**HTML and JavaScript BASICS, 4th Edition**

**Lesson 1: Quick HTML Know-How**

**A Guide to this Instructor’s Manual:**

We have designed this Instructor’s Manual to supplement and enhance your teaching experience through classroom activities and a cohesive chapter summary.

This document is organized chronologically, using the same headings in **plum** that you see in the textbook. Under each heading you will find (in order): Lesson Objectives, Teacher Materials, a Prepare section that focuses students’ attention on the objectives in the lesson, Instructor Notes and Teacher Tips that summarize the section, Figures and Boxes found in the section, Classroom Activities, Projects to Assign, Key Terms, and Assess. Pay special attention to teaching tips, and activities geared towards quizzing your students, enhancing their critical thinking skills, and encouraging experimentation within the software.

In addition to this Instructor’s Manual, our Instructor Resources CD also contains PowerPoint presentations, Test Banks, and other supplements to aid in your teaching experience.

**For your students:**

Our latest online feature, CourseCasts, is a library of weekly podcasts designed to keep your students up to date with the latest in technology news. Direct your students to <http://coursecasts.course.com>, where they can download the most recent CourseCast onto their mp3 players. Ken Baldauf, host of CourseCasts, is a faculty member of the Florida State University Computer Science Department where he is responsible for teaching technology classes to thousands of FSU students each year. Ken is an expert in the latest technology and sorts through and aggregates the most pertinent news and information for CourseCasts so your students can spend their time enjoying technology, rather than trying to figure it out. Open or close your lecture with a discussion based on the latest CourseCast.

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# **Lesson Objectives**

Students will have mastered the material in Lesson 1 when they can:

* View HTML tags.
* Enter starting tags.
* Save correctly.
* Integrate levels of headings into Web pages.
* Create unordered, ordered, and embedded lists.

# **Data Files**

Students will not need data files to complete this lesson.

# **Teacher Materials**

* Learner text.
* PowerPoint presentation from the **PowerPoint Presentations** drop-down menu on the *Instructor Resources* CD.
* Solutions to review questions and projects from the **Solutions to Exercises** drop-down menu on the *Instructor Resources* CD.
* ExamView® test questions from the **Test Bank & Test Engine** drop-down menu on the *Instructor Resources* CD.

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# **Prepare**

* Set up a projection system and show the PowerPoint presentation for the lesson, if desired.
* Give necessary instructions to students about lab guidelines.
* Prepare questions from ExamView.

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# **Technical Notes**

* The show-and-tell method works well to provide learners with visual aids to make the information easier to understand. Choose a Web page and print out both the way it appears in a browser and also the source code. Enlarge the printout and hang it on the wall for students to view and begin to match the HTML code with the Web page appearance.

# **Instructor Notes and Teacher Tips**

* Review Objectives and ask students about their experience with HTML.
* Review the vocabulary list at the beginning of the lesson, and ask students to identify any terms they are already familiar with.
* Discuss the widespread use of the Internet and how it affects each of us individually and as a society.
* Visit the home page for each of the popular Web browsers shown in Figure 1-1.
* Review Figures 1-2A and 1-2B to show how a Web Page appears in Internet Explorer versus the way the HTML code appears under the hood.
* Make sure students understand that although they can use programs to build Web pages without ever knowing HTML, learning and entering the tags by hand is important for their understanding. For more information on the benefits of learning HTML, visit pages 9 and 10.
* Emphasize that HTML pages are saved as simple text files with .htm or .html file extensions.
* Explain that there are six heading levels in HTML, with level 1 indicating the most prominent heading and level 6 indicating the least prominent.
* Show examples of ordered (numbered) and unordered (bulleted) lists.

# **4: Communicating on the Web**

* Web pages present a cascading explosion of multimedia.
* Web sites are collections of related Web pages.
* Web browsers are software that locates and displays Web information.
* The dominant Web browser for the past twenty years has been Microsoft’s Internet Explorer. Some challenging mainstream competitors to Internet Explorer include Mozilla’s Firefox, Apple’s Safari, and Google’s Chrome.

FIGURES

* Figure 1-1: Several of the popular browsers

CLASSROOM ACTIVITIES

1. Discussion Questions:
2. Have students identify the browser they are currently using. Ask them to explain why they chose that browser. Compare and contrast the answers given by different students.
3. Compare and contrast the browser logos shown in Figure 1-1. What does each logo symbolize? If you did not know that these logos were browsers, what would you think they were for? Which logo do you like best? Why?
   1. Group Activity:
4. Divide the class into small groups. Ask each group to research two browsers on the Internet and build a chart comparing and contrasting the browser’s features. Which browser appears to be the strongest? Why?

# **4: Interfacing HTML and Other Tools**

* HTML tells Web browsers how Web pages should look on a computer or handheld smartphone screen.
* Cascading Style Sheets create convenient ways to determine the style on multiple Web site pages.
* Extensible Markup Language (XML) and Extensible Hypertext Markup Language (XHTML) are powerful additions to HTML.
* Java is a programming language used widely with Internet applications.
* Flash is a high-impact multimedia creation tool.
* JavaScript is a Java-like scripting language used to create miniapplications called apps or gadgets.
* With a few simple HTML tags, you can determine the placement of colors, pictures, apps, gadgets, and backgrounds on Web pages.

CLASSROOM ACTIVITIES

* 1. Quick Quizzes:
     1. True or False? JavaScript is used in the creation of apps and gadgets.

**Answer:** True.

* + 1. True or False? HTTP is the unifying language of the World Wide Web.

**Answer:** False. The unifying language of the World Wide Web is HTML.

* 1. Lab Activity:
  2. The lesson stated that JavaScript is used to create miniapplications are also called apps or gadgets. What do you perceive to be the difference between miniapplications, apps, and gadgets? Research the definition of these terms on the Internet. What did you find to be the differences between these terms? Which Web site was your best source of information?

# **5: Uncovering the Page Beneath the Page**

* + Review Figure 1-2A and Figure 1-2B. Figure 1-2A shows how visitors see the page in Internet Explorer. Figure 1-2B shows the tags and code underneath the hood that create the visual display.

**How HTML Works**

* + HTML tags are simple and easy to use. They usually appear in pairs enclosed in *<angle brackets>*.
  + Review the example of HTML on the bottom of page 6. Point out that the difference between the opening and closing tags is a slash (/) following the left angle bracket in the closing tag.
  + In Step-by-Step 1.1, students will open a Web page and view the Web page’s source code.

BOXES

* Extra for Experts: If you are using Internet Explorer 7 or Internet Explorer 8, make your life easier and display the menu bar. For Internet Explorer 7, click the Tools button, and then click Menu Bar from the list. For Internet Explorer 8, click the Tools button, point to Toolbars, and then click Menu Bar. This allows you to use the View menu for opening and closing Web pages.
* Net Business: Business Discovers the Web. The World Wide Web (WWW) was created in the late 1980s in Europe. It was used limitedly in academic circles for about the next five years. However, it didn’t capture the public’s imagination until 1994 when a Web browser called Mosaic came on the scene. It was the first Web browser that allowed both pictures and text to accompany Web pages.

Excitement grew around this new way to present and share information. Then, Netscape Communications Corporation released its browser called Netscape Navigator. Netscape caught the imagination of businesses in 1995, and everything was different from that point on.

In just a few short years, the World Wide Web became the new advertising and commercial medium we see today. Billions and billions of dollars were invested by companies and corporations hoping to cash in on this new, golden, information-sharing system. Suddenly, hundreds of thousands of corporate Web page creators began to learn HTML so they could put their business Web pages online.

FIGURES

* + Figure 1-2A: A Google Sites CSS-style Web page (*sites.google.com*)
  + Figure 1-2B: HTML tags for the Google Sites-created page shown in Figure 1-2A
  + Figure 1-3A: The Page (Alternatively: View), View Source command in Internet Explorer
  + Figure 1-3B: The View, Page Source command in Mozilla Firefox
  + Table 1-1: Common tags

CLASSROOM ACTIVITIES

1. Quick Quizzes:
   1. The World Wide Web was created in the late \_\_\_\_ in \_\_\_\_.

**Answer:** The World Wide Web was created in the late 1980’s in Europe.

* + 1. What was the name of the first Web browser that allowed both pictures and text?

**Answer:** Mosaic.

2. Discussion Questions:

1. Discuss the hint listed on page 6 that states “HTML tags are just instructions to the Web browser.” Does this make HTML easier to understand? What are some other ways to describe HTML?
2. Review the HTML source code from a live site. Ask students to identify the opening and closing tags.
3. Ask students to practice typing some simple HTML tags using angle brackets. Did they find it to be simple and easy? Did anyone have difficulty locating the angle brackets or the slash used in the closing tag?

# **9: Entering Your Mystery Tags the Old-Fashioned Way**

* + There are slight but important distinctions between the terms Web page, Home page, Welcome page, Landing page, and Web site. These terms are described on page 9.

**Creating a Powerful Advantage with Tags**

* + You can use specialized software, such as Expression Web 2 by Microsoft or Dreamweaver by Adobe, to create exciting Web pages.
  + You can also use free online tools such as Sites from Google.
  + These programs help organize your HTML pages and allow you to create superior Web page effects without ever entering an HTML tag.

**Why Learn HTML?**

* + Even though there are programs available to build Web sites, it is still important to learn HTML. The reasons include:
    - Gaining a deeper understanding of how HTML works
    - Being able to troubleshoot Web page errors
    - Being able to view other pages and learn how others achieved a certain effect
    - Learning how file and folder structures work on Web servers
    - Gaining an understanding of how HTML and other tools like XHTML, JavaScript, CSS, and XML work together.

**What to Use**

* + Any text editor will work for creating HTML tags and JavaScript code.
  + In Step-by-Step 1.2, students will start to learn and use HTML tags.

BOXES

* Warning: Ask your instructor for advice on the text editor you should use before you jump in and waste a lot of time entering tags into the wrong text-editing tool.
* Warning: In the past, HTML wasn’t case sensitive. You could use uppercase <TAGS>, lowercase <tags>, or mixed <TagS>. With HTML 4.01 and XHTML 1.0 standards, new and stricter methods are now being implemented. It is now considered good form to only use lowercase <tags>.

FIGURES

* + Figure 1-4: Enter these tags exactly as shown here
  + Figure 1-5: Enter the text between the tags exactly as shown here

CLASSROOM ACTIVITIES

1. Quick Quizzes:
   1. What is a Home page?

**Answer:** A home page is the main or primary Web page for a corporation, organization, or individual.

* + 1. A Web site is a collection of interconnected \_\_\_\_.

**Answer:** Web pages

* + 1. A landing page is a targeted “welcome” page used by Web \_\_\_\_.

**Answer:** advertisers

2. Critical Thinking:

1) Review the section “Why Learn HTML?” Do you agree that learning HTML outside a Web design program is important? What would have been the impact on you if you never learned math, but did learn how to use a calculator? Do you see a similarity with someone who learns a Web design program but does not understand the underlying HTML?

1. Lab Activity:

1) Review the list of pages created using HTML tags listed on page 9. Find an example of a Web page, Home page, Welcome page, Landing page, and Web site. Where do these terms overlap the most? Can a Web page also be a Home page, a Welcome page, and part of a Web site?

# **12: Saving and Viewing Your HTML Page**

* + HTML documents are text files with .html or .htm extensions.
* Saving as text allows HTML files to move quickly over the Web.
* To tell one type of file from another, computers add file extensions to file names.
* In Step-by-Step 1.3, students will save an HTML/text file in Notepad.

BOXES

* + Warning: Ask your instructor if you need help saving an HTML/text file on your unique server setup or with your specific text editor.
  + Net Business: The Browser Wars. In 1994, the dominant browser was called Mosaic. It was freeware out of the National Supercomputing Center at the University of Illinois in Champagne-Urbana. At the time Netscape came on the scene, Mosaic was adding 600,000 new users a month. But things changed in a hurry.

In the first three months of 1995, Netscape’s Navigator browser gained a reputation for being a faster browser. By midyear, it had captured 50 percent of browser users, and by the end of the year, it commanded a whopping 80 percent of the browser market.

Netscape’s dominance was quickly challenged by rival Microsoft, which came out with its Internet Explorer browser. Microsoft gave away copies of its browser in hopes of cutting into Netscape’s lead. Microsoft also had an advantage in that its Windows operating system ran on over 90 percent of personal computers. By bundling Windows and Internet Explorer together, Microsoft creating a unique marketing advantage.

However, Microsoft’s advantage led to many legal battles. Several antitrust lawsuits argued that Microsoft was using its dominance in Windows to crush Netscape and to eliminate its competition unfairly. Microsoft claimed it was simply adding more value for its customers by making its Internet Explorer browser easier to access by its Windows customers.

The browser wars continue today. Microsoft’s Internet Explorer is still the dominant player in most markets; Netscape Navigator has all but disappeared from use. Fortunately, for the sake of competition, Mozilla’s Firefox took Netscape’s place and has made a charge at Internet Explorer’s dominance. By 2009, Internet Explorer’s market share dropped to 65 percent. Other browsers have also been developed to further challenge the dominance of Internet Explorer, including Apple’s Safari and Google’s Chrome, which by 2009 occupied the third and fourth positions, respectively.

FIGURES

* + Table 1-2: Common File Extensions
  + Figure 1-6: Name a text file with an .html extension
  + Figure 1-7: Open the menu bar to make it easier to use
  + Figure 1-8: Find your file in IE
  + Figure 1-9: Open File command in Firefox
  + Figure 1-10: Find your file in Firefox
  + Figure 1-11: Congratulations! Your Web page probably looks like this sample

CLASSROOM ACTIVITIES

1. Quick Quiz:

1) What type of file is an HTML document?

**Answer:** An HTML document is a text file.

1. Discussion Questions:

1) Review the file extensions in Table 1-2 on page 12. Which of these types of file extensions are you familiar with? What are some other file extensions? The book states that the .html extension is like putting up a sign saying, “Hey, browser, read me. I’m an HTML document.” Do you agree with this description?

1. Ask students to read the Net Business box on page 16. Was it fair or unfair of Microsoft to bundle Internet Explorer with their Windows operating system? Do you think they should continue to bundle Internet Explorer with Windows now? Why or why not?

# **16: Using Headings**

* + HTML gives you six standard headings, or title sizes, from which to choose.
  + The heading tags are easy to remember. They use the letter H with a number from 1 to 6.
  + Heading numbers indicate the level of importance for marked headings, with 1 being the most prominent and 6 being the least prominent.
  + In Step-by-Step 1.4, students will open the HTML file they have been working on and will add the heading or title tags.

BOXES

* Warning: Users might see a “Pop-Up Blocked” message or some other error message that might block the opening of the page. Simply click the option to allow the content to be viewed. If you need help, ask your instructor or read the Help files for your specific browser.

FIGURES

* + Figure 1-12: Open a file in Notepad
  + Figure 1-13: Add the heading tags
  + Figure 1-14: Various size headings in a Web page

CLASSROOM ACTIVITIES

1. Lab Activity:
2. Divide the class into small groups. Search on the Internet to find Web sites with different size headings. Print out the Web page with the most heading levels on one page, and also print the source code. Present the findings to the class.

2. Discussion Question:

1) Review the 6 heading sizes listed on the bottom of page 16. Ask students to practice writing these HTML tags. If you were the inventor of HTML, would you make <h1> or <h6> the most prominent heading? Is it surprising that there are only 6 heading levels?

# **19: Using Numbered and Bulleted Lists**

* + One of the most powerful ways to organize information on a Web page is by the use of lists.
  + Unordered, or bulleted, lists use the <ul></ul> tags.
  + Ordered, or numbered, lists use the <ol></ol> tags.
  + In Step-by-Step 1.5, students will create both an ordered and an unordered list.

BOXES

* Warning: Don’t use a zero; use the letter O for ordered.

FIGURES

* + Figure 1-15: Enter the unordered list tags
  + Figure 1-16: An unordered list
  + Figure 1-17: Enter the ordered lists tags
  + Figure 1-18: An ordered or numbered list
  + Figure 1-19: Enter additional unordered lists tags
  + Figure 1-20: Embedded and indented lists

CLASSROOM ACTIVITIES

1. Quick Quizzes:
   * + 1. True or False? A numbered list is a type of ordered list.

**Answer:** True.

1. True or False? A bulleted list is a type of ordered list.

**Answer**: False. A bulleted list is a type of unordered list.

1. Classroom Discussion:
   1. What is the difference between an ordered and an unordered list? Does an ordered list have to include numbers? Does an unordered list have to include bullets?

# **Key Terms**

* **Angle brackets:** These brackets appear on the comma and period keys on the keyboard and are used to enclose HTML tags. (6)
* **Apps:** Another term for miniapplications. (5)
* **Cascading Style Sheets (CSS):** Create convenient ways to determine the style on multiple Web site pages. (5)
* **Flash:** A high-impact multimedia creation tool. (5)
* **Gadgets:** Another term for miniapplications. (5)
* **Dome page:** The main or primary Web page for a corporation, organization, or individual. (9)
* **HTML page:** Another term for a Web page. (9)
* **Hypertext Markup Language (HTML):** Tells Web browsers how Web pages should look on a computer or handheld smartphone screen. (4)
* **Java:** A programming language used widely with Internet applications. (5)
* **JavaScript:** A Java-like scripting language used to create miniapplications. (5)
* **Landing page:** A targeted “welcome” page used by Web advertisers. (9)
* **Tags:** HTML code that is used to determine the placement of colors, pictures, apps, gadgets, and backgrounds on Web pages. (5)
* **Web browser:** Software that locates and displays Web information. (4)
* **Web page:** Any page created in HTML that can be placed on the World Wide Web. (4, 9)
* **Web site:** Collections of related Web pages. (4, 9)
* **Welcome page:** A Web page designed especially for new visitors to a Web site. (9)
* **XHTML:** Extensible Hypertext Markup Language is a new addition to HTML that gives new power to an old medium. (5)
* **XML:** Extensible Markup Language is a powerful new addition to HTML. (5)

# **Projects to Assign**

* In Project 1-1, students will find and review HTML and XHTML online resources.
* In Project 1-2, students will work in a team to find seven great Web pages and discuss what makes them so cool.
* In Project 1-3, students will list the reasons why government agencies, nonprofit organizations, and universities need Web sites.
* In Critical Thinking Activity 1-1, students will write a report about online information overload and what can be done about it.
* In Critical Thinking Activity 1-2, students will review some HTML code and identify the error.
* In Critical Thinking Activity 1-3, students will identify how a research paper can be enhanced using HTML.
* In the Capstone Simulation project, students will use HTML to create an outline for a book.

# **Assess**

* Administer the ExamView test for Lesson 1.

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