Julie C. Meloni

HTML5 Coverage

Sams Teach Yourself

HTML, CSS and JavaScript

All in One

SAMS

Julie C. Meloni

Sams Teach Yourself

HTML, CSS and JavaScript All in One

SAMS 800 East 96th Street, Indianapolis, Indiana, 46240 USA

Sams Teach Yourself HTML, CSS, and JavaScript All in One

Copyright © 2012 by Pearson Education, Inc.

All rights reserved. No part of this book shall be reproduced, stored in a retrieval system, or transmitted by any means, electronic, mechanical, photocopying, recording, or otherwise, without written permission from the publisher. No patent liability is assumed with respect to the use of the information contained herein. Although every precaution has been taken in the preparation of this book, the publisher and author assume no responsibility for errors or omissions. Nor is any liability assumed for damages resulting from the use of the information contained herein.

ISBN-13: 978-0-672-33332-3
ISBN-10: 0-672-33332-5

Library of Congress Cataloging-in-Publication data is on file.

First Printing November 2011

Trademarks

All terms mentioned in this book that are known to be trademarks or service marks have been appropriately capitalized. Sams Publishing cannot attest to the accuracy of this information. Use of a term in this book should not be regarded as affecting the validity of any trademark or service mark.

Warning and Disclaimer

Every effort has been made to make this book as complete and as accurate as possible, but no warranty or fitness is implied. The information provided is on an "as is" basis. The author and the publisher shall have neither liability nor responsibility to any person or entity with respect to any loss or damages arising from the information contained in this book or programs accompanying it.

Bulk Sales

Sams Publishing offers excellent discounts on this book when ordered in quantity for bulk purchases or special sales. For more information, please contact

U.S. Corporate and Government Sales
1-800-382-3419
corpsales@pearsontechgroup.com

For sales outside of the U.S., please contact

International Sales
international@pearson.com

Acquisitions Editor
Mark Taber

Development Editor
Songlin Qiu

Managing Editor
Sandra Schroeder

Project Editor
Seth Kerney

Copy Editor
Mike Henry

Indexer
Ken Johnson

Proofreader
Jovana San Nicolas-Shirley

Technical Editor
Phil Ballard

Publishing Coordinator
Cindy Teeters

Book Designer
Gary Adair

Compositor
Trina Wurst

Contents at a Glance

PART I: **Getting Started on the Web**

CHAPTER 1: Publishing Web Content
CHAPTER 2: Understanding HTML and XHTML Connections
CHAPTER 3: Understanding Cascading Style Sheets
CHAPTER 4: Understanding JavaScript

PART II: **Building Blocks of Practical Web Design**

CHAPTER 5: Working with Fonts, Text Blocks, and Lists
CHAPTER 6: Using Tables to Display Information
CHAPTER 7: Using External and Internal Links
CHAPTER 8: Working with Colors, Images, and Multimedia

PART III: **Advanced Web Page Design with CSS**

CHAPTER 9: Working with Margins, Padding, Alignment, and Floating
CHAPTER 10: Understanding the CSS Box Model and Positioning
CHAPTER 11: Using CSS to Do More with Lists, Text, and Navigation
CHAPTER 12: Creating Fixed or Liquid Layouts

PART IV: **Getting Started with Dynamic Web Sites**

CHAPTER 13: Understanding Dynamic Websites
CHAPTER 14: Getting Started with JavaScript Programming
CHAPTER 15: Working with the Document Object Model (DOM)
CHAPTER 16: Using JavaScript Variables, Strings, and Arrays
CHAPTER 17: Using JavaScript Functions and Objects
CHAPTER 18: Controlling Flow with Conditions and Loops
CHAPTER 19: Responding to Events
CHAPTER 20: Using Windows and Frames

PART V: **Advanced JavaScript Programming**

CHAPTER 21: Using Unobtrusive JavaScript
CHAPTER 22: Using Third-Party Libraries
CHAPTER 23: Greasemonkey: Enhancing the Web with JavaScript
CHAPTER 24: AJAX: Remote Scripting

PART VI: **Advanced Website Functionality and Management**

CHAPTER 25: Creating Print-Friendly Web Pages
CHAPTER 26: Working with Web-Based Forms
CHAPTER 27: Organizing and Managing a Website
CHAPTER 28: Helping People Find Your Web Pages
Index

Table of Contents

CHAPTER 1: **Publishing Web Content** **1**

A Brief History of HTML and the World Wide Web ... 1
Creating Web Content ... 2
Understanding Web Content Delivery ... 3
Selecting a Web Hosting Provider ... 6
Testing with Multiple Web Browsers ... 8
Creating a Sample File ... 9
Using FTP to Transfer Files ... 10
Distributing Content Without a Web Server ... 18
Tips for Testing Web Content ... 19

CHAPTER 2: **Understanding HTML and XHTML Connections** **25**

Getting Prepared ... 25
Getting Started with a Simple Web Page ... 26
HTML Tags Every XHTML Web Page Must Have ... 29
Organizing a Page with Paragraphs and Line Breaks ... 31
Organizing Your Content with Headings ... 34
Validating Your Web Content ... 36
The Scoop on HTML, XML, XHTML, and HTML5 ... 38

CHAPTER 3: **Understanding Cascading Style Sheets** **45**

How CSS Works ... 46
A Basic Style Sheet ... 47
A CSS Style Primer ... 52
Using Style Classes ... 57
Using Style IDs ... 59
Internal Style Sheets and Inline Styles ... 59

CHAPTER 4: **Understanding JavaScript** **65**

Learning Web Scripting Basics ... 65
How JavaScript Fits into a Web Page ... 67
Exploring JavaScript's Capabilities ... 70
Displaying Time with JavaScript ... 71
Beginning the Script ... 71
Adding JavaScript Statements ... 72
Creating Output ... 73
Adding the Script to a Web Page ... 73
Testing the Script ... 74

CHAPTER 5: **Working with Fonts, Text Blocks, and Lists** **81**

Boldface, Italics, and Special Text Formatting ... 82
Tweaking the Font ... 85
Working with Special Characters ... 89
Aligning Text on a Page ... 92
The Three Types of HTML Lists ... 95
Placing Lists Within Lists ... 97

CHAPTER 6: **Using Tables to Display Information** **107**

Creating a Simple Table ... 107
Controlling Table Sizes ... 110
Alignment and Spanning Within Tables ... 113
Page Layout with Tables ... 116

CHAPTER 7: **Using External and Internal Links** **123**

Using Web Addresses ... 123
Linking Within a Page Using Anchors ... 126
Linking Between Your Own Web Content ... 129
Linking to External Web Content ... 131
Linking to an Email Address ... 132
Opening a Link in a New Browser Window ... 134
Using CSS to Style Hyperlinks ... 134

CHAPTER 8: **Working with Colors, Images, and Multimedia** **141**

Best Practices for Choosing Colors ... 141
Understanding Web Colors ... 143
Using Hexadecimal Values for Colors ... 145
Using CSS to Set Background, Text, and Border Colors ... 146
Choosing Graphics Software ... 148
The Least You Need to Know About Graphics ... 149
Preparing Photographic Images ... 150
Creating Banners and Buttons ... 155
Reducing the Number of Colors in an Image ... 157
Working with Transparent Images ... 158
Creating Tiled Backgrounds ... 159
Creating Animated Web Graphics ... 160
Placing Images on a Web Page ... 161
Describing Images with Text ... 163
Specifying Image Height and Width ... 165
Aligning Images ... 165

Turning Images into Links 169
Using Background Images 171
Using Imagemaps 173
Integrating Multimedia into Your Website 178

CHAPTER 9: **Working with Margins, Padding, Alignment, and Floating** **191**
Using Margins 192
Padding Elements 199
Keeping Everything Aligned 203
Understanding the Float Property 204

CHAPTER 10: **Understanding the CSS Box Model and Positioning** **209**
The CSS Box Model 209
The Whole Scoop on Positioning 213
Controlling the Way Things Stack Up 217
Managing the Flow of Text 220

CHAPTER 11: **Using CSS to Do More with Lists, Text, and Navigation** **225**
HTML List Refresher 226
How the CSS Box Model Affects Lists 226
Placing List Item Indicators 229
Creating Image Maps with List Items and CSS 231
How Navigation Lists Differ from Regular Lists 235
Creating Vertical Navigation with CSS 236
Creating Horizontal Navigation with CSS 245

CHAPTER 12: **Creating Fixed or Liquid Layouts** **253**
Understanding Fixed Layouts 254
Understanding Liquid Layouts 255
Creating a Fixed/Liquid Hybrid Layout 258

CHAPTER 13: **Understanding Dynamic Websites** **273**
Understanding the Different Types of Scripting 273
Including JavaScript in HTML 274
Displaying Random Content 276
Understanding the Document Object Model 280
Changing Images Based on User Interaction 281

CHAPTER 14: **Getting Started with JavaScript Programming** **287**
Basic Concepts 287
JavaScript Syntax Rules 291
Using Comments 293
Best Practices for JavaScript 293

CHAPTER 15: **Working with the Document Object Model (DOM)** **299**
Understanding the Document Object Model (DOM) 299
Using window Objects 300
Working with the document Object 300
Accessing Browser History 303
Working with the location Object 305
More About the DOM Structure 306
Working with DOM Nodes 309
Creating Positionable Elements (Layers) 311
Hiding and Showing Objects 316
Modifying Text Within a Page 317
Adding Text to a Page 319

CHAPTER 16: **Using JavaScript Variables, Strings, and Arrays** **325**
Using Variables 325
Understanding Expressions and Operators 328
Data Types in JavaScript 330
Converting Between Data Types 331
Using String Objects 332
Working with Substrings 335
Using Numeric Arrays 337
Using String Arrays 338
Sorting a Numeric Array 340

CHAPTER 17: **Using JavaScript Functions and Objects** **347**
Using Functions 347
Introducing Objects 352
Using Objects to Simplify Scripting 354
Extending Built-in Objects 356
Using the Math Object 360
Working with Math Functions 361
Using the with Keyword 363
Working with Dates 364

CHAPTER 18: **Controlling Flow with Conditions and Loops** **369**
The if Statement 369
Using Shorthand Conditional Expressions 372
Testing Multiple Conditions with if and else 373
Using Multiple Conditions with switch 375
Using for Loops 377
Using while Loops 379
Using do...while Loops 380
Working with Loops 380
Looping Through Object Properties 382

CHAPTER 19: **Responding to Events** **389**
Understanding Event Handlers 389
Using Mouse Events 394
Using Keyboard Events 397
Using the onLoad and onUnload Events 399
Using onclick to Change <div> Appearance 400

CHAPTER 20: **Using Windows and Frames** **409**
Controlling Windows with Objects 409
Moving and Resizing Windows 413
Using Timeouts 414
Displaying Dialog Boxes 417
Working with Frames 418
Building a Frameset 420
Linking Between Frames and Windows 423
Using Inline Frames 426

CHAPTER 21: **Using Unobtrusive JavaScript** **433**
Scripting Best Practices 433
Reading Browser Information 440
Cross-Browser Scripting 443
Supporting Non-JavaScript Browsers 445

CHAPTER 22: **Using Third-Party Libraries** **453**
Using Third-Party Libraries 453
Other Libraries 456

CHAPTER 23: **Greasemonkey: Enhancing the Web with JavaScript** **463**
Introducing Greasemonkey 463
Working with User Scripts 466
Creating Your Own User Scripts 468

CHAPTER 24: **AJAX: Remote Scripting** **479**
Introducing AJAX 479
Using XMLHttpRequest 483
Creating a Simple AJAX Library 485
Creating an AJAX Quiz Using the Library 487
Debugging AJAX Applications 491

CHAPTER 25: **Creating Print-Friendly Web Pages** **499**
What Makes a Page Print-Friendly? 500
Applying a Media-Specific Style Sheet 503
Designing a Style Sheet for Print Pages 505
Viewing a Web Page in Print Preview 508

CHAPTER 26: **Working with Web-Based Forms** **513**
How HTML Forms Work 513
Creating a Form 514
Accepting Text Input 519
Naming Each Piece of Form Data 519
Exploring Form Input Controls 521
Submitting Form Data 527
Accessing Form Elements with JavaScript 528
Displaying Data from a Form 528
Sending Form Results by Email 530

CHAPTER 27: **Organizing and Managing a Website** **537**
When One Page Is Enough 538
Organizing a Simple Site 540
Organizing a Larger Site 543
Writing Maintainable Code 546
Thinking About Version Control 548

CHAPTER 28: **Helping People Find Your Web Pages** **553**
Publicizing Your Website 553
Listing Your Pages with the Major Search Sites 555
Providing Hints for Search Engines 556
Additional Tips for Search Engine Optimization 562

INDEX **567**

About the Author

Julie C. Meloni is the Lead Technologist and Architect in the Online Library Environment at the University of Virginia. Before coming to the library, she worked for more than 15 years in web application development for various corporations large and small in Silicon Valley. She has written several books and articles on Web-based programming languages and database topics, including the bestselling *Sams Teach Yourself PHP, MySQL, and Apache All in One*.

We Want to Hear from You!

As the reader of this book, *you* are our most important critic and commentator. We value your opinion and want to know what we're doing right, what we could do better, what areas you'd like to see us publish in, and any other words of wisdom you're willing to pass our way.

You can email or write directly to let us know what you did or didn't like about this book—as well as what we can do to make our books stronger.

Please note that we cannot help you with technical problems related to the topic of this book, and that due to the high volume of mail we receive, we might not be able to reply to every message.

When you write, please be sure to include this book's title and author as well as your name and email address. We will carefully review your comments and share them with the author and editors who worked on the book.

Email:	feedback@samspublishing
Mail:	Sams Publishing 800 East 96th Street Indianapolis, IN 46240 USA

Reader Services

Visit our website and register this book at informit.com/register for convenient access to any updates, downloads, or errata that might be available for this book.

CHAPTER 3
Understanding Cascading Style Sheets

In the previous chapter, you learned the basics of HTML and XHTML, including how to set up a skeletal HTML template for all your web content. In this chapter, you will learn how to fine-tune the display of your web content using *Cascading Style Sheets (CSS).*

The concept behind style sheets is simple: You create a style sheet document that specifies the fonts, colors, spacing, and other characteristics that establish a unique look for a website. You then link every page that should have that look to the style sheet, instead of specifying all those styles repeatedly in each separate document. Therefore, when you decide to change your official corporate typeface or color scheme, you can modify all your web pages at once just by changing one or two entries in your style sheet rather than changing them in all of your static web files. So, a *style sheet* is a grouping of formatting instructions that controls the appearance of several HTML pages at once.

Style sheets enable you to set a great number of formatting characteristics, including exacting typeface controls, letter and line spacing, and margins and page borders, just to name a few. Style sheets also enable sizes and other measurements to be specified in familiar units, such as inches, millimeters, points, and picas. You can also use style sheets to precisely position graphics and text anywhere on a web page, either at specific coordinates or relative to other items on the page.

In short, style sheets bring a sophisticated level of display to the Web. And they do so—you'll pardon the expression—with style.

WHAT YOU'LL LEARN IN THIS CHAPTER:

- How to create a basic style sheet
- How to use style classes
- How to use style IDs
- How to construct internal style sheets and inline styles

NOTE

If you have three or more web pages that share (or should share) similar formatting and fonts, you might want to create a style sheet for them as you read this chapter. Even if you choose not to create a complete style sheet, you'll find it helpful to apply styles to individual HTML elements directly within a web page.

How CSS Works

The technology behind style sheets is called CSS, which stands for Cascading Style Sheets. CSS is a language that defines style constructs such as fonts, colors, and positioning, which are used to describe how information on a web page is formatted and displayed. CSS styles can be stored directly in an HTML web page or in a separate style sheet file. Either way, style sheets contain style rules that apply styles to elements of a given type. When used externally, style sheet rules are placed in an external style sheet document with the file extension .css.

A *style rule* is a formatting instruction that can be applied to an element on a web page, such as a paragraph of text or a link. Style rules consist of one or more *style properties* and their associated values. An *internal style sheet* is placed directly within a web page, whereas an *external style sheet* exists in a separate document and is simply linked to a web page via a special tag—more on this tag in a moment.

NOTE

You might notice that I use the term *element* a fair amount in this chapter (and I will for the rest of the book, for that matter). An *element* is simply a piece of information (content) in a web page, such as an image, a paragraph, or a link. Tags are used to code elements, and you can think of an element as a tag complete with descriptive information (attributes, text, images, and so on) within the tag.

The *cascading* part of the name CSS refers to the manner in which style sheet rules are applied to elements in an HTML document. More specifically, styles in a CSS style sheet form a hierarchy in which more specific styles override more general styles. It is the responsibility of CSS to determine the precedence of style rules according to this hierarchy, which establishes a cascading effect. If that sounds a bit confusing, just think of the cascading mechanism in CSS as being similar to genetic inheritance, in which general traits are passed from parents to a child, but more specific traits are entirely unique to the child. Base style rules are applied throughout a style sheet but can be overridden by more specific style rules.

A quick example should clear things up. Take a look at the following code to see whether you can tell what's going on with the color of the text:

```
<div style="color:green">
  This text is green.
  <p style="color:blue">This text is blue.</p>
  <p>This text is still green.</p>
</div>
```

In the previous example, the color green is applied to the `<div>` tag via the `color` style property. Therefore, the text in the `<div>` tag is colored green. Because both `<p>` tags are children of the `<div>` tag, the green text style cascades down to them. However, the first `<p>` tag overrides the color style and changes it to blue. The end result is that the first line (not surrounded by a paragraph tag) is green, the first official paragraph is blue, and the second official paragraph retains the cascaded green color.

If you made it through that description on your own, congratulations. If you understood it after I explained it in the text, congratulations to you as well. Understanding CSS isn't like understanding rocket science, although many people will try to convince you that it is (so that they can charge high consultation fees, most likely!).

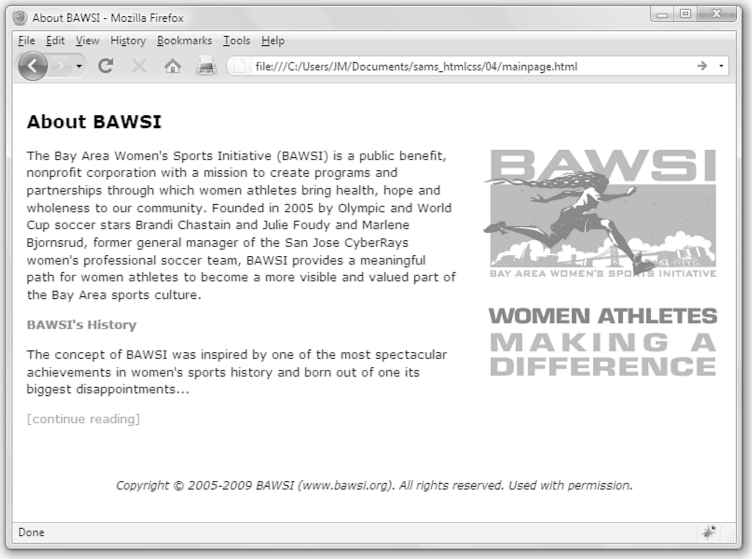
Like many web technologies, CSS has evolved over the years. The original version of CSS, known as *Cascading Style Sheets Level 1* (*CSS1)* was created in 1996. The later CSS 2 standard was created in 1998, and CSS 2 is still in use today. All modern web browsers support CSS 2, and you can safely use CSS 2 style sheets without too much concern. So when I talk about CSS throughout the book, I'm referring to CSS 2.

You'll find a complete reference guide to CSS at http://www.w3.org/Style/CSS/. The rest of this chapter explains how to put CSS to good use.

A Basic Style Sheet

Despite their intimidating power, style sheets can be simple to create. Consider the web pages shown in Figure 3.1 and Figure 3.2. These pages share several visual properties that could be put into a common style sheet:

- They use a large, bold Verdana font for the headings and a normal size and weight Verdana font for the body text.
- They use an image named logo.gif floating within the content and on the right side of the page.
- All text is black except for subheadings, which are purple.
- They have margins on the left side and at the top.
- There is vertical space between lines of text.
- The footnotes are centered and in small print.


About BAWSI - Mozilla Firefox
File Edit View History Bookmarks Tools Help
file:///C:/Users/JM/Documents/sams_htmlcss/04/mainpage.html
BAWSI
BAY AREA WOMEN'S SPORTS INITIATIVE
WOMEN ATHLETES MAKING A DIFFERENCE
Done

About BAWSI

The Bay Area Women's Sports Initiative (BAWSI) is a public benefit, nonprofit corporation with a mission to create programs and partnerships through which women athletes bring health, hope and wholeness to our community. Founded in 2005 by Olympic and World Cup soccer stars Brandi Chastain and Julie Foudy and Marlene Bjornsrud, former general manager of the San Jose CyberRays women's professional soccer team, BAWSI provides a meaningful path for women athletes to become a more visible and valued part of the Bay Area sports culture.

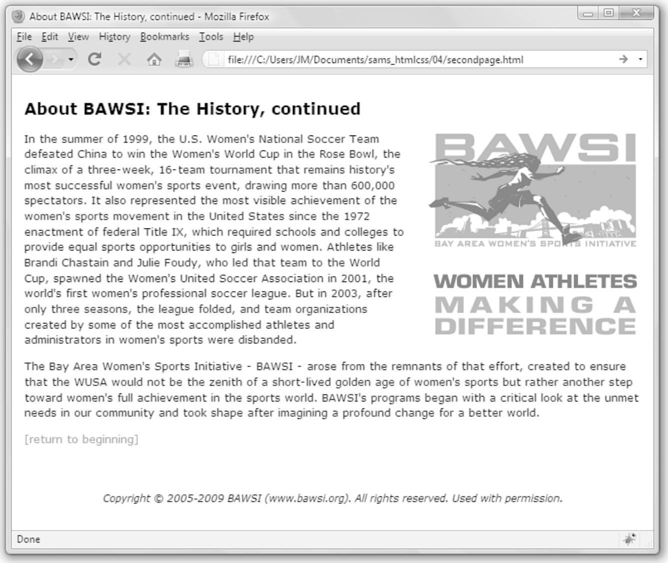
BAWSI's History

The concept of BAWSI was inspired by one of the most spectacular achievements in women's sports history and born out of one its biggest disappointments...

[continue reading]

Copyright © 2005-2009 BAWSI (www.bawsi.org). All rights reserved. Used with permission.

FIGURE 3.1
This page uses a style sheet to fine-tune the appearance and spacing of the text and images.


About BAWSI: The History, continued - Mozilla Firefox
File Edit View History Bookmarks Tools Help
file:///C:/Users/JM/Documents/sams_htmlcss/04/secondpage.html
BAWSI
BAY AREA WOMEN'S SPORTS INITIATIVE
WOMEN ATHLETES MAKING A DIFFERENCE
Done

About BAWSI: The History, continued

In the summer of 1999, the U.S. Women's National Soccer Team defeated China to win the Women's World Cup in the Rose Bowl, the climax of a three-week, 16-team tournament that remains history's most successful women's sports event, drawing more than 600,000 spectators. It also represented the most visible achievement of the women's sports movement in the United States since the 1972 enactment of federal Title IX, which required schools and colleges to provide equal sports opportunities to girls and women. Athletes like Brandi Chastain and Julie Foudy, who led that team to the World Cup, spawned the Women's United Soccer Association in 2001, the world's first women's professional soccer league. But in 2003, after only three seasons, the league folded, and team organizations created by some of the most accomplished athletes and administrators in women's sports were disbanded.

The Bay Area Women's Sports Initiative - BAWSI - arose from the remnants of that effort, created to ensure that the WUSA would not be the zenith of a short-lived golden age of women's sports but rather another step toward women's full achievement in the sports world. BAWSI's programs began with a critical look at the unmet needs in our community and took shape after imagining a profound change for a better world.

[return to beginning]

Copyright © 2005-2009 BAWSI (www.bawsi.org). All rights reserved. Used with permission.

FIGURE 3.2
This page uses the same style sheet as the one shown in Figure 3.1, thus maintaining a consistent look and feel.

Listing 3.1 shows the code for the style sheet specifying these properties.

LISTING 3.1 A Single External Style Sheet

```
body {
  font-size: 10pt;
  font-family: Verdana, Geneva, Arial, Helvetica, sans-serif;
  color: black;
  line-height: 14pt;
  padding-left: 5pt;
  padding-right: 5pt;
  padding-top: 5pt;
}

h1 {
  font: 14pt Verdana, Geneva, Arial, Helvetica, sans-serif;
  font-weight: bold;
  line-height: 20pt;
}

p.subheader {
  font-weight: bold;
  color: #593d87;
}

img {
  padding: 3pt;
  float: right;
}

a {
  text-decoration: none;
}

a:link, a:visited {
  color: #8094d6;
}

a:hover, a:active {
  color: #FF9933;
}

div.footer {
  font-size: 9pt;
  font-style: italic;
  line-height: 12pt;
  text-align: center;
  padding-top: 30pt;
}
```

This might initially appear to be a lot of code, but if you look closely, you'll see that there isn't a lot of information on each line of code. It's fairly standard to place individual style rules on their own line to help make style sheets more readable, but that is a personal preference; you could put all the rules on one line as long as you kept using the semicolon to separate each rule (more on that in a bit). Speaking of code readability, perhaps the first thing you noticed about this style sheet code is that it doesn't look anything like normal HTML code. CSS uses a language all its own to specify style sheets.

Of course, the listing includes some familiar HTML tags. As you might guess, `body`, `h1`, `p`, `img`, `a`, and `div` in the style sheet refer to the corresponding tags in the HTML documents to which the style sheet will be applied. The curly braces after each tag name contain the specifications for how all content within that tag should appear.

In this case, the style sheet says that all `body` text should be rendered at a size of 10 points, in the Verdana font (if possible), with the color black, and 14 points between lines. If the user does not have the Verdana font installed, the list of fonts in the style sheet represents the order in which the browser should search for fonts to use: Geneva, then Arial, and then Helvetica. If the user has none of those fonts, the browser will use whatever default sans serif font is available. Additionally, the page should have left, right, and top margins of 5 points each.

Any text within an `<h1>` tag should be rendered in boldface Verdana at a size of 14 points. Moving on, any paragraph that uses only the `<p>` tag will inherit all the styles indicated by the body element. However, if the `<p>` tag uses a special class named `subheader`, the text will appear bold and in the color #593d87 (a purple color).

NOTE

You can specify font sizes as large as you like with style sheets, although some display devices and printers will not correctly handle fonts larger than 200 points.

The `pt` after each measurement in Listing 3.1 means *points* (there are 72 points in an inch). If you prefer, you can specify any style sheet measurement in inches (`in`), centimeters (`cm`), pixels (`px`), or widths-of-a-letter-m, which are called ems (`em`).

You might have noticed that each style rule in the listing ends with a semicolon (`;`). Semicolons are used to separate style rules from each other. It is therefore customary to end each style rule with a semicolon, so you can easily add another style rule after it.

To link this style sheet to HTML documents, include a `<link />` tag in the `<head>` section of each document. Listing 3.2 shows the HTML code for the page shown in Figure 3.1. It contains the following `<link />` tag:

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

This assumes that the style sheet is stored under the name `styles.css` in the same folder as the HTML document. As long as the web browser supports style sheets—and all modern browsers do support style sheets—the properties specified in the style sheet will apply to the content in the page without the need for any special HTML formatting code. This confirms the ultimate goal of XHTML, which is to provide a separation between the content in a web page and the specific formatting required to display that content.

LISTING 3.2 HTML Code for the Page Shown in Figure 3.1

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
  "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">

<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en">
  <head>
    <title>About BAWSI</title>
    <link rel="stylesheet" type="text/css" href="styles.css" />
  </head>
  <body>
     <h1>About BAWSI</h1>
     <p><img src="logo.gif" alt="BAWSI logo"/>The Bay Area Women's
     Sports Initiative (BAWSI) is a public benefit, nonprofit
     corporation with a mission to create programs and partnerships
     through which women athletes bring health, hope and wholeness to
     our community. Founded in 2005 by Olympic and World Cup soccer
     stars Brandi Chastain and Julie Foudy and Marlene Bjornsrud,
     former general manager of the San Jose CyberRays women's
     professional soccer team, BAWSI provides a meaningful path for
     women athletes to become a more visible and valued part of the
     Bay Area sports culture.</p>
     <p class="subheader">BAWSI's History</p>
     <p>The concept of BAWSI was inspired by one of the most
     spectacular achievements in women's sports history and born out
     of one its biggest disappointments... </p>
     <p><a href="secondpage.html">[continue reading]</a></p>
     <div class="footer">Copyright &copy; 2005-2009 BAWSI
    (www.bawsi.org). All rights reserved.  Used with permission.</div>
  </body>
</html>
```

TIP

In most web browsers, you can view the style rules in a style sheet by opening the .css file and choosing Notepad or another text editor as the helper application to view the file. (To determine the name of the .css file, look at the HTML source of any web page that links to it.) To edit your own style sheets, just use a text editor.

The code in Listing 3.2 is interesting because it contains no formatting of any kind. In other words, there is nothing in the HTML code that dictates how the text and images are to be displayed—no colors, no fonts, nothing. Yet the page is carefully formatted and rendered to the screen, thanks to the link to the external style sheet, styles.css. The real benefit to this

NOTE

Although CSS is widely supported in all modern web browsers, it hasn't always enjoyed such wide support. Additionally, not every browser's support of CSS is flawless. To find out about how major browsers compare to each other in terms of CSS support, take a look at this website: http://www.quirksmode.org/css/contents.html.

approach is that you can easily create a site with multiple pages that maintains a consistent look and feel. And you have the benefit of isolating the visual style of the page to a single document (the style sheet) so that one change impacts all pages.

▼ TRY IT YOURSELF

Create a Style Sheet of Your Own

Starting from scratch, create a new text document called mystyles.css and add some style rules for the following basic HTML tags: `<body>`, `<p>`, `<h1>`, and `<h2>`. After your style sheet has been created, make a new HTML file that contains these basic tags. Play around with different style rules and see for yourself how simple it is to change entire blocks of text in paragraphs with one simple change in a style sheet file.

A CSS Style Primer

You now have a basic knowledge of CSS style sheets and how they are based on style rules that describe the appearance of information in web pages. The next few sections of this chapter provide a quick overview of some of the most important style properties and allow you to get started using CSS in your own style sheets.

CSS includes various style properties that are used to control fonts, colors, alignment, and margins, to name just a few. The style properties in CSS can be generally grouped into two major categories:

- **Layout properties**—Consist of properties that affect the positioning of elements on a web page, such as margins, padding, alignment, and so on
- **Formatting properties**—Consist of properties that affect the visual display of elements within a website, such as the font type, size, color, and so on

Layout Properties

CSS layout properties are used to determine how content is placed on a web page. One of the most important layout properties is the `display` property, which describes how an element is displayed with respect to other elements. There are four possible values for the `display` property:

- **`block`**—The element is displayed on a new line, as in a new paragraph.
- **`list-item`**—The element is displayed on a new line with a list-item mark (bullet) next to it.
- **`inline`**—The element is displayed inline with the current paragraph.
- **`none`**—The element is not displayed; it is hidden.

It's easier to understand the `display` property if you visualize each element on a web page occupying a rectangular area when displayed—the `display` property controls the manner in which this rectangular area is displayed. For example, the `block` value results in the element being placed on a new line by itself, whereas the `inline` value places the element next to the content just before it. The `display` property is one of the few style properties that can be applied in most style rules. Following is an example of how to set the `display` property:

```
display:block;
```

You control the size of the rectangular area for an element with the `width` and `height` properties. Like many size-related CSS properties, `width` and `height` property values can be specified in several different units of measurement:

- **`in`**—Inches
- **`cm`**—Centimeters
- **`mm`**—Millimeters
- **`px`**—Pixels
- **`pt`**—Points

You can mix and match units however you choose within a style sheet, but it's generally a good idea to be consistent across a set of similar style properties. For example, you might want to stick with points for font properties or pixels for dimensions. Following is an example of setting the width of an element using pixel units:

```
width: 200px;
```

Formatting Properties

CSS formatting properties are used to control the appearance of content on a web page, as opposed to controlling the physical positioning of the content. One of the most popular formatting properties is the `border` property,

NOTE

The `display` property relies on a concept known as *relative positioning*, which means that elements are positioned relative to the location of other elements on a page. CSS also supports *absolute positioning*, which enables you to place an element at an exact location on a page independent of other elements. You'll learn more about both of these types of positioning in Part III, "Advanced Web Page Design with CSS."

which is used to establish a visible boundary around an element with a box or partial box. The following `border` properties provide a means of describing the borders of an element:

- **`border-width`**—The width of the border edge
- **`border-color`**—The color of the border edge
- **`border-style`**—The style of the border edge
- **`border-left`**—The left side of the border
- **`border-right`**—The right side of the border
- **`border-top`**—The top of the border
- **`border-bottom`**—The bottom of the border
- **`border`**—All the border sides

The `border-width` property is used to establish the width of the border edge. It is often expressed in pixels, as the following code demonstrates:

```
border-width:5px;
```

Not surprisingly, the `border-color` and `border-style` properties are used to set the border color and style. Following is an example of how these two properties are set:

```
border-color:blue;
border-style:dotted;
```

The `border-style` property can be set to any of the following values:

- **`solid`**—A single-line border
- **`double`**—A double-line border
- **`dashed`**—A dashed border
- **`dotted`**—A dotted border
- **`groove`**—A border with a groove appearance
- **`ridge`**—A border with a ridge appearance
- **`inset`**—A border with an inset appearance
- **`outset`**—A border with an outset appearance
- **`none`**—No border

The default value of the `border-style` property is `none`, which is why elements don't have a border unless you set the border property to a different style. The most common border styles are the `solid` and `double` styles.

NOTE

The exception to the default `border-style` of `none` is when an image is placed within an `<a>` tag so that it serves as a linked image. In that case, a solid border is automatically set by default. That's why you often see linked images with the style `border-style:none`, which turns off the automatic border.

The `border-left`, `border-right`, `border-top`, and `border-bottom` properties enable you to set the border for each side of an element individually. If you want a border to appear the same on all four sides, you can use the single `border` property by itself, which expects the following styles separated by a space: `border-width`, `border-style`, and `border-color`. Following is an example of using the `border` property to set a border that consists of two (double) red lines that are a total of 10 pixels in width:

```
border:10px double red;
```

Whereas the color of an element's border is set with the `border-color` property, the color of the inner region of an element is set using the `color` and `background-color` properties. The `color` property sets the color of text in an element (foreground) and the `background-color` property sets the color of the background behind the text. Following is an example of setting both color properties to predefined colors:

```
color:black;
background-color:orange;
```

You can also assign custom colors to these properties by specifying the colors in hexadecimal (covered in more detail in Chapter 8, "Working with Colors, Images, and Multimedia") or as RGB (Red, Green, Blue) decimal values, just as you do in HTML:

```
background-color:#999999;
color:rgb(0,0,255);
```

You can also control the alignment and indentation of web page content without too much trouble. This is accomplished with the `text-align` and `text-indent` properties, as the following code demonstrates:

```
text-align:center;
text-indent:12px;
```

After you have an element properly aligned and indented, you might be interested in setting its font. The following font properties are used to set the various parameters associated with fonts:

- **`font-family`**—The family of the font
- **`font-size`**—The size of the font

- **`font-style`**—The style of the font (`normal` or `italic`)
- **`font-weight`**—The weight of the font (`light`, `medium`, `bold`, and so on)

The `font-family` property specifies a prioritized list of font family names. A prioritized list is used instead of a single value to provide alternatives in case a font isn't available on a given system. The `font-size` property specifies the size of the font using a unit of measurement, usually points. Finally, the `font-style` property sets the style of the font and the `font-weight` property sets the weight of the font. Following is an example of setting these font properties:

```
font-family: Arial, sans-serif;
font-size: 36pt;
font-style: italic;
font-weight: medium;
```

Now that you know a whole lot more about style properties and how they work, refer back at Listing 3.1 and see whether it makes a bit more sense. Here's a recap of the style properties used in that style sheet, which you can use as a guide for understanding how it works:

- **`font`**—Lets you set many font properties at once. You can specify a list of font names separated by commas; if the first is not available, the next is tried, and so on. You can also include the words `bold` and/or `italic` and a font size. Each of these font properties can be specified separately with `font-family`, `font-size`, `font-weight`, and `font-style` if you prefer.
- **`line-height`**—Also known in the publishing world as *leading*. This sets the height of each line of text, usually in points.
- **`color`**—Sets the text color using the standard color names or hexadecimal color codes (see Chapter 8 for more details).
- **`text-decoration`**—Useful for turning link underlining off—simply set it to `none`. The values of `underline`, `italic`, and `line-through` are also supported. The application of styles to links is covered in more detail in Chapter 7, "Using External and Internal Links."
- **`text-align`**—Aligns text to the `left`, `right`, or `center`, along with justifying the text with a value of `justify`.
- **`padding`**—Adds padding to the left, right, top, and bottom of an element; this padding can be in measurement units or a percentage of the page width. Use `padding-left` and `padding-right` if you want to add padding to the left and right of the element independently. Use

padding-top or padding-bottom to add padding to the top or bottom of the element, as appropriate. You'll learn more about these style properties in Chapters 9, "Working with Margins, Padding, Alignment, and Floating," and 10, "Understanding the CSS Box Model and Positioning."

Using Style Classes

This is a "teach yourself" book, so you don't have to go to a single class to learn how to give your pages great style, although you do need to learn what a style class is. Whenever you want some of the text on your pages to look different from the other text, you can create what amounts to a custom-built HTML tag. Each type of specially formatted text you define is called a *style class*. A *style class* is a custom set of formatting specifications that can be applied to any element in a web page.

Before showing you a style class, I need to take a quick step back and clarify some CSS terminology. First off, a CSS *style property* is a specific style that can be assigned a value, such as `color` or `font-size`. You associate a style property and its respective value with elements on a web page by using a selector. A *selector* is used to identify tags on a page to which you apply styles. Following is an example of a selector, a property, and a value all included in a basic style rule:

```
h1 { font: 36pt Courier; }
```

In this code, `h1` is the selector, `font` is the style property, and `36pt Courier` is the value. The selector is important because it means that the font setting will be applied to all `h1` elements in the web page. But maybe you want to differentiate between some of the `h1` elements—what then? The answer lies in style classes.

Suppose you want two different kinds of `<h1>` headings for use in your documents. You would create a style class for each one by putting the following CSS code in a style sheet:

```
h1.silly { font: 36pt Comic Sans; }
h1.serious { font: 36pt Arial; }
```

Notice that these selectors include a period (`.`) after `h1`, followed by a descriptive class name. To choose between the two style classes, use the `class` attribute, like this:

```
<h1 class="silly">Marvin's Munchies Inc. </h1>
<p>Text about Marvin's Munchies goes here. </p>
```

Or you could use this:

```
<h1 class="serious">MMI Investor Information</h1>
<p>Text for business investors goes here.</p>
```

When referencing a style class in HTML code, simply specify the class name in the `class` attribute of an element. In the previous example, the words `Marvin's Munchies Inc.` would appear in a 36-point Comic Sans font, assuming that you included a `<link />` to the style sheet at the top of the web page and assuming that the user has the Comic Sans font installed. The words `MMI Investor Information` would appear in the 36-point Arial font instead. You can see another example of classes in action in Listing 3.2; look for the `subheader` `<p>` class and the `footer` `<div>` class.

What if you want to create a style class that could be applied to any element, rather than just headings or some other particular tag? You can associate a style class with the `<div>` tag, as in Listing 3.2, which is used to enclose any text in a block that is somewhat similar to a paragraph of text; the `<div>` tag is another useful container element.

You can essentially create your own custom HTML tag by using the `div` selector followed by a period (`.`) followed by any style class name you make up and any style specifications you choose. That tag can control any number of font, spacing, and margin settings all at once. Wherever you want to apply your custom tag in a page, use a `<div>` tag with the `class` attribute followed by the class name you created.

TIP

You might have noticed a change in the coding style when multiple properties are included in a style rule. For style rules with a single style, you'll commonly see the property placed on the same line as the rule, like this:

```
div.footer { font-size: 9pt; }
```

However, when a style rule contains multiple style properties, it's much easier to read and understand the code if you list the properties one-per-line, like this:

```
div.footer {
  font-size:9pt;
  font-style: italic;
  line-height:12pt;
  text-align: center;
  padding-top: 30pt;
}
```

For example, the style sheet in Listing 3.1 includes the following style class specification:

```
div.footer {
  font-size: 9pt;
  font-style: italic;
  line-height: 12pt;
  text-align: center;
  padding-top: 30pt;
}
```

This style class is applied in Listing 3.2 with the following tag:

```
<div class="footer">
```

Everything between that tag and the closing `</div>` tag in Listing 3.2 appears in 9-point, centered, italic text with 12-point vertical line spacing and 30 points of padding at the top of the element.

What makes style classes so valuable is how they isolate style code from web pages, effectively allowing you to focus your HTML code on the actual content in a page, not how it is going to appear on the screen. Then you can focus on how the content is rendered to the screen by fine-tuning the style sheet. You might be surprised by how a relatively small amount of code in a style sheet can have significant effects across an entire website. This makes your pages much easier to maintain and manipulate.

Using Style IDs

When you create custom style classes, you can use those classes as many times as you would like—they are not unique. However, there will be some instances when you want to have precise control over unique elements for layout or formatting purposes (or both). In such instances, look to ID*s* instead of classes.

A *style ID* is a custom set of formatting specifications that can be applied only to one element in a web page. You can use IDs across a set of pages but only once per time within each page.

For example, suppose you have a title within the body of all your pages. Each page has only one title, but all the pages themselves include one instance of that title. Following is an example of a selector with an ID indicated, plus a property and a value:

```
p#title {font: 24pt Verdana, Geneva, Arial, sans-serif}
```

Notice that this selector includes a hash mark, or pound sign `(#)`, after `p`, followed by a descriptive ID name. When referencing a style ID in HTML code, simply specify the ID name in the `id` attribute of an element, like so:

```
<p id="title">Some Title Goes Here</p>
```

Everything between the opening and closing `<p>` tags will appear in 24-point Verdana text—but only once on any given page. You will often see style IDs used to define specific parts of a page for layout purposes, such as a header area, footer area, main body area, and so on. These types of areas in a page will appear only once per page, so using an ID rather than a class is the appropriate choice.

Internal Style Sheets and Inline Styles

In some situations, you might want to specify styles that will be used in only one web page, in which case you can enclose a style sheet between `<style>` and `</style>` tags and include it directly in an HTML document.

Style sheets used in this manner must appear in the `<head>` of an HTML document. No `<link />` tag is needed, and you cannot refer to that style sheet from any other page (unless you copy it into the beginning of that document, too). This kind of style sheet is known as an internal style sheet, as you learned earlier in the chapter.

Listing 3.3 shows an example of how you might specify an internal style sheet.

LISTING 3.3 A Web Page with an Internal Style Sheet

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN"
  "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">

<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en">
  <head>
    <title>Some Page</title>

    <style type="text/css">
      div.footer {
        font-size: 9pt;
        line-height: 12pt;
        text-align: center;
      }
    </style>
  </head>
  <body>
  ...
  <div class="footer">
  Copyright 2009 Acme Products, Inc.
  </div>
  </body>
</html>
```

NOTE

`<span>` and `</span>` are *dummy* tags that do nothing in and of themselves except specify a range of content to apply any `style` attributes that you add. The only difference between `<div>` and `<span>` is that `<div>` is a block element and therefore forces a line break, whereas `<span>` doesn't. Therefore, you should use `<span>` to modify the style of any portion of text that is to appear in the middle of a sentence or paragraph without any line break.

In the listing code, the `div.footer` style class is specified in an internal style sheet that appears in the head of the page. The style class is now available for use within the body of this page. And, in fact, it is used in the body of the page to style the copyright notice.

Internal style sheets are handy if you want to create a style rule that is used multiple times within a single page. However, in some instances you might need to apply a unique style to one particular element. This calls for an inline style rule, which allows you to specify a style for only a small part of a page, such as an individual element. For example, you can create and apply a style rule within a `<p>`, `<div>`, or `<span>` tag via the `style` attribute. This type of style is known as an *inline style* because it is specified right there in the middle of the HTML code.

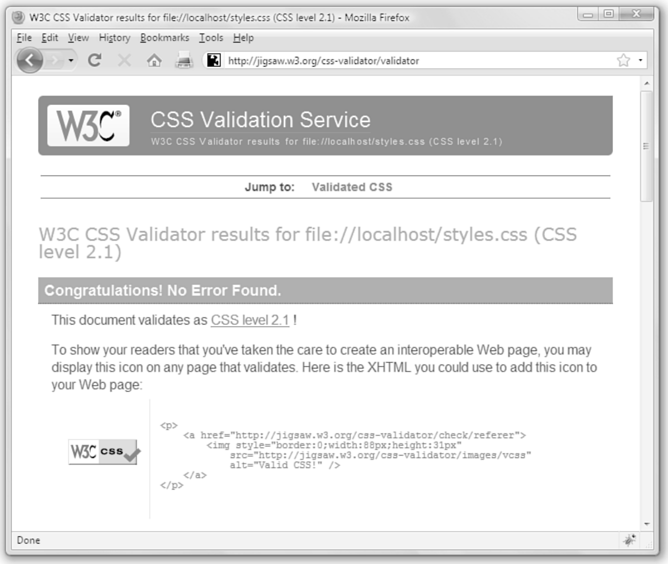
Here's how a sample `style` attribute might look:

```
<p style="color:green">
  This text is green, but <span style="color:red">this text is
  red.</span>
  Back to green again, but...
</p>
<p>
  ...now the green is over, and we're back to the default color
  for this page.
</p>
```

This code makes use of the `<span>` tag to show how to apply the `color` style property in an inline style rule. In fact, both the `<p>` tag and the `<span>` tag in this example use the `color` property as an inline style. What's important to understand is that the `color:red` style property overrides the `color:green` style property for the text appearing between the `<span>` and `</span>` tags. Then in the second paragraph, neither of the `color` styles applies because it is a completely new paragraph that adheres to the default color of the entire page.

Validate Your Style Sheets

Just as it is important to validate your HTML or XHTML markup, it is important to validate your style sheet. A specific validation tool for CSS can be found at http://jigsaw.w3.org/css-validator/. Just like the validation tool discussed in Chapter 2, "Understanding HTML and XHTML Connections," you can point the tool to a web address, upload a file, or paste content into the form field provided. The ultimate goal is a result such as that shown in Figure 3.3: valid!


W3C CSS Validator results for file://localhost/styles.css (CSS level 2.1) - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://jigsaw.w3.org/css-validator/validator
W3C
Done

CSS Validation Service
W3C CSS Validator results for file://localhost/styles.css (CSS level 2.1)

Jump to: Validated CSS

W3C CSS Validator results for file://localhost/styles.css (CSS level 2.1)

Congratulations! No Error Found.

This document validates as CSS level 2.1 !

To show your readers that you've taken the care to create an interoperable Web page, you may display this icon on any page that validates. Here is the XHTML you could use to add this icon to your Web page:

```
<p>
    <a href="http://jigsaw.w3.org/css-validator/check/referer">
        <img style="border:0;width:88px;height:31px"
            src="http://jigsaw.w3.org/css-validator/images/vcss"
            alt="Valid CSS!" />
    </a>
</p>
```

FIGURE 3.3
The W3C CSS Validator shows there are no errors in the style sheet contents of Listing 3.1.

Summary

In this chapter, you learned that a style sheet can control the appearance of many HTML pages at once. It can also give you extremely precise control over the typography, spacing, and positioning of HTML elements. You also discovered that by adding a `style` attribute to almost any HTML tag, you can control the style of any part of an HTML page without referring to a separate style sheet document.

You learned about three main approaches to including style sheets in your website: a separate style sheet file with the extension .css that is linked to in the `<head>` of your documents, a collection of style rules placed in the head of the document within the `<style>` tag, and as rules placed directly in an HTML tag via the `style` attribute.

Table 3.1 summarizes the tags discussed in this chapter. Refer to the CSS 2 style sheet standards at http://www.w3c.org for details on what options can be included after the `<style>` tag or the `style` attribute.

TABLE 3.1 HTML Tags and Attributes Covered in Chapter 3

Tag/Attributes	Function
`<style>…</style>`	Allows an internal style sheet to be included within a document. Used between `<head>` and `</head>`.
Attribute	
`type="contenttype"`	The Internet content type. (Always `"text/css"` for a CSS style sheet.)
`<link />`	Links to an external style sheet (or other document type). Used in the `<head>` section of the document.
Attribute	
`href="url"`	The address of the style sheet.
`type="contenttype"`	The Internet content type. (Always `"text/css"` for a CSS style sheet.)
`rel="stylesheet"`	The link type. (Always `"stylesheet"` for style sheets.)
`<span>…</span>`	Does nothing but provide a place to put `style` or other attributes. (Similar to `<div>…</div>` but does not cause a line break.)
Attribute	
`style="style"`	Includes inline style specifications. (Can be used in `<span>`, `<div>`, `<body>`, and most other HTML tags.)

Q&A

Q. Say I link a style sheet to my page that says all text should be blue, but there's a `<span style="font-color:red">` tag in the page somewhere. Will that text display as blue or will it display as red?

A. Red. Local inline styles always take precedence over external style sheets. Any style specifications you put between `<style>` and `</style>` tags at the top of a page will also take precedence over external style sheets (but not over inline styles later in the same page). This is the cascading effect of style sheets that I mentioned earlier in the chapter. You can think of cascading style effects as starting with an external style sheet, which is overridden by an internal style sheet, which is overridden by inline styles.

Q. Can I link more than one style sheet to a single page?

A. Sure. For example, you might have a sheet for formatting (text, fonts, colors, and so on) and another one for layout (margins, padding, alignment, and so on)—just include a `<link />` for both. Technically speaking, the CSS standard requires web browsers to give the user the option to choose between style sheets when multiple sheets are presented via multiple `<link />` tags. However, in practice, all major web browsers simply include every style sheet. The preferred technique for linking in multiple style sheets involves using the special `@import` command. Following is an example of importing multiple style sheets with `@import`:

```
@import url(styles1.css);
@import url(styles2.css);
```

Similar to the `<link />` tag, the `@import` command must be placed in the head of a web page. You learn more about this handy little command in Chapter 25, "Creating Print-Friendly Web Pages," when you learn how to create a style sheet specifically for printing web pages.

Workshop

The workshop contains quiz questions and exercises to help you solidify your understanding of the material covered. Try to answer all questions before looking at the "Answers" section that follows.

Quiz

1. What code would you use to create a style sheet to specify 30-point blue Arial headings and all other text in double-spaced, 10-point blue Times Roman (or the default browser font)?
2. If you saved the style sheet you made for Question 1 as corporate.css, how would you apply it to a web page named intro.html?
3. How many different ways are there to ensure style rules can be applied to your content?

Answers

1. Your style sheet would include the following:

```
h1 { font: 30pt blue Arial; }
body { font: 10pt blue; }
```

2. Put the following tag between the `<head>` and `</head>` tags of the `intro.html` document:

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

3. Three: externally, internally, and inline.

Exercises

- Using the style sheet you created earlier in this chapter, add some style classes to your style sheet. To see the fruits of your labor, apply those classes to the HTML page you created as well. Use classes with your `<h1>` and `<p>` tags to get the feel for things.
- Develop a standard style sheet for your website and link it into all your pages. (Use internal style sheets and/or inline styles for pages that need to deviate from it.) If you work for a corporation, chances are it has already developed font and style specifications for printed materials. Get a copy of those specifications and follow them for company web pages, too.
- Be sure to explore the official style sheet specs at http://www.w3.org/Style/CSS/ and try some of the more esoteric style properties not covered in this chapter.

INDEX

Symbols

/ (forward slashes), HTML and, 124
+ (plus signs) in JavaScript statements, 73
+= operator, 327
(;) semicolons, JavaScript statements, 72, 287

Numbers

140 cross-browser color names, 143-144

A

A Small Orange web hosting provider, 7
<a> tags (HTML), 170
  anchor locations, linking to, 126-129
  naming, 127
  web pages, identifying locations within, 126
absolute addresses, web pages and, 124-125
absolute links, web pages and, 124
absolute positioning, 213
  display property (CSS), 53
  positioning property, 214-217
accessibility, JavaScript best practices, 439
Adaptive Path, AJAX, 480
addEventListener function, 392
Adjust Hue/Lightness/Saturation tool (GIMP), 154
Adobe Photoshop, 148
AJAX, 71, 479. *See also* JavaScript
  AJAX Frameworks JavaScript library, 456
  debugging applications, 491-496
  examples of, 481
  frameworks, 482
  libraries, 482
    ajaxRequest function, 486
    ajaxResponse function, 486
    creating, 485-486
    quiz building example, 487-491
    using, 486
  limitations of, 482
  live search forms, creating, 496
    front end, 495
    HTML file example, 493
    HTML forms, 492
    JavaScript front end, 494-495
    PHP back end, 493-494
  quiz building example
    HTML files, 487-488
    JavaScript files, 489-490
    testing, 490-491
    XML files, 488-489
  requests
    awaiting responses, 484
    back end, 480, 493-494
    creating, 483
    front end, 480, 494-495
    interpreting response data, 484
    JavaScript client, 480
    sending, 484
    server-side scripts, 480, 493-495
  XML and, 481
  XMLHttpRequest
    awaiting responses to requests, 484
    creating requests, 483
    interpretting request response data, 484
    opening URLs, 483
    sending requests, 484
alert() function, event handlers and, 295
alerts (dialog boxes), 417-418

aligning
- align property (CSS), 191, 203-204
- images
  - horizontal alignment, 165-166
  - vertical alignment, 167-168
- text
  - attributes, 92-93
  - block-level elements, 93-95
  - paragraphs, 93-95
  - tables, 113-115
  - text-align property (CSS), 56
  - text-align style rule (CSS), 93-95
  - text-decoration property (CSS), 56

AllTheWeb, listing websites with, 556
AltaVista, listing websites with, 556
alternate text, 163-164
Amazon.com, 481, 543
analogous color schemes, 143
anchor objects (DOM), 303
anchor tags
- naming, 127
- web pages, identifying locations within, 126
- web pages,linking to anchor locations, 126-129

anchors, documents, 303
animated graphics, 160-161
API functions (Greasemonkey), 471
Apple computers
- HTML file creation, 27
- Safari, 9, 465

arguments (JavaScript functions), 348
Arial font (text), 86
arithmetic mean, 363
arrays (JavaScript)
- declaring, 337
- elements of, accessing, 338
- frames arrays, 426
- length of, 338
- numeric arrays, 337, 340-342
- string arrays, 338
  - sorting, 340-342
  - splitting, 339

ASCII text, 26, 34, 82, 397
.asp file extensions, 27
ASP scripting language, 274
attributes, 92-93, 123
auto image loading, web browsers, 20

B

<b> tags (HTML), 81-83
back end (AJAX requests), 480, 493-494
Back/Forward buttons, adding to documents, 304-305
backgrounds
- background-position style property, 172
- background-repeat style property, 172
- colors,
  - background-color property (CSS), 55
  - background-color style property, 171
  - CSS and 146-148
- images, 171-172
- tiled backgrounds, 159-160

bad website examples, 144
bandwidth, web hosting providers, 6
banners, creating, 156
Barry's Clipart Server website, 149
BAWSI.org, website organization, 545
behavior, Javascripting scripting best practices, 434
Berners-Lee, Sir Tim, 1
<big> tags (HTML), 83
big text, 83
Bing, listing websites with, 556
block value (CSS display property), 53
blogs, publishing to web content, 19
<body> tags, 27, 31-33
boilerplate code, web page creation, 28-30
boldface text, 82-83
Boodman, Aaron, 464
Boolean operators. *See* logical operators (JavaScript)
Boolean values (JavaScript), 330
borders
- CSS box model, 210
  - border property, 54-55
  - border-bottom property, 54-55
  - border-color property, 54-55
  - border-left property, 54-55
  - border-right property, 54-55
  - border-style property, 54-55
  - border-top property, 54-55
  - border-width property, 54
- frame borders, modifying, 424-425
- lists, styling, 227-228
- tables
  - CSS and color, 146-148
  - sizing, 107
  - spacing, 116

box model (CSS), 209, 212
- borders, 210
- content, 210
- lists and, 226-229
- margins, 210
- padding, 210
- sizing elements, 210-212

<br /> tags, 32-33, 85
break statements (JavaScript), 381
browsers (web)
- 140 cross-browser color names, 143-144
- cross-browser scripting

debugging browsers, 444
feature sensing, 437, 443-444
CSS, support for, 51
debugging, 444
development of, 2
dialog boxes, displaying, 417-418
distributing, 18
Firefox, 9, 464
frames, 418-420
adding individual frames, 423
creating frameset documents, 421-423
frames array, 426
inline frames, 426-429
JavaScript objects and, 425
linking windows to frames, 423-424
modifying borders, 424-425
nested framesets, 425
Google Chrome, 9, 465
history, accessing, 2, 303-305
HTML development, 2
images, auto image loading, 20
information, reading via JavaScript
dishonest browsers, 442-443
displaying information, 440-441
Internet Explorer, 9
event properties, 393
Trixie, 465-468
links, opening in new browser windows, 134
lists, displaying in, 97
margins and, 226-229
non-Internet Explorer event properties, 393-394
non-JavaScript browsers
avoiding errors, 446-449
detecting, 445-446
JavaScript optionality, 446
<noscript> tag, 445-446
<script> tag, 457
non-viewable window areas, 254
Opera, 9, 465
padding and, 226-228
pop-up windows, 134
popularity of, 26
Safari, 9
search engines, 445
sensing. ***See*** feature sensing
servers, basic browser server interaction, 3-5
text, adjusting font size settings, 20
websites
comparing, 26
testing, 8-9, 26
windows
creating, 410-411
linking frames to windows, 423-424
moving, 413-414
opening/closing, 411-412
resizing, 413-414
timeouts, 414-416
built-in objects (JavaScript), 289, 352, 356-359
date object
converting date formats, 366
creating, 364
local time values, 365-366
reading date values, 365
setting date values, 364-365
time zones, 365
definitions, extending, 359
math object, 361
generating random numbers, 360-363
rounding decimal numbers, 360
truncating decimal numbers, 360
buttons, creating, 156
buying domain names, 6

C

case statements (JavaScript), 376
case-sensitivity, JavaScript syntax, 292
CD-ROM, transferring photos to, 150
cells (tables)
creating, 107
sizing, 111-113
Champeon, Steve, 435
check boxes (forms), 521-523
child objects (JavaScript), 353
child tags. *See* nested tags (HTML)
children (DOM), 308
Chrome (Google), 9
error messages, displaying, 77
Greasemonkey and, 465
clarity, coding for, 548
Classic FTP FTP client
server connections, 13
website connections, 11-12
clear property (CSS), text flow and, 220
client-side scripting, 274
clip art, 149
closing tags (HTML), 30
closing/opening browser windows, 411-412
cm value (CSS height/width properties), 53
color
140 cross-browser color names, 143-144
analogous color schemes, 143
background color
background-color style property, 171
CSS and, 146-148
best practices, 141-143
border color (tables), CSS and, 146-148
color property (CSS), 56

- Color Scheme Generator website, 143
- color style rule (CSS), fonts and, 86-87
- color theory, 142
- color wheel, 142
- Colorblind Web Page Filter tool, 148
- complementary color schemes, 143
- graphics, adjusting color in, 154
- hexadecimal color codes, 144-146
- links and, 144
- lists, styling, 227-228
- monitors and, 144
- tables and, 115
- text
  - CSS and, 146-148
  - formatting in style sheets, 46
- triadic color schemes, 143
- using, 141-143
- W3C color standards, 143

columns, fixed/liquid hybrid layouts
- defining, 260-262
- height, setting, 264-268

combining
- string object values, 332-334
- tasks. ***See*** functions (JavaScript)

comments
- HTML, JavaScript and, 276
- JavaScript, 293
- websites, maintaining code via, 546-547

complementary color schemes, 143

compression
- graphics, 150
- JPEG, 155

conditional expressions, 317, 370-373

conditional operators (JavaScript), 370

conditional statements (JavaScript), 289

conditions (for loops), 377

confirmations (dialog boxes), 417-418

constructor functions (JavaScript), 354

containers, 307

content (web)
- creating, 2-3
- CSS box model, 210
- delivering, 3-5
- Javascripting scripting best practices, 434
- publishing
  - locally, 18-19
  - to blogs, 19
- viewing locally, 5
- web hosting providers, selecting, 6-8, 26

continue statements (JavaScript), 382

continuing loops (JavaScript), 382

control panels, selecting web hosting providers, 7-8

converting
- data formats (JavaScript date objects), 366
- data types (JavaScript), 331
- string case (JavaScript), 334

copyrights, graphics and, 149

counters (JavaScript), for loops, 377

Creammonkey add-on, Greasemonkey support in Safari, 465

Creative Commons licenses, 149

cropping images, 151-152

cross-browser scripting
- debugging browsers, 444
- event handlers, JavaScript and, 437
- feature sensing, 437, 443-444

CSS
- align property, 191, 203-204
- box model, 209
  - borders, 210
  - content, 210
  - lists and, 226-229
  - margins, 210
  - padding, 210
  - sizing elements, 210-212
- cascading component of, 46
- clear property, text flow and, 220
- color, specifying via CSS, 146-148
- CSS 2, 47
- CSS Zen Garden, 191-192, 253
- CSS1, 47
- definition of, 45-46
- <div> tags, 46
- DOCTYPE declarations, 212
- float property, 191, 204-207, 220
- formatting properties, 53
  - background-color property, 55
  - border property, 54-55
  - border-bottom property, 54-55
  - border-color property, 54-55
  - border-left property, 54-55
  - border-right property, 54-55
  - border-style property, 54-55
  - border-top property, 54-55
  - border-width property, 54
  - color property, 56
  - font property, 56
  - font-family property, 55
  - font-size property, 55
  - font-style property, 56
  - font-weight property, 56
  - line-height property, 56
  - padding property, 56
  - text-align property, 55-56
  - text-decoration property, 56
  - text-indent property, 55
- image maps, creating, 231-235
- inline styles, 60-61
- layouts
  - display property, 52-53
  - fixed layouts, 254

fixed/liquid hybrid layouts, 258-268
height property, 53
liquid layouts, 253- 257
width property, 53
<link /> tag, 50
links, styling, 134-138
lists
horizontal navigation, 245-248
list-style-image property, 226
list-style-position property, 226, 229-231
list-style-type property, 226
navigation lists, 236-248
vertical navigation, 236-244
margin property, 191-199
media-specific style sheets, 503-504
overflow property, text flow and, 220
padding property, 191, 199-202
positioning
absolute positioning, 213-217
overlapping elements, 213, 217-219
positioning property, 213
relative positioning, 213-215
z-index property, 217-219
print pages, desiging style sheets for, 505-508
properties, hyphenating, 312
reference guide online resource, 47
selectors, 57
style classes, 57-58
style IDs, 59
style properties, 57
style rules, 46, 50
color style rule, 86-87
font weight style rule, 83
font-family style rule, 86
font-size style rule, 86-87
list-style-type style rule, 99-101
multiple style properties in, 58
text-align style rule, 93-95
viewing, 51
style sheets
creating, 47-52
definition of, 45
external style sheets, 46-51
formatting properties, 53-56
formatting text color, 46
inline styles and, 61
internal style sheets, 46, 59-60
italic text, 56
layout properties, 52-53
line-through text, 56
linking to HTML documents, 50
sizing text, 50
strikethrough text, 56
underline text, 56
tags, 50
elements and, 46
selectors, 57
validating, 61
web browsers, CSS support, 51
z-index property, 217-219
current line, text flow and, 220
custom HTML tags, creating, 58
custom objects (JavaScript), 289
customer service, web hosting providers, 6
Cyberduck FTP client, 11

D

DailyRazor web hosting provider, 7
dashed value (CSS border-style properties), 54
data types (JavaScript), 330-331
date object (JavaScript)
creating, 364
date formats, converting, 366
date values, reading, 365
date values, setting, 364-365
local time values, 365-366
time zones, 365
Date objects (JavaScript), time display example, 72
debugging
AJAX applications, 491-496
browsers, 444
user scripts, 474-476
decimal numbers
rounding, 360
truncating, 360
declaring variables (JavaScript), 326
decrementing/incrementing variables (JavaScript), 327
definition lists, 96, 226
design patterns, JavaScript best practices, 439
dialog boxes, displaying, 417-418
Digg, 481
directories (web content), 123-124
display property (CSS), 52-53
displaying
document information, 301-302
error messages, 77
time (JavaScript example)
adding scripts to web pages, 73-74
creating output, 73
Date objects, 72
error handling, 76-78
modifying scripts, 74-76
<script> tags, 71-72
statements, 72
testing scripts, 74
variables, 72

DisplayKey function, keyboard events, 398-399
distributing web browsers, 18
dithering, 158
<div> tags (CSS), 46, 170
do, while loops (JavaScript), 380
DOCTYPE declarations, 212
document objects (DOM), 300
- anchor objects, 303
- document information, displaying, 301-302
- link objects, 303, 306
- methods of, 302, 310
- properties of, 301
- text, writing within documents, 302

document roots, 13-16
document.write statements (JavaScript), 68, 73
documenting code, 546-547
documents
- anchors, 303
- Back/Forward buttons, adding, 304-305
- information, displaying in, 301-302
- links, 303, 306
- text, writing within documents, 302

Dojo JavaScript library, 456
DOM, 280-281
- children, 308
- layers
  - controlling positioning via JavaScript, 311-315
  - creating, 311
  - moveable layers, 311-315
- nodes, 307, 309-310
- objects, 352
  - anchor objects, 303
  - document objects, 300-303, 306
  - hiding/showing, 316-317
  - history objects, 303-305
  - link objects, 303, 306
  - location objects, 305-306
  - methods, 299
  - naming, 299
  - parents, 308
  - properties, 299
  - referencing, 299
  - showing/hiding, 316-317
  - siblings, 308
  - window objects, 300, 409-418
- parents, 308
- siblings, 308
- structure of, 306-307
- text, web pages
  - adding to, 319-321
  - modifying in, 317-318

DOM objects (JavaScript), 289
domain names, purchasing, 6
dotted value (CSS border-style properties), 54
double value (CSS border-style properties), 54-55
downloading JavaScript libraries, 457
dynamic websites
- client-side scripting, 274
- DOM, 280-281
- images, changing via user interaction, 281-283
- server-side scripting, 274
- text, printing via JavaScript, 275
- web content, displaying random content via JavaScript, 276-280

E

editors, blogs, 19
effects (JavaScript), 70
elements, definition of, 46
else keyword (JavaScript), testing multiple conditions, 372-373
- HTML files, 374
- JavaScript files, 374-375

<em> tags (HTML), 83
email
- addresses
  - email address encoders, 133
  - linking to, 132-133
- form data, sending via, 530-531

<embed> tags (XHTML), 183
embedded multimedia files, 180-183
emphasized text. *See* italic text
empty tags (HTML), 30, 33
error handling, 448
- JavaScript scripts, 76-78
- non-JavaScript browsers, 446-449

error messages, displaying, 77
escaping loops (JavaScript), 381
ESPN.com, 254, 540-542
European languages, formatting text for, 89-91
event handlers, 389
- creating, 390-391
- defining, 390-391
- event objects, 392
- functions and, 484
- JavaScript and, 68-70, 290-291, 435
  - alert() function, 295
  - best practices, 294-295
  - cross-browser scripting, 437
  - W3C event model, 436-437
- keyboard events, 397-399
- mouse events
  - mousestatus function, 396
  - onClick, 394-397, 400-404
  - onDblClick, 395
  - onMouseDown, 395-397
  - onMouseOut, 394
  - onMouseOver, 394

onMouseUp, 395-397
rollover images, 394
multiple event handlers, 391-392
naming, 390
onLoad events, 399
onUnload events, 400
parentheses and, 484
quotation marks and, 390
syntax of, 390
Yahoo! UI Library, 437
event objects
event handlers and, 392
Internet Explorer event properties, 393
non-Internet Explorer event properties, 393-394
events (JavaScript), 69
expressions (JavaScript), 328
extending built-in object definitions, 359
external scripts (JavaScript), 69
external style sheets (CSS), 46-51

F

feature sensing, 437, 443-444
Fetch FTP client, 11
finding
substrings (JavaScript), 336-337
user scripts, 466
Firebug, validating web content, 37
Firefox, 9
error messages, displaying, 77
Greasemonkey, installing, 464
FireFTP FTP client, 10-11
FireZilla FTP client, 11
fixed layouts, 254
fixed/liquid hybrid layouts
columns
defining in, 260-262
setting height, 264-268
minimum width, setting, 262-263
structure of, 258-259
Flickr, 161-163
float property (CSS), 191, 204-207, 220
float style property, 166
flow control (JavaScript), 369
break statements, 381
case statements, 376
continue statements, 382
do, while loops, 380
for loops, 377-378
for, in loops, 382-384
if statements, 369
conditional expressions, 370-373
conditional operators, 370
else keyword, 372-375
logical operators, 371
testing multiple conditions, 373-375
infinite loops, 380-381
loops
break statements, 381
continue statements, 382
escaping, 381
switch statements, using multiple conditions, 375-376
while loops, 379-380
flowing text, 220
fluid layouts. *See* liquid layouts
folders (web content), 123-125
<font> tags (HTML), 81, 86
fonts (text)
Arial font, 86
CSS
color style rule, 86-87
font property, 56
font-family property, 55
font-family style rule, 86
font-size property, 55
font-size style rule, 86-87
font-style property, 56
font-weight property, 56
font weight style rule, 83
foreign languages, 89-91
HTML, customizing in, 85-89
resumes, creating, 87-89
sans-serif font, 86
sizing, style sheets, 50
special characters, 89-91
Times Roman font, 86
typerwriter font. ***See*** monospaced text
web browsers, adjusting font size settings, 20
for loops (JavaScript), 377-378
for statements (JavaScript), 290
for, in loops (JavaScript), 382-384
foreign languages, formatting text for, 89-91
formatting
CSS, 53
background-color property, 55
border property, 54-55
border-bottom property, 54-55
border-color property, 54-55
border-left property, 54-55
border-right property, 54-55
border-style property, 54-55
border-top property, 54-55
border-width property, 54
color property, 56
font property, 56
font-family property, 55
font-size property, 55
font-style property, 56
font-weight property, 56
line-height property, 56
padding property, 56
text-align property, 55-56
text-decoration property, 56
text-indent property, 55

style sheets, 46, 50
text, 82
aligning text, 92-95
big text, 83
boldface text, 82-83
color, style sheets, 46
customizing fonts in HTML, 85-89
definition lists, 96, 226
foreign languages, 89-91
italic text, 82-83
monospaced text, 84-85
multitiered lists, 100-101
nested lists, 97-100, 226
older HTML tags, 81
ordered lists, 95-96, 226
outlines, 98-100
resumes, creating, 87-89
sizing, style sheets, 50
small text, 83
special characters, 89-91
subscript text, 83
superscript text, 83
unordered lists, 95-96, 226
web page creation, 33-35

forms, 513
check boxes, 521-523
creating, 514-519
data
displaying in pop-up windows, 528-530
naming, 519-520
sending via email, 530-531
submitting, 527
elements, accessing via JavaScript, 528
hidden data, 520
JavaScript events, 527-528
pull-down pick lists, 524-525
radio buttons, 523-524
scrolling lists, 524-525
selection lists, 524-525
text areas, 526
text fields, 526
text input, accepting, 519
user input, accepting, 519
validating, 70, 531-532

forward slashes (/), HTML and, 124

Forward/Back buttons, adding to documents, 304-305

frames, 418-420
animated graphics, 161
borders, modifying, 424-425
frames array, 426
frameset documents, creating, 421-423
individual frames, adding, 423
inline frames, 426-429
JavaScript objects and, 425
nested framesets, 425
windows, linking to frames, 423-424

front end (AJAX requests), 480, 494-495

FTP (File Transfer Protocol), 10, 29
Classic FTP client
server connections, 13
website connections, 11-12
Cyberduck, 11
Fetch, 11
FireFTP, 10-11
FireZilla, 11
FTP clients
selecting, 10-11
using, 11-13

Fuchs, Thomas, 455

functions
API functions (Greasemonkey), 471
JavaScript functions, 68, 288, 347
alert() function, 265
arguments, 348
calling, 349-350
constructor functions, 354
defining, 347-349
function call statements, 288
math functions, 361-363
naming, 292
parameters, 288, 348
returning values, 351-352

G

Garrett, Jesse James, 480

get methods (JavaScript objects), 365

Gickr, animated graphics, 161

GIFs, 157-158
animated graphics, 160-161
tiled backgrounds, 159-160
transparent images, 159

GIMP, 149
Adjust Hue/Lightness/Saturation tool, 154
banners, creating, 156
buttons, creating, 156
images
adjusting color, 154
cropping, 151-152
JPEG compression, 155
resizing, 153
Red Eye Removal, 154

Git website version control, 550

global variables (JavaScript), 326

GMT (Greenwich Mean Time), JavaScript time displaying example, 71

Google
Chrome, 9
displaying error messages, 77
Greasemonkey, 465
Gmail, 446, 481
Images, 161
listing websites with, 555

- Picasa, 149
- searches, 4

graceful degradation, web design and, 434

graphics

- Adobe Photoshop, 148
- aligning
  - horizontal alignment, 165-166
  - vertical alignment, 167-168
- animated graphics, 160-161
- backgrounds
  - background-image style property, 172
  - graphics, 171-172
  - tiled backgrounds, 159-160
- banners, creating, 156
- buttons, creating, 156
- CD-ROM, transferring graphics to, 150
- clip art, 149
- color, adjusting, 154
- compression, 150
- copyrights and, 149
- Creative Commons licenses, 149
- cropping, 151-152
- dithering, 158
- file sizes, 150
- Flickr, 161-163
- GIFs, 157-158
  - animated graphics, 160-161
  - tiled backgrounds, 159-160
  - transparent images, 159
- GIMP, 149
  - adjusting image color, 154
  - banners, 156
  - buttons, 156
  - cropping images, 151-152
  - JPEG compression, 155
  - resizing images, 153
- Google Images, 161
- Google Picasa, 149
- height/width, specifying, 165
- image maps, 173-178
- JPEGs
  - compression, 155
  - tiled backgrounds, 159-160
- links, turning graphics into, 169-171
- Picnik, 149
- PNGs, 158-159
- Red Eye Removal, 154
- republishing, 163
- resizing, 153
- resolution, 150
- rollover images, 394
- software, choosing, 149
- text descriptions, 163-164
- transparent graphics, 158
- uses of, 150
- web pages
  - grabbing graphics from, 149
  - placing graphics on web pages, 161-163

Greasemonkey, 463

- API functions, 471
- browser support, 465
- installing, 464
- metadata, 470
- turning on/off, 468
- user scripts
  - creating, 468, 475
  - debugging user scripts, 474-476
  - describing, 469-470
  - finding, 466
  - installing, 466
  - managing, 466-467
  - metadata and, 469-470
  - site-specific user scripts, 472-473
  - testing, 468-471
  - text area macro user scripts, 475-476

groove value (CSS border-style properties), 54

grouping statements (JavaScript). *See* loops

H

<head> tags, 27, 31-33, 68

heading tags (HTML), 34-36

headings (tables), creating, 108

height

- CSS box model, adjusting height in, 210-212
- fixed/liquid hybrid layouts, setting column height in, 264-268
- height property (CSS), 53
- images, specifying height in, 165

Hello World HTML file, creating, 9-10

help

- CSS, reference guide online resource, 47
- web hosting providers, selecting, 6

helper applications, 180

hexadecimal color codes, 144-146

hidden form data, 520

hiding/showing DOM objects, 316-317

history objects (DOM), 303-305

horizontal image alignment, 165-166

horizontal navigation, 245-248

horizontal rule tags (HTML), 33

<hr /> tags, 33

HTML

- AJAX
  - live search forms, 492
  - quiz building example, 487-488
- attributes, 92-93, 123
- comments, JavaScript and, 276
- containers, 307

CSS
  CSS box model, 209-212
  external style sheets, 51
  linking style sheets to HTML documents, 50
development of, 1-2, 38
event handlers
  JavaScript, 435-437
  Yahoo! UI Library, 437
file creation
  boilerplate code, 28-30
  comparing web page HTML codes, 37
  formatting text, 33-35
  html file extensions, 27
  HTML tags, 27-33
  HTML-compatible word processors, 27
  indenting text, 35
  line breaks, 32-33
  naming files with HTML tags, 27
  Notepad, 26
  organizing content via headings, 34-36
  overview of, 29
  paragraphs, 32-33
  saving files with HTML tags, 27
  templates, 31
  TextEdit, 27
  Word, 27
  WYSIWYG editors, 27
files
  creating, 9-10
  index pages, 16-18
  managing, 14-16
  organizing, 14-16
  transfering, 10-13, 29
  viewing, 29
forms, 513
  accessing elements via JavaScript, 528
  check boxes, 521-523
  creating, 514-519
  displaying data in pop-up windows, 528-530
  hidden data, 520
  JavaScript events, 527-528
  naming form data, 519-520
  pull-down pick lists, 524-525
  radio buttons, 523-524
  scrolling lists, 524-525
  selection lists, 524-525
  sending data via email, 530-531
  submitting form data, 527
  text areas, 526
  text fields, 526
  text input, 519
  user input, 519
  validating, 531-532
forward slashes (/), 124
frames, 418-420
  adding individual frames, 423
  creating frameset documents, 421-423
  frames array, 426
  JavaScript objects and, 425
  linking windows to frames, 423-424
  modifying borders, 424-425
  nested framesets, 425
FTP
  selecting FTP clients, 10-11
  using FTP clients, 11-13
future of, 28
graphics, image maps, 176-178
<head> tags, functions and, 68
Hello World sample file, creating, 9-10
history of, 1-2
html file extensions, 27
HTML-compatible word processors, creating HTML files, 27
HTML4, empty tags, 33
HTML5, 28, 40
images, placing on web pages, 162-163
JavaScript and, 274
  adding libraries to HTML documents, 457
  adding scripts to HTML documents, 73-74
  changing images via user interaction, 281-283
  displaying random web content via, 276-280
  DOM, 280-281
  HTML comments, 276
  printing text via, 275
JavaScript's advantages over, 299
.js files, linking to, 69
layouts
  fixed layouts, 254
  fixed/liquid hybrid layouts, 258-268
  liquid layouts, 253- 257
links
  absolute links, 124
  anchor tags, 126-129
  images as, 134
  linking between web content, 129-131
  linking to email addresses, 132-133
  linking to external web content, 131-132
  opening links in new browser windows, 134
  relative-root links, 124
  styling via CSS, 134-138
lists
  definition lists, 96, 226
  multitiered lists, 100-101
  nested lists, 97-100, 226
  ordered lists, 95-96, 226

- outlines, creating via lists, 98-100
- unordered lists, 95-96, 226

“marked up” text, 2
multiple conditions, testing, 374
Notepad, creating HTML files, 26
outlines, creating, 98-100
pseudoclasses, 134-138
tables
- aligning within, 113-115
- cells, creating, 107
- cells, sizing, 111-113
- color in, 115
- creating, 107-110
- headings, creating, 108
- images in, 116
- page layout via, 116-117
- rows, creating, 107
- sizing, 110-113
- sizing borders, 107
- spacing borders, 116
- spanning within, 115
- uses for, 107

tags, 5, 28
- <a> tags, 126-129, 170
- attributes, 92-93, 123
- </b> tags, 81-83
- <big> tags, 83
- <body> tag, 27, 31-33
- <br /> tag, 32-33, 85
- <b> tags, 81-83
- closing tags, 30
- creating custom tags, 58
- <div> tags, 170
- <em> tags, 83
- empty tags, 30, 33
- <em> tags, 83
- event handlers, 68, 291
- <font> tags, 81, 86
- formatting and older HTML tags, 81
- <head> tag, 27, 31-33
- heading tags, 34-36
- horizontal rule tag, 33
- <hr /> tag, 33
- <html> tag, 27, 31-33
- <i> tags, 81-83
- <img> tags, 162-163
- line breaks, 32-33
- naming files with, 27
- nested tags, 97
- opening tags, 30
- <p> tag, 31-33
- paragraphs, 32-33
- <pre> tags, 84-85
- pseudoclasses, 134-138
- saving files with, 27
- <small> tags, 83
- <strike> tags, 84
- <strong> tags, 83
- <sub> tags, 83
- <sup> tags, 83
- <table> tags, 107
- <td> tags, 107
- <th> tags, 108
- <title> tags, 27, 31-33, 36
- <tr> tags, 107
- <tt> tags, 84-85
- <u> tags, 84
- xml : lang attribute, 31
- xmlns attribute, 31

text, formatting
- aligning text, 92-95
- big text, 83
- boldface text, 82-83
- customizing fonts, 85-89
- definition lists, 96, 226
- foreign languages, 89-91
- italic text, 82-83
- monospaced text, 84-85
- multitiered lists, 100-101
- nested lists, 97-100, 226
- older HTML tags, 81
- ordered lists, 95-96, 226
- outlines, 98-100
- resumes, creating, 87-89
- small text, 83
- special characters, 89-91
- subscript text, 83
- superscript text, 83
- unordered lists, 95-96, 226
- whitespace, 32

TextEdit, creating HTML files, 27
validating, 36-37
web content
- absolute addresses, 124-125
- absolute links, 124
- anchor tags, 126-129
- creating, 2-3
- delivering, 3-5
- directories, 123-124
- folders, 123-125
- images as links, 134
- linking between, 129-131
- linking to email addresses, 132-133
- linking to external web content, 131-132
- opening links in new browser windows, 134
- organizing, 123-124
- publishing locally, 18-19
- publishing to blogs, 19
- relative addresses, 124-125
- relative-root addresses, 124
- relative-root links, 124
- selecting web hosting providers, 6-8, 26
- styling links via CSS, 134-138
- website architectures, creating, 125

whitespace, 32
Word, creating HTML files, 27

WYSIWYG editors, creating HTML files, 27
XHTML, development of, 40
XML, development of, 39-40
HTML Validator, 37
hyperlinks. *See* links
hyphenating CSS properties, 312

I

<i> tags (HTML), 81-83
if statements (JavaScript), 369
conditional expressions, 317, 370-373
conditional operators, 370
else keyword, 372-375
logical operators, 371
multiple conditions, testing, 373
HTML files, 374
JavaScript files, 374-375
<iframe>. *See* inline frames
image maps, creating
creating, web resources, 231
CSS, 231-235
tutorials, 231
images
aligning
horizontal alignment, 165-166
vertical alignment, 167-168
animated images, 160-161
auto image loading, web browsers, 20
background images, 171-172
backgrounds
background images, 171-172
tiled backgrounds, 159-160
banners, creating, 156
buttons, creating, 156
CD-ROM, transferring images to, 150
clip art, 149
color, adjusting, 154
compression, 150
copyrights and, 149
Creative Commons licenses, 149
cropping, 151-152
dithering, 158
dynamic websites, changing images via user interaction, 281-283
file sizes, 150
Flickr, 161-163
GIFs, 157-158
animated images, 160-161
tiled backgrounds, 159-160
transparent images, 159
Google Images, 161
Google Picasa, 149
height/width, specifying, 165
image maps, 173-178
JPEGs
compression, 155
tiled backgrounds, 159-160
links, images as, 134, 169-171
Picnik, 149
PNGs, 158-159
Red Eye Removal, 154
republishing, 163
resizing, 153
resolution, 150
rollover images, 394
tables and, 116
text descriptions, 163-164
transparent images, 158
uses of, 150
web pages
grabbing images from, 149
placing images on web pages, 161-163
Images (Google), 161
<img> tags (HTML), 162-163
in value (CSS height/width properties), 53
increment expressions (for loops), 377
incrementing/decrementing variables (JavaScript), 327
indenting
code, 548
text, web page creation, 35
index pages, HTML file management, 16-18
indexes (JavaScript), for loops, 377
infinite loops (JavaScript), 380-381
initial expressions (for loops), 377
inline frames, 426-429
inline styles (CSS), 60-61
inline value (CSS display property), 53
inset value (CSS border-style properties), 54
installing
Greasemonkey, 464
user scripts, 466
internal style sheets (CSS), 46, 59-61
Internet, ISP selection, 25-26
Internet Explorer, 9
DOCTYPE declarations, 212
error messages, displaying, 77
event properties, 393
Internet Explorer 6.0, JavaScript testing, 74
Trixie, 465
installing user scripts, 466
managing user scripts, 467
turning on/off, 468
interpreted languages, 66
ISP (Internet service providers), selecting, 25-26
italic text, 56, 82-83

J

JavaScript, 274. *See also* AJAX
- accessibility, 439
- AJAX, 71
  - live search forms, creating, 494-496
  - quiz building example, 489-490
  - requests, 480, 494-495
- arrays
  - accessing elements of, 338
  - declaring, 337
  - length of, 338
  - numeric arrays, 337, 340-342
  - string arrays, 338-340
- best practices, 293-295, 433
  - accessibility, 439
  - behavior, 434
  - comments, 438
  - content, 434
  - design patterns, 439
  - documenting code, 438
  - event handlers, 435-437
  - presentation, 434
  - “progressive enhancement”, 435
  - usability, 438-439
  - web standards and browser specificity, 437-438
- break statements, 381
- browser specificity, web standards, 437-438
- browsers, reading information on, 440-443
- capabilities of, 66, 70
- case statements, 376
- comments, 293, 438
- conditional expressions, 370-373
- conditional operators, 370
- continue statements, 382
- cross-browser scripting
  - debugging browsers, 444
  - feature sensing, 437, 443-444
- data types, 330-331
- Date objects, time display example, 72
- design patterns, 439
- development of, 66
- do, while loops, 380
- document.write statements, 68, 73
- documenting code, 438
- DOM, 280-281
  - adding text to web pages, 319-321
  - anchor objects, 303
  - children, 308
  - document objects, 300-303, 306
  - hiding/showing objects, 316-317
  - history objects, 303-305
  - layers, 311-315
  - link objects, 303, 306
  - location objects, 305-306
  - modifying text in web pages, 317-318
  - naming objects, 299
  - nodes, 307-310
  - object methods, 299
  - object properties, 299
  - objects, 352
  - parents, 308
  - referencing objects, 299
  - showing/hiding objects, 316-317
  - siblings, 308
  - structure of, 306-307
  - window objects, 300, 409-418
- else keyword, 372-375
- error handling, 76-78, 446-449
- event handlers, 68-70, 290-291, 389, 435
  - alert() function, 295
  - best practices, 294-295
  - creating, 390-391
  - cross-browser scripting, 437
  - defining, 390-391
  - event objects, 392
  - keyboard events, 397-399
  - mouse events, 394-397, 400-404
  - multiple event handlers, 391-392
  - naming, 390
  - onLoad events, 399
  - onUnload events, 400
  - quotation marks and, 390
  - syntax of, 390
  - W3C event model, 436-437
- events, 69
- expressions, 328
- external scripts, 69
- flow control
  - break statements, 381
  - case statements, 376
  - continue statements, 382
  - continuing loops, 382
  - do, while loops, 380
  - escaping loops, 381
  - for loops, 377-378
  - for, in loops, 382-384
  - if statements, 369-375
  - infinite loops, 380-381
  - switch statements, 375-376
  - while loops, 379-380
- for loops, 377-378
- for, in loops, 382-384
- form elements, accessing, 528
- form events, 527-528
- forms, validating, 70
- function call statements, 288
- functions, 68, 288
  - alert() function, 295
  - arguments, 348
  - calling, 349-350
  - constructor functions, 354
  - defining, 347-349
  - math functions, 361-363

naming, 292
parameters, 288, 348
returning values, 351-352
Gmail and, 446
Greasemonkey, 463
API functions, 471
browser support, 465
creating user scripts, 468, 475
debugging user scripts, 474-476
describing user scripts, 469-470
finding user scripts, 466
installing, 464
installing user scripts, 466
managing user scripts, 466-467
metadata and user scripts, 469-470
site-specific user scripts, 472-473
testing user scripts, 468-471
text area macro user scripts, 475-476
turning on/off, 468
history of, 66
HTML, 274
comments, 276
JavaScript's advantages over, 299
if statements, 369
conditional expressions, 370-373
conditional operators, 370-371
else keyword, 372-375
testing multiple conditions, 373-375
images, changing via user interaction, 281-283
infinite loops, 380-381
.js files, 69
JSON, 481
layers, controlling positioning of, 311-315
libraries
adding effects via, 457
adding to HTML documents, 457
AJAX Frameworks, 456
building scripts, 458-459
Dojo, 456
downloading, 457
jQuery, 454-455
Mochikit, 456
MooTools, 456
Prototype, 453-454
Script.aculo.us, 455-459
using effects via, 457
Yahoo! UI Library, 456
logical operators, 371
loops
break statements, 381
continue statements, 382
escaping, 381
modifying scripts, 74-76
modulo operators, 362
multiple conditions, testing, 374-375
non-JavaScript browsers
avoiding errors, 446-449
detecting, 445-446
JavaScript optionality, 446
<noscript> tag, 445-446
<script> tag, 457
objects, 288
built-in objects, 289, 352, 356-361, 364-366
child objects, 353
creating, 353
creating instances of, 356
custom objects, 289
date object, 364-366
defining, 354-355
defining methods, 355-356
DOM objects, 289, 352
frames and, 425
math object, 360-363
methods, 289, 353, 365
naming, 292
properties, 288, 353
prototypes, 357-358
simplifying scripting via, 354-356
operators, 328-330
order of script operation, determining, 291
output, creating, 73
parseFloat() function, 331
parseInt() function, 331
programming language versus scripting language, 66
"progressive enhancement" strategies, 294
random web content, displaying via, 276-280
remote scripting, 71
<script> tags, 67-72, 457
scripting language versus programming language, 66
special effects, 70
statements
conditional statements, 289
for statements, 290
function calls, 288
loops, 290
objects, 288-289, 292
plus signs (+) in, 73
semicolons, 72
time display example, 72
variables, 288, 292
strings
calculating length of, 334
converting case, 334
string arrays, 338-340
string objects, 332-334, 357
substrings, 335-337

switch statements
  syntax of, 376
  using multiple conditions, 375-376
syntax, 332
  case-sensitivity, 292
  functions, 292
  objects, 292
  reserved words, 292
  spacing (whitespace), 292
  variables, 292
testing scripts, Internet Explorer 6.0, 74
text
  printing via, 275
  text editors, 74
time display example
  adding scripts to web pages, 73-74
  creating output, 73
  Date objects, 72
  error handling, 76-78
  modifying scripts, 74-76
  <script> tags, 71-72
  statements, 72
  testing scripts, 74
  variables, 72
toLowerCase() method, 334
toUpperCase() method, 334
Trixie, 465
  installing user scripts, 466
  managing user scripts, 467
  turning on/off, 468
.txt file extension, 74
"unobtrusive scripting", 433, 447-449
usability and, 438-439
using, 68
variables, 288
  assigning values to variables, 327-328
  declaring, 326
  global variables, 326
  incrementing/decrementing, 327
  local variables, 326
  localtime variable, 72
  naming, 292, 325-326
  scope of, 326
  time display example, 72
  UTC variable, 72
web pages, adding JavaScript to, 67-68, 73-74
websites, navigating, 70
while loops, 379-380
with keyword, 363-364

join() method, 342

JPEG
  compression, 155
  tiled backgrounds, 159-160

jQuery JavaScript library, 454-455

.js files, 69

JSON, 481

.jsp file extension, 27

JSP scripting language, 274

K - L

keyboard events, 397-399

Koch, Peter-Paul, 444

languages (foreign), formatting text for, 89-91

layers (DOM)
  creating, 311
  moveable layers, 311-315
  positioning, controlling via JavaScript, 311-315

layouts
  CSS layout properties, 52-53
  fixed layouts, 254
  fixed/liquid hybrid layouts, 258
    defining columns in, 260-262
    setting column height, 264-268
    setting minimum width, 262-263
    structure of, 258-259
  liquid layouts, 255-257
  web resources, 253

leading (text), line-height property (CSS), 56

libraries (AJAX), 482
  ajaxRequest function, 486
  ajaxResponse function, 486
  creating, 485-486
  quiz building example
    HTML files, 487-488
    JavaScript files, 489-490
    testing, 490-491
    XML files, 488-489
  using, 486

libraries (JavaScript)
  AJAX Frameworks, 456
  Dojo, 456
  downloading, 457
  effects, using via, 457
  HTML documents, adding libraries to, 457
  jQuery, 454-455
  Mochikit, 456
  MooTools, 456
  Prototype, 453-454
  Script.aculo.us, 455-459
  scripts, building, 458-459
  Yahoo! UI Library, 456

line breaks, web page creation, 32-33

line-height property (CSS), 56

line-through text, style sheets, 56

<link /> tags (CSS), 50

link objects (DOM), 303, 306

links
- absolute links, 124
- anchor tags
  - identifying locations within web pages via, 126
  - linking to anchor locations, 126-129
  - naming, 127
- color and, 144
- documents, 303, 306
- email addresses, 132-133
- images, 134, 169-171
- .js files, 69
- multimedia/website integration, 179-180
- opening in new browser windows, 134
- relative-root links, 124
- styling via CSS, 134-138
- web content
  - linking between, 129-131
  - linking to external web content, 131-132

liquid layouts, 253-257

list-item value (CSS display property), 53

lists
- borders, styling, 227-228
- color, styling, 227-228
- CSS box model and, 226-229
- definition lists, 96, 226
- list item indicators, placing, 229-231
- list-style-image property (CSS), 226
- list-style-position property (CSS), 226, 229-231
- list-style-type property (CSS), 226
- list-style-type style rule (CSS), 99-101
- multitiered lists, 100-101
- navigation lists
  - horizontal navigation, 245-248
  - primary navigation, 236
  - regular lists versus, 235
  - secondary navigation, 236
  - vertical navigation, 236-244
- nested lists, 97-100, 226
- ordered lists, 95-96, 226
- outlines, creating via lists, 98-100
- unordered lists, 95-96, 226

live search forms
- AJAX, creating via, 496
  - HTML forms, 492
  - JavaScript front end, 494-495
  - PHP back end, 493-494
- example, requirements for, 496

LiveScript, JavaScript development, 66

loading web content, timing, 20

local time values, date object (JavaScript) and, 365-366

local variables (JavaScript), 326

localtime variable (JavaScript), 72

location objects (DOM), 305-306

logical operators (JavaScript), 371

loops (JavaScript), 290
- break statements, 381
- continue statements, 382
- continuing, 382
- do, while loops, 380
- escaping, 381
- for loops, 377-378
- for, in loops, 382-384
- infinite loops, 380-381
- while loops, 379-380

LunarPages web hosting provider, 7

M

Macintosh computers, HTML file creation, 27

managing
- domain names, 6
- HTML files, 14
  - document roots, 15-16
  - index pages, 16-18
- user scripts, 466-467
- web pages, headings, 34-36
- websites
  - coding clarity, 548
  - comments, 546-547
  - documenting code, 546-547
  - indenting code, 548
  - maintainable code, 546-548
  - version control, 548-550

margin property (CSS), 191-199

margins
- browsers and, 226-229
- CSS box model, 210

marked up text in HTML, 2

Mashable.com, publicizing websites via, 554

math object (JavaScript)
- decimal numbers
  - rounding, 360
  - truncating, 360
- math functions, 361-363
- random numbers, generating, 360-363

media-specific style sheets, 503-504

metadata, user scripts, 469-470

methods
- DOM objects, 299
  - document objects, 302, 310
  - history objects, 303
  - location objects, 306
- JavaScript objects, 289, 353
  - adding to string objects, 357
  - defining, 355-356
  - get methods, 365
  - prototypes, 357-358

MIME types, 182

mm value (CSS height/width properties), 53

Mochikit JavaScript library, 456

modifying
- frame borders, 424-425
- JavaScript scripts, 74-76
- text in web pages, 317-318

modulo operators (JavaScript), 362
monitors and color, 144
monospaced text, 84-85
MooTools JavaScript library, 456
mouse events
- mousestatus function, 396
- onClick event handler, 394-397, 400-404
- onDblClick event handler, 395
- onMouseDown event handler, 395-397
- onMouseOut event handler, 394
- onMouseOver event handler, 394
- onMouseUp event handler, 395-397
- rollover images, 394

mousestatus function, mouse events and, 396
moveable layers (DOM), 311-315
moving browser windows, 413-414
Mozilla Firefox web browser, 9
multimedia
- QuickTime, 180
- website integration with, 178-179
  - embedded multimedia files, 180-183
  - links, 179-180
  - streaming multimedia, 181
  - tips for using, 184-185

multiple event handlers, 391-392
multitiered lists, 100-101

N

naming
- anchor tags, 127
- DOM objects, 299
- event handlers, 390
- files with HTML tags, 27
- form data, 519-520
- JavaScript functions, 292
- JavaScript objects, 292
- JavaScript variables, 292, 325-326

NaN (not a number), 331
navigating websites, JavaScript, 70
navigation lists
- horizontal navigation, 245-248
- primary navigation, 236
- regular lists versus, 235
- secondary navigation, 236
- vertical navigation, 236-238
  - multilevel vertical navigation, 240-244
  - single-level vertical navigation, 239-241

nested framesets, 425
nested lists, 97-100, 226
nested tags (HTML), 97
nodes (DOM), 307
- methods of, 310
- properties, 309

non-viewable window areas (browsers), 254
none value (CSS)
- border-style properties, 54
- display property, 53

<noscript> tag (JavaScript), detecting non-JavaScript browsers, 445-446
Notepad, creating HTML files, 26
null values (JavaScript), 330
numbers
- arithmetic mean, 363
- decimal numbers
  - rounding, 360
  - truncating, 360
- random numbers, generating, 360-363

numeric arrays (JavaScript), 337, 340-342
numeric data types (JavaScript), 330

O

<object> tags (XHTML), 180-183
objects (built-in), extending definitions, 359
objects (DOM), 352
- anchor objects, 303
- document objects, 300
  - anchor objects, 303
  - displaying document information, 301-302
  - link objects, 303, 306
  - methods of, 302
  - properties of, 301
  - writing text within documents, 302
- hiding/showing, 316-317
- history objects, 303-305
- link objects, 303, 306
- location objects, 305-306
- methods, 299
  - document objects, 302
  - history objects, 303
  - location objects, 306
- naming, 299
- parents, 308
- properties, 299
  - document objects, 301
  - history objects, 303
  - location objects, 305-306
- referencing, 299
- showing/hiding, 316-317
- siblings, 308
- window objects, 300
  - creating browser windows, 410-411
  - displaying dialog boxes, 417-418
  - moving browser windows, 413-414
  - opening/closing browser windows, 411-412

properties of, 409-410
resizing browser windows, 413-414
timeouts, 414-416
objects (JavaScript), 288
built-in objects, 289, 352, 356-359
date object, 364-366
math object, 360-361
child objects, 353
creating, 353
custom objects, 289
date object
converting date formats, 366
creating, 364
local time values, 365-366
reading date values, 365
setting date values, 364-365
time zones, 365
defining, 354-355
DOM objects, 289, 352
instances, creating, 356
math object
generating random numbers, 360-363
math functions, 361-363
rounding decimal numbers, 360
truncating decimal numbers, 360
methods, 289, 353
adding to string objects, 357
get methods, 365
prototypes, 357-358
methods, defining, 355-356
naming, 292
properties, 288
prototypes, 357-358
values, 353
prototypes, 357-358
scripting, simplifying
creating object instances, 356
defining object methods, 355-356
defining objects, 354-355
string objects
adding methods to, 357
assigning values, 332-334
combining values, 332-334
creating, 332
Office Online Clip Art and Media website (Microsoft), 149
onClick event handler, 394-397, 400-404
onDblClick event handler, 395
online resources, CSS reference guide, 47
onLoad events, 399
onMouseDown event handler, 395-397
onMouseOut event handler, 394
onMouseOver event handler, 394
onMouseUp event handler, 395-397
onUnload events, 400
opening tags (HTML), 30
opening/closing, browser windows, 411-412
Opera, 9, 465
operators (JavaScript), 328-330
ordered lists, 95-96, 226
organizing
HTML files, 14
document roots, 15-16
index pages, 16-18
web content, 123-124
web pages, headings, 34-36
websites, 538
Amazon.com, 543
BAWSI.org, 545
ESPN.com, 540-542
larger websites, 543-546
simple websites, 540-542
single-page websites, 538-539
Starbucks.com, 544
outlines, creating via lists, 98-100
outset value (CSS border-style properties), 54
overflow property (CSS), text flow and, 220
overlapping elements, 213, 217-219

P

<p> tags, 31-33
padding
browsers and, 226-228
CSS box model, 210
padding property (CSS), 56, 191, 199-202
paragraphs
aligning, 93-95
web page creation, 32-33
parameters (JavaScript functions), 288, 348
parent folders, 125
parents (DOM), 308
parseFloat() function (JavaScript), 331
parseInt() function (JavaScript), 331
periods (.), JavaScript objects, 289
Perl scripting language, 274
photos
aligning
horizontal alignment, 165-166
vertical alignment, 167-168
background photos, 171-172
background-image style property, 172
CD-ROM, transferring photos to, 150
cropping, 151-152
Flickr, 161-163
Google Images, 161
height/width, specifying, 165
image maps, 173-178
links, turning images into, 169-171
Red Eye Removal, 154
republishing, 163
resizing, 153

text descriptions, 163-164
web pages, placing photos on, 161-163
Photoshop (Adobe), 148
PHP, 274, 514
AJAX live search forms, creating, 493-494
.php file extensions, 27
Picasa (Google), 149
Picnik, 149
"plain" text, 26, 34, 82
plug-ins, 180
plus signs (+), JavaScript statements, 73
PNGs, 158-159
pop-up windows, 134, 528-530
positionable elements. *See* layers
positioning
absolute positioning, 213-217
overlapping elements, 213, 217-219
positioning property, 213
relative positioning, 213-215
presentation, JavaScript scripting best practices, 434
<pre> tags (HTML), 84-85
pricing, web hosting providers, 6
primary navigation, 236
printing
Print Preview, viewing web pages in, 508-509
print-friendly web pages, 499
criteria for print-friendliness, 500-503
designing style sheets for print pages, 505-508
media-specific style sheets, 503-504
reviewing content for print-friendliness, 500
viewing web pages in Print Preview, 508-509
text via JavaScript, 275
programming languages, strings, 72
"progressive enhancement"
strategies for, 294
web design and, 435
prompts (dialog boxes), 417-418
properties
DOM objects, 299
document objects, 301
history objects, 303
location objects, 305-306
relationship properties, 309
JavaScript objects, 288
prototypes, 357-358
values, 353
Prototype JavaScript library, 453-454
prototypes (JavaScript objects), 357-358
pseudoclasses, 134-138
pt value (CSS height/width properties), 53
publicizing websites, 553-555
publishing web content
blog publication, 19
local publication, 18-19
pull-down pick lists (forms), 524-525
purchasing domain names, 6
px value (CSS height/width properties), 53
Python scripting language, 274

Q - R

QuickTime, 180
QuirksMode, debugging code, 444
quiz building example (AJAX)
HTML files, 487-488
JavaScript files, 489-490
testing, 490-491
XML files, 488-489
radio buttons (forms), 523-524
random numbers, generating, 360-363
Red Eye Removal, 154
relationship properties (DOM nodes), 309
relative addresses and web pages, 124-125
relative positioning, 213-215
display property (CSS), 53
positioning property, 214
relative-root addresses and web pages, 124
relative-root links and web pages, 124
reliability, web hosting providers, 6
remote scripting, 71. *See also* AJAX
republishing images, 163
reserved words, JavaScript syntax, 292
resizing
browser windows, 413-414
images, 153
resolution (graphics), 150
ridge value (CSS border-style properties), 54
rollover images, 394
rounding decimal numbers, 360
rows (tables), creating, 107
Ruby scripting language, 274

S

Safari, 9, 465
sans-serif font (text), 86
saving files
files with HTML tags, 27
.js files, 69
scaling images, 153
<script> tag (JavaScript), 67-69
detecting non-JavaScript browsers, 457
time display example, 71-72

Script.aculo.us JavaScript library, 455-459

scripting

- AJAX, 479
  - ajaxRequest function, 486
  - ajaxResponse function, 486
  - back end, 480, 493-494
  - debugging applications, 491-496
  - examples of, 481
  - frameworks, 482
  - front end, 480, 494-495
  - JavaScript client, 480
  - libraries, 482, 485-491
  - limitations of, 482
  - live search forms, 492-496
  - quiz building example, 487-491
  - requests, 480, 483-484, 493-495
  - server-side scripts, 480, 493-495
  - XML and, 481
  - XMLHttpRequest, 483-484
- ASP, 274
- client-side scripting, 274
- comments, adding, 293
- cross-browser scripting, 443
  - debugging browsers, 444
  - event handlers and JavaScript, 437
  - feature sensing, 437, 443-444
- Greasemonkey, 463-464
  - API functions, 471
  - browser support, 465
  - creating user scripts, 468, 475
  - debugging user scripts, 474-476
  - describing user scripts, 469-470
  - finding user scripts, 466
  - installing, 464
  - installing user scripts, 466
  - managing user scripts, 466-467
  - metadata and user scripts, 469-470
  - site-specific user scripts, 472-473
  - testing user scripts, 468-471
  - text area macro user scripts, 475-476
  - turning on/off, 468
- interpreted languages, 66
- JavaScript, 274
  - accessibility, 439
  - adding scripts to web pages, 73-74
  - adding to web pages, 67-68
  - advantages over HTML, 299
  - AJAX, 71
  - AJAX live search forms, 494-496
  - AJAX quiz building example, 489-490
  - AJAX requests, 480, 494-495
  - arrays, 337-342
  - best practices, 293-295, 433-439
  - break statements, 381
  - capabilities of, 66, 70
  - case statements, 376
  - changing images via user interaction, 281-283
  - comments, 293, 438
  - conditional expressions, 370-373
  - conditional operators, 370
  - continue statements, 382
  - continuing loops, 382
  - creating .js files, 69
  - creating output, 73
  - cross-browser scripting, 437, 443-444
  - data types, 330-331
  - Date objects, 72
  - design patterns, 439
  - determining order of script operation, 291
  - development of, 66
  - displaying random web content via, 276-280
  - do, while loops, 380
  - document.write statements, 68, 73
  - documenting code, 438
  - DOM, 280-281, 299-321, 409-418
  - else keyword, 372-375
  - error handling, 76-78
  - escaping loops, 381

event handlers, 68-70, 290-291, 294-295, 389-392, 394-404, 435-437

window objects (DOM), 409

  - events, 69
  - expressions, 328
  - external scripts, 69
  - flow control, 369-384
  - for loops, 377-378
  - for, in loops, 382-384
  - form events, 527-528
  - frames and JavaScript objects, 425
  - functions, 68, 288, 292, 347, 352-354, 361-363
  - Gmail and, 446
  - Greasemonkey, 463-476
  - history of, 66
  - HTML and, 274-276
  - if statements, 369-375
  - infinite loops, 380-381
  - .js file extension, 69
  - JSON, 481
  - libraries (third-party), 453-459
  - linking to .js files, 69
  - logical operators, 371
  - modifying scripts, 74-76
  - navigating websites, 70
  - non-JavaScript browsers, 445-449
  - objects, 288-289, 292, 352-361, 364-366

operators, 328-330
parseFloat() function, 331
parseInt() function, 331
plus signs (+) in statements, 73
printing text via, 275
programming language versus scripting language, 66
“progressive enhancement” strategies, 294
reading browser information, 440-443
remote scripting, 71
saving .js files, 69
<script> tags, 67-72
scripting language versus programming language, 66
simplifying, 354-356
special effects, 70
statements, 72, 287
statements, conditional statements, 289
statements, for statements, 290
statements, function calls, 288
statements, loops, 290
statements, objects, 288-289, 292
statements, variables, 288, 292
strings, 332-340, 357
switch statements, 375-376
syntax, case-sensitivity, 292
syntax, functions, 292
syntax, objects, 292
syntax, reserved words, 292
syntax, spacing (whitespace), 292
syntax, variables, 292
testing scripts, 74
time display example, 71-78
toLowerCase() method, 334
toUpperCase() method, 334
Trixie, 465-468
“unobtrusive scripting”, 433, 447-449
usability, 438-439
using, 68
validating forms, 70
variables, 72, 288, 292, 325-328
web standards and browser specificity, 437-438
while loops, 379-380
with keyword, 363-364

JSON, 481
JSP, 274
languages, 65
Perl, 274
PHP, 274, 514
Python, 274
remote scripting. ***See*** AJAX
Ruby, 274
server-side scripts, 274, 480, 493-495
text editors, 74
Trixie, 465
  installing user scripts, 466
  managing user scripts, 467
  turning on/off, 468
.txt file extension, 74
“unobtrusive scripting”, 433, 447-449
user scripts
  creating, 468, 475
  debugging, 474-476
  describing, 469-470
  finding, 466
  Greasemonkey, 463-476
  installing, 466
  managing, 466-467
  metadata and, 469-470
  scripting, 465
  site-specific scripts, 472-473
  testing, 468-471
  text area macro user scripts, 475-476
  Trixie, 465-467
VBScript, 274

scrolling lists (forms), 524-525
search engines, 445
  heading tags (HTML), 36
  SEO, 553, 562-563
  spamming, 557
  websites, listing with search engines, 555-562
searches
  Google searches, 4
  live search forms, creating via AJAX, 496
    HTML forms, 492
    JavaScript front end, 494-495
    PHP back end, 493-494
secondary navigation, 236
security, user scripts, 465
selection lists (forms), 524-525
selectors (CSS), 57
semicolons (;), JavaScript statements, 72, 287
server-side scripting, 274, 480, 493-495
servers
  browsers, basic server interaction, 3-5
  document roots, 13-16
  FTP client connections, 13
  space, 6
  “uptime”, 6
  web hosting providers, selecting, 6
shorthand conditional expressions (JavaScript), 372-373
siblings (DOM), 308
single-page websites, 538-539
site-specific user scripts, 472-473
sizing
  borders (tables), 107
  browser windows, 413-414
  cells (tables), 111-113
  elements (CSS box model), 210-212
  images, 153
  tables, 110-113

text
font-size style rule (CSS), 86-87
style sheets, 50
skeleton pages. *See* templates
<small> tags (HTML), 83
small text, 83
solid value (CSS border-style properties), 54-55
sorting arrays (JavaScript)
numeric arrays, 340-342
string arrays, 340
source editors, blogs and, 19
spacing (whitespace), JavaScript syntax, 292
spamming search engines, 557
spanning with tables, 115
special effects (JavaScript), 70
splitting string arrays (JavaScript), 339
Starbucks.com, website organization, 544
statements (JavaScript), 287
conditional statements, 289
for statements, 290
function calls, 288
loops, 290
objects, 288
built-in objects, 289
custom objects, 289
DOM objects, 289
naming, 292
plus signs (+) in, 73
semicolons, 72
time display example, 72
variables, 288, 292
Stephenson, Sam, 453
streaming multimedia, 181
<strike> tags (HTML), 84
strikethrough text, style sheets, 56
string arrays, sorting, 340
strings, 72
strings (JavaScript), 330
case, converting, 334
length of, calculating, 334
string arrays, 338
sorting, 340
splitting, 339
string objects
adding methods to, 357
assigning values, 332-334
combining values, 332-334
creating, 332
substrings
finding, 336-337
getting single characters, 336
using parts of strings, 335-336
<strong> tags (HTML), 83
strong text. *See* boldface text
style classes (CSS), 57-58
style IDs (CSS), 59
style properties (CSS), 57
style rules (CSS), 46, 50
color style rule, fonts and, 86-87
font weight style rule, 83
font-family style rule, 86
font-size style rule, 86-87
list-style-type style rule, 99-101
multiple style properties in, 58
text-align style rule, 93-95
viewing, 51
style sheets
align property, 191, 203-204
box model, 209, 212
borders, 210
content, 210
lists and, 226-229
lists and, 226
margins, 210
padding, 210
sizing elements, 210-212
clear property, text flow and, 220
color, specifying via style sheets, 146-148
creating, 47, 49-52
CSS tags, 50
CSS Zen Garden, 191-192
definition of, 45
DOCTYPE declarations, 212
external style sheets, 46-51
float property, 191, 204-207, 220
formatting properties, 53
background-color property, 55
border property, 54-55
border-bottom property, 54-55
border-color property, 54-55
border-left property, 54-55
border-right property, 54-55
border-style property, 54-55
border-top property, 54-55
border-width property, 54
color property, 56
font property, 56
font-family property, 55
font-size property, 55
font-style property, 56
font-weight property, 56
line-height property, 56
padding property, 56
text-align property, 55-56
text-decoration property, 56
text-indent property, 55
HTML documents, linking to, 50
image maps, creating, 231-235
inline styles, 60-61
internal style sheets, 46, 59-61
italic text, 56
layouts
display property, 52-53
fixed layouts, 254
fixed/liquid hybrid layouts, 258-268
height property, 53

liquid layouts, 253- 257
width property, 53
line-through text, 56
links, styling, 134-138
list-style-image property, 226
list-style-position property, 226, 229-231
list-style-type property, 226
lists
horizontal navigation, 245-248
navigation lists, 236-248
vertical navigation, 236-244
margin property, 191-199
media-specific style sheets, 503-504
overflow property, text flow and, 220
padding property, 191, 199-202
positioning
absolute positioning, 213-217
overlapping elements, 213, 217-219
positioning property, 213
relative positioning, 213-215
z-index property, 217-219
print pages, designing style sheets for, 505-508
properties, hyphenating, 312
selectors, 57
strikethrough text, 56
style classes, 57-58
style IDs, 59
style properties, 57
style rules, 46, 50
color style rule, 86-87
font weight style rule, 83
font-family style rule, 86
font-size style rule, 86-87
list-style-type style rule, 99-101
multiple style properties in, 58
text-align style rule, 93-95
viewing, 51
text
formatting color, 46
sizing, 50
underline text, 56
validating, 61
web browsers, CSS support, 51
z-index property, 217-219
<sub> tags (HTML), 83
subscript text, 83
substrings
finding, 336-337
parts of strings, using, 335-336
single characters, getting, 336
Subversion website version control, 550
<sup> tags (HTML), 83
superscript text, 83
support
CSS, web browser support for, 51
web hosting providers, selecting, 6
switch statements (JavaScript)
multiple conditions, using, 375-376
syntax of, 376
syntax, JavaScript, 332

T

<table> tags (HTML), 107
tables
aligning within, 113-115
borders
sizing, 107
spacing, 116
specifying color via CSS, 146-148
cells
creating, 107
sizing, 111-113
color in, 115
creating, 107-110
headings, creating, 108
images in, 116
page layout via, 116-117
rows, creating, 107
sizing, 110-113
spanning within, 115
uses for, 107
tags (CSS), 50
elements and, 46
<link /> tag, 50
selectors, 57
tags (HTML), 5, 28
<a> tags, 170
identifying locations within web pages, 126
linking to anchor locations, 126-129
naming, 127
attributes, 92-93, 123
<b> tags, 81-83
<big> tags, 83
<body> tag, 27, 31-33
<br /> tags, 32-33, 85
closing tags, 30
containers, 307
custom tags, creating, 58
<div> tags, 170
<em> tags, 83
empty tags, 30, 33
event handlers, 68
<font> tags, 81, 86
<head> tags, 27, 31-33, 68
heading tags, 34-36
horizontal rule tag, 33
<hr /> tag, 33
<html> tag, 27, 31-33
<i> tags, 81-83
<img> tags, 162-163
line breaks, 32-33
naming files with, 27

nested tags, 97
older HTML tags, formatting and, 81
opening tags, 30
<p> tag, 31-33
paragraphs, 32-33
<pre> tags, 84-85
pseudoclasses, 134-138
saving files with, 27
<script> tags, 67-72
<small> tags, 83
<strike> tags, 84
<strong> tags, 83
<sub> tags, 83
<sup> tags, 83
<table> tags, 107
<td> tags, 107
<th> tags, 108
<title> tags, 27, 31-33, 36
<tr> tags, 107
<tt> tags, 84-85
<u> tags, 84
xml : lang attribute, 31
xmlns attribute, 31

tags (XHTML)
<embed> tags, 183
<object> tags, 180-183

tasks, combining. *See* functions (JavaScript)

<td> tags (HTML), 107

templates, web page creation, 31

testing
AJAX quiz building example, 490-491
JavaScript scripts, Internet Explorer 6.0, 74
user scripts, 468, 470-471
web content, 19-20
websites, multiple web browsers, 8-9, 26

text
aligning
attributes, 92-93
block-level elements, 93-95
paragraphs, 93-95
tables, 113-115
text-align style rule (CSS), 93-95
alternate text, 163-164
ASCII text, 26, 34, 82
color, CSS and, 56, 146-148
documents, writing text within, 302
flowing text, 220
fonts
Arial font, 86
color style rule (CSS), 86-87
font property (CSS), 56
font weight style rule (CSS), 83
font-family property (CSS), 55
font-family style rule (CSS), 86
font-size property (CSS), 55
font-size style rule (CSS), 86-87
font-style property (CSS), 56
font-weight property (CSS), 56
sans-serif font, 86
Times Roman font, 86
typewriter font. *See* monospaced text
formatting
aligning text, 92-95
big text, 83
boldface text, 82-83
customizing fonts in HTML, 85-89
definition lists, 96, 226
foreign languages, 89-91
italic text, 82-83
monospaced text, 84-85
multitiered lists, 100-101
nested lists, 97-100, 226
ordered lists, 95-96, 226
outlines, 98-100
resumes, creating, 87-89
small text, 83
special characters, 89-91
subscript text, 83
superscript text, 83
unordered lists, 95-96, 226
web page creation, 33-35
forms, accepting text input in, 519
graphics and, 163-164
HTML, whitespace, 32
indenting, web page creation, 35
italic text, style sheets, 56
leading, line height property (CSS), 56
line breaks, web page creation, 32-33
line-through text, style sheets, 56
paragraphs, web page creation, 32-33
"plain" text, 26, 34, 82
printing, JavaScript and, 275
sizing, font-size style rule (CSS), 86-87
strikethrough text, style sheets, 56
style sheets, 56
formatting color, 46
sizing, 50
text-align property (CSS), 55-56
text-align style rule (CSS), 93-95
text area macro user scripts, 475-476
text areas (forms), 526
text-decoration property (CSS), 56
text editors, 74
text fields (forms), 526
text-indent property (CSS), 55
underline text, style sheets, 56
web browsers, adjusting font size settings, 20
web pages
adding to web pages, 319-321
modifying text in, 317-318

TextEdit, creating HTML files, 27

<th> tags (HTML), 108

third-party JavaScript libraries
- AJAX Frameworks, 456
- Dojo, 456
- downloading, 457
- effects, adding via, 457-459
- effects, using, 457
- HTML documents, adding libraries to, 457
- jQuery, 454-455
- Mochikit, 456
- MooTools, 456
- Prototype, 453-454
- Script.aculo.us, 455-459
- scripts, building, 458-459
- Yahoo! UI Library, 456

tiled backgrounds, 159-160

time, displaying (JavaScript example), 71
- Date objects, 72
- error handling, 76-78
- output, creating, 73
- scripts
  - adding to web pages, 73-74
  - modifying, 74-76
  - <script> tags, 71-72
  - testing, 74
- statements, 72
- variables, 72

time zones, date object (JavaScript) and, 365

timeouts (browser windows), 414-416

Times Roman font (text), 86

timing loading of web content, 20

<title> tags, 27, 31-33, 36

toLowerCase() method (JavaScript), 334

tool tips, 164

toUpperCase() method (JavaScript), 334

<tr> tags (HTML), 107

transferring HTML files, FTP clients, 10-13, 29

transparent images, 158

triadic color schemes, 143

Trixie, 465
- turning on/off, 468
- user scripts
  - installing, 466
  - managing, 467

truncating decimal numbers, 360

<tt> tags (HTML), 84-85

turning on/off
- Greasemonkey, 468
- Trixie, 468

.txt file extension, 74

typewriter font. *See* monospaced text

U

<u> tags (HTML), 84

underline text, style sheets, 56

"unobtrusive scripting", 433, 447-449

unordered lists, 95-96, 226

"uptime," servers and, 6

URLs, opening, 483

usability, JavaScript best practices, 438-439

USB drivers, 18

user input, accepting in forms, 519

user scripts
- creating, 468, 475
- debugging, 474-476
- describing, 469-470
- finding, 466
- Greasemonkey, 463
  - API functions, 471
  - browser support, 465
  - creating user scripts, 468, 475
  - debugging user scripts, 474-476
  - describing user scripts, 469-470
  - finding user scripts, 466
  - installing, 464
  - installing user scripts, 466
  - managing user scripts, 466-467
  - metadata and user scripts, 469-470
  - site-specific user scripts, 472-473
  - testing user scripts, 468-471
  - text area macro user scripts, 475-476
- installing, 466
- managing, 466-467
- metadata and, 469-470
- security, 465
- site-specific scripts, 472-473
- testing, 468-471
- text area macro user scripts, 475-476
- Trixie, 465
  - installing user scripts, 466
  - managing user scripts, 467

UTC (Universal Time [Coordinated]), 71

UTC variable (JavaScript), 72

V

validating
- forms, 70, 531-532
- style sheets, 61
- web content, 36-37

variables (JavaScript), 288
- declaring, 326
- global variables, 326
- incrementing/decrementing, 327
- local variables, 326
- localtime variable, 72
- naming, 292, 325-326
- scope of, 326
- time display example, 72
- UTC variable, 72
- values, assigning to variables, 327-328

VBScript scripting language, 274
version control, websites and, 548-550
vertical image alignment, 167-168
vertical navigation, 236-238
  multilevel vertical navigation, 240-244
  single-level vertical navigation, 239-241
vertical-align style property, 167
video, embedding, 182
viewing
  CSS style rules, 51
  HTML files, 29
  web pages, 29
visual editors, blogs, 19

W

W3C color standards, 143
W3C CSS Validator, 61
W3C event model, 436-437
W3C Validation Service, 37-38
web browsers
  140 cross-browser color names, 143-144
  cross-browser scripting
    debugging browsers, 444
    feature sensing, 437, 443-444
  CSS, support for, 51
  debugging, 444
  development of, 2
  dialog boxes, displaying, 417-418
  distributing, 18
  Firefox, 9, 464
  frames, 418-420
    adding individual frames, 423
    creating frameset documents, 421-423
    frames array, 426
    inline frames, 426-429
    JavaScript objects and, 425
    linking windows to frames, 423-424
    modifying borders, 424-425
    nested framesets, 425
  Google Chrome, 9, 465
  history, accessing, 2, 303-305
  HTML development, 2
  images, auto image loading, 20
  information, reading via JavaScript
    dishonest browsers, 442-443
    displaying information, 440-441
  Internet Explorer, 9
    event properties, 393
    Trixie, 465-468
  links, opening in new browser windows, 134
  lists, displaying in, 97
  margins and, 226-229
  non-Internet Explorer event properties, 393-394
  non-JavaScript browsers
    avoiding errors, 446-449
    detecting, 445-446
    JavaScript optionality, 446
    <noscript> tag, 445-446
    <script> tag, 457
  non-viewable window areas, 254
  Opera, 9, 465
  padding and, 226-228
  pop-up windows, 134
  popularity of, 26
  Safari, 9
  search engines, 445
  sensing. ***See*** feature sensing
  servers, basic browser server interaction, 3-5
  text, adjusting font size settings, 20
  websites
    comparing, 26
    testing, 8-9, 26
  windows
    creating, 410-411
    linking frames to windows, 423-424
    moving, 413-414
    opening/closing, 411-412
    resizing, 413-414
    timeouts, 414-416
web content
  absolute addresses, 124-125
  aligning via align property (CSS), 191, 203-204
  clear property (CSS), text flow and, 220
  color
    140 cross-browser color names, 143-144
    best practices, 141-143
    Colorblind Web Page Filter tool, 148
    hexadecimal color codes, 144-146
    using, 141-143
    W3C color standards, 143
  comparing, 26
  creating, 2-3
    ASCII text, 26, 34
    boilerplate code, 28-30
    comparing web content HTML codes, 37
    formatting text, 33-35
    HTML tags, 27-33
    indenting text, 35
    line breaks, 32-33
    organizing content via headings, 34-36
    overview of, 29
    paragraphs, 32-33
    “plain” text, 26, 34
    templates, 31
  CSS box model, 209
    borders, 210
    content, 210

- lists and, 226-229
- margins, 210
- padding, 210
- sizing elements, 210-212

delivering, 3-5

directories, 123-124

float property (CSS), 191, 204-207, 220

folders, 123-125

forms, 513
- accessing elements via JavaScript, 528
- check boxes, 521-523
- creating, 514-519
- displaying data in pop-up windows, 528-530
- hidden data, 520
- JavaScript events, 527-528
- naming form data, 519-520
- pull-down pick lists, 524-525
- radio buttons, 523-524
- scrolling lists, 524-525
- selection lists, 524-525
- sending data via email, 530-531
- submitting form data, 527
- text areas, 526
- text fields, 526
- text input, 519
- user input, 519
- validating, 531-532

“graceful degradation”, 434

graphics
- adjusting color, 154
- Adobe Photoshop, 148
- aligning graphics, 165-168
- animated graphics, 160-161
- background graphics, 171-172
- banners, 156
- buttons, 156
- choosing software, 149
- clip art, 149
- compression, 150
- copyrights and, 149
- Creative Commons licenses, 149
- cropping, 151-152
- dithering, 158
- file sizes, 150
- Flickr, 161, 163
- GIFs, 157-161
- GIMP, 149
- GIMP, adjusting image color, 154
- GIMP, banners, 156
- GIMP, buttons, 156
- GIMP, cropping images, 151-152
- GIMP, JPEG compression, 155
- GIMP, resizing images, 153
- Google Images, 161
- Google Picasa, 149
- grabbing from web pages, 149
- image maps, 173-178
- JPEGs, 155, 159-160
- Picnik, 149
- placing graphics on web pages, 161-163
- PNGs, 158-159
- Red Eye Removal, 154
- republishing, 163
- resizing, 153
- resolution, 150
- specifying height/width, 165
- text descriptions, 163-164
- tiled backgrounds, 159-160
- transparent graphics, 158
- turning graphics into links, 169-171
- uses of, 150

images, changing images via user interaction, 281-283

links
- absolute links, 124
- anchor tags, 126-129
- email addresses, 132-133
- images as, 134
- linking between, 129-131
- linking to external web content, 131-132
- opening in new browser windows, 134
- relative-root links, 124
- styling via CSS, 134-138

lists
- borders, 227-228
- color, 227-228
- CSS box model and, 226-229
- horizontal navigation, 245-248
- navigation lists, 235-248
- placing list item indicators, 229-231
- vertical navigation, 236-244

loading, timing, 20

managing
- coding clarity, 548
- comments, 546-547
- documenting code, 546-547
- indenting code, 548
- maintainable code, 546-548
- version control, 548-550

margins
- browsers and, 226-229
- margin property (CSS), 191-199

multimedia, integrating with, 178
- embedded multimedia files, 180-183
- links, 179-180
- tips for using, 184-185

organizing, 123-124, 538
- larger websites, 543-546
- simple websites, 540-542
- single-page websites, 538-539

overflow property (CSS), text flow and, 220

padding
- browsers and, 226-228
- padding property (CSS), 191, 199-202

Print Preview, viewing web content in, 508-509
print-friendly web pages, 499
- criteria for print-friendliness, 500-503
- designing style sheets for print pages, 505-508
- media-specific style sheets, 503-504
- reviewing content for print-friendliness, 500
- viewing web pages in Print Preview, 508-509

"progressive enhancement", 435
publishing
- locally, 18-19
- to blogs, 19

random web content, displaying via JavaScript, 276-280
relative addresses, 124-125
relative-root addresses, 124
search engines, listing web content with, 555-562
style sheets
- creating, 47-52
- definition of, 45
- external style sheets, 46-51
- formatting properties, 53-56
- formatting text color, 46
- inline styles, 60-61
- internal style sheets, 46, 59-61
- layout properties, 52-53
- linking to HTML documents, 50
- selectors, 57
- sizing text, 50
- style classes, 57-58
- style IDs, 59
- style properties, 57
- style rules, 46, 50-51, 58
- validating, 61
- web browser support, 51

tables
- aligning within, 113-115
- cells, creating, 107
- cells, sizing, 111-113
- color in, 115
- creating, 107-110
- headings, creating, 108
- images in, 116
- page layout via, 116-117
- rows, creating, 107
- sizing, 110-113
- sizing borders, 107
- spacing borders, 116
- spanning within, 115
- uses for, 107

testing, 19-20
text, formatting, 82
- adding to web pages, 319-321
- aligning text, 92-95
- big text, 83
- boldface text, 82-83
- customizing fonts in HTML, 85-89
- definition lists, 96, 226
- flowing text, 220
- foreign languages, 89-91
- italic text, 82-83
- modifying, 317-318
- monospaced text, 84-85
- multitiered lists, 100-101
- nested lists, 97-100, 226
- older HTML tags, 81
- ordered lists, 95-96, 226
- outlines, 98-100
- resumes, creating, 87-89
- small text, 83
- special characters, 89-91
- subscript text, 83
- superscript text, 83
- unordered lists, 95-96, 226

transferring, FPT, 29
validating, 36-37
viewing, 5, 29
- web hosting providers, selecting, 6-8, 26
- website architectures, creating, 125
- YouTube and, 184

web design
- "graceful degradation", 434
- "progressive enhancement", 435

web hosting provider DailyRazor, 7
web hosting providers
- A Small Orange, 7
- bandwidth, 6
- control panels, 7-8
- customer service, 6
- domain names, purchasing, 6
- LunarPages, 7
- pricing, 6
- reliability, 6
- selecting, 6-8, 26
- server space, 6

web pages
- absolute addresses, 124-125
- aligning via align property (CSS), 191, 203-204
- clear property (CSS), text flow and, 220
- color
  - 140 cross-browser color names, 143-144
  - best practices, 141-143
  - Colorblind Web Page Filter tool, 148
  - hexadecimal color codes, 144-146
  - using, 141-143
  - W3C color standards, 143
- creating
  - ASCII text, 26, 34
  - boilerplate code, 28-30
  - comparing web page HTML codes, 37
  - formatting text, 33-35
  - HTML tags, 27-33

indenting text, 35
line breaks, 32-33
organizing content via headings, 34-36
overview of, 29
paragraphs, 32-33
"plain" text, 26, 34
templates, 31

CSS box model, 209
borders, 210
content, 210
lists and, 226-229
margins, 210
padding, 210
sizing elements, 210-212

directories, 123-124
float property (CSS), 191, 204-207, 220
folders, 123-125
forms, 513
accessing elements via JavaScript, 528
check boxes, 521-523
creating, 514-519
displaying data in pop-up windows, 528-530
hidden data, 520
JavaScript events, 527-528
naming form data, 519-520
pull-down pick lists, 524-525
radio buttons, 523-524
scrolling lists, 524-525
selection lists, 524-525
sending data via email, 530-531
submitting form data, 527
text areas, 526
text fields, 526
text input, 519
user input, 519
validating, 531-532

"graceful degradation", 434
graphics
adjusting color, 154
Adobe Photoshop, 148
aligning graphics, 165-168
animated graphics, 160-161
background graphics, 171-172
banners, 156
buttons, 156
choosing software, 149
clip art, 149
compression, 150
copyrights and, 149
Creative Commons licenses, 149
cropping, 151-152
dithering, 158
file sizes, 150
Flickr, 161-163
GIFs, 157-161
GIMP, 149
GIMP, adjusting image color, 154
GIMP, banners, 156
GIMP, buttons, 156
GIMP, cropping images, 151-152
GIMP, JPEG compression, 155
GIMP, resizing images, 153
Google Images, 161
Google Picasa, 149
grabbing from web pages, 149
image maps, 173-178
JPEG compression, 155
JPEGs, 159-160
Picnik, 149
placing graphics on web pages, 161-163
PNGs, 158-159
Red Eye Removal, 154
republishing, 163
resizing, 153
resolution, 150
specifying height/width, 165
text descriptions, 163-164
tiled backgrounds, 159-160
transparent graphics, 158
turning graphics into links, 169-171
uses of, 150

images, changing images via user interaction, 281-283
JavaScript, adding to web pages, 67-68
links
absolute links, 124
anchor tags, 126-129
email addresses, 132-133
images as, 134
linking between web pages, 129-131
linking to external web pages, 131-132
opening in new browser windows, 134
relative-root links, 124
styling via CSS, 134-138

lists
borders, 227-228
color, 227-228
CSS box model and, 226-229
horizontal navigation, 245-248
navigation lists, 235-248
placing list item indicators, 229-231
vertical navigation, 236-244

loading, timing, 20
managing
coding clarity, 548
comments, 546-547
documenting code, 546-547
indenting code, 548
maintainable code, 546-548
version control, 548-550

margins
browsers and, 226-229
margin property (CSS), 191-199

multimedia, integrating with, 178
  embedded multimedia files, 180-183
  links, 179-180
  tips for using, 184-185
organizing, 123-124, 538
  larger websites, 543-546
  simple websites, 540, 542
  single-page websites, 538-539
overflow property (CSS), text flow and, 220
padding
  browsers and, 226-228
  padding property (CSS), 191, 199-202
Print Preview, viewing web pages in, 508-509
print-friendly web pages, 499
  criteria for print-friendliness, 500-503
  designing style sheets for print pages, 505-508
  media-specific style sheets, 503-504
  reviewing content for print-friendliness, 500
  viewing web pages in Print Preview, 508-509
"progressive enhancement", 435
relative addresses, 124-125
relative-root addresses, 124
scripts, adding to web pages (JavaScript), 73-74
search engines, listing web pages with, 555-562
style sheets
  creating, 47-52
  definition of, 45
  external style sheets, 46-51
  formatting properties, 53-56
  formatting text color, 46
  inline styles, 60-61
  internal style sheets, 46, 59-61
  layout properties, 52-53
  linking to HTML documents, 50
  selectors, 57
  sizing text, 50
  style classes, 57-58
  style IDs, 59
  style properties, 57
  style rules, 46, 50-51, 58
  validating, 61
  web browser support, 51
tables
  aligning within, 113-115
  cells, creating, 107
  cells, sizing, 111-113
  color in, 115
  creating, 107-110
  headings, creating, 108
  images in, 116
  page layout via, 116-117
  rows, creating, 107
  sizing, 110-113
  sizing borders, 107
  spacing borders, 116
  spanning within, 115
  uses for, 107
text, formatting
  adding to web pages, 319-321
  aligning text, 92-95
  big text, 83
  boldface text, 82-83
  customizing fonts in HTML, 85-89
  definition lists, 96, 226
  flowing text, 220
  foreign languages, 89-91
  italic text, 82-83
  modifying, 317-318
  monospaced text, 84-85
  multitiered lists, 100-101
  nested lists, 97-100, 226
  older HTML tags, 81
  ordered lists, 95-96, 226
  outlines, 98-100
  resumes, creating, 87-89
  small text, 83
  special characters, 89-91
  subscript text, 83
  superscript text, 83
  unordered lists, 95-96, 226
transferring FTP, 29
validating, 36-37
viewing, 29
web content, displaying random content via JavaScript, 276-280
website architectures, creating, 125
YouTube and, 184

websites
aligning via align property (CSS), 191, 203-204
architectures, creating, 125
bad website examples, 144
clear property (CSS), text flow and, 220
color
  140 cross-browser color names, 143-144
  best practices, 141-143
  Colorblind Web Page Filter tool, 148
  hexadecimal color codes, 144-146
  using, 141-143
  W3C color standards, 143
comparing, 26
connecting to, Classic FTP client, 12
CSS box model, 209
  borders, 210
  content, 210
  lists and, 226-229
  margins, 210
  padding, 210
  sizing elements, 210-212
dynamic websites
  changing images via user interaction, 281-283
  client-side scripting, 274
  displaying random web content via JavaScript, 276-280
  DOM, 280-281

printing text via JavaScript, 275
server-side scripting, 274
float property (CSS), 191, 204-207, 220
forms, 513
accessing elements via JavaScript, 528
check boxes, 521-523
creating, 514-519
displaying data in pop-up windows, 528-530
hidden data, 520
JavaScript events, 527-528
naming form data, 519-520
pull-down pick lists, 524-525
radio buttons, 523-524
scrolling lists, 524-525
selection lists, 524-525
sending data via email, 530-531
submitting form data, 527
text areas, 526
text fields, 526
text input, 519
user input, 519
validating, 531-532
"graceful degradation", 434
graphics
adjusting color, 154
Adobe Photoshop, 148
aligning graphics, 165-168
animated graphics, 160-161
background graphics, 171-172
banners, 156
buttons, 156
choosing software, 149
clip art, 149
compression, 150
copyrights and, 149
Creative Commons licenses, 149
cropping, 151-152
dithering, 158
file sizes, 150
Flickr, 161-163
GIFs, 157-161
GIMP, 149
GIMP, adjusting image color, 154
GIMP, banners, 156
GIMP, buttons, 156
GIMP, cropping images, 151-152
GIMP, JPEG compression, 155
GIMP, resizing images, 153
Google Images, 161
Google Picasa, 149
grabbing from web pages, 149
image maps, 173-178
JPEGs, 155, 159-160
Picnik, 149
placing graphics on web pages, 161-163
PNGs, 158-159
Red Eye Removal, 154
republishing, 163
resizing, 153
resolution, 150
specifying height/width, 165
text descriptions, 163-164
tiled backgrounds, 159-160
transparent graphics, 158
turning graphics into links, 169-171
uses of, 150
links
absolute links, 124
anchor tags, 126-129
email addresses, 132-133
images as, 134
linking between web pages, 129-131
linking to external web pages, 131-132
opening in new browser windows, 134
relative-root links, 124
styling via CSS, 134-138
lists
borders, 227-228
color, 227-228
CSS box model and, 226-229
horizontal navigation, 245-248
navigation lists, 235-248
placing list item indicators, 229-231
vertical navigation, 236-244
managing
coding clarity, 548
comments, 546-547
documenting code, 546-547
indenting code, 548
maintainable code, 546-548
version control, 548-550
margins
browsers and, 226-229
margin property (CSS), 191-199
multimedia, integrating with, 178-179
embedded multimedia files, 180-183
links, 179-180
tips for using, 184-185
navigating JavaScript, 70
organizing
Amazon.com, 543
BAWSI.org, 545
ESPN.com, 540-542
larger websites, 543-546
simple websites, 540-542
single-page websites, 538-539
Starbucks.com, 544
overflow property (CSS), text flow and, 220
padding
browsers and, 226-228
padding property (CSS), 191, 199-202
"progressive enhancement", 435
publicizing, 553-555
search engines, listing websites with, 555-562
SEO, 553, 562-563
single-page websites, 538-539

style sheets
  creating, 47-52
  definition of, 45
  external style sheets, 46-51
  formatting properties, 53-56
  formatting text color, 46
  inline styles, 60-61
  internal style sheets, 46, 59-61
  layout properties, 52-53
  linking to HTML documents, 50
  selectors, 57
  sizing text, 50
  style classes, 57-58
  style IDs, 59
  style properties, 57
  style rules, 46, 50-51, 58
  validating, 61
  web browser support, 51
testing, 8-9, 26
text
  adding to web pages, 319-321
  flowing text, 220
  modifying, 317-318
web content
  absolute addresses, 124-125
  directories, 123-124
  folders, 123-125
  organizing, 123-124
  relative addresses, 124-125
  relative-root addresses, 124
web pages
  print-friendly web pages, 499-509
  viewing in Print Preview, 508-509
YouTube and, 184

while loops (JavaScript), 379-380

whitespace (spacing)
  HTML, 32
  JavaScript syntax, 292

width
  CSS box model, adjusting in, 210-212
  fixed/liquid hybrid layouts, setting minimum width in, 262-263
  images, specifying width in, 165
  width property (CSS), 53

window objects (DOM), 300
  browser windows
    creating, 410-411
    moving, 413-414
    opening/closing, 411-412
    resizing, 413-414
    timeouts, 414-416
  dialog boxes, displaying, 417-418
  properties of, 409-410

windows (browser)
  closing, 412
  creating, 410-411
  frames, linking to windows, 423-424
  moving, 413-414
  non-viewable window areas, 254
  opening/closing, 411-412
  pop-up windows, displaying form data in, 528-530
  resizing, 413-414
  timeouts, 414-416

with keyword (JavaScript), 363-364

.WMV video clips, embedding, 182

Word, creating HTML files, 27

WordPress Theme Gallery, layouts and, 253

writing text within documents, 302

WWW (World Wide Web), HTML development, 2

WYSIWYG (what-you-see-is-what-you-get) editors, 27

X

XHTML
  boilerplate code, 30
  check boxes (forms), 522
  defining, 3
  development of, 40
  function of, 51
  goal of, 51
  image maps, 231
  inline frames, 426-429
  tags
    <embed> tags, 183
    <object> tags, 180-183
  xml : lang attribute (HTML tags), 31
  xmlns attribute (HTML tags), 31

XML
  AJAX and, 481, 488-489
  boilerplate code, 30
  development of, 39-40

xml : lang attribute (HTML tags), 31

XMLHttpRequest, 483
  requests
    awaiting responses, 484
    creating, 483
    interpreting response data, 484
    sending, 484
  URLs, opening, 483

xmlns attribute (HTML tags), 31

Y - Z

Yahoo! Developer Network, JavaScript design patterns, 439

Yahoo! Search, listing websites with, 556

Yahoo! UI Library, 437, 456

YouTube, website integration, 184

z-index property (CSS), 217-219

Zen Garden (CSS), 191-192, 253