

## **Chapter One**

### **The Internet and the World Wide Web**

- 1.1 The Evolution of the Internet
- 1.2 The Internet, Intranets, and Extranets
  - The Evolution of the World Wide Web
  - Internet Standards and Coordination
- 1.3 Web Standards and the World Wide Web Consortium
- 1.4 Accessibility and the Web
- 1.5 Ethical Use of Information on the Web
- Checkpoint 1.1
- 1.6 Network Overview
- 1.7 The Client/Server Model
- 1.8 Internet Protocols
  - File Transfer Protocol (FTP)
  - E-mail Protocols
  - Hypertext Transfer Protocol (HTTP)
  - Transmission Control Protocol/  
Internet Protocol (TCP/IP)
- 1.9 URLs and Domain Names
  - URLs
  - Domain Names
- 1.10 Markup Languages
  - Standard Generalized Markup Language (SGML)
  - Hypertext Markup Language (HTML)
  - Extensible Markup Language (XML)
  - Extensible Hypertext Markup Language (XHTML)
- Checkpoint 1.2
- 1.11 Internet and Web Trends
- Key Terms
- Review Questions
- Web Research

## Chapter Two

### XHTML Basics

- 2.1 What Is HTML?
- 2.2 Why XHTML and Not HTML?
- 2.3 Document Type Definition
- 2.4 Your First Web Page
  - Hands-On Practice 2.1
- Checkpoint 2.1
- 2.5 XHTML—Body and Text Basics
  - The Body Tag
  - The Heading Tag
  - Hands-On Practice 2.2
  - Accessibility and Headings
  - The Paragraph Tag
  - Hands-On Practice 2.3
  - The Line Break Tag
  - Hands-On Practice 2.4
- 2.6 XHTML—List Basics
  - Definition Lists
  - Hands-On Practice 2.5
  - Ordered Lists
  - Unordered Lists
  - Hands-On Practice 2.6
- 2.7 XHTML—More Block-Level Tags
  - Preformatted Text
  - Hands-On Practice 2.7
  - Indenting Text
  - Hands-On Practice 2.8
- Checkpoint 2.2
- 2.8 XHTML —Text Formatting
  - The <font> Tag
  - Hands-On Practice 2.9
  - XHTML Logical Style Tags
  - XHTML Physical Style Tags
  - Special XHTML Characters
  - Hands-On Practice 2.10
- 2.9 XHTML Validation
  - Hands-On Practice 2.11
- Checkpoint 2.3
- Key Terms
- Review Questions
- Apply Your Knowledge
- Hands-On Exercises
- Web Site Case Study
  - JavaJam Coffee House
  - Fish Creek Animal Hospital
  - Pete the Painter
  - Prime Properties
- Web Research

## Chapter Three

### XHTML Hyperlinks & Tables

#### 3.1 XHTML—Hyperlinks

The Anchor Tag

Absolute and Relative Links

Hands-On Practice 3.1

Accessibility and Links

More on Relative Linking

Relative Link Examples

Opening a Link in a New Browser Window

Internal Links

Hands-On Practice 3.2

E-mail Links

Hands-On Practice 3.3

#### Checkpoint 3.1

#### 3.2 Using Tables on Web Pages

Overview of an XHTML Table

XHTML Table Headings

XHTML Table Captions

Hands-On Practice 3.4

XHTML Table Attributes

Applying Attributes to Rows and Cells

Hands-On Practice 3.5

Accessibility and Tables

#### Checkpoint 3.2

#### 3.3 XHTML—Formatting a Web Page with a Table

Accessibility and Layout Tables

More Sample Page Layout Examples

Flexible and Fixed Table Widths

Hands-On Practice 3.6

Nested Tables

#### Checkpoint 3.3

Key Terms

Review Questions

Apply Your Knowledge

Hands-On Exercises

Web Site Case Study

JavaJam Coffee House

Fish Creek Animal Hospital

Pete the Painter

Prime Properties

Web Research

## Chapter Four

### XHTML Color and Visual Elements

#### 4.1 Using Color on Web Pages

- Web Color Palette

- Color and the Body Tag

- Accessibility and Color

#### 4.2 Horizontal Rules

- Hands-On Practice 4.1

- Horizontal Rule Attributes

- Hands-On Practice 4.2

#### Checkpoint 4.1

#### 4.3 Types of Graphics

- GIF Images

- JPEG Images

- PNG Images

#### 4.4 Using Graphics

- The ImageTag

- Accessibility and Images

- Page Backgrounds

- Hands-On Practice 4.3

- Image Links

- Hands-On Practice 4.4

#### Checkpoint 4.2

#### 4.5 XHTML Images and More

- The **<noabr>** Tag

- Using a Table to Format Images

- Image Maps

- Thumbnail Images

- Advanced Techniques: Image Slicing

- Sources of Graphics

#### 4.6 Sources and Guidelines for Graphics

- Sources of Graphics

- Guidelines for Using Images

- Web Accessibility

#### Checkpoint 4.3

Key Terms

Review Questions

Apply Your Knowledge

Hands-On Exercises

Web Site Case Study

- JavaJam Coffee House

- Fish Creek Animal Hospital

- Pete the Painter

- Prime Properties

Web Research

## Chapter Five

### XHTML Frames

#### 5.1 Overview of Frames

- Advantages of Using Frames

- Disadvantages of Using Frames

- Accessibility and Frames

#### Checkpoint 5.1

#### 5.2 XHTML—Using Frames

- Your First Frameset

- Hands-On Practice 5.1

- The **<frameset>** Tag

- The **<frame />** Tag

- Hands-On Practice 5.2

- The **<noframes>** Tag

- The Target Attribute

- The **<base />** Tag

#### 5.3 Inline Frames

- Hands-On Practice 5.3

#### 5.4 Frames, Links, and Ethics

#### Checkpoint 5.2

#### Key Terms

#### Review Questions

#### Apply Your Knowledge

#### Hands-On Exercises

#### Web Site Case Study

- JavaJam Coffee House

- Fish Creek Animal Hospital

- Pete the Painter

- Prime Properties

#### Web Research

## Chapter Six

### XHTML Forms

6.1 Overview of Forms

6.2 XHTML—Using Forms

Hands-On Practice 6.1

The **<form>** Tag

Basic Form Elements

Hands-On Practice 6.2

Checkpoint 6.1

6.3 Form Enhancements

The **<label>** Tag

The **<fieldset>** and **<legend>** Tags

The Tabindex Attribute

The Accesskey Attribute

Accessibility and Forms

Image Buttons and **<button>** Tag

Hands-On Practice 6.3

Checkpoint 6.2

6.4 CGI Server-Side Processing

Steps in Utilizing CGI

Using CGI

Hands-On Practice 6.4

Privacy and Forms

CGI Resources

Other Technologies Used for Server-Side Processing

Checkpoint 6.3

Key Terms

Review Questions

Apply Your Knowledge

Hands-On Exercises

Web Site Case Study

JavaJam Coffee House

Fish Creek Animal Hospital

Pete the Painter

Prime Properties

Web Research

## Chapter Seven

### Web Site Design

- 7.1 Web Site Organization
  - Hierarchical Organization
  - Linear Organization
  - Random Organization
- 7.2 Web Site Navigation—Best Practices
  - Ease of Navigation
  - Navigation Bars
  - Short Pages
  - Table of Contents
  - Site Map and Site Search Features
- 7.3 Design Principles
  - Repetition
  - Contrast
  - Proximity
  - Alignment
- 7.4 Web Page Design—Best Practices
  - Load Time
  - Perceived Load Time
  - Above the Fold
  - Web Page “Real Estate”
  - Horizontal Scrolling
  - Adequate White Space
  - Target Audience
  - Browser-Friendly
  - Screen Resolution
  - Page Layout
- 7.5 Page Layout Design Techniques
  - Ice Design
  - Jello Design
  - Liquid Design
- Checkpoint 7.1
- 7.6 Text Design—Best Practices
- 7.7 Graphic Design—Best Practices
- 7.8 Design to Provide Accessibility
- 7.9 Best Practices Checklist
- Checkpoint 7.2
- Key Terms
- Review Questions
- Hands-On Exercises
- Web Site Case Study
  - JavaJam Coffee House
  - Fish Creek Animal Hospital
  - Pete the Painter
  - Prime Properties
  - Web Project
- Web Research

## **Chapter Eight**

### **Web Site Development**

#### 8.1 Successful Large-Scale Project Development

- Project Manager
- Information Architect
- Marketing Representative
- Copywriter and Editor
- Content Manager
- Graphic Designer
- Database Administrator
- Network Administrator
- Web Developer
- Project Staffing Criteria

#### 8.2 The Development Process

- Conceptualization
- Analysis
- Design
- Production
- Testing
- Launch
- Maintenance
- Evaluation

#### Checkpoint 8.1

#### 8.3 Web Hosting

- Types of Web Host Providers
- Hosting Needs

#### 8.4 Choosing a Virtual Host

- Web Host Checklist

#### Checkpoint 8.2

#### Key Terms

#### Review Questions

#### Hands-On Exercises

#### Web Site Case Study

- Web Project

#### Web Research

## Chapter Nine

### Cascading Style Sheets Introduction

#### 9.1 Overview of Cascading Style Sheets

- Advantages of Cascading Style Sheets

- Types of Cascading Style Sheets

- Introduction to CSS Syntax

#### 9.2 Using Inline Styles

- Hands-On Practice 9.1

- XHTML Elements Used with Styles

- Hands-On Practice 9.2

#### Checkpoint 9.1

#### 9.3 Using Embedded Style Sheets

- Hands-On Practice 9.3

- Using CSS with the class Selector

- Hands-On Practice 9.4

- Using CSS with the id Selector

#### 9.4 Using External Style Sheets

- Hands-On Practice 9.5

#### Checkpoint 9.2

#### 9.5 The “Cascade”

- Hands-On Practice 9.6

#### 9.6 CSS Pseudo-classes and Links

- Hands-On Practice 9.7

- Hands-On Practice 9.8

#### 9.7 CSS and Fonts

#### 9.8 CSS Strategies

#### Checkpoint 9.3

#### Key Terms

#### Review Questions

#### Apply Your Knowledge

#### Hands-On Exercises

#### Web Site Case Study

- JavaJam Coffee House

- Fish Creek Animal Hospital

- Pete the Painter

- Prime Properties

- Web Project

#### Web Research

## Chapter Ten

### Cascading Style Sheets—Page Layout

#### 10.1 CSS Page Layout Overview

Advantages of Using CSS for Page Layout

Disadvantages of Using CSS for Page Layout

#### 10.2 The Box Model

#### 10.3 CSS Positioning Properties

Relative and Absolute Positioning

The float Property

The display Property

The z-index Property

Hands-On Practice 10.1

#### Checkpoint 10.1

#### 10.4 Two-Column Page Layout

Hands-On Practice 10.2

#### 10.5 Navigation Layout Using Lists

#### 10.6 Three-Column Page Layout

Hands-On Practice 10.3

#### Checkpoint 10.2

#### 10.7 Using CSS to Style a Form

#### 10.8 CSS Styling for Print

Hands-On Practice 10.4

#### 10.9 CSS Debugging Tips

#### 10.10 CSS Page Layout Resources

#### Checkpoint 10.3

#### Key Terms

#### Review Questions

#### Apply Your Knowledge

#### Hands-On Exercises

#### Web Site Case Study

JavaJam Coffee House

Fish Creek Animal Hospital

Pete the Painter

Prime Properties

Web Project

#### Web Research

## Chapter Eleven

### Web Multimedia & Interactivity

- 11.1 Helper Applications and Plug-ins
- 11.2 Audio File Types
  - Obtaining Audio Files
- 11.3 Using Sound on a Web Page
  - The <embed> Tag
  - Hands-On Practice 11.1
  - The <object> Tag
  - Hands-On Practice 11.2
  - Background Sounds
  - Hands-On Practice 11.3
- 11.4 Video File Types
  - Obtaining Video Files
- 11.5 Using Video on a Web Page
  - The <embed> Tag
  - Hands-On Practice 11.4
  - The <object> Tag
  - Hands-On Practice 11.5
  - Internet Explorer Only Options
- 11.6 Browser Compatibility and Accessibility
- 11.7 Streaming Media
- 11.8 Introduction to RealNetworks Streaming Media
  - Authoring
  - Distribution
  - Playback
- 11.9 Copyright Issues and Media Files
- Checkpoint 11.1
- 11.10 Adobe Macromedia Flash
  - Common Uses of Flash
  - Web Design and Flash
  - Adding a Flash Animation to a Web Page
  - Hands-On Practice 11.6
  - Flash Resources
- 11.11 Java
  - Common Uses of Java Applets
  - Adding a Java Applet to a Web Page
  - Hands-On Practice 11.7
  - Free Java Applet Resources
- Checkpoint 11.2
- 11.12 JavaScript
  - Common Uses of JavaScript
  - Free JavaScript Resources
- 11.13 Dynamic HTML (DHTML)
  - Common Uses of DHTML
  - Sources of free DHTML
- 11.14 Ajax – An Advanced Web Technology
  - Common Uses of Ajax
  - Ajax Resources
- Checkpoint 11.3
- 11.15 Accessibility and Multimedia/Interactivity
- Key Terms
- Review Questions
- Apply Your Knowledge

Hands-On Exercises

Web Site Case Study

JavaJam Coffee House

Fish Creek Animal Hospital

Pete the Painter

Prime Properties

Web Project

Web Research

## **Chapter Twelve**

### **E-Commerce Overview**

#### 12.1 What Is E-Commerce?

- Advantages of E-Commerce

- Risks of E-Commerce

#### 12.2 E-Commerce Business Models

#### 12.3 Electronic Data Interchange (EDI)

#### 12.4 E-Commerce Statistics

#### 12.5 E-Commerce Issues

#### 12.6 E-Commerce Security

- Encryption

- Integrity

- Secure Sockets Layer (SSL)

- Digital Certificate

- SSL and Digital Certificates

#### Checkpoint 12.1

#### 12.7 Order and Payment Processing

- Cash Model

- Check Model

- Credit Model

- Smart Card

#### 12.8 E-Commerce Storefront Solutions

- Instant Online Storefront

- Off-the-Shelf Shopping Cart Software

- Custom-Built Solution

- Semi-Custom-Built Solutions on a Budget

#### Checkpoint 12.2

#### Key Terms

#### Review Questions

#### Hands-On Exercises

#### Web Site Case Study

- JavaJam Coffee House

- Fish Creek Animal Hospital

- Pete the Painter

- Prime Properties

- Web Project

#### Web Research

## Chapter Thirteen

### Promotion for Web Developers

13.1 Search Engines and Search Indexes Overview

13.2 Popular Search Engines and Search Indexes

13.3 Components of a Search Engine

Robot

Database

Search Form

13.4 Designing Your Pages for Promotion

Keywords

Description

Meta Tags

13.5 Listing in a Search Engine and Search Index

Preferential Placement

Checkpoint 13.1

13.6 Monitoring Search Engine and Search Index Listings

13.7 Link Popularity

13.8 Other Site Promotion Activities

Affiliate Programs

Banner Ads

Banner Exchange

Reciprocal Link Agreements

Newsletters

“Sticky” Site Features

Blogs and RSS Feeds

Personal Recommendations

Web Rings

Newsgroup and Listserv Postings

Traditional Media Ads and Existing Marketing Materials

Checkpoint 13.2

Key Terms

Review Questions

Hands-On Exercises

Web Site Case Study

JavaJam Coffee House

Fish Creek Animal Hospital

Pete the Painter

Prime Properties

Web Project

Web Research

## Chapter Fourteen

### A Brief Look at JavaScript

14.1 Overview of JavaScript?

14.2 The Development of JavaScript

14.3 Popular Uses for JavaScript

Alert Message

Popup Windows

Browser Sniffing

Jump Menus

Mouse Movement Techniques

14.4 Adding JavaScript to a Web Page

The <script> Tag

JavaScript Statement Block Template

Hands-On Practice 14.1

Checkpoint 14.1

14.5 Document Object Model Overview

Hands-On Practice 14.2

14.6 Events and Event Handlers

Hands-On Practice 14.3

Checkpoint 14.2

14.7 Variables

Writing a Variable to a Web Page

Hands-on Practice 14.4

Collecting Variable Values Using Prompt

Hands-On Practice 14.5

14.8 Introduction to Programming Concepts

Arithmetic Operators

Decision Making Using If

Hands-On Practice 14.6

Functions

Hands-On Practice 14.7

Checkpoint 14.3

14.9 Form Handling

Hands-On Practice 14.8

Checkpoint 14.4

14.10 JavaScript and Accessibility

14.10 JavaScript Resources

Key Terms

Review Questions

Apply Your Knowledge

Hands-On Exercises

Web Site Case Study

JavaJam Coffee House

Fish Creek Animal Hospital

Pete the Painter

Prime Properties

Web Project

Web Research

## Answers

Chapter 1  
Chapter 2  
Chapter 3  
Chapter 4  
Chapter 5  
Chapter 6  
Chapter 7  
Chapter 8  
Chapter 9  
Chapter 10  
Chapter 11  
Chapter 12  
Chapter 13  
Chapter 14

## Appendix -- Web Developer's Handbook

A. XHTML Reference  
B. Special Characters  
C. CSS Property Reference  
D. Comparison of HTML and XHTML  
E. Tutorial: Using FTP to Publish to the Web  
F. Section 508 Standards

## Index

### Student Files Available for Download

Hands-On Practice Solutions  
Hands-On Practice Starter Files  
Case Study Starter Files  
Using Macromedia Dreamweaver 8 Tutorial 1  
Using Macromedia Dreamweaver 8 Tutorial 2  
Using Macromedia Dreamweaver 8 Tutorial 3

### Textbook Companion Website

<http://webdevfoundations.net>

One page for each Chapter with links, updated info, errata

Color Chart

Online Macromedia Fireworks 8 Tutorial

Online Macromedia Flash 8 Tutorial