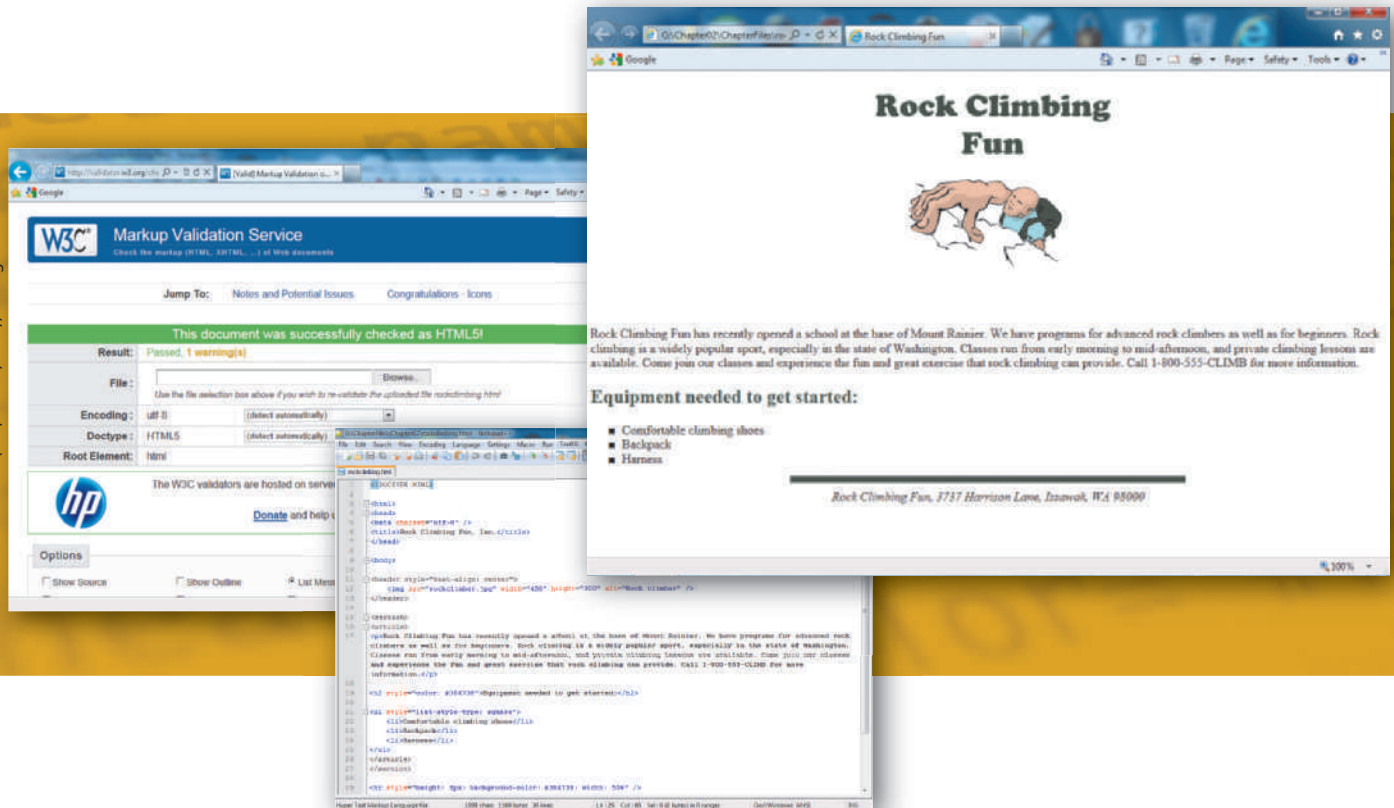


2 Creating and Editing a Web Page Using Inline Styles



Objectives

You will have mastered the material in this chapter when you can:

- Identify elements of a Web page
- Start Notepad++ and describe the Notepad++ window
- Enable word wrap in Notepad++
- Enter HTML tags
- Enter a centered heading and a paragraph of text
- Create an unordered, ordered, or definition list
- Save an HTML file
- Use a browser to view a Web page
- Activate Notepad++
- Identify Web page image types and attributes
- Add an image, change the color of headings on a Web page, change a bulleted list style, and add a horizontal rule using inline styles
- View the HTML source code in a browser
- Print a Web page and an HTML file
- Quit Notepad++ and a browser

2 | Creating and Editing a Web Page Using Inline Styles

Introduction

With an understanding of the Web development life cycle, you should have a good idea about the importance of proper Web site planning, analysis, and design. After completing these phases, the next phase is the actual development of a Web page using HTML. As discussed in Chapter 1, Web pages are created by using HTML tags and attributes to define the structure, layout, and appearance of a Web page. In this chapter, you create and edit a Web page using basic HTML tags.

Project — Rock Climbing Fun Web Page

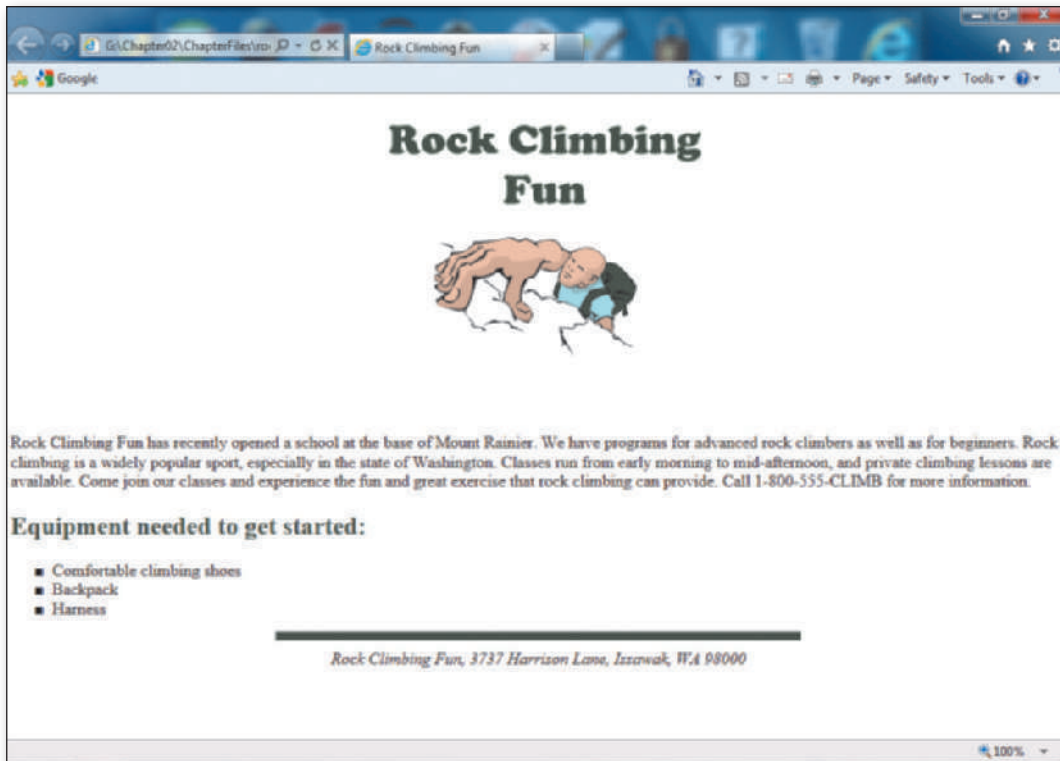
Chapter 2 illustrates how to use HTML to create a Web page for a rock climbing company, as shown in Figure 2–1a. As an employee of the company, one of your tasks is to develop a Web page to advertise the company’s rock climbing classes. The Rock Climbing Fun Web page will include general information about the company along with information on the equipment needed to start rock climbing.

To enter text and HTML tags used to create the Web page, you will use a program called Notepad++, as shown in Figure 2–1b. **Notepad++** is a basic text editor that you can use for simple documents or for creating Web pages using HTML. Previous editions of this book used Notepad, a text editor that is a part of the Windows operating system. Notepad worked well to enter the HTML elements and Web page content, but Notepad++ is a more sophisticated text editor with more features. Notepad++ has line numbering, which is very helpful when reading code. It also highlights code and text with different colors, as you will see later in the chapter. Because of this added versatility, Notepad++ is the chosen text editor for this edition. You will use the Microsoft Internet Explorer browser to view your Web page as you create it. By default, Internet Explorer is installed with Windows, and Notepad++ can be downloaded for free on the Web. If you do not have Notepad++ on your computer, you can download it from the notepad-plus-plus.org Web site. If you do not have Internet Explorer available on your computer, another browser program will work.

Overview

As you read this chapter, you will learn how to create the Web page shown in Figure 2–1 by performing these general tasks:

- Enter HTML code into the Notepad++ window.
- Save the file as an HTML file.
- Enter basic HTML tags and add text to the file.
- Organize the text by adding headings and creating a bulleted list.
- Enhance the Web page’s appearance with an image and inline styles.
- View the Web page and HTML code in your browser.
- Validate the Web page.
- Print the Web page.



Art courtesy of Opencilipart.org/Darren Beck

(a) Rock Climbing Fun Web page.

```

1  <!DOCTYPE HTML>
2
3  <html>
4  <head>
5  <meta charset="utf-8" />
6  <title>Rock Climbing Fun, Inc.</title>
7  </head>
8
9  <body>
10
11 <header style="text-align: center">
12 
13 </header>
14
15 <section>
16 <article>
17 <p>Rock Climbing Fun has recently opened a school at the base of Mount Rainier. We have programs for advanced rock
18 climbers as well as for beginners. Rock climbing is a widely popular sport, especially in the state of Washington.
19 Classes run from early morning to mid-afternoon, and private climbing lessons are available. Come join our classes
20 and experience the fun and great exercise that rock climbing can provide. Call 1-800-555-CLIMB for more
21 information.</p>
22
23 <h2 style="color: #384738">Equipment needed to get started:</h2>
24
25 <ul style="list-style-type: square">
26 <li>Comfortable climbing shoes</li>
27 <li>Backpack</li>
28 <li>Harness</li>
29 </ul>
30 </article>
31 </section>
32
33 <hr style="height: 0px; background-color: #384738; width: 504" />
34
35 <footer style="text-align: center; font-style: italic">
36 Rock Climbing Fun, 3737 Harrison Lane, Issaquah, WA 98000
37 </footer>
38
39 </body>
40 </html>

```

(b) HTML code used to create the Web page.

Figure 2-1

Plan Ahead**General Project Guidelines**

When creating a Web page, the actions you perform and decisions you make will affect the appearance and characteristics of the finished page. As you create a Web page, such as the project shown in Figure 2–1 on the previous page, you should follow these general guidelines:

1. **Complete Web page planning.** Before developing a Web page, you must know the purpose of the Web site, identify the users of the site and their computing environments, and decide who owns the information on the Web page.
2. **Analyze the need for the Web page.** In the analysis phase of the Web development life cycle, you should analyze what content to include on the Web page. In this phase, you determine the tasks and the information that the users need. Refer to Table 1–4 on page HTML 15 in Chapter 1 for information on the phases of the Web development life cycle.
3. **Choose the content for the Web page.** Once you have completed the analysis, you need to determine what content to include on the Web page. Follow the *less is more* principle. The less text, the more likely the Web page will be read. Use as few words as possible to make a point.
4. **Determine the file naming convention that you will use for this Web page.** Before you start creating and saving files, you should decide on a standard way of naming your files. Should you use the .htm or .html extension? As explained later in the chapter, you use the .htm extension when the host Web server only allows short file names. You use .html when the host Web server allows long file names. What name should you give your file to indicate the file's content or purpose? For instance, naming a Web page page1.html does not describe what that Web page is; a more descriptive name is helpful in development of the Web site.
5. **Determine where to save the Web page.** You can store a Web page permanently, or save it, on a variety of storage media, including a hard disk, USB flash drive, CD, or DVD. Your instructor or the company for whom you are developing the Web page may have specific storage media requirements.
6. **Determine what folder structure to use on your storage device.** Once you have determined the storage media to use, you should also determine folder location, structure, and names on which to save the Web page. This should be done before you start to save any of your files.
7. **Identify how to format various elements of the Web page.** The overall appearance of a Web page significantly affects its ability to communicate clearly. Examples of how you can modify the appearance, or **format**, of the Web page include adding an image, color to headings, and horizontal rules.
8. **Find appropriate graphical images.** Eye-catching graphical images help convey the Web page's overall message and add visual interest. Graphics can be used to show a product, service, result, or benefit, or visually convey a message that is not expressed easily with words.
9. **Establish where to position and how to format the graphical images.** The position and format of the graphical images should grab the attention of viewers and draw them into reading the Web page.
10. **Test the Web page for W3C compliance.** An important part of Web development is testing to assure that your Web page follows standards. The World Wide Web Consortium (W3C) has an online validator that allows you to test your Web page and clearly explains any errors.

When necessary, more specific details concerning the above guidelines are presented at appropriate points in the chapter. The chapter will also identify the actions performed and decisions made regarding these guidelines during the creation of the Web page shown in Figure 2–1a.

Elements of a Web Page

Today, many people — individuals, students, teachers, business executives, Web developers, and others — are developing Web pages for personal or professional reasons. Each person has his or her own style and the resulting Web pages are as diverse as the people who create them. Most Web pages, however, include several basic features, or elements, as shown in Figure 2–2.



Figure 2–2 Elements of a Web page.

Browser Window Elements

The **title** of a Web page is the text that appears on the title bar and taskbar of the browser window when the Web page appears. The title is also the name assigned to the page if a user adds the page to the browser's list of **favorites**, or **bookmarks**. Because of its importance, you should always include a title on your Web page. The title, which usually is the first element you see, should identify the subject or purpose of the page. The title should be concise, yet descriptive, and briefly explain the page's content or purpose to the visitor.

The **body** of the Web page contains the information that is displayed in the browser window. The body can include text, graphics, and other elements. The Web page displays anything that is contained within the `<body>` (start body) and `</body>` (end body) tags. The **background** of a Web page is a solid color, a picture, or a graphic against which the other elements on the Web page appear. When choosing your background, be sure it does not overpower the information on the Web page. As you surf the Web, watch for background colors or images that do not allow the content of the Web page to show through. This is certainly a “what not to do” guideline for Web developers.

BTW

Favorites and Bookmarks

Internet Explorer, Google Chrome, and Mozilla Firefox have a feature that allows you to add Web pages to a list so you can quickly access them in the future. Internet Explorer refers to these as Favorites, while Chrome and Firefox calls them Bookmarks. Web developers need to make sure that they include a descriptive title on their Web pages because that is the title that is shown in the bookmark or favorite.

HTML Resources

The Web has many wonderful sources of information on HTML and Web page development. One of the better sources is the HTML Goodies Web site, which has primers and tutorials on a variety of topics as well as free downloads and discussion areas. To learn more about this Web site, search for the term “HTML Goodies” in a search engine.

Text Elements

Normal text is the default text format used for the main content of a Web page. Normal text can be used in a standard paragraph or formatted to appear as: bold, italic, or underlined; in different colors; and so on. You can also use inline styles to alter the format of the text, an approach used throughout this book. Normal text can also be used in a series of text items called a **list**. Typically, lists are bulleted or numbered. Various attributes of lists can be altered. For example, you might want to have square bullets rather than the default round bullets, or to have your list text in italic or bold.

Headings are used to set off paragraphs of text or different sections of a page. Headings are a larger font size than normal text and are often bold or italic or a different color than normal text. Heading sizes run from 1 (the largest) to 6 (the smallest). You generally go from one heading size to the next smallest when setting up a Web page.

Image Elements

Web pages typically use several different types of graphics, or images, such as an icon, bullet, line, photo, illustration, or other picture. An image used in a Web page is also called an **inline image**, which means that the image or graphic file is not part of the HTML file. Instead, the Web browser merges the separate graphic file into the Web page as it is displayed in the browser window. The HTML file contains `` tags that tell the browser which graphic file to request from the server, where to insert it on the page, and how to display it.

Web pages typically use several different types of inline images. An **image map** is a special type of inline image in which you define one or more areas as hotspots. A **hotspot** is an area of an image that activates a function when selected. For example, each hotspot in an image map can link to a different Web page. Some inline images are **animated**, meaning they include motion and can change in appearance.

Horizontal rules are lines that are displayed across a Web page to separate different sections of the page. Although the appearance of a horizontal rule can vary, many Web pages use an inline image as a horizontal rule. Alternatively, you can use the horizontal rule tag (`<hr />`) to add a simple horizontal rule, such as the one used in this chapter project.

Hyperlink Elements

One of the more important elements of a Web page is a hyperlink, or link. A **link** is text, an image, or another Web page element that you click to instruct the browser to go to a location in a file or to request a file from a server. On the Web, links are the primary way to navigate between Web pages and among Web sites. Links point not only to Web pages, but also to graphics, sound, video, program files, e-mail addresses, and parts of the same Web page. Text links, also called hypertext links, are the most commonly used hyperlinks. For example, the text “Volunteers” in Figure 2–2 on the previous page links to opportunities for volunteer service. When text identifies a hyperlink, it usually appears as underlined text, in a color different from the rest of the Web page text. Image links are also very common. For example, there are two image links identified in Figure 2–2. Clicking either of those image links sends (or links) the user to another Web page that contains further information about those items. A corporate or organizational logo, such as the Smithsonian logo, often serves as an image link to the home page or corporate information.

Defining Web Page Structure

To create an HTML document, you use a text editor to enter information about the structure of the Web page, the content of the Web page, and instructions for how that content should be displayed. This book uses the Notepad++ text editor to enter the HTML elements and content for all projects and exercises.

Before you begin entering the content for this project, you must start by entering tags that define the overall structure of the Web page. You do this by inserting a `<!DOCTYPE>` tag and five tags (`<html>`, `<head>`, `<meta />`, `<title>`, and `<body>`) together with the closing tags (`</html>`, `</head>`, `</title>`, and `</body>`). These tags define the structure of a standard Web page and divide the HTML file into its basic sections: header information and the body of the page that contains text and graphics.

The `<!DOCTYPE>` tag is used to tell the browser which HTML or XHTML version and type the document uses. Throughout this book, we will utilize the HTML5 `<!DOCTYPE>` tag. In addition to that tag, the World Wide Web Consortium (W3C) supports three document types for other versions of HTML or XHTML: strict, transitional, and frameset. The **strict** document type is specified when you want to prohibit the use of deprecated tags. **Deprecated tags** are tags that the W3C has earmarked for eventual removal from their specifications, because those tags have been replaced with newer, more functional tags, attributes, or CSS properties. The **transitional** document type allows the use of deprecated tags. The **frameset** document type, which is used to support frames on a Web page, also allows the use of deprecated tags although the frame tags have been eliminated by HTML5. The `<!DOCTYPE>` tag includes a URL that references a Document Type Definition found on the w3.org Web site. Although this book does not use deprecated tags, the projects do use HTML5, which does not require a URL reference to a Document Type Definition.

BTW **The `<!DOCTYPE>` Tag**
The w3schools.com Web site provides additional information about the `<!DOCTYPE>` tag used for the HTML5 or XHTML strict, transitional, and frameset document types. To learn more about the `<!DOCTYPE>` tag, visit the W3C Web site at w3.org. It provides a wealth of information on this and other HTML tags.

Defining the HTML Document

The first set of tags beyond the `<!DOCTYPE>` tag, `<html>` and `</html>`, indicates the start and end of an HTML document. This set of tags contains all of the content of the Web page, the tags that format that content, and the tags that define the different parts of the document. Software tools, such as browsers, use these tags to determine where the HTML code in a file begins and ends.

The Head The next set of tags, `<head>` and `</head>`, contains the Web page title and other document header information. One of the tags inserted into the `<head>` `</head>` container is the meta tag. The `<meta />` tag has several functions. In this chapter, it is used to declare the character encoding UTF-8. The **Unicode Transformation Format (UTF)** is a compressed format that allows computers to display and manipulate text. When the browser encounters this meta tag, it will display the Web page properly, based on the particular UTF-8 encoding embedded in the tag. UTF-8 is the preferred encoding standard for Web pages, e-mail, and other applications. The encoding chosen is also important when validating the Web page. The meta tag has other purposes that are described in subsequent chapters of the book. The `<title>` tag is another tag inserted into the `<head>` `</head>` container. The `<title>` and `</title>` tags indicate the title of the Web page, which appears on the browser title bar and taskbar when the Web page is displayed in the browser window. The title is also the name given to the page when a user adds the page to a favorites or bookmarks list.

The Body The final set of tags, `<body>` and `</body>`, contains the main content of the Web page. All text, images, links, and other content are contained within this final set of tags. Table 2–1 on the next page lists the functions of the tags described so far, as well as other tags that you will use in this chapter.

BTW

WordPad

WordPad is a text editor included with Windows that you can also use to create HTML files. To start WordPad, click the Start button on the taskbar, click All Programs in the Start menu, click Accessories in the All Programs submenu, and then click WordPad in the Accessories folder. WordPad Help provides tips on how to use the product.

BTW

Notepad++ Help

Notepad++ has a wealth of help information available. There is Notepad++ Help internal to the program as well as help facilities online.

Table 2–1 Basic HTML Tags and Their Functions

HTML Tag	Function
<!DOCTYPE>	Indicates the version and type of HTML used; may include a URL reference to a DTD
<html> </html>	Indicates the start and end of an HTML document
<head> </head>	Indicates the start and end of a section of the document used for the title and other document header information
<meta />	Indicates hidden information about the Web page
<title> </title>	Indicates the start and end of the title. The title does not appear in the body of the Web page, but appears on the title bar of the browser.
<body> </body>	Indicates the start and end of the body of the Web page
<h1> </h1>	Indicates the start and end of the text section called a heading; sizes range from <h1> through <h6>. See Figure 2–9a on page HTML 47 for heading size samples.
<p> </p>	Indicates the start and end of a new paragraph; inserts a blank line above the new paragraph
 	Indicates the start and end of an unordered (bulleted) list
 	Indicates that the item that follows the tag is an item within a list
<hr />	Inserts a horizontal rule
 	Inserts a line break at the point where the tag appears

Most HTML start tags, such as <html>, <head>, <title>, and <body>, have corresponding end tags, </html>, </head>, </title>, and </body>. Note that, for tags that do not have end tags, such as <meta />, <hr />, and
, the tag is closed using a space followed by a forward slash.

To Start Notepad++

With the planning, analysis, and design of the Web page complete, you can begin developing the Web page by entering the HTML code and Web page content using a text editor.

The following steps, which assume Windows 7 is running and Notepad++ is installed, start Notepad++ based on a typical installation. You may need to ask your instructor how to download, install, and start Notepad++ for your computer.

- Click the Start button on the Windows taskbar to display the Start menu.
 - Click All Programs at the bottom of the left pane on the Start menu to display the All Programs list.
 - Click the Notepad++ folder in the All Programs list (Figure 2–3).

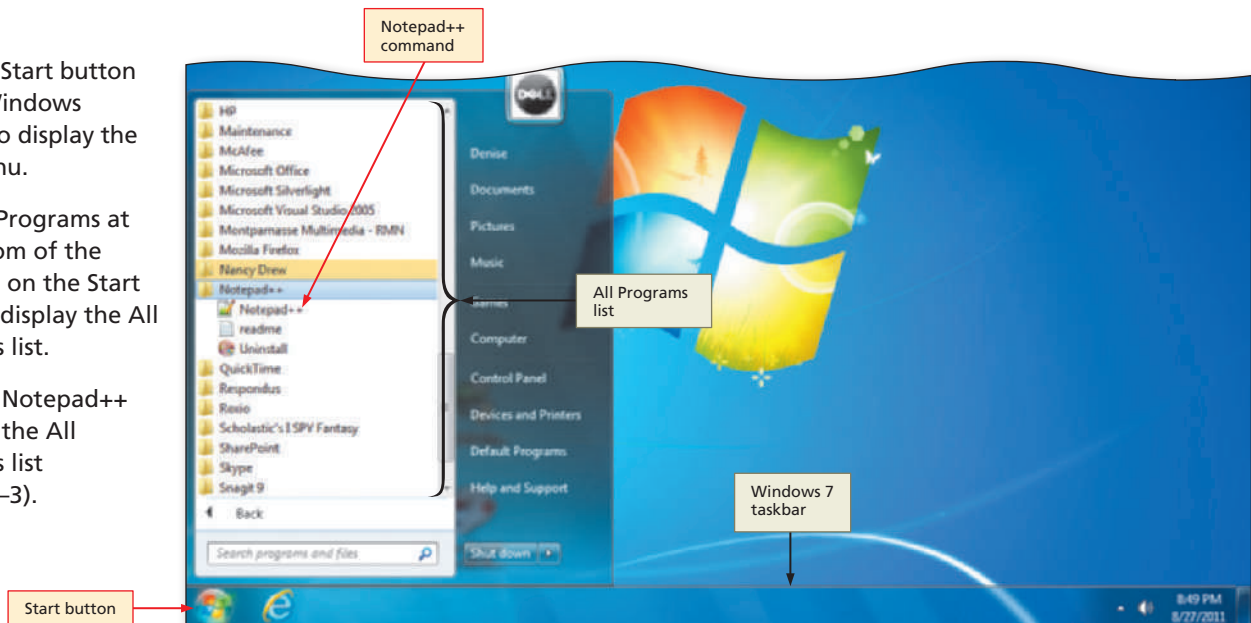


Figure 2–3

2

- Click Notepad++ in the list to display a blank Notepad++ window (Figure 2-4).
- If the Notepad++ window is not maximized, click the Maximize button on the Notepad++ title bar to maximize it. Note that by default, Notepad++ starts with the most recently used file open, so your Notepad++ screen may not look like Figure 2-4. To close all open files, click File and then click Close All.

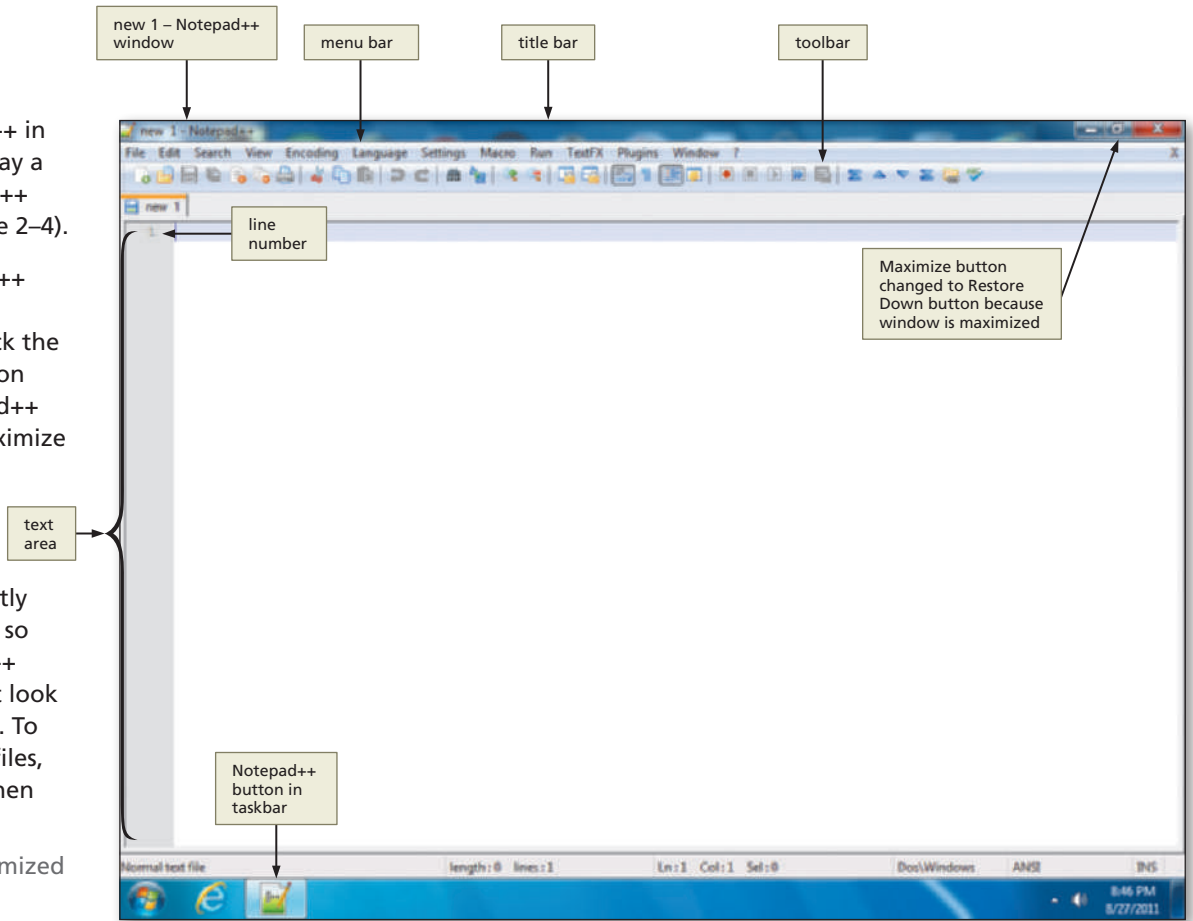


Figure 2-4

Q&A What is a maximized window?

A maximized window fills the entire screen. When you maximize a window, the Maximize button changes to a Restore Down button.

Q&A How can I add Notepad++ to my Start menu or the taskbar?

To add Notepad++ to the Start menu or taskbar, complete Step 1 above, right-click Notepad++, and then click Pin to Start Menu or Pin to Taskbar.

Other Ways

- | | |
|--|--|
| 1. Double-click Notepad++ icon on desktop, if one is present | 2. Click Notepad++ on Start menu, if it is present |
|--|--|

To Enable Word Wrap in Notepad++

In Notepad++, the text entered in the text area scrolls continuously to the right unless the word wrap feature is enabled, or turned on. **Word wrap** causes text lines to break at the right edge of the window and appear on a new line, so all entered text is visible in the Notepad++ window. When word wrap is enabled, a paragraph of text will be assigned a single logical line number even though it may display on multiple physical lines in Notepad++. Word wrap does not affect the way text prints. The following step shows how to enable word wrap in Notepad++.

- 1**
- Click View on the menu bar (Figure 2–5).
 - If word wrap does not have a check mark next to it, click word wrap.

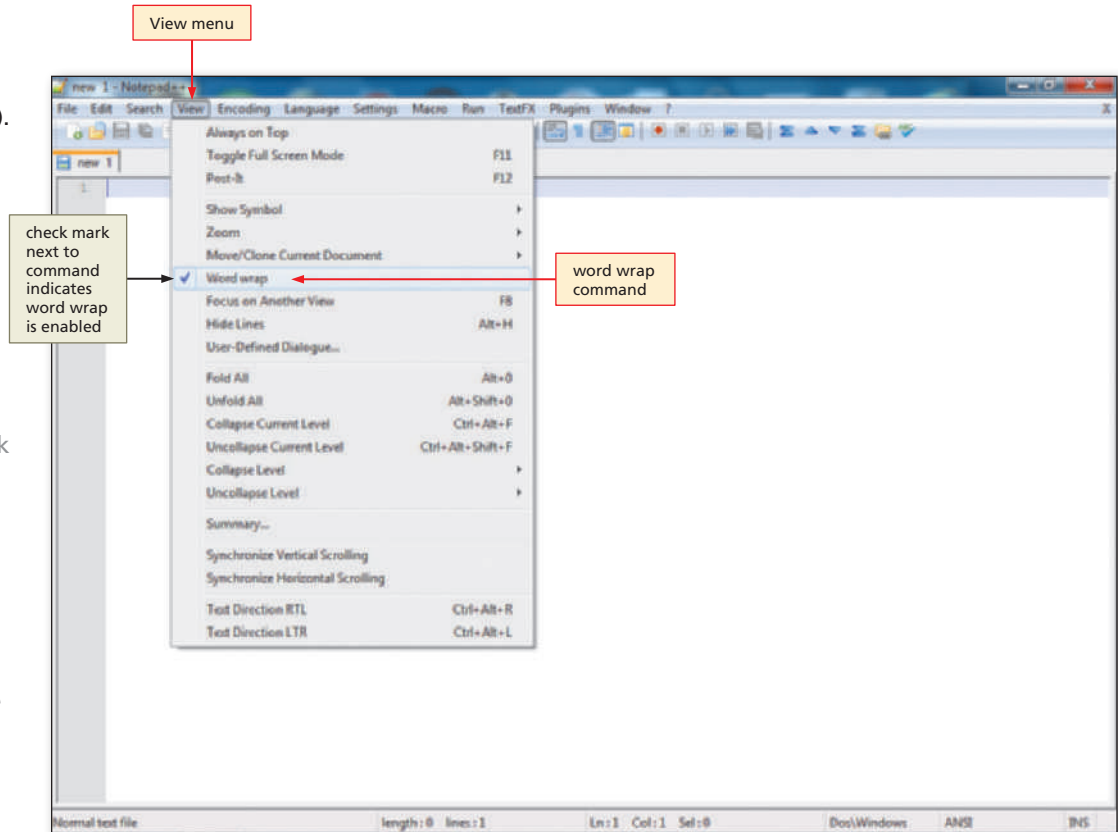


Figure 2–5

Q&A How do I know if word wrap is enabled?

When word wrap is enabled, a check mark precedes the word wrap command on the View menu, and when you type, your words remain on the screen.

Q&A What happens to the text if word wrap is not enabled?

The text of a paragraph would appear all on one line in Notepad++ and scroll off the screen, though the Web page would still be displayed correctly in the browser. For readability in Notepad++, you should enable word wrap.

To Define the Web Page Structure Using HTML Tags

The first task is to enter the initial tags that define the Web page structure. Table 2–2 contains the HTML tags and text used to create the Web page shown in Figure 2–1a on page HTML 35. In this chapter and throughout this book, where large segments of HTML code or text are to be entered, you will find this code or text in tables with line number references, rather than within the steps. The steps will direct you to enter the text shown in the tables.

Table 2–2 Initial HTML Tags

Line	HTML Tag and Text
1	<!DOCTYPE HTML>
2	
3	<html>
4	<head>
5	<meta charset="utf-8" />
6	<title>Rock Climbing Fun</title>
7	</head>

The following steps illustrate how to enter the initial tags that define the structure of the Web page.

1

- Enter the HTML code shown in Table 2–2 (Figure 2–6). Press ENTER at the end of each line. If you make an error as you are typing, use the BACKSPACE key to delete all the characters back to and including the incorrect characters, and then continue typing.

- Press the ENTER key to start the next line of code, leaving one blank line after the </head> tag.

- Compare what you typed to Figure 2–6. If you notice errors, use your mouse pointer or arrow keys to move the insertion point to the right of each error and use the BACKSPACE key to correct the error.

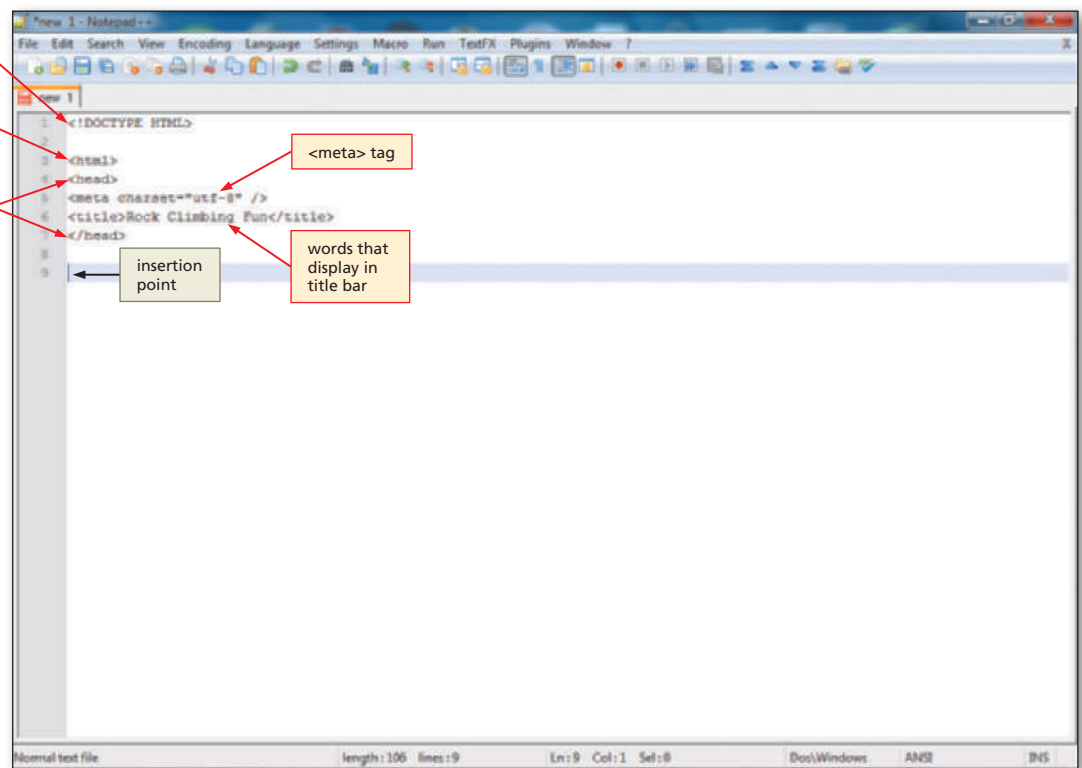


Figure 2–6

2

- On line 9, type `<body>` and then press the ENTER key twice.

- Type `</body>` and then press the ENTER key.

- Type `</html>` as the end tag (Figure 2–7).

- Compare what you typed to Figure 2–7 and correct errors in your typing if necessary.

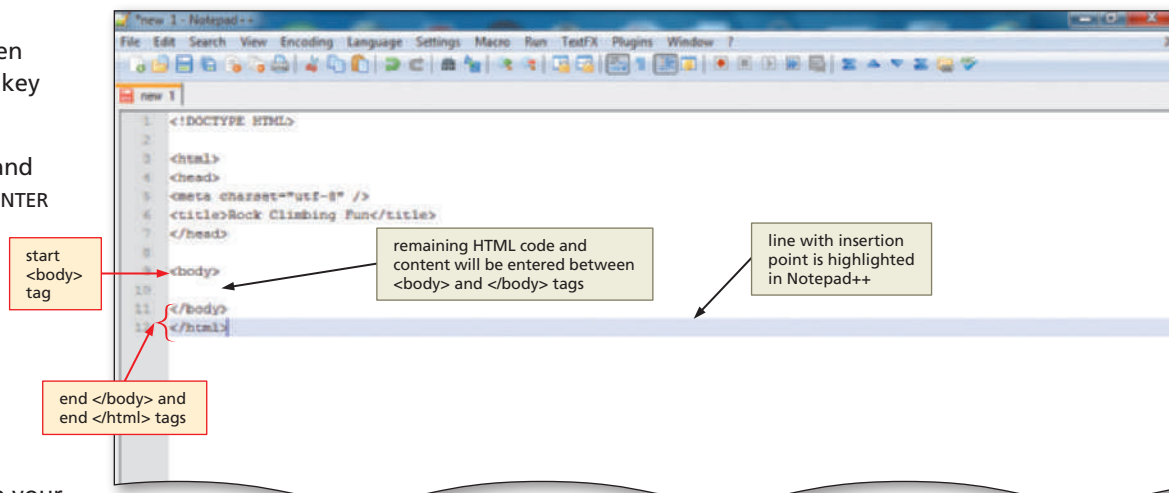


Figure 2–7

Q&A Do I have to type the initial HTML tags for every Web page that I develop?

The same initial HTML tags are used in many other chapters. To avoid retyping these tags, you can save the code that you just typed, and give it a new file name, something like structure.html or template.html. If you save this file at the root level of your folders, you will have easy access to it for other chapters.

Q&A Can I use either uppercase or lowercase letters for my HTML code?

HTML5 allows tags to be entered in upper-, lower-, or mixed-case. However, in this book, the project directions follow the guidelines presented in Table 1–3 on page HTML 13 in Chapter 1.

Plan Ahead

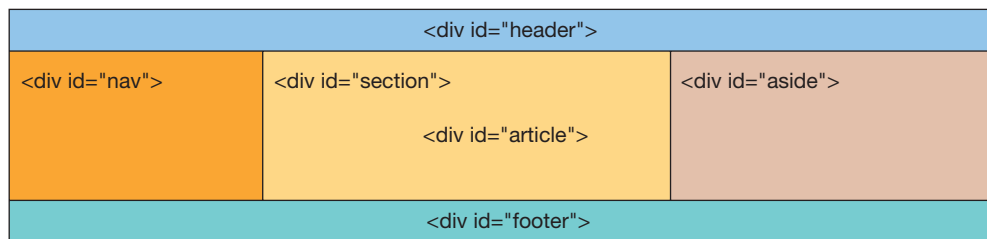
Identify how to format various elements of the text.

By formatting the characters and paragraphs on a Web page, you can improve its overall appearance. On a Web page, consider the following formatting suggestions.

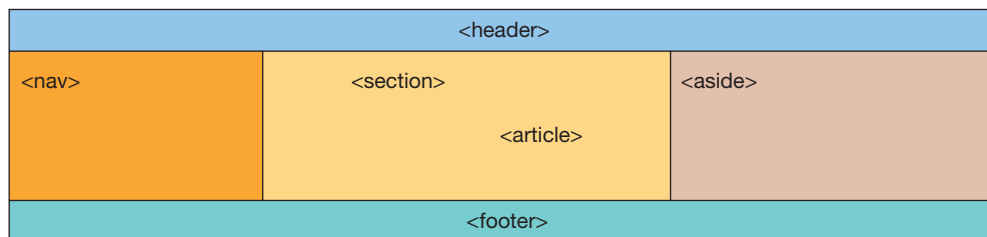
- **Determine the Web page layout.** HTML5 has introduced new tags to format the layout of the Web page. The tags include the head, section, articles, and footer divisions.
- **Use default text size when appropriate.** The body text consists of all text between the heading and the bottom of the Web page. This text highlights the key points of the message in as few words as possible. It should be easy to read and follow. While emphasizing the positive, the body text must be realistic, truthful, and believable. The default font size and style are appropriate to use for the body of text.
- **Effectively utilize headings.** The main heading is generally the first line of text on the Web page. It conveys the purpose of the Web page, such as identifying the company name. In this project, the company name is part of the image that is used at the top of the page, so a heading size 1 is not needed. Heading size standards should be followed, as shown in Figure 2–9 on page HTML 47. The main heading should be size 1, and subtopics or subheadings should be size 2. For the Web site in this chapter, you start with heading size 2 because the main heading is part of the image. That heading identifies the equipment needed. It is generally not a good idea to jump from one heading size to a heading two sizes smaller. For instance, if your main heading is size 1, then the next heading down should be heading size 2, not heading size 4.
- **Highlight key points with a bulleted list.** A **bullet** is a dot or other symbol positioned at the beginning of a list item. The bulleted list contains specific information that is more clearly identified by a list versus a paragraph of text.

Formatting the Web Page

In HTML 4.01, `<div>` `</div>` tags were introduced to separate sections within a Web page. This works well, and we utilize the `<div>` tag throughout the book. HTML5 has introduced new semantic elements to help Web developers structure the layout of a Web page. These tags are **semantic** in that the name of the tag reflects the purpose of the tag. For instance, the new `<footer>` tag is used to display content at the bottom (or footer) of the Web page. The `<aside>` tag is used to add content that is **tangential** or a side issue to the main Web page content. These new HTML5 tags, including `<article>`, `<aside>`, `<footer>`, `<header>`, `<nav>`, and `<section>`, are used for layout in the Web page projects in this book. Although the `<div>` tags, together with an `id` attribute (see Figure 2-8a), achieve the same results in layout, the future of Web development includes the new HTML5 layout tags. Figure 2-8b shows the new structural elements provided in HTML5 and how they help structure a Web page. Note that the `<nav>` (navigation) tag can also be used across the top of the page under the header depending on the Web page design.



(a) Structural elements with HTML 4.01 tags



(b) Structural elements with new HTML5 tags

Figure 2-8

The header section is the top area of a Web page and is generally used for company logos, main heading text, or navigation. The `<nav>` tag identifies a section of the Web page that can alternately be used for navigation. The `<section>` tag is used as a generic document or application section. A section can be used to incorporate Web page content together with heading tags (i.e., h1 through h6). Articles are inserted within sections, adding to the content. An `<aside>` tag is used to represent content that is slightly related to the rest of the page, such as comments, biography, or background information. The footer is generally used for company information. Table 2-3 on the next page describes the purpose for each of these new tags. The project in this chapter contains a header, a footer, and one section that contains one article.

Table 2–3 HTML5 Structural Elements

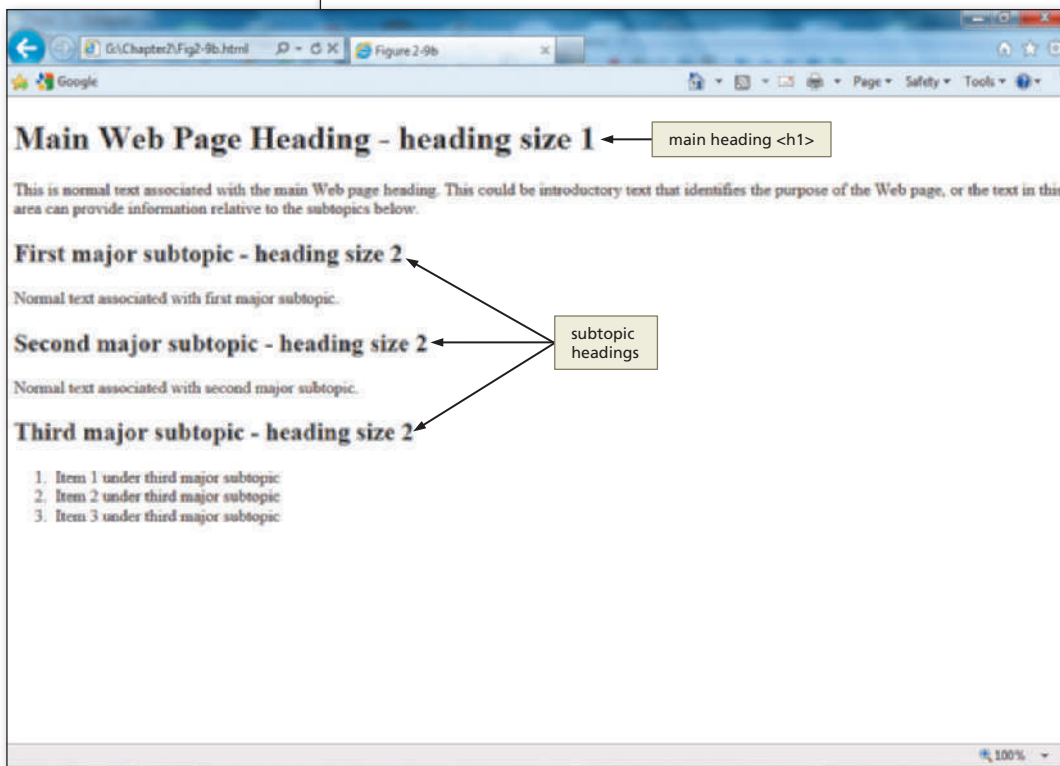
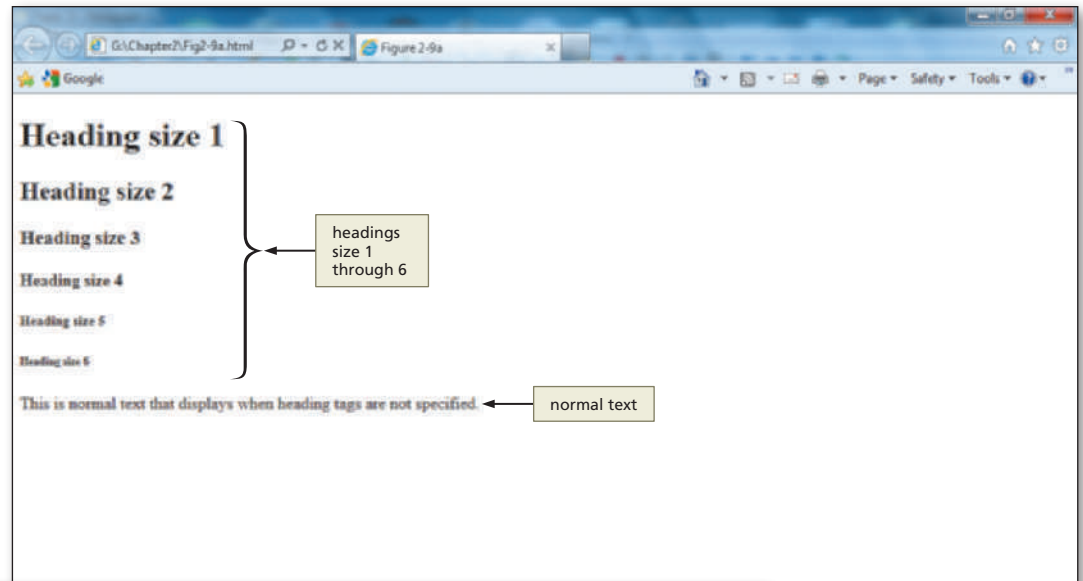
Element	Purpose
Header	Information placed at the top of the Web page, such as logos or main headings
Navigation	Navigation structure that links to other parts of the Web page, Web site, or external to the Web site
Section	Major content area on the Web page
Article	Content that represents an independent piece of information
Aside	Content that is tangential or slightly related to the main topic of the Web page
Footer	Content placed at the bottom of the Web page, such as copyright or contact information

Entering Web Page Content

Once you have established the Web page structure, it is time to enter the content of the Web page, including headings, an informational paragraph of text, a subtopic heading, and a bulleted list.

Web pages generally contain a significant amount of text. Because you turned word wrap on (Figure 2–5 on page HTML 42) in Notepad++, you will see all of the text that you type in one Notepad++ window. If there is a substantial amount of information, you can break the text into paragraphs that help to separate key ideas and make the text easier to read. Paragraphs are separated with a blank line by using `<p>` (start paragraph) and `</p>` (end paragraph) tags. Putting too much text on one Web page is not a good choice. Your audience can get lost in large amounts of text. If you find that you have to press the Page Down key dozens of times to get to the bottom of the Web page, you need to think about restructuring your Web page. You can split up large pieces of information under more headings, which will be more manageable and more readable.

Headings are used to separate text or add new topics on the Web page. Several styles and sizes of headings exist, indicated by the tags `<h1>` through `<h6>`, with `<h1>` being the largest. Generally, you use the Heading 1 style for the main heading unless you use a graphical image for the heading (as we do in later steps). Figure 2–9a on the next page shows a Web page using various sizes of headings. A Web page usually has only one main heading; therefore, the HTML file for that Web page usually has only one set of `<h1>` `</h1>` tags. One method of maintaining a consistent look on a Web page is to use the same heading size for headings at the same topic level (Figure 2–9b). The header image that is inserted later in the chapter takes the place of the Main heading at the top of the Web page in Figure 2–9b. The complete Web page will therefore not have any `<h1>` headings. Notice that the paragraphs of text and the bulleted lists are all separated by size 2 headings in Figure 2–9b. This separation indicates that the text (i.e., two paragraphs plus one bulleted list) is all at the same level of importance on the Web page.



(a) Examples of six heading sizes.

(b) A consistent use of headings can help organize Web page content.

Figure 2-9

Sometimes text on a Web page is easier for users to read and understand when it is formatted as a list, instead of as a paragraph. HTML provides several types of lists, but the most popular are unordered (bulleted) and ordered (numbered) lists. During the design phase of the Web development life cycle, you decide on the most effective way to structure the Web content and format the text on the Web page. Your main goal is to give Web page visitors an effective way to find the information that they need. If users cannot easily find what they need, they will not revisit your Web site.

BTW **Headings for Organization**
 When using headings to organize content and emphasize key points on a Web page, be sure to use them consistently. That is, if you use a heading 2 (<h2>) style for a specific level of text, you always should use a heading 2 style to break up information at that level. Also, do not skip levels of headings in your document. For example, do not start with a heading 1 (<h1>) style and then use a heading 3 (<h3>) style.

To Enter a Paragraph of Text

After you enter the initial HTML tags, you next add a paragraph of text using the `<p>` tag. When the browser finds a `<p>` tag in an HTML file, it starts a new line and inserts a blank line above the new paragraph. The `</p>` end tag indicates the end of the paragraph. When you enter this paragraph of text, do not press the ENTER key at the end of each line. Because word wrap is turned on, your text will wrap to the next line even without pressing the ENTER key. Table 2-4 contains the HTML tags and text used in the paragraph.

Table 2-4 Adding a Paragraph of Text

Line	HTML Tag and Text
11	<code><section></code>
12	<code><article></code>
13	<code><p>Rock Climbing Fun has recently opened a school at the base of Mount Rainier. We have programs for advanced rock climbers as well as for beginners. Rock climbing is a widely popular sport, especially in the state of Washington. Classes run from early morning to mid-afternoon, and private climbing lessons are available. Come join our classes and experience the fun and great exercise that rock climbing can provide. Call 1-800-555-CLIMB for more information.</p></code>

The following step illustrates how to enter a paragraph of text in an HTML file.

- Click line 10 and then press the ENTER key.
 - With the insertion point on line 11, enter the HTML code, as shown in Table 2-4. Do not press ENTER at the end of each line when entering the text in line 13 and use only one space after periods.
 - Press the ENTER key twice to position the insertion point on line 15 (Figure 2-10).

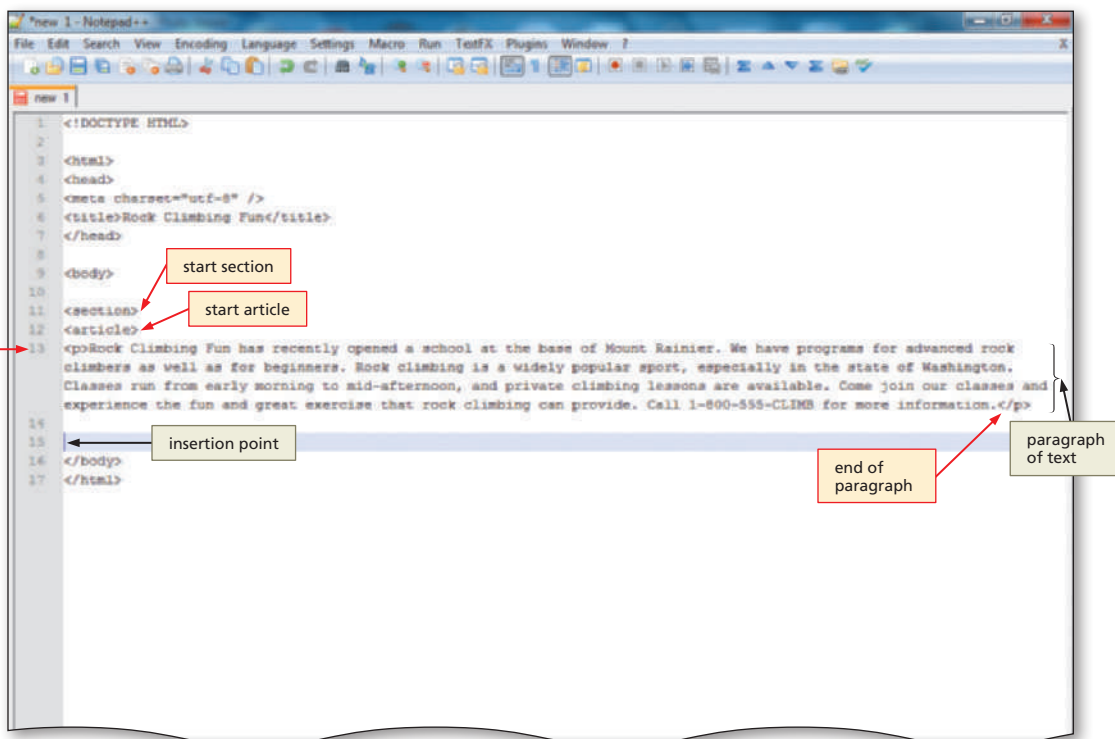


Figure 2-10

Q&A Why do you not press the ENTER key after each line of code in line 13 in Table 2-4?

Because you turned on word wrap right after you started Notepad++, the text that you enter as the paragraph will automatically wrap to the next line. The text goes to the end of the Notepad++ window and then wraps. If you had not turned on word wrap, your text would continue scrolling to the right as you type, and text to the left would scroll off the screen. With word wrap on, all text remains visible in the Notepad++ window.

To Enter a Heading

The heading, Equipment needed to get started, is the heading that separates the paragraph of text from the bulleted list. You use an `<h2>` heading because it is not really the main heading of the Web page. You insert an image as the main heading later in the chapter. The following step illustrates how to enter a heading on the Web page.

1

- With the insertion point on line 15, type `<h2>Equipment needed to get started:</h2>` in the text area, and then press the ENTER key twice (Figure 2–11).

h2 heading
on line 15

```

1 <!DOCTYPE HTML>
2
3 <HTML>
4 <head>
5 <meta charset="utf-8" />
6 <title>Rock Climbing Fun</title>
7 </head>
8
9 <body>
10
11 <section>
12 <article>
13 <p>Rock Climbing Fun has recently opened a school at the base of Mount Rainier. We have programs for advanced rock
14 climbers as well as for beginners. Rock climbing is a widely popular sport, especially in the state of Washington.
15 Classes run from early morning to mid-afternoon, and private climbing lessons are available. Come join our classes and
16 experience the fun and great exercise that rock climbing can provide. Call 1-800-555-CLIMB for more information.</p>
17 <h2>Equipment needed to get started:</h2>
18
19 </body>
20 </html>

```

Figure 2–11

Using Lists to Present Content

Lists structure text into an itemized format. Typically, lists are bulleted (unordered) or numbered (ordered). An **unordered list**, which also is called a **bulleted list**, formats information using small images called bullets. Figure 2–12 shows Web page text formatted as unordered, or bulleted, lists and the HTML code used to create the lists.

An **ordered list**, which also is called a **numbered list**, formats information in a series using numbers or letters. An ordered list works well to organize items where

BTW

List Styles

It is sometimes helpful to structure the text of a Web page in a list. There are several list options that you can use. The Web page purpose determines which would be more effective. See the section on List Styles in Appendix D for style options that can be used with lists.

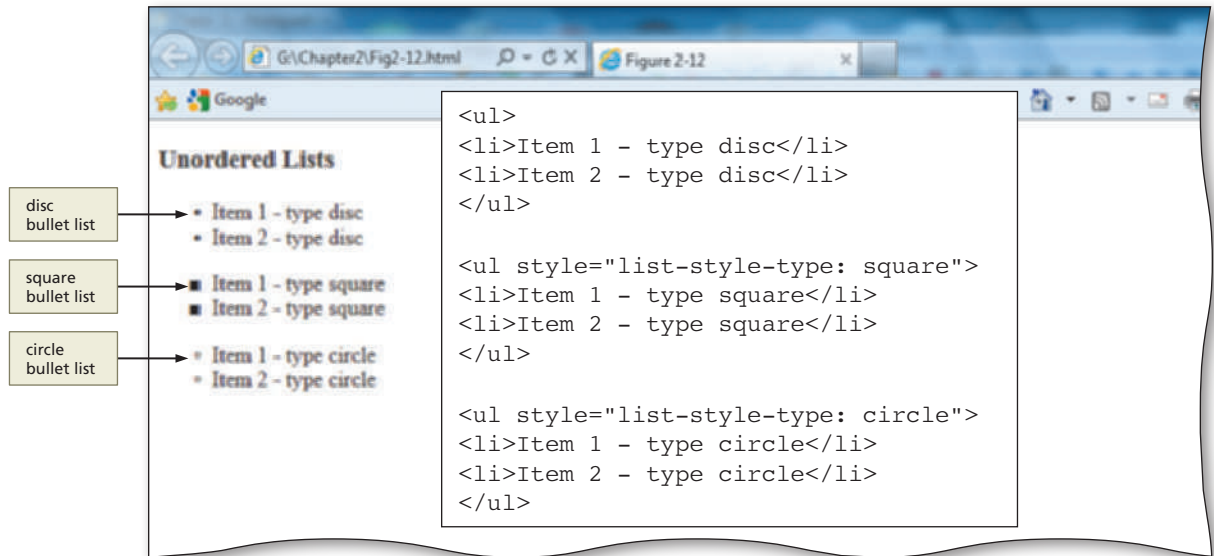


Figure 2-12

order must be emphasized, such as a series of steps. Figure 2-13 shows Web page text formatted as ordered, or numbered, lists and the HTML tags used to create the lists.

The `` and `` tags must be at the start and end of an unordered or bulleted list. The `` and `` tags are used at the start and end of an ordered or numbered list. Unordered and ordered lists have optional bullet and number types. As shown in Figure 2-12, an unordered list can use one of three different bullet options: disc, square, or circle. If no type is identified, the default, disc, is used. You can also use an image as a bullet as is shown in a later chapter. An ordered list can use numbers, letters, or Roman numerals, as shown in Figure 2-13. The default option is to use Arabic numbers, such as 1, 2, and 3. After the `` or `` tag is entered to define the type of list, the `` and `` tags are used to define each list item within an ordered or unordered list.

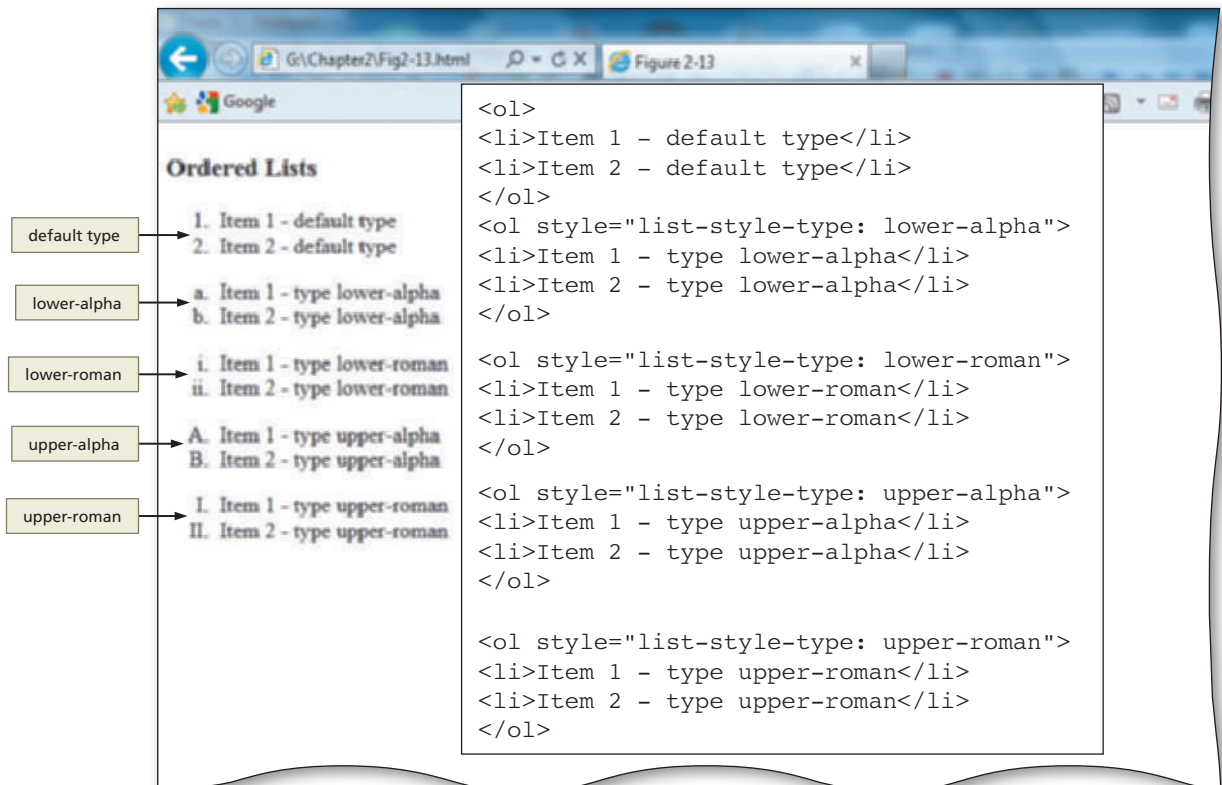


Figure 2-13

To Create an Unordered List

To highlight what Web site visitors will need for equipment when taking a class with Rock Climbing Fun you will create a bulleted (unordered) list using the HTML tags and text shown in Table 2–5. Remember that each list item must start with `` and end with ``.

Table 2–5 Adding an Unordered List

Line	HTML Tag and Text
17	<code></code>
18	<code>Comfortable climbing shoes</code>
19	<code>Backpack</code>
20	<code>Harness</code>
21	<code></code>
22	<code></article></code>
23	<code></section></code>

The following step illustrates how to create an unordered, or bulleted, list using the default bullet style.

1

- With the insertion point on line 17, enter the HTML code, as shown in Table 2–5. When you type the text on line 18, make sure to press the TAB key at the start of the line (also on lines 19 and 20 if they are not automatically indented). Press ENTER at the end of each line.

each list item enclosed in `` `` tags

Figure 2–14

- On line 23, press the ENTER key twice, positioning the cursor on line 25 and leaving a blank line on 24 (Figure 2–14).

Q&A Why do you press the TAB key at the start of the lines with the `` (list item) code?
Using the TAB key (to indent) when you enter list items helps format the text so that you can easily see that this text is different from the paragraph of text. Indenting text helps the Web developer see that certain segments of code are related to each other.

More About List Formats

If you use the `` or `` start tags without attributes, you will get the default bullet (disc) or number style (Arabic numerals). To change the bullet or number type, the **list-style-type** property is entered within the `` or `` tags. To create a list with square bullets, you would type the line

```
<ul style="list-style-type: square">
```

as the inline style (CSS) code. You can find other list-style properties and values in Appendix D.

In addition to ordered and unordered lists, there is a third kind of list, called a **definition list**, which offsets information in a dictionary-like style. Although they are used less often than unordered or ordered lists, definition lists are useful to create a glossary-like list of terms and definitions, as shown in Figure 2–15a. Figure 2–15b shows the HTML code used to create the definition list.

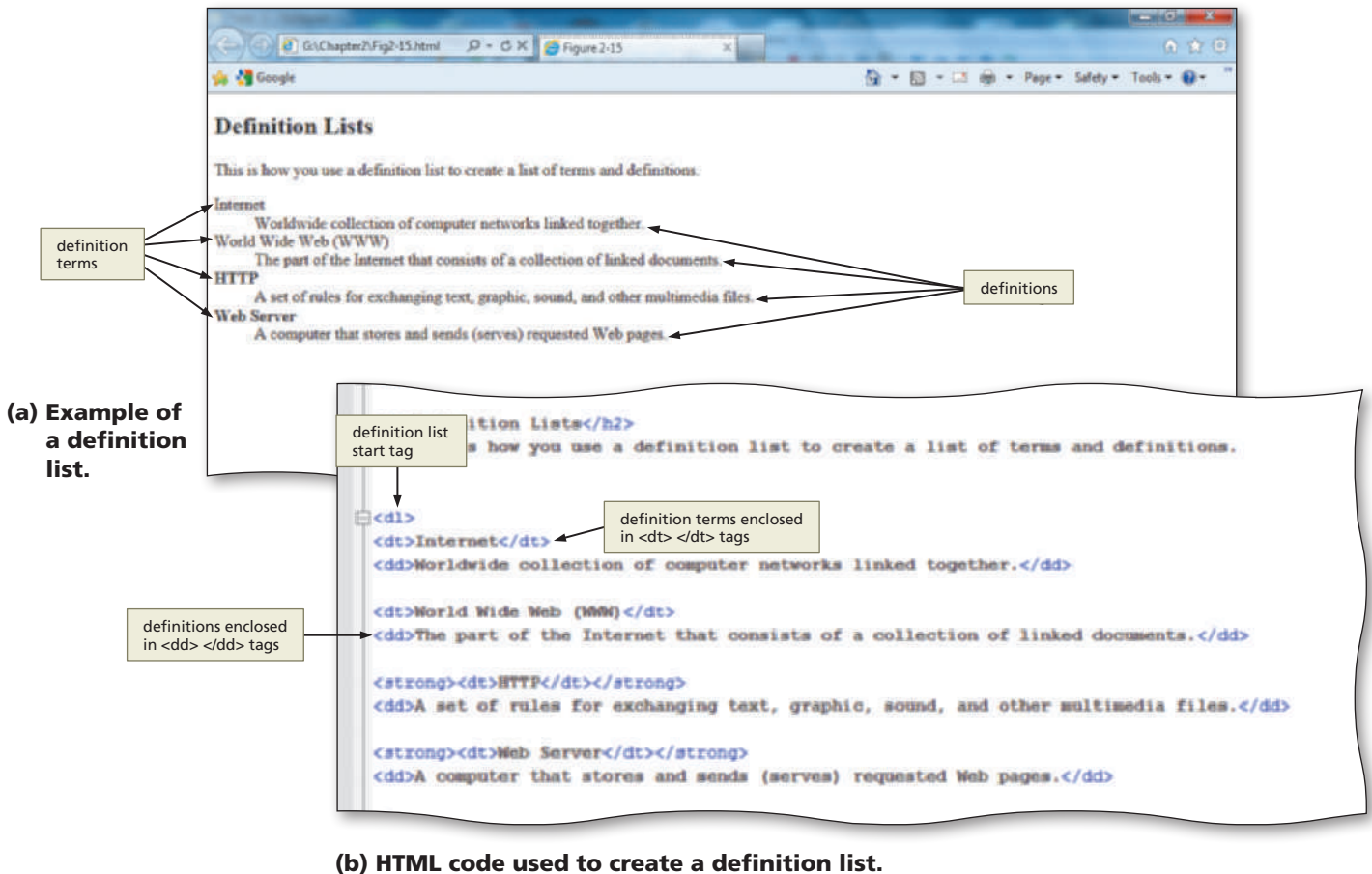


Figure 2–15

The syntax for definition lists is not as straightforward as the ``, ``, or `` structure that is used in the unordered and ordered list styles. With definition lists, you use the `<dl>` and `</dl>` tags to start and end the list. A `<dt>` tag indicates a term, and a `<dd>` tag identifies the definition of that term by offsetting the definition from the term. Table 2–6 lists definition list tags and their purposes.

Table 2–6 Definition List Tags and Purposes	
Definition List Tags	Purpose
<code><dl> </dl></code>	Start and end a definition list
<code><dt> </dt></code>	Identify a term
<code><dd> </dd></code>	Identify the definition of the term directly above

As shown in Figure 2–15, by default, the definition term is left-aligned on the line and the definition for each term is indented so it is easily distinguishable as the definition for the term above it. In order to more clearly identify the definition term, you may want to make the term bold, as shown in the last two definitions (HTTP and Web Server) in Figure 2–15. You could do this by wrapping the term inside a ``

container. That gives the term a strong emphasis, so text is usually displayed as bold text. The following code would do that for the HTTP definition term.

```
<strong><dt>HTTP</dt></strong>
```

Adding a Footer

As mentioned earlier in the chapter, HTML5 introduced several new structural elements that help to enhance the layout of a Web page. One of these new elements, the footer, is inserted in the next section of the chapter. The footer tag is used to position text toward the bottom of a Web page. Content placed there generally has to do with the company's address, copyright, or contact information.

To Add a Footer

It is important for Web site visitors to be able to contact the company. In the next step, you enter company contact information onto the Web page by inserting a tag in the HTML file using the tags and text shown in Table 2-7.

Table 2-7 Adding a Footer

Line	HTML Tag and Text
25	<footer>
26	Rock Climbing Fun, 3737 Harrison Lane, Issawak, WA 98000
27	</footer>

- 1 With the insertion point on line 25, enter the HTML code, as shown in Table 2-7. Press ENTER at the end of each line (Figure 2-16).

```

1 <!DOCTYPE HTML>
2
3 <html>
4 <head>
5 <meta charset="utf-8" />
6 <title>Rock Climbing Fun</title>
7 </head>
8
9 <body>
10
11 <section>
12 <article>
13 <p>Rock Climbing Fun has recently opened a school at the base of Mount Rainier. We have programs for advanced rock
14 climbers as well as for beginners. Rock climbing is a widely popular sport, especially in the state of Washington.
15 Classes run from early morning to mid-afternoon, and private climbing lessons are available. Come join our classes and
16 experience the fun and great exercise that rock climbing can provide. Call 1-800-888-CLIMB for more information.</p>
17
18 <h2>Equipment needed to get started:</h2>
19
20 <ul>
21 <li>Comfortable climbing shoes</li>
22 <li>Backpack</li>
23 <li>Harness</li>
24 </ul>
25 </article>
26 </section>
27 <footer>
28   Rock Climbing Fun, 3737 Harrison Lane, Issawak, WA 98000
29 </footer>
30 </body>
31 </html>

```

Figure 2-16

BTW

HTML File Names

HTML files have an extension of .html or .htm. The home page of a Web site is often called index.html, index.htm, default.html, or default.htm. Check with your Web hosting service provider to find out which name they use.

BTW

Saving Your Work

It is a good idea to save your HTML file periodically as you are working to avoid the risk of losing your work completed thus far. You should get into the habit of saving your file after any large addition of information (i.e., a paragraph or image). You might also want to save the file after typing in several HTML tags that would be difficult to re-do.

BTW

Storing Your Files

Many schools provide students with space on a Web server to store their Web pages. However, saving your Web pages to another medium (e.g., a USB flash drive) assures that you have a backup copy of the files that you created. Saving Web page files to the hard drive on a computer in a school lab runs the risk of it not being there the next time you are in that lab. Many schools delete all files at the start-up of each computer.

Saving and Organizing HTML Files

Before you can see how your HTML file looks in a Web browser, you must save it. It is also important to save your HTML file for the following reasons:

- The document in memory will be lost if the computer is turned off or you lose electrical power while the text editor is open.
- If you run out of time before completing your project, you may finish your document at a future time without starting over.

To save your file, you use the Notepad++ File, Save command. When you save a file, you give your file a name and follow that with the file extension. As mentioned earlier in the book, file names should always make sense relative to their purpose. For instance, naming a file page1 does not indicate the purpose of that file. Naming the file rockclimbing immediately identifies that this file has something to do with that topic. The Web page files in this book are always named with all lowercase letters and with no spaces. This is a standard that is followed throughout the book.

HTML files must end with an extension of **.htm** or **.html**. Many older Web page servers can only display pages with the .htm extension, or short file names (i.e., file names that are only up to eight characters in length). HTML files with an extension of .html can be viewed on Web servers running an operating system that allows long file names (i.e., file names that can be up to 255 characters in length). Almost all current operating systems allow long file names, including Windows 7, Windows Vista, Windows XP, Windows Server 2003/2008, Windows 2000, Mac OS X, and Linux. For Web servers that run an operating system that does not accept long file names, you need the .htm extension. In this book, all files are saved using the .html extension.

You will use a very simple folder structure with all the projects in this book. It is therefore important to organize your files in folders so that all files for a project or end-of-chapter exercise, including HTML code and graphical images, are saved in the same folder. If you correctly downloaded the files from the Data Files for Students (see the inside back cover of this book), you will have the required file structure. When you initially save the rockclimbing.html file, you will save it in the ChapterFiles subfolder of the Chapter02 folder. The graphical image used in Chapter 2, rockclimbing.jpg, will be stored in that same folder — Chapter02\ChapterFiles. Because the chapter projects in this book are relatively simple and use few images, images and HTML code are stored in the same folder. In real-world applications, though, hundreds or thousands of files might exist in a Web site, and it is more appropriate to separate the HTML code and graphical images into different subfolders. You will learn more about organizing HTML files and folders in Chapter 3.

Plan Ahead

Determine where to save the Web page.

When saving a Web page, you must decide which storage medium to use.

- If you always work on the same computer and have no need to transport your projects to a different location, then your computer's hard drive will suffice as a storage location. It is a good idea, however, to save a backup copy of your projects on a separate medium in case the file becomes corrupted or the computer's hard disk fails.
- If you plan to work on your projects in various locations or on multiple computers, then you should save your projects on a portable medium, such as a USB flash drive or CD. The projects in this book use a USB flash drive, which saves files quickly and reliably and can be reused. CDs are easily portable and serve as good backups for the final versions of projects because they generally can save files only one time.

The above are general guidelines about saving your files. Your instructor may give you specific instructions for saving your work that differ from the steps that follow.

To Save an HTML File

You have entered a lot of text while creating this project and do not want to risk losing the work you have done so far. Also, to view HTML in a browser, you must save the file. The following steps show how to save an HTML file.

1

- With a USB flash drive connected to one of the computer's USB ports, click File on the Notepad++ menu bar (Figure 2-17).

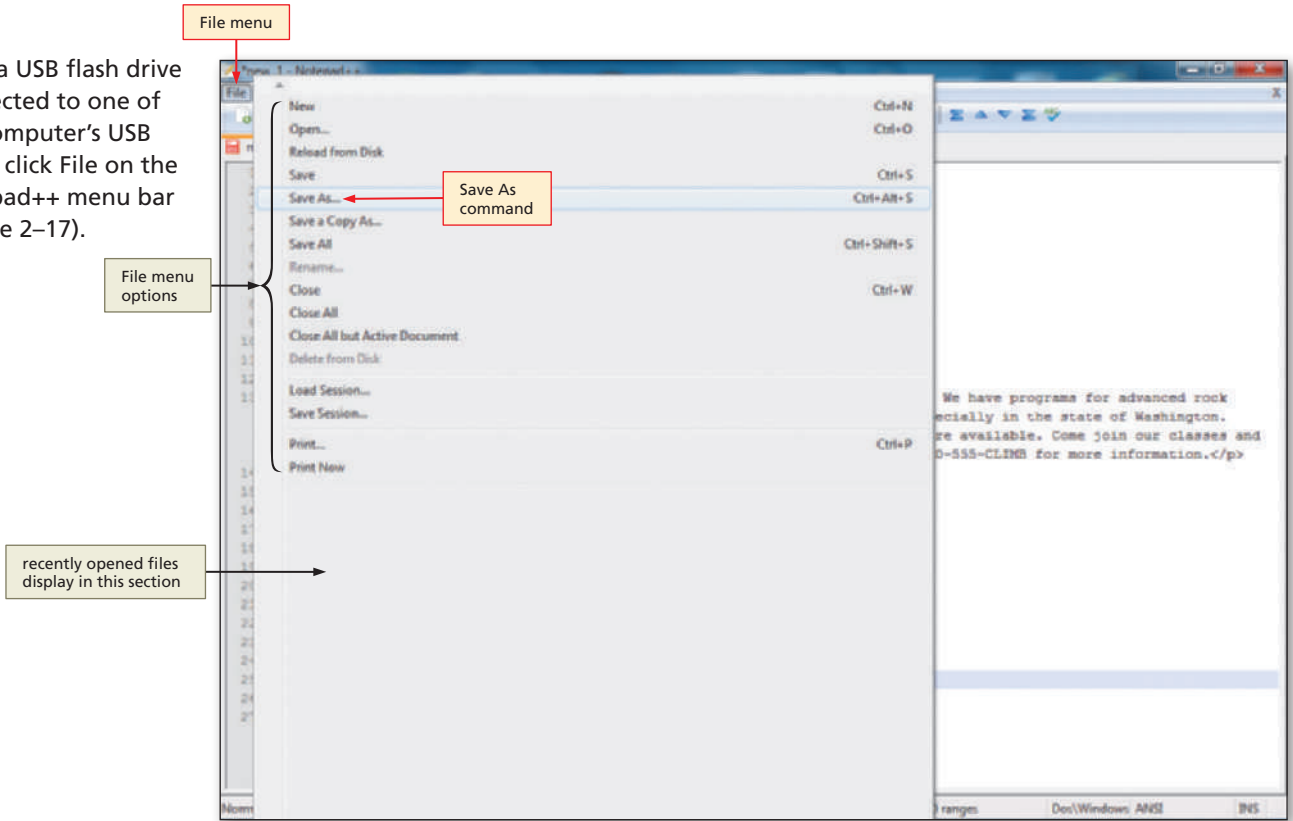


Figure 2-17

2

- Click Save As on the File menu to display the Save As dialog box (Figure 2-18).

Q&A

Do I have to save to a USB flash drive?

No. You can save to any device or folder. A folder is a specific location on a storage medium. Use the same process, but select your device or folder.

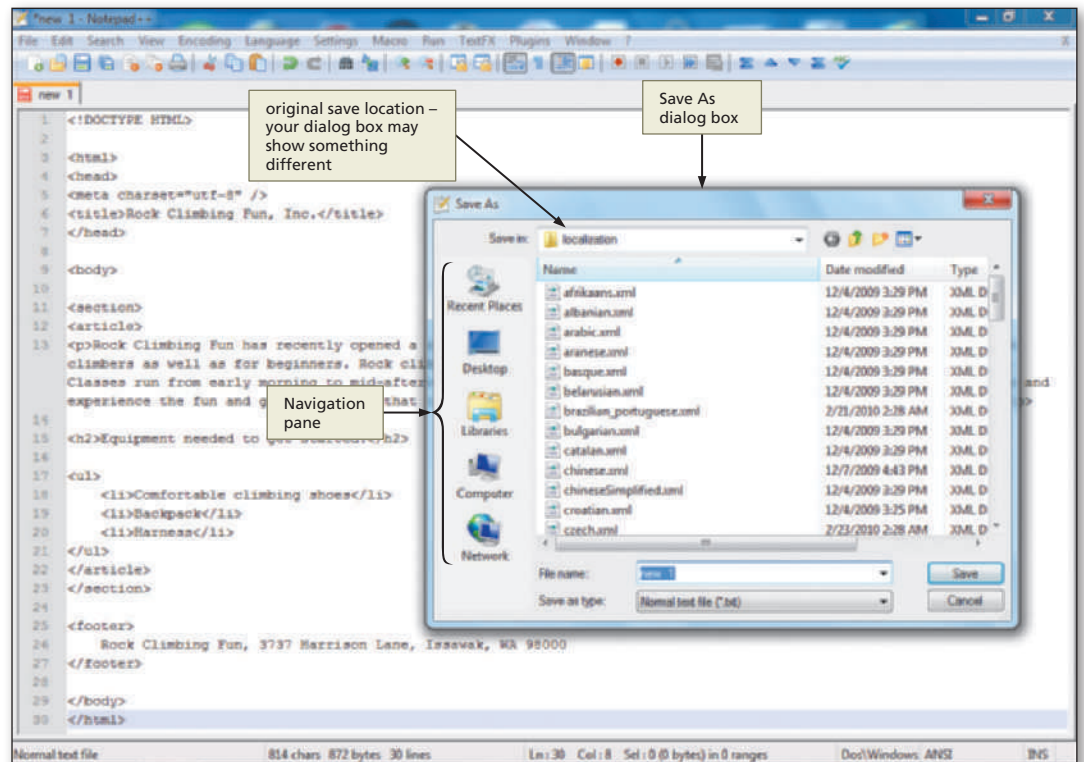


Figure 2-18

3

- Type rockclimbing.html in the File name text box to change the file name. Do not press ENTER after typing the file name.
- Click Computer in the left side of the dialog box to display a list of available drives (Figure 2–19).
- If necessary, scroll until your USB flash drive, such as UDISK 2.0 (G:), appears in the list of available drives.

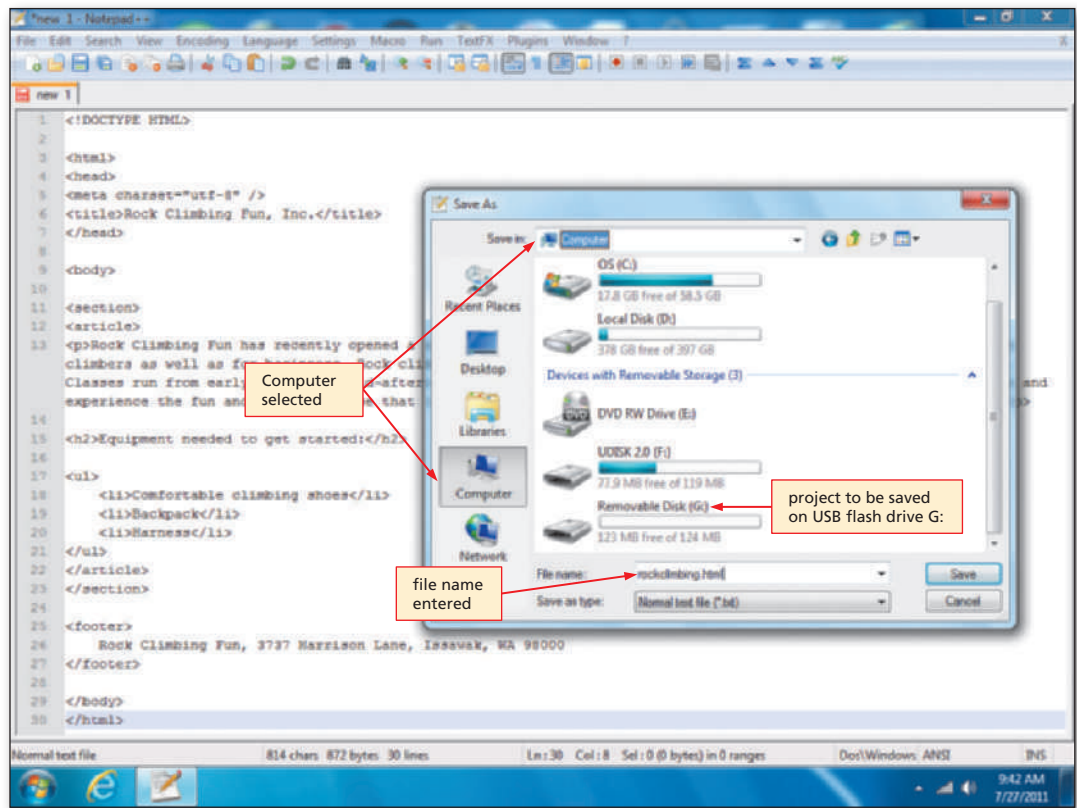


Figure 2–19

Q&A Why is my list of files, folders, and drives arranged and named differently from those shown in the figure?

Your computer's configuration determines how the list of files and folders is displayed and how drives are named.

Q&A How do I know the drive and folder in which my file will be saved?

Notepad++ displays a list of available drives and folders. You then select the drive and/or folder into which you want to save the file.

4

- Double-click UDISK 2.0 (G:) (or your storage device) in the Computer list to select the USB flash drive, drive G in this case, as the new save location.

Q&A What if my USB flash drive has a different name or letter?

It is likely that your USB flash drive will have a different name and drive letter and be connected to a different port. Verify that the device in your Computer list is correct.

- If necessary, open the Chapter02\ChapterFiles folder (Figure 2–20).

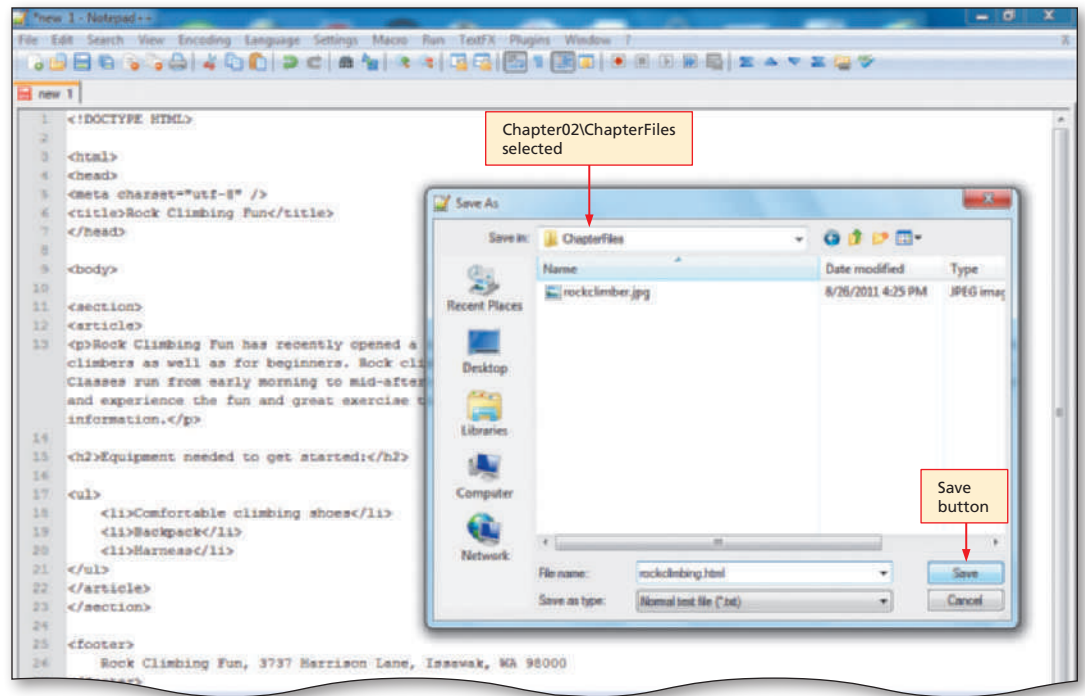


Figure 2–20

Q&A What if my USB flash drive does not have a folder named Chapter02\ChapterFiles?

If you followed the steps to download the chapter files from the Data Files for Students, you should have a folder named Chapter02\ChapterFiles. If you do not, check with your instructor.

5

- Click the Save button in the Save As dialog box to save the file on the USB flash drive with the name rockclimbing.html (Figure 2–21).

Q&A Is my file only on the USB drive now?

No, although the HTML file is saved on a USB drive, it also remains in memory and is displayed on the screen (Figure 2–21). Notepad++ displays the new file name on the title bar and on the document tab.

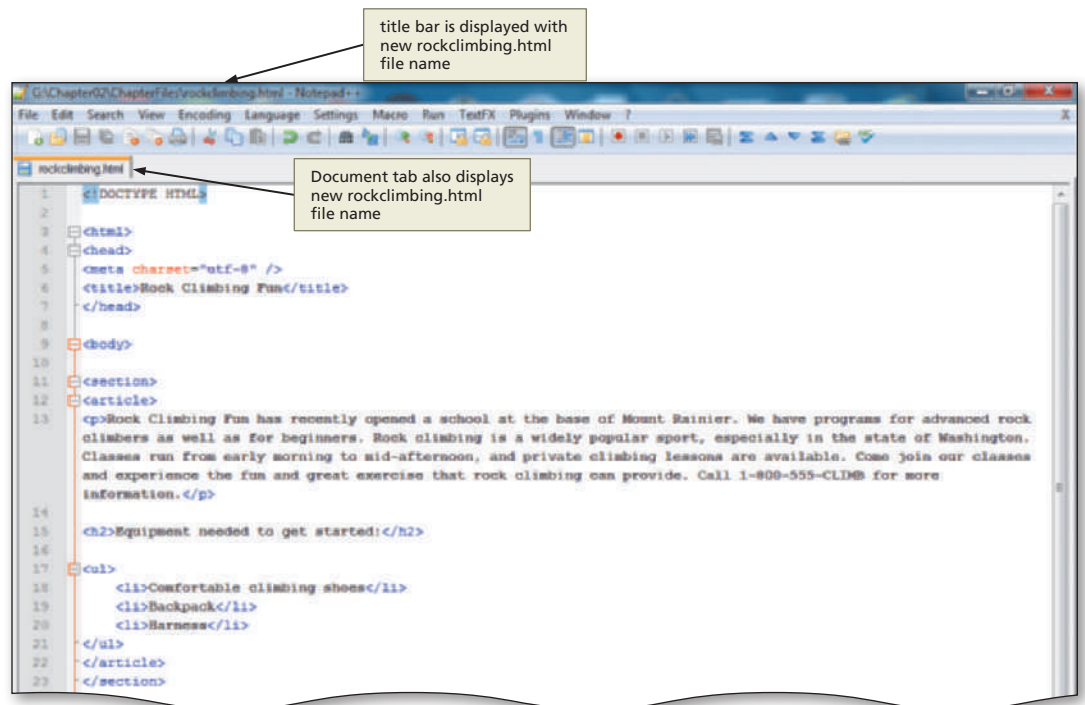


Figure 2–21

Other Ways

1. Press CTRL+ALT+S, type select drive or folder, click file name, click Computer, Save button

BTW **Developing Web Pages for Multiple Browsers**

When developing Web pages, you must consider the types of browsers visitors will use. Popular browsers include Internet Explorer, Google Chrome, Mozilla Firefox, and Apple Safari. Part of thorough testing includes reviewing your Web pages in multiple versions of different browsers.

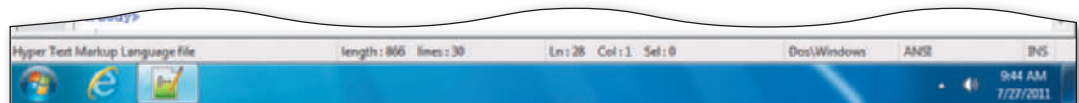
Using a Browser to View a Web Page

After saving the HTML file, you should view the Web page in a browser to see what the Web page looks like up to this point. The HTML file is displayed in the browser as if the file were available on the Web. In general, viewing the Web page periodically during development is good coding practice, because it allows you to see the effect of various HTML tags on the text and to check for errors in your HTML file. If your computer is connected to the Internet when the browser window opens, it displays a **home page**, or **start page**, which is a Web page that appears each time Internet Explorer starts.

To Start a Browser

With the HTML file saved on the USB drive, the next step is to view the Web page using a browser. Because Windows is **multitasking**, you can have more than one program running at a time, such as Notepad++ and your browser. The following steps illustrate how to start a browser to view a Web page.

- 1 Click the Internet Explorer icon on the taskbar (Figure 2–22).



Internet Explorer icon in taskbar

Figure 2–22

- 2 If necessary, click the Maximize button to maximize the browser window (Figure 2–23).



msn home page; your home page may differ

Maximize button changed to the Restore Down button because window is maximized

status bar

Figure 2–23

Q&A Why does my browser display a different window?

Because it is possible to change the Web page that appears as the home page using browser settings, the home page that is displayed by your browser may be different. Schools and organizations often customize the home page for browsers installed on lab or office computers.

Other Ways

1. Click Start, click All Programs, click Internet Explorer	2. Double-click Internet Explorer icon on desktop, if one is present
---	--

To View a Web Page in a Browser

A browser allows you to open a Web file located on your computer and have full browsing capabilities, as if the Web page were stored on a Web server and made available on the Web. The following steps use this technique to view the HTML file, `rockclimbing.html`, in a browser.

1

- Click the Address bar to select the URL.
- Type `g:\Chapter02\ChapterFiles\rockclimbing.html` to enter the path of the HTML file in the Address bar (Figure 2–24).

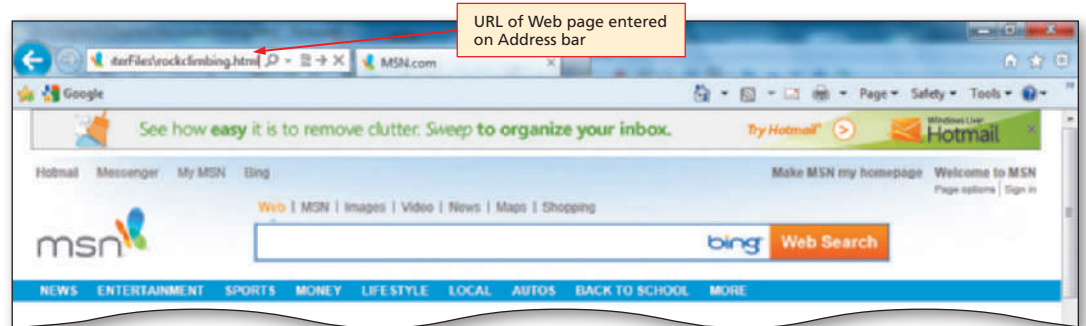


Figure 2–24

Q&A

What if my file is in a different location?

You can type in the path to your file in the Address bar or browse to your file, as shown in Other Ways.

2

- Press the ENTER key to display the `rockclimbing.html` page as if it were available on the Web (Figure 2–25).

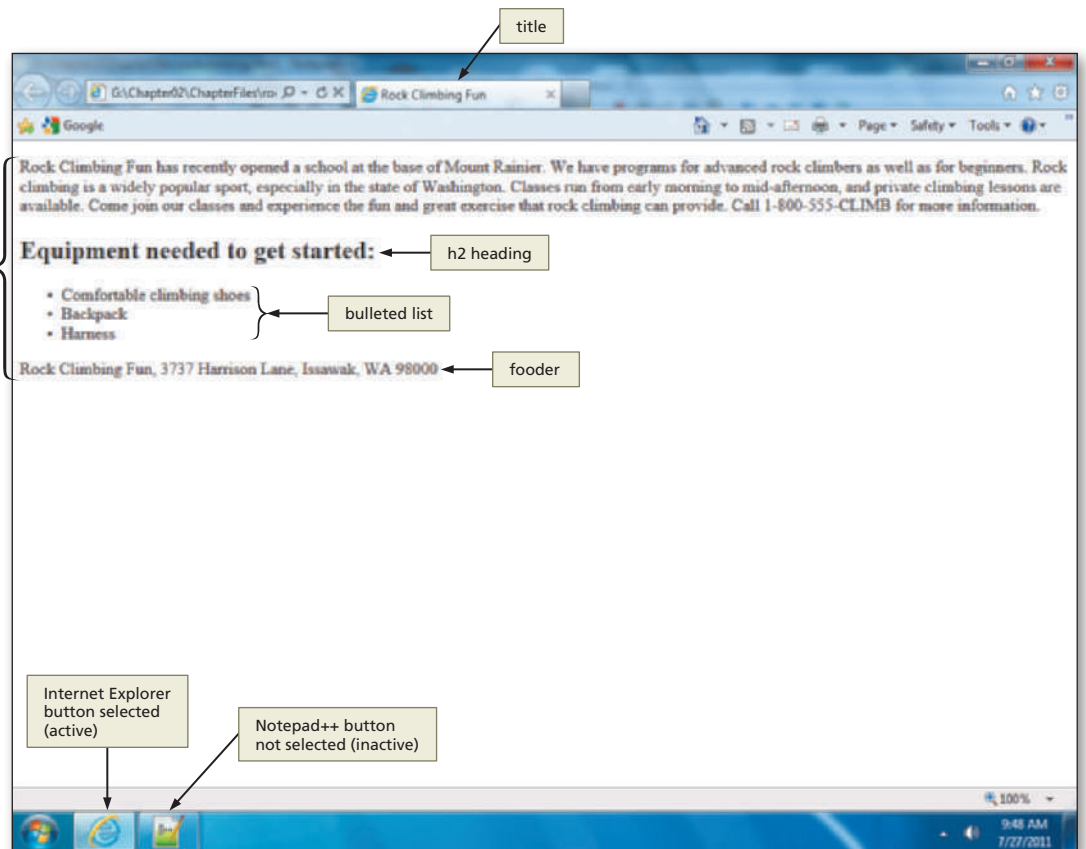


Figure 2–25

Q&A

What if my page is not displayed correctly?

Check your `rockclimbing.html` file carefully against Figure 2–26 on the next page to make sure you have not made any typing errors or left anything out. Correct the errors, resave the file, and try again by refreshing the Web page in the browser.

Other Ways

1. In Windows Explorer, double-click HTML file name to open in default browser
2. In Windows Explorer, right-click HTML file name, point to Open with, click browser name

To Activate Notepad++

After viewing the Web page, you can modify it by adding additional tags or text to the HTML file. To continue editing, you first must return to the Notepad++ window. The following step illustrates how to activate Notepad++.

1

- Click the Notepad++ button on the taskbar to maximize Notepad++ and make it the active window (Figure 2–26).

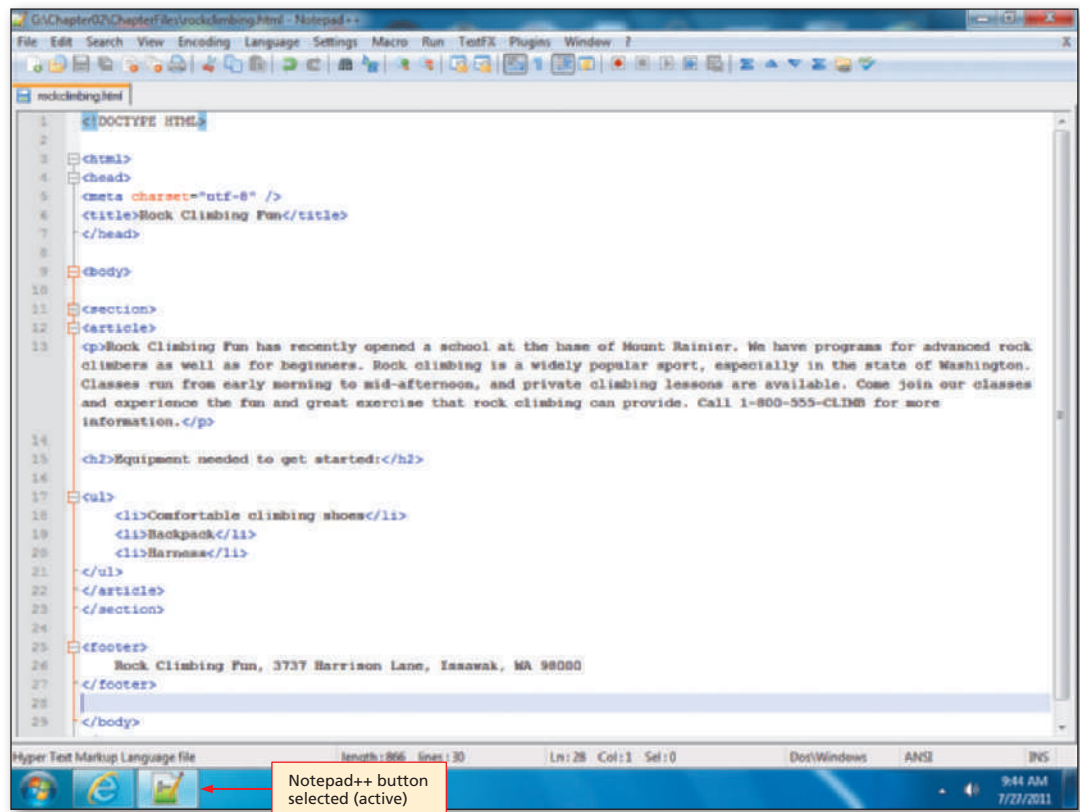
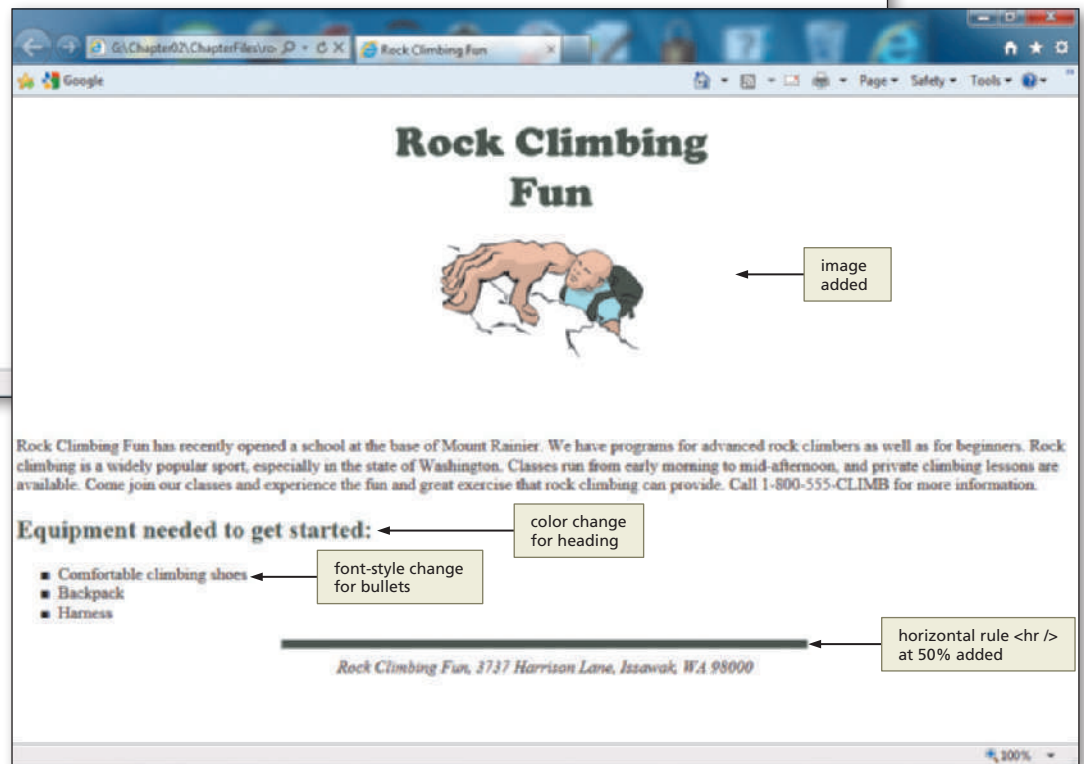
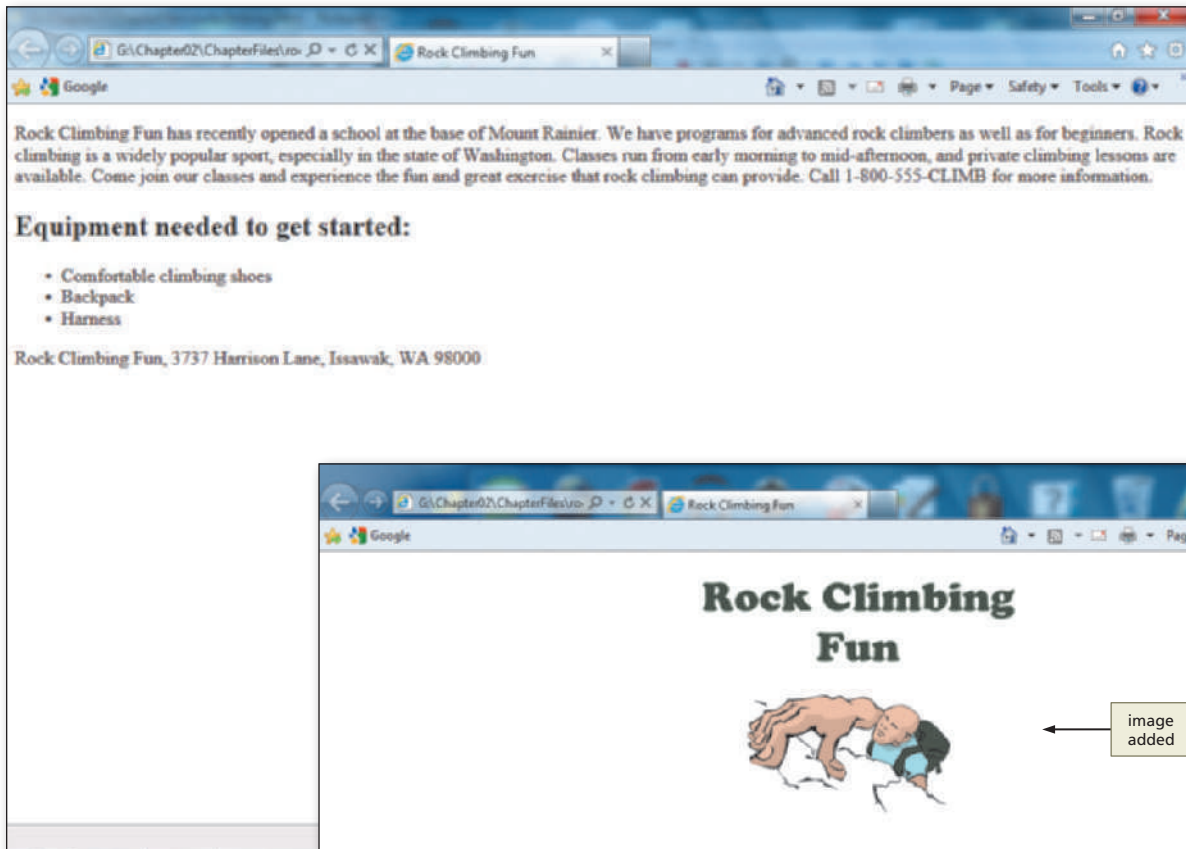


Figure 2–26

Improving the Appearance of Your Web Page

One goal in Web page development is to create a Web page that is visually appealing and maintains the interest of the visitors. The Web page developed thus far in the chapter is functional, but lacks visual appeal. In this section, you will learn how to improve the appearance of the Web page from the one shown in Figure 2–27a to the one shown in Figure 2–27b by adding an image, adding color to a heading, changing the style of the footer, adding a horizontal rule, and changing the list style type of the bulleted list. Many of these tasks can be accomplished by using style sheets.

(a) Rock Climbing Fun Web page.



(b) Rock Climbing Fun Web page formatted to improve appearance.

Figure 2-27

Using Style Sheets

Although HTML allows Web developers to make changes to the structure, design, and content of a Web page, HTML is limited in its ability to define the appearance, or style, across one or more Web pages. As a result, style sheets were created.

As a review, a **style** is a rule that defines the appearance of an element on a Web page. A **Cascading Style Sheet (CSS)** is a series of rules that defines the style for a Web page or an entire Web site. With a style sheet, you can alter the appearance of a Web page or pages by changing characteristics such as font family, font size, margins, and link specifications.

The latest version of CSS is CSS3. As with HTML5, CSS3 is still in a working draft status at the World Wide Web Consortium (W3C). CSS3 adds many new style features, including column-based layouts, rounded borders, and enhanced text effects. For full CSS3 styles, visit w3.org. We will utilize some of the new styles in later chapters.

Inline Styles

Using an inline style is helpful when you want to alter the appearance (or style) of a single HTML element. Appendix D contains the Cascading Style Sheet Properties and Values supported by most browsers. The inline styles used in this chapter can be found in the appendix. For more information on CSS, look at w3.org.

CSS supports three types of style sheets: inline, embedded (or internal), and external (or linked). With an **inline style**, you add a style to an individual HTML tag, such as a heading or paragraph. The style changes that specific tag, but does not affect other tags in the document. With an **embedded style sheet**, or **internal style sheet**, you add the style sheet within the <head> tags of the HTML document to define the style for an entire Web page. With an **external style sheet**, or **linked style sheet**, you create a text file that contains all of the styles you want to apply, and save the text file with the file extension .css. You then add a link to this external style sheet on any Web page in the Web site. External style sheets give you the most flexibility and are ideal to apply the same formats to all of the Web pages in a Web site. External style sheets also make it easy to change formats quickly across Web pages. You will use inline styles in this chapter's project to enhance the styles of the heading (change the color) and the bulleted list (change the font style).

Style Sheet Precedence As shown in Table 2–8, the three style sheets supported by CSS control the appearance of a Web page at different levels. Each type of style sheet also has a different level of precedence or priority in relationship to the others. An external style sheet, for example, is used to define styles for multiple pages in a Web site. An embedded style sheet is used to change the style of one Web page, and overrides or takes precedence over any styles defined in an external style sheet. An inline style is used to control the style within an individual HTML tag and takes precedence over the styles defined in both embedded and external style sheets.

Table 2–8 Style Sheet Precedence

Type	Level and Precedence
Inline	<ul style="list-style-type: none"> • To change the style within an individual HTML tag • Overrides embedded and external style sheets
Embedded	<ul style="list-style-type: none"> • To change the style of one Web page • Overrides external style sheets
External	<ul style="list-style-type: none"> • To change the style of multiple pages in a Web site

Because style sheets have different levels of precedence, all three types of style sheets can be used on a single Web page. For example, you may want some elements of a Web page to match the other Web pages in the Web site, but you also may want to vary the look of certain sections of that Web page. You can do this by using the three types of style sheets.

Style Statement Format No matter what type of style sheet you use, you must use a **style statement** to define the style. The following code shows an example of a style statement used in an inline style:

```
<h1 style="font-family: Garamond; font-color: navy">
```

A style statement is made up of a selector and a declaration. The part of the style statement that identifies the page elements is called the **selector**. In this example, the selector is h1 (header size 1). The part of the style statement that identifies how the element(s) should appear is called the **declaration**. In this example, the declaration is everything between the quotation marks: the font-family and font-color properties and their values (Garamond and navy, respectively). A declaration includes at least one type of style, or **property**, to apply to the selected element. Examples of properties include color,

text-indent, border-width, and font-style. For each property, the declaration includes a related **value**, which specifies the display parameters for that specific property.

Each property accepts specific values, based on the styles that property can define. The property, font-color, for example, can accept the value, navy, but cannot accept the value, 10%, because that is not a valid color value. In the next section of this chapter, you will change the heading color to the color #384738 for the h2 heading. Using an inline style in this case is appropriate because there is only one heading to change on the Web page. If you had many headings to change, an embedded or external style sheet would be more appropriate. This will be discussed in later chapters.

Inline Styles An inline style is used to define the style of an individual HTML tag. For example, to change the style of a horizontal rule, you could add an inline style with the <hr /> (horizontal rule) tag as the selector and a declaration that defines new height, width, and background-color styles, as shown here:

```
<hr style="height: 8px; background-color: #384738; width: 50%" />
```

Because inline styles take precedence over the other types of style sheets and affect the style for individual HTML tags, they are helpful when one section or one element of a Web page needs to have a style different from the rest of the Web page. In this chapter's project, an inline style is used to change the color of the <h2> heading, the bullet list type, the footer, and the horizontal rule styles on the Web page.

Now that you understand how style sheets and inline styles function, it is time to think about adding an image to enhance the appearance of your Web page.

Using Web Page Divisions

It can be helpful to break up your Web page into divisions (or sections), which allows you to apply styles to different Web page elements. Throughout this book, you sometimes use the start <div> and end </div> division tags as a container in which to insert images. You also use the new HTML5 layout elements to help structure your Web page into sections. As mentioned earlier, these new semantic elements are useful because the name of the tag actually reflects the purpose of the tag. For example, the <header> tag is used to display text at the top (or the header) of the Web page. Utilizing structural and division tags allows you to add styles such as centering your image or adding background color to your images.

Find appropriate graphical images.

To use graphical images, also called graphics, on a Web page, the image must be stored digitally in a file. Files containing graphical images are available from a variety of sources:

- Some Web sites offer images that are free and are not subject to copyright; these images are considered to be in the **public domain**. Other Web sites offer images that require permission from the copyright owner or a fee for use.
- You can take a picture with a digital camera and **download** it, which is the process of copying the digital picture from the camera to your computer.
- With a scanner, you can convert a printed picture, drawing, or diagram to a digital file.

If you receive a picture from a source other than yourself, do not use the file until you are certain it does not contain a virus. A **virus** is a computer program that can damage files and programs on your computer. Use an antivirus program to verify that any files you use are virus free.

(continued)

Plan Ahead

Plan Ahead

(continued)

Establish where to position and how to format the graphical image. The content, size, shape, position, and format of a graphic should capture the interest of viewers, enticing them to stop and read the Web page. Often, the graphic is the center of attraction and visually the largest element on a page. If you use colors in the graphical image, be sure they are part of the Web page's color scheme.

Identify the width and height of the image. The width and height (measured in pixels) of an image should always be identified in the tag. These dimensions are used by the browser to determine the size to display the image.

Provide alternate text for the image. Text describing the image, known as alternate text, should always be used for each image. This text is especially useful to users with visual impairments who use a screen reader, which translates information on a computer screen into audio output. The length of the alternate text should be reasonable.

Types of Web Page Images

Images are used in many ways to enhance the look of a Web page and make it more interesting and colorful. Images can be used to add background color, to help organize a Web page, to help clarify a point being made in the text, or to serve as links to other Web pages. Images are often also used to break up Web page sections (such as with a horizontal rule) or as directional elements that allow a visitor to navigate a Web site.

Web pages use three types of files as images: GIF, JPEG, and PNG (Table 2–9).

Graphics Interchange Format (GIF) files have an extension of .gif. A graphic image saved as a GIF (pronounced *jiff* or *giff*) uses compression techniques, called LZW compression, to make it smaller for download on the Web. Standard (or noninterlaced) GIF images are displayed one line at a time when loading. Interlaced GIF images load all at once, starting with a blurry look and becoming sharper as they load. Using interlaced GIFs for large images is a good technique, because a Web page visitor can see a blurred outline of the image as it loads.

A second type of image file is **Portable Network Graphics (PNG)**, which has a .png extension. The PNG (pronounced *ping*) format is also a lossless compressed file format that supports multiple colors and resolutions. The PNG format is a patent-free alternative to the GIF format. Most newer browsers support PNG images.

Finally, **Joint Photographic Experts Group (JPEG)** files have an extension of .jpg, .jpe, or .jpeg. A JPEG (pronounced *JAY-peg*) is a graphic image saved using a lossy compression technique that discards some data during the compression process and is best suited for images with smooth variations of tone and color. JPEG files are often used for more complex images, such as photographs, because the JPEG file format supports more colors and resolutions than the other file types.

BTW

Images

Images on Web pages are viewed in a variety of environments, including on computers with slow connections to the Internet. Optimizing your images is important to increase the speed of download for all of your Web page visitors. Search the Web for more information on image optimization.

Table 2–9 Image Types and Uses

Image Type	Use
Graphics Interchange Format (GIF)	<ul style="list-style-type: none"> • Use for images with few colors (<256) • Allows for transparent backgrounds
Portable Network Graphics (PNG)	<ul style="list-style-type: none"> • Newest format for images • Use for all types of images • Allows for variation in transparency
Joint Photographic Experts Group (JPEG)	<ul style="list-style-type: none"> • Use for images with many colors (>256), such as photographs

If an image is not in one of these formats, you can use a paint or graphics-editing program to convert an image to a .gif, .jpg, or .png format. Some paint programs even allow you to save a standard GIF image as interlaced. A number of paint and graphics-editing programs, such as Adobe Photoshop and Corel Paint Shop Pro, are available in the marketplace today.

Image Attributes

You can enhance HTML tags by using attributes. **Attributes** define additional characteristics for the HTML tag. For instance, you should use the width and height attributes for all tags. Table 2–10 lists the attributes that can be used with the tag. In this chapter, the src and alt attributes are used in the tag. Image attributes will be explained in detail, because they are used in later chapters.

BTW

Overusing Images

Be cautious about overusing images on a Web page. Using too many images may give your Web page a cluttered look or distract the visitor from the purpose of the Web page. An image should have a purpose, such as to convey content, visually organize a page, provide a hyperlink, or serve another function.

Table 2–10 Image Attributes

Attribute	Function
alt	<ul style="list-style-type: none"> • Alternative text to display when an image is being loaded • Especially useful for screen readers, which translate information on a computer screen into audio output • Should be a brief representation of the purpose of the image • Generally should stick to 50 characters or fewer
height	<ul style="list-style-type: none"> • Defines the height of the image, measured in pixels • Improves loading time
src	<ul style="list-style-type: none"> • Defines the URL of the image to be loaded
width	<ul style="list-style-type: none"> • Defines the width of the image, measured in pixels • Improves loading time

To Add an Image

In the early days when the Web was used mostly by researchers needing to share information with each other, having purely functional, text-only Web pages was the norm. Today, Web page visitors are used to a more graphically oriented world, and have come to expect Web pages to use images that provide visual interest. The following step illustrates how to add an image to a Web page by entering an tag in the HTML file using the tags and text shown in Table 2–11.

Table 2–11 Adding an Image

Line	HTML Tag and Text
11	<header style="text-align: center">
12	
13	</header>

1

- Click the blank line 10 and then press the ENTER key.
- With the insertion point on line 11, enter the HTML code, as shown in Table 2–11. Press ENTER at the end of each line (Figure 2–28).

image added within header element

alt attribute and text

width and height attributes and sizes

```

1 <!DOCTYPE HTML>
2
3 <html>
4 <head>
5 <meta charset="utf-8" />
6 <title>Rock Climbing Fun</title>
7 </head>
8
9 <body>
10
11 <header style="text-align: center">
12 
13 </header>
14
15 <section>
16 <article>
17 <p>Rock Climbing Fun has recently opened a school at the base of Mount Rainier. We have programs for advanced rock
18 climbers as well as for beginners. Rock climbing is a widely popular sport, especially in the state of Washington.
19 Classes run from early morning to mid-afternoon, and private climbing lessons are available. Come join our classes
20 and experience the fun and gr... climbing can provide. Call 1-800-555-CLIMB for more
21 information.</p>
22
23 <h2>Equipment needed to get started:</h2>
24
25 <ul>
26 <li>Comfortable climbing shoes</li>
27 <li>Backpack</li>
28 <li>Harness</li>
29 </ul>
30 </article>
31 </section>
32
33 <footer>

```

Figure 2–28

Q&A What is the purpose of the alt attribute?

The alt attribute has three important purposes. First, screen readers used by users with visual impairments read the alternate text out loud. Second, the alternate text is displayed while the image is being loaded. Finally, the alt tag is required for compliance to good programming standards.

Q&A What is the purpose of the inline style used in the <header> tag?

You use the style="text-align: center" statement to center the header on the Web page.

Plan Ahead

Make other visual enhancements.

In addition to images, there are several ways to add visual interest.

Add color to headings. Web developers often use colors to call attention to elements on a Web page. The color selected should coordinate with the images selected for the page. It should also allow the Web page text to be read easily. Some colors, such as dark colors, may not be appropriate because the default black text cannot be displayed effectively on a dark background. When changing the color of an element such as a heading, it is usually best to apply the same style to all headings on the Web page for consistency.

Change the list style type of a bulleted list. It is sometimes aesthetically pleasing to change the style of the bullet in a bulleted list. When you want to call attention to the information, you might also want to italicize or bold the bullet text.

Insert a horizontal rule. It is useful to use a horizontal rule to break up text on a Web page. A horizontal rule is used as a divider for a page to separate text sections.

Alter the footer style. A footer contains content, such as contact information, that does not have to be strongly highlighted. Changes can be made to that tag to make its style different from the other content on the page.

Other Visual Enhancements

One way to help capture a Web page visitor’s attention is to use color. Many colors are available for use as a Web page background, text, border, or link. Figure 2–29 shows colors often used on Web pages, with the corresponding six-digit number codes. The six-digit number codes, known as **hexadecimal** codes, can be used to specify a color for a background, text, or links. The heading on the Rock Climbing Fun Web page is currently black (the default color). You will spruce up the Web page by adding color to the heading and the horizontal rule using inline styles.

BTW Colors
Figure 2–29 does not list all possible Web colors. Many other colors are available that you can use for Web page backgrounds or text fonts. For more information about colors, see Appendix B or search the Web for browser colors.

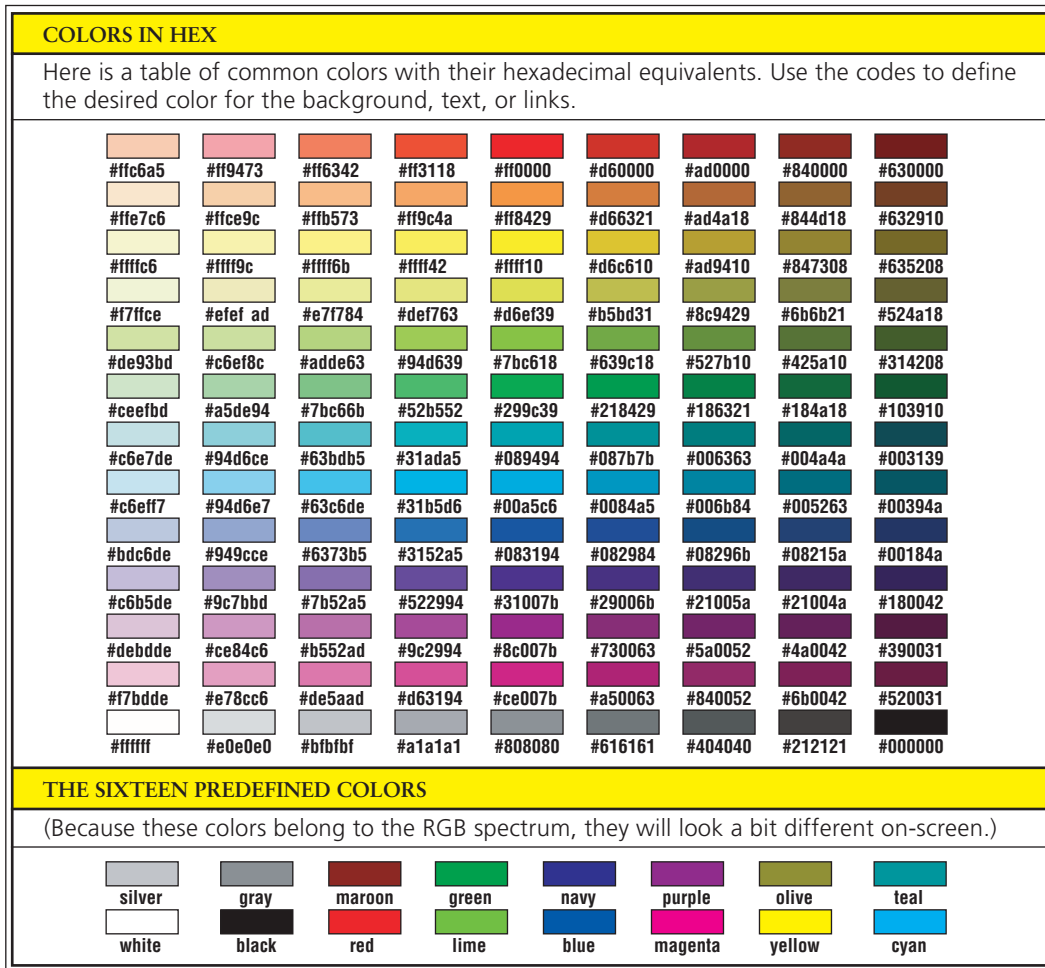


Figure 2–29

The color codes and names shown in Figure 2–29 can be used for background, text, border, and link colors. The color property is used in the <h2> tag to specify the color for the heading. The color #384738 will be used for the heading because it is one of the colors found in the graphical image inserted in the steps above.

Another way to visually enhance the Web page is to change the style of some of the text. This calls attention to that particular text on the Web page. In this section, you will change the text in the footer to an italic style using an inline style. This change helps call attention to that tangential content.

BTW Browser-safe Colors
Web developers used to have to make sure that they used browser-safe colors (Appendix B). The trend for monitors today is to display “true color”, which means that any of 16 million colors can be displayed on the monitor. Few people use 8-bit monitors anymore, so you generally do not have to limit yourself to browser-safe colors.

Finally, you will add a horizontal rule and an inline style to further enhance this Web page. As discussed earlier in the chapter, horizontal rules are lines that act as dividers on a Web page to provide a visual separation of sections on the page. You can use an inline image to add a horizontal rule, or you can use the horizontal rule tag (<hr />) to add a simple horizontal rule, as shown in the following steps. To make the horizontal rule more apparent, you will give it a height of 8 pixels and color the background the same color as the <h2> heading. You will also set the width of the horizontal rule to 50% of the Web page. You do all three of those changes to the horizontal rule using an inline style. Figure 2–30 shows examples of a variety of horizontal rules and the HTML code used to add them. The default horizontal rule is shown in the first rule on the page. Dimension is added to a horizontal rule by increasing the number of pixels that are displayed.



Figure 2–30

To Add Color to a Web Page Heading

To change the color of a heading on a Web page, the color property must be added in the <h2> tag of the HTML file. The **color** property lets you change the color of various elements on the Web page. The following step shows how to add a color using the color property in an inline style.

1

- Click after the "2" but before the closing bracket in <h2> on line 19 and then press the SPACEBAR.
- Type `style="color: #384738"` as the color code for the heading (Figure 2–31).

Q&A

Can I use any hexadecimal code or color name to change colors of headings?

Although you may use any of the hexadecimal codes or color names available, you have to make sure that the color is appropriate for the headings of your Web page. You do not want a heading that is too light in color or otherwise diminishes the headings.

color code
#384738
added to
heading in
<h2> tag

```

1 <!DOCTYPE HTML>
2
3 <html>
4 <head>
5 <meta charset="utf-8" />
6 <title>Rock Climbing Fun</title>
7 </head>
8
9 <body>
10
11 <header style="text-align: center">
12 
13 </header>
14
15 <section>
16 <article>
17 <p>Rock Climbing Fun has recently opened a school at the base of Mount Rainier. We have programs for advanced rock
18 climbers as well as for beginners. Rock climbing is a widely popular sport, especially in the state of Washington.
19 Classes run from early morning to mid-afternoon, and private climbing lessons are available. Come join our classes
20 and experience the fun and great exercise that rock climbing can provide. Call 1-800-555-CLIMB for more
21 information.</p>
22 <h2 style="color: #384738" >Equipment needed to get started:</h2>
23 <ul>
24 <li>Comfortable climbing shoes</li>
25 <li>Backpack</li>
26 <li>Harness</li>
27 </ul>
28 </article>
29 </section>
30
31 <footer>

```

Figure 2–31

To Change the Bulleted List Style

To change the style of the bulleted list, you again use an inline style with the `list-style-type` property. The `list-style-type` property lets you change the style of the bullet type from the default disc to other options. There are several values for the `list-style-type`, as shown in Appendix D. The following step shows how to change the `list-style-type` property using an inline style.

1

- Click after the “l” but before the closing bracket in `` on line 21 and then press the SPACEBAR.
- Type `style="list-style-type: square"` as the code (Figure 2–32).

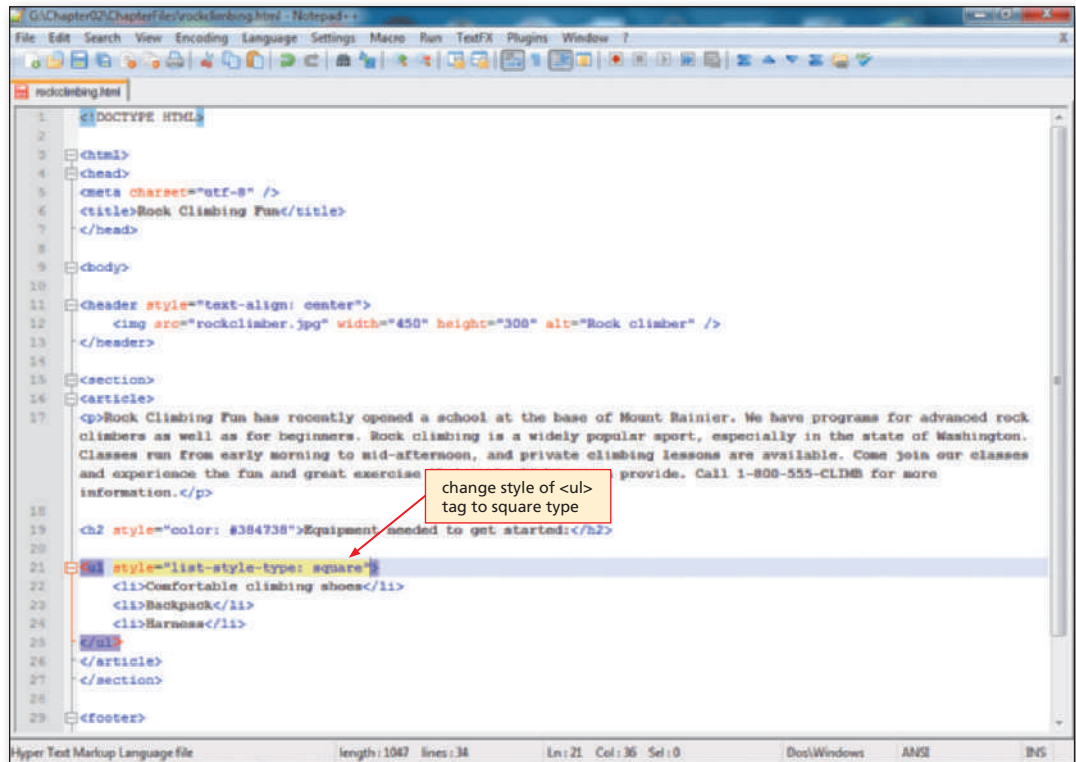


Figure 2–32

To Add a Horizontal Rule

You next insert a horizontal rule to separate the top part of the Web page from the footer area. You also give the horizontal rule more height (8 pixels) than the default, change the background color to match the heading, and make the width 50%. The following step illustrates how to add a horizontal rule to a Web page.

1

- Click the blank line 28 and then press the ENTER key.
- Type `<hr style="height: 8px; background-color: #384738; width: 50%" />` and then press the ENTER key (Figure 2–33).

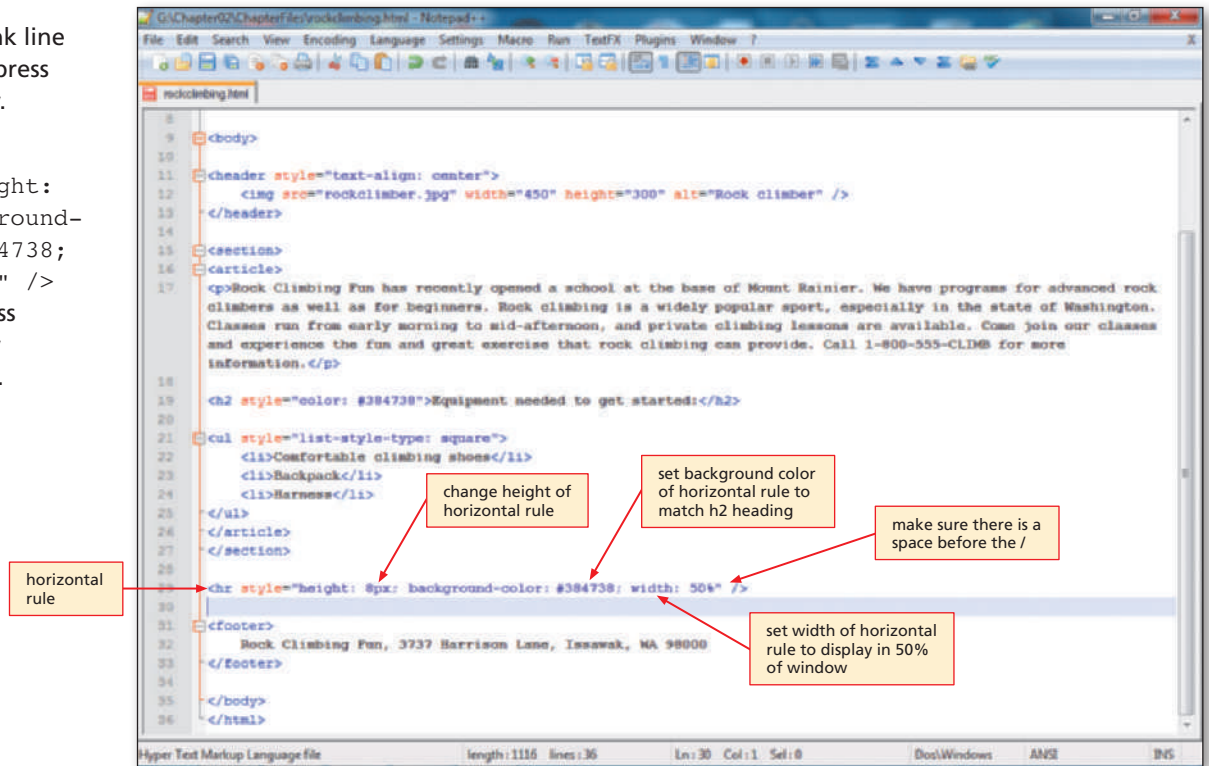


Figure 2–33

To Change the Footer Style

To change the style of the footer element, you again use an inline style with the `font-style` property. In this step, you center the footer across the Web page and change the font style to italic. Footer information is not generally intended to be the highlight of the Web page, so making the footer content italic is appropriate. The following steps show how to center and change the text using an inline style.

1

- Click after the “r” but before the closing bracket in `<footer>` on line 31 and then press the SPACEBAR.
- Type `style="text-align: center; font-style: italic"` as the code (Figure 2–34).

2

- Click File on the menu bar and then click Save.

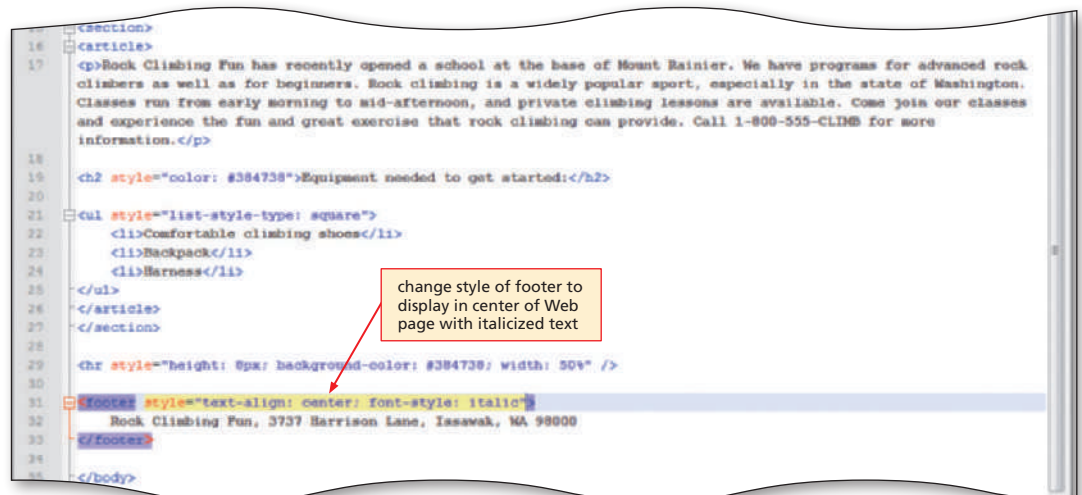


Figure 2–34

To Refresh the View in a Browser

As you continue developing the HTML file in Notepad++, it is a good idea to view the file in your browser as you make modifications. Clicking the Refresh button when viewing the modified Web page in the browser, ensures that the latest version of the Web page is displayed. The following step shows how to refresh the view of a Web page in a browser in order to view the modified Web page.

- 1
 - Click the Internet Explorer button on the taskbar to display the rockclimbing.html Web page.
 - Click the Refresh button on the Address bar to display the modified Web page (Figure 2–35).

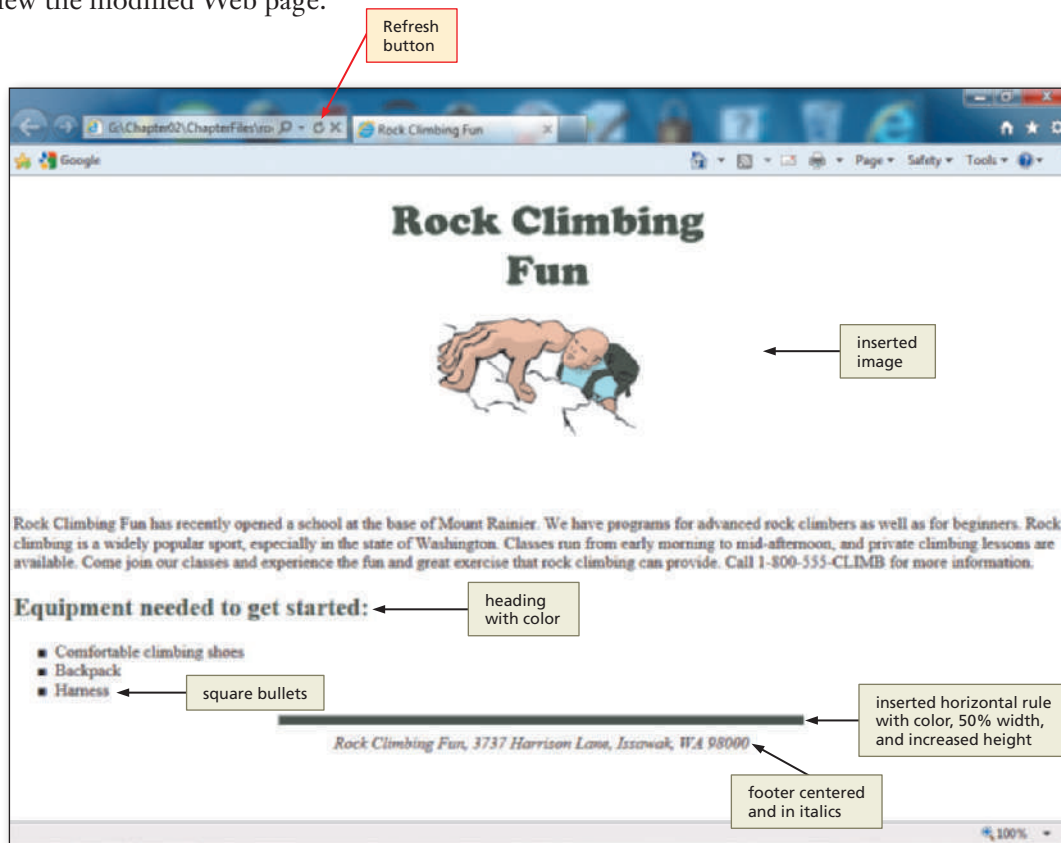


Figure 2–35

Other Ways

1. In Internet Explorer, press F5 to refresh

Validating and Viewing HTML Code

BTW

HTML and HTML5 Tags

The Web has excellent sources that list HTML5 tags. For more information about HTML and HTML5, search for “HTML tags” or “HTML5 tags” in a search engine.

In Chapter 1, you read about validating your HTML code. Many validation services are available on the Web that can be used to assure that your HTML code follows standards. This should always be a part of your Web page testing. The validation service used in this book is the W3C Markup Validation Service (validator.w3.org). This validator checks the markup validity of Web documents in HTML and XHTML, along with some other markup languages. The validator looks at the DOCTYPE statement to see which version of HTML or XHTML you are using, and then checks to see if the code is valid for that version. In this chapter, the project uses the HTML5 DOCTYPE.

If validation detects an error in your HTML code, you will see the warning “Errors found while checking this document as HTML5!” in the header bar, which is in red (Figure 2–36a on the next page). The Result line shows the number of errors that you have. You can scroll down the page or click the Jump To: Validation Output link to see detailed comments on each error.

It is important to note that one error can result in more errors. As an example, the `</h2>` tag on line 19 in the rockclimbing.html file was removed to show code with an error. Figure 2–36b shows that in this case, one initial error (that the `` tag on line 21 cannot be used within the `<h2>` tag on line 19) resulted in a total of three errors and one warning.

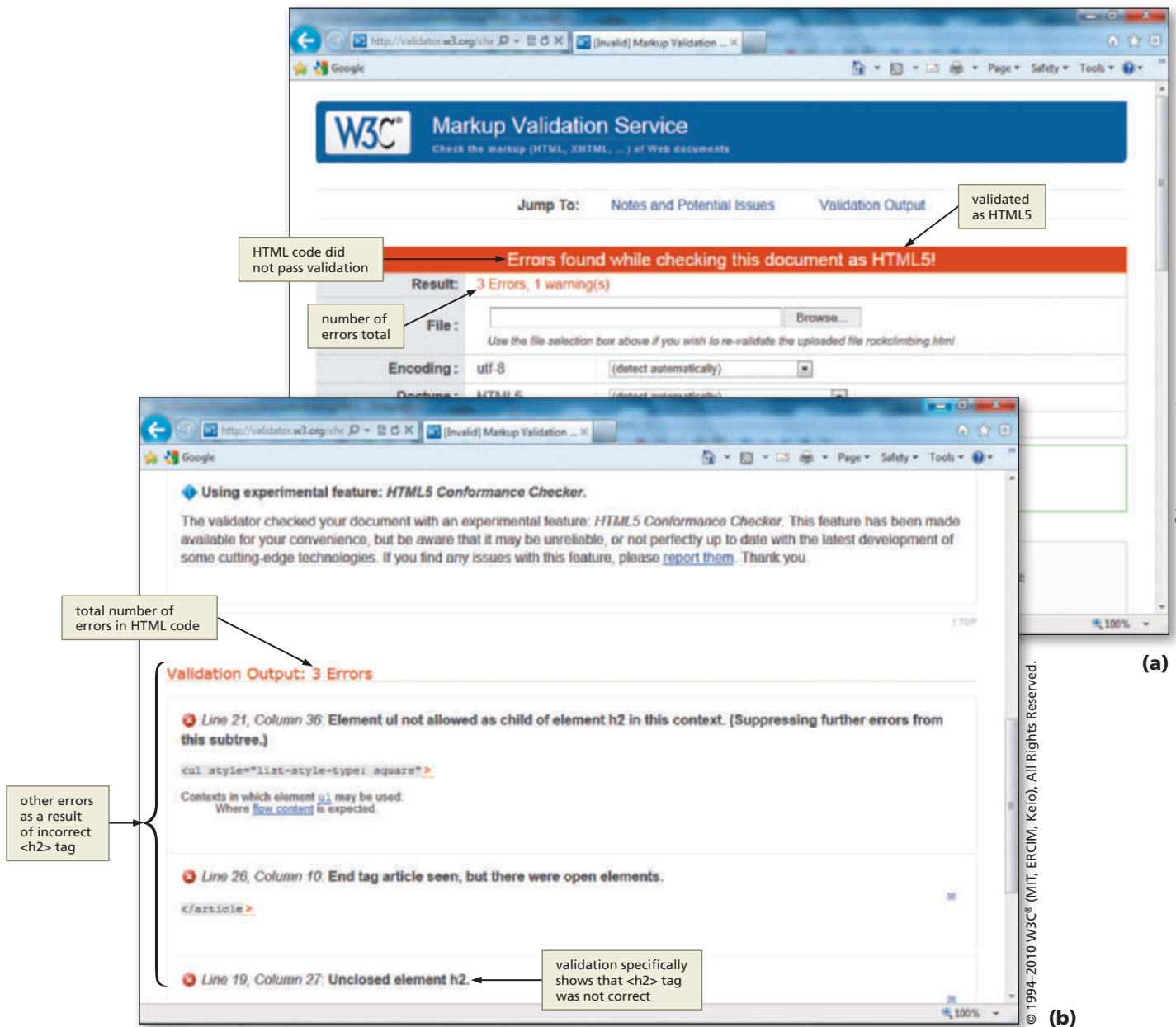


Figure 2-36

To Validate HTML Code

Now that you have added all the basic elements to your Web page and enhanced it with images, color, italics, and rules, you need to validate your code. The current validation process for HTML5 returns not just errors, but informational warnings, as shown in Figure 2-39a on page HTML 75. Although the validator says the code “was successfully checked as HTML5” it also displays a warning for the code. Figure 2-39b explains that warning, which says that the HTML5 Conformance Checker used for validation on HTML5 code is experimental. As mentioned earlier in the chapter, HTML5 is still experimental as are associated support features, and this warning is just telling you that. The warning is fine though, so your code has passed the validation process. The following steps illustrate how to validate your HTML code using the W3 validator.

- 1
 - Click the Address bar on the browser to highlight the current URL.
 - Type validator.w3.org to replace the current entry, and then press the ENTER key.
 - If necessary, click OK if the browser asks to open a new window.
 - Click the Validate by File Upload tab (Figure 2–37).

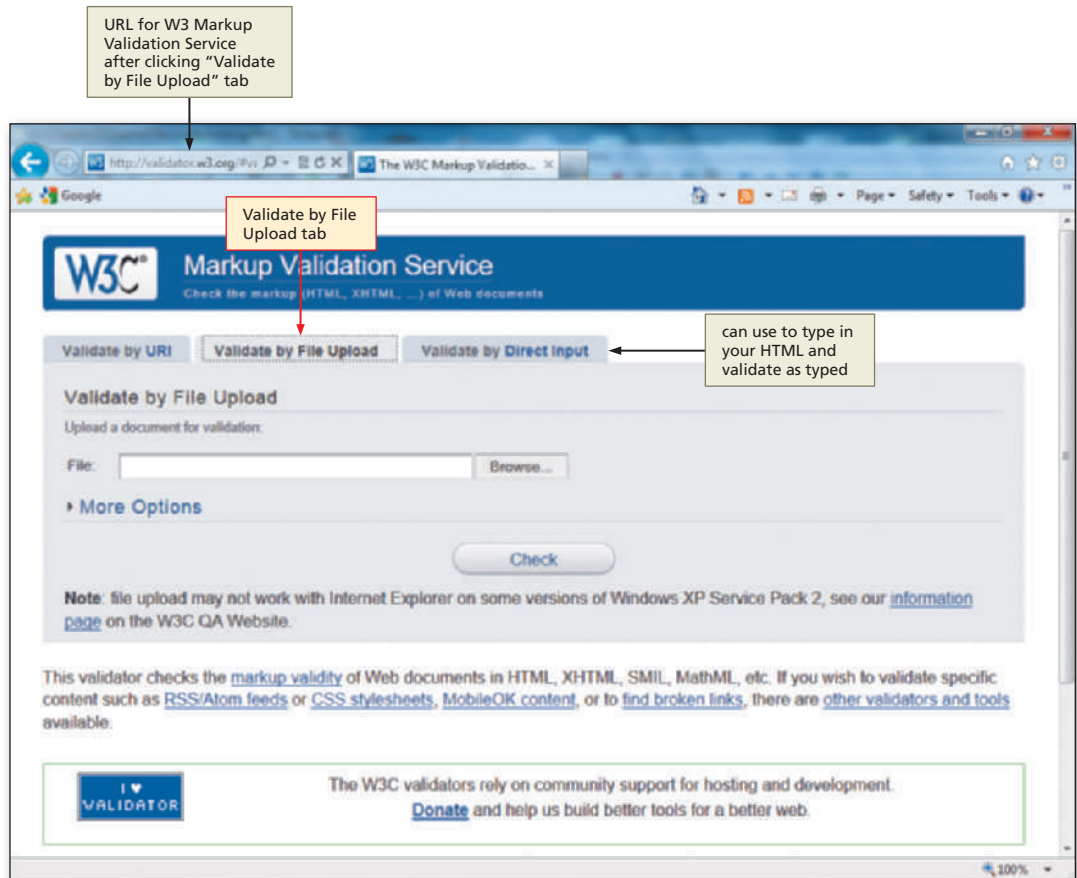


Figure 2–37

- 2
 - Click the Browse button.
 - Locate the rockclimbing.html file on your storage device and then click the file name.
 - Click the Open button on the Choose File to Upload dialog box and the file path and name will be inserted into the File box, as shown in Figure 2–38.

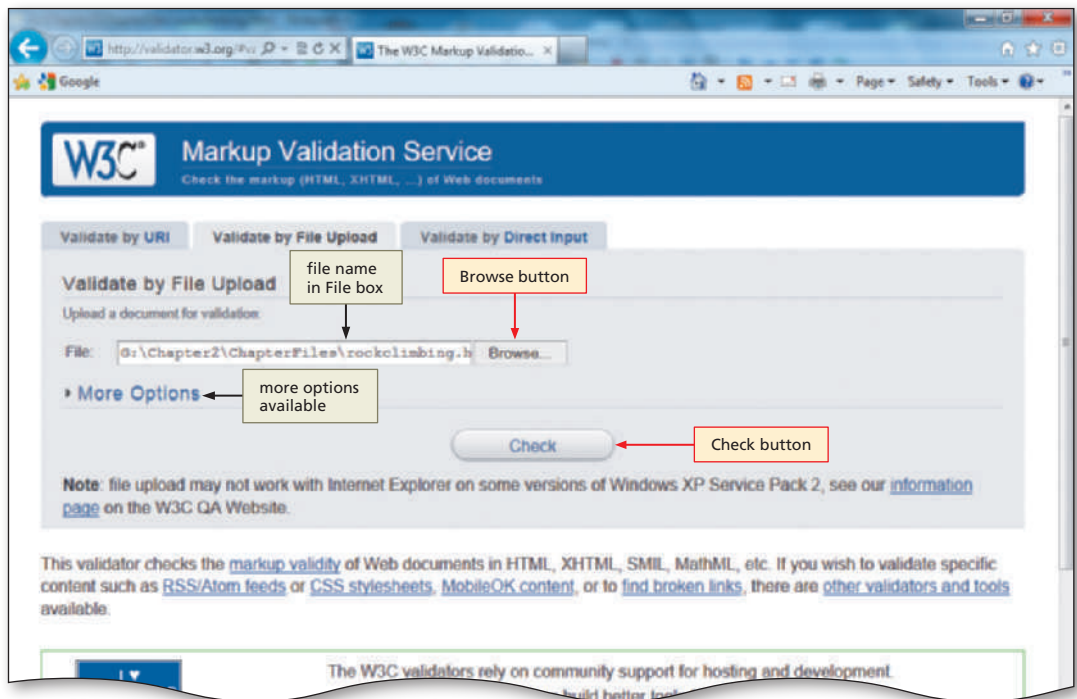


Figure 2–38

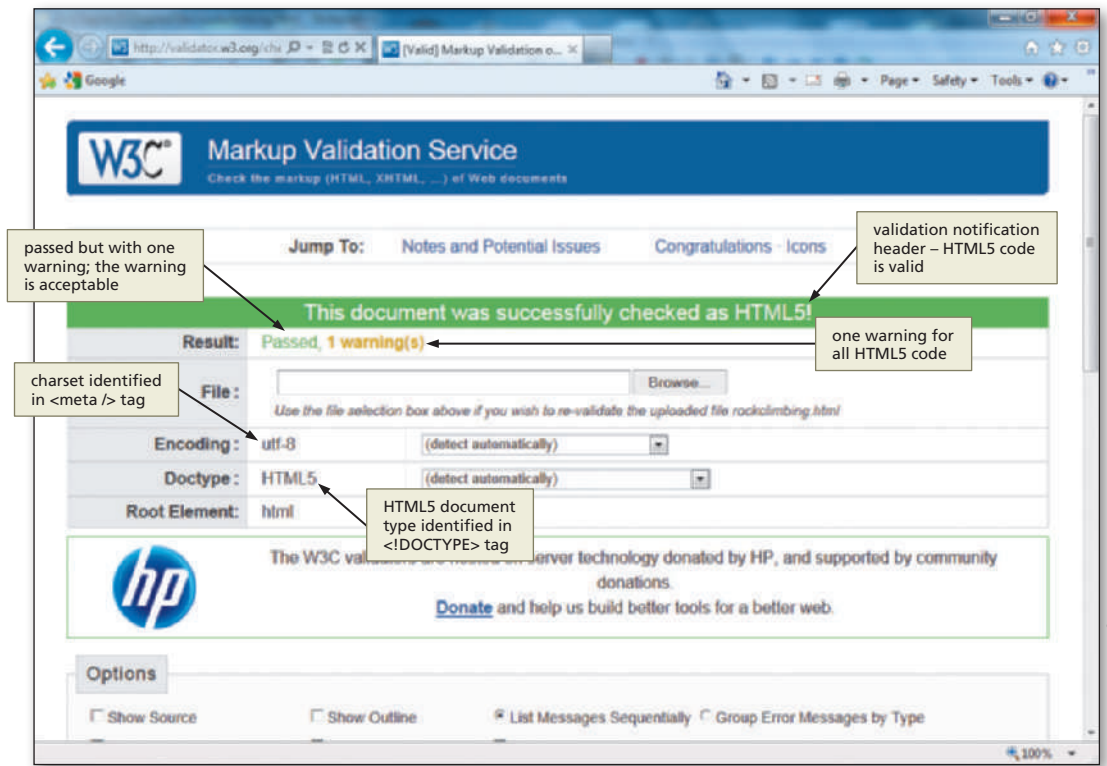
3

- Click the Check button. The resulting validation should be displayed, as shown in Figure 2–39a and 2–39b.
- Return to the Rock Climbing Fun Web page, either by clicking the Back button on your browser or by clicking the Internet Explorer button in the taskbar.

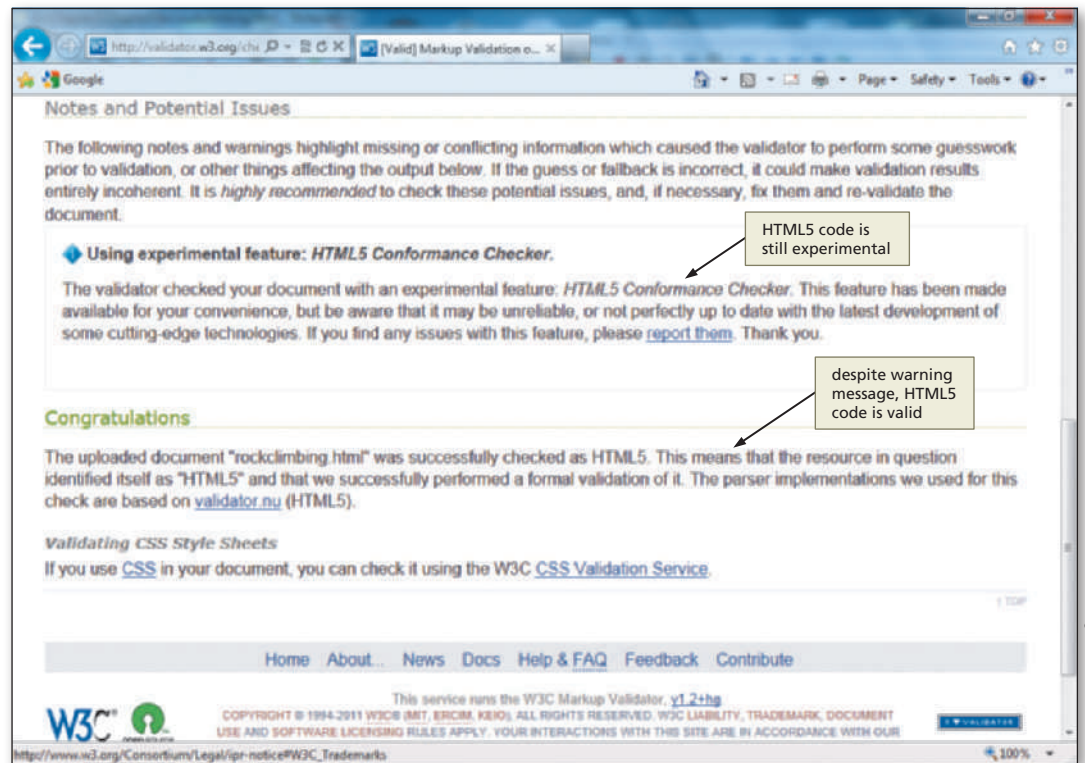
Q&A How do I know if my HTML code is valid?
The notification header will be green, and in the Result area, you should see the word “Passed.”

Q&A What can I do if my HTML code is not validated?

If your code has errors, edit your HTML file to correct the errors. The Markup Validation Service report lists what is wrong with your code. Once you make the necessary changes and save the file, you can use the Browse button to open the corrected HTML file, then scroll down and click the Revalidate button to validate the changed code.



(a)



(b)

Figure 2–39

To View HTML Source Code for a Web Page

Source code is the code or instructions used to create a Web page or program. For a Web page, the source code is the HTML code, which then is translated by a browser into a graphical Web page. You can view the HTML source code for any Web page from within your browser. This feature allows you to check your own HTML source code, as well as to see the HTML code other developers used to create their Web pages. If a feature on a Web page is appropriate or appealing for your Web page, you can view the source to understand the HTML required to add that feature and then copy sections of the HTML code to put on your own Web pages. You can use your browser to look at the source code for most Web pages. The following steps show how to view the HTML source code for your Web page using a browser.

1

- Use the Back button on the browser to return to the Web page.
- Click Page on the Command bar. If your Command bar is not displayed, right-click the title bar, click Command bar, and then click Page.
- Click View source to view the HTML code in the default text editor (Figure 2–40).

Q&A

Do all browsers allow me to view the HTML source code in the same way?

Browsers such as Chrome, Firefox and Safari all allow you to view the source code of Web pages. However, they might use different buttons or menu options to access source code. For instance, in Mozilla Firefox, select View and then Page Source.

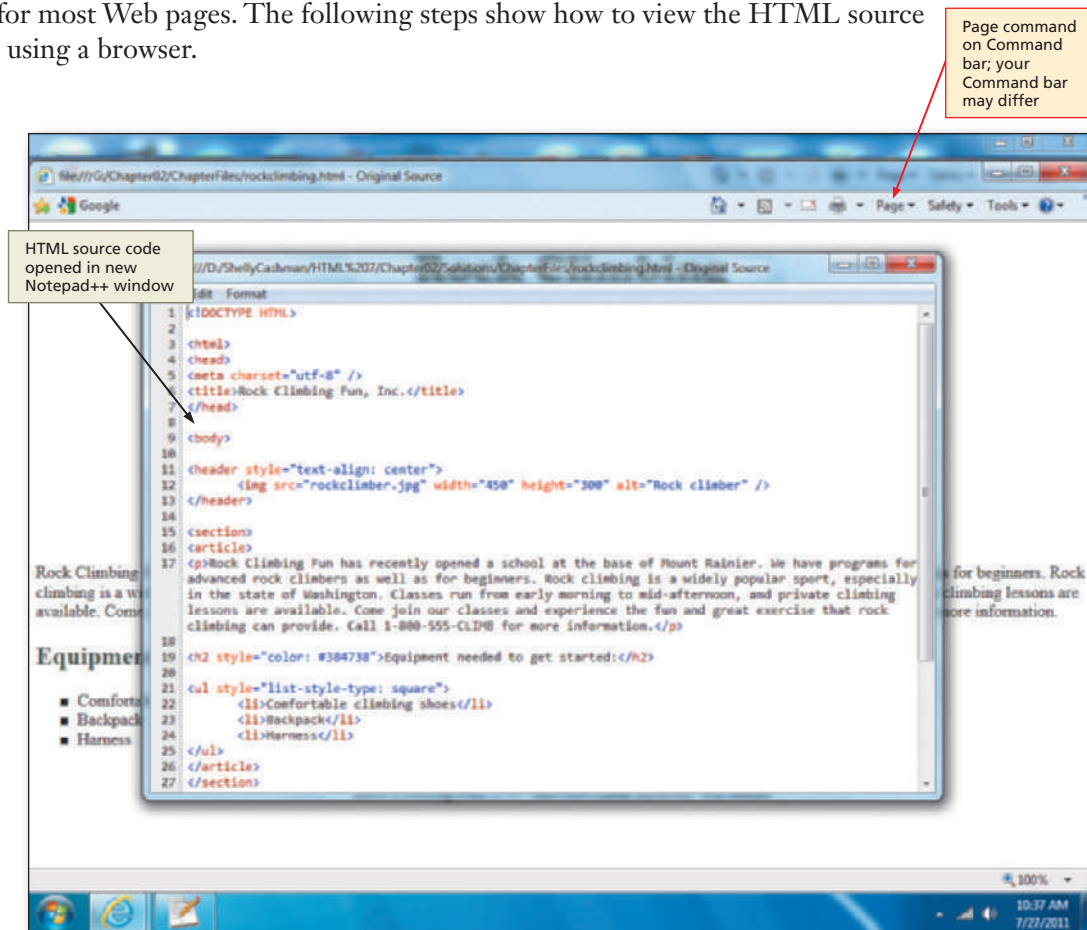


Figure 2–40

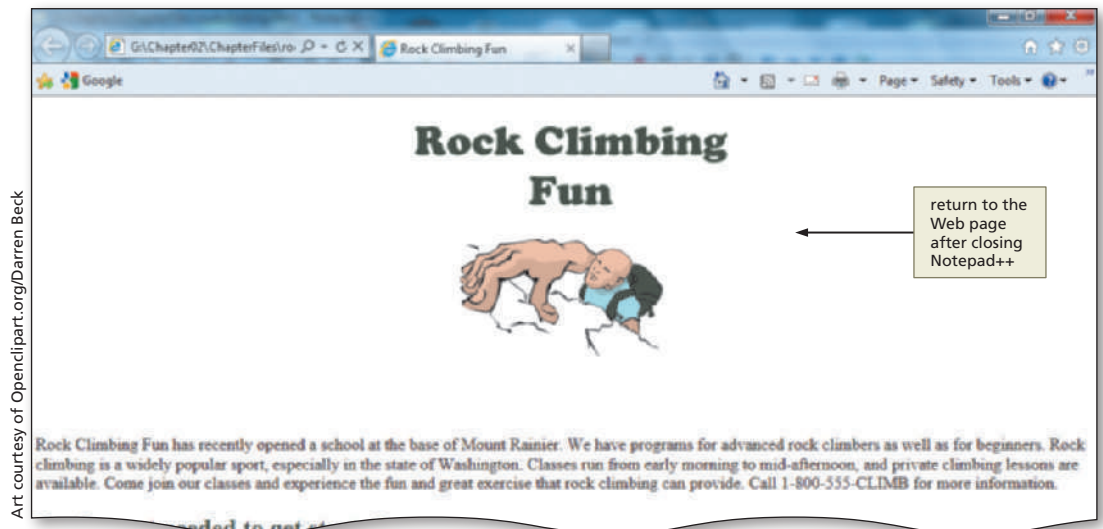
2

- Click the Close button on the text editor menu bar to close the active text editor window (Figure 2–41).

Q&A

What is the default text editor?

It is likely to be Notepad for Internet Explorer, but could be Notepad++ or another editor depending on your browser setup.



Art courtesy of Opencilipart.org/Darren Beck

Figure 2–41

To Print a Web Page and an HTML File

After you have created the HTML file and saved it, you might want to print a copy of the HTML code and the resulting Web page. A printed version of a file, Web page, or other document is called a **hard copy** or **printout**. Printed copies of HTML files and Web pages can be kept for reference or to distribute. The following steps show how to print a Web page and its corresponding HTML file.

1

- Ready the printer according to the printer instructions.
- With the Rock Climbing Fun Web page open in the browser window, click the Print icon on the Command bar.
- When the Print dialog box appears, click the Print button.
- When the printer stops printing the Web page, retrieve the printout (Figure 2–42).

Q&A

Are there other ways to print a Web page?

Pressing CTRL+P opens the Print dialog box, where you can select print options. You can also use the Print option in the File menu on the menu bar.



Art courtesy of Opencilipart.org/Darren Beck

Figure 2–42

2

- Click the Notepad++ button on the task-bar to activate the Notepad++ window.
- Click File on the menu bar, click the Print command, and then click the Print button to print a hard copy of the HTML code (Figure 2–43).

Q&A Why do I need a printout of the HTML code?

Having a hard-copy printout is an invaluable tool for beginning developers. A printed copy can help you immediately see the relationship between the HTML tags and the Web page that you view in the browser.

```
<!DOCTYPE HTML>

<html>
<head>
<meta charset="utf-8" />
<title>Rock Climbing Fun, Inc.</title>
</head>

<body>

<header style="text-align: center">
  
</header>

<section>
<article>
<p>Rock Climbing Fun has recently opened a school at the base of Mount Rainier. We have
programs for advanced rock climbers as well as for beginners. Rock climbing is a widely
popular sport, especially in the state of Washington. Classes run from early morning to
mid-afternoon, and private climbing lessons are available. Come join our classes and
experience the fun and great exercise that rock climbing can provide. Call
1-800-555-CLIMB for more information.</p>

<h2 style="color: #384738">Equipment needed to get started:</h2>

<ul style="list-style-type: square">
  <li>Comfortable climbing shoes</li>
  <li>Backpack</li>
  <li>Harness</li>
</ul>
</article>
</section>

<hr style="height: 8px; background-color: #384738; width: 50%" />

<footer style="text-align: center; font-style: italic">
  Rock Climbing Fun, 3737 Harrison Lane, Issawak, WA 98000
</footer>

</body>
</html>
```

Figure 2–43

BTW**Quick Reference**

For a list of HTML tags and their associated attributes, see the HTML Quick Reference (Appendix A) at the back of this book, or visit the HTML Quick Reference on the Book Companion Site Web page for this book at www.cengagebrain.com. For a list of CSS properties and values, see Appendix D.

To Quit Notepad++ and a Browser

The following steps show how to quit Notepad++ and a browser.

- 1** In Notepad++, click the File menu, then Close All.
- 2** Click the Close button on the Notepad++ title bar.
- 3** Click the Close button on the Internet Explorer title bar.

Chapter Summary

In this chapter, you have learned how to identify the elements of a Web page, define the Web page structure, and enter Web page content using a text editor. You enhanced the appearance of your Web page using inline styles, saved and validated your code, and viewed your Web page and source code in a browser. The items listed below include all the new HTML skills you have learned in this chapter.

1. Start Notepad++ (HTML 40)
2. Enable word wrap in Notepad++ (HTML 42)
3. Define the Web Page Structure Using HTML Tags (HTML 42)
4. Enter a Paragraph of Text (HTML 48)
5. Enter a Heading (HTML 49)
6. Create an Unordered List (HTML 51)
7. Add a Footer (HTML 53)
8. Save an HTML File (HTML 55)
9. Start a Browser (HTML 58)
10. View a Web Page in a Browser (HTML 59)
11. Activate Notepad++ (HTML 60)
12. Add an Image (HTML 65)
13. Add Color to a Web Page Heading (HTML 69)
14. Change the Bulleted List Style (HTML 70)
15. Add a Horizontal Rule (HTML 70)
16. Change the Footer Style (HTML 71)
17. Refresh the View in a Browser (HTML 72)
18. Validate HTML Code (HTML 73)
19. View HTML Source Code for a Web Page (HTML 76)
20. Print a Web Page and an HTML File (HTML 77)

Learn It Online

Test your knowledge of chapter content and key terms.

Instructions: To complete the following exercises, please visit www.cengagebrain.com. At the CengageBrain.com home page, search for *HTML5 and CSS 7th Edition* using the search box at the top of the page. This will take you to the product page for this book. On the product page, click the Access Now button below the Study Tools heading. On the Book Companion Site Web page, select Chapter 2, and then click the link for the desired exercise.

Chapter Reinforcement TF, MC, and SA

A series of true/false, multiple choice, and short answer questions that test your knowledge of the chapter content.

Flash Cards

An interactive learning environment where you identify chapter key terms associated with displayed definitions.

Practice Test

A series of multiple choice questions that test your knowledge of chapter content and key terms.

Who Wants To Be a Computer Genius?

An interactive game that challenges your knowledge of chapter content in the style of a television quiz show.

Wheel of Terms

An interactive game that challenges your knowledge of chapter key terms in the style of the television show, *Wheel of Fortune*.

Crossword Puzzle Challenge

A crossword puzzle that challenges your knowledge of key terms presented in the chapter.

Apply Your Knowledge

Reinforce the skills and apply the concepts you learned in this chapter.

Editing the Apply Your Knowledge Web Page

Instructions: Start Notepad++. Open the file apply2-1.html from the Chapter02\Apply folder of the Data Files for Students. See the inside back cover of this book for instructions for downloading the Data Files for Students, or contact your instructor for information about accessing the required files for this book.

The apply2-1.html file is a partially completed HTML file that you will use for this exercise. Figure 2–44 shows the Apply Your Knowledge Web page as it should be displayed in a browser after the additional HTML tags and attributes are added.



Figure 2–44

Perform the following tasks:

1. Enter `g:\Chapter02\Apply\apply2-1.html` as the URL to view the Web page in your browser.
2. Examine the HTML file and its appearance in the browser.
3. Using Notepad++, change the HTML code to make the Web page look similar to the one shown in Figure 2–44. Both headings are the color #910603. (*Hint:* Use the `style="color: #910603"` property and value.)
4. Add the image `kimono_doll.jpg` (in the Chapter02\Apply folder) to the Web page. It has a width of 260 pixels and a height of 346 pixels. (*Hint:* Include the image in a `<header>` `</header>` container and remember to use the `alt` attribute.)
5. Make the bulleted list using bullet type "circle" as shown in Figure 2–44.

6. Save the revised HTML file in the Chapter02\Apply folder using the file name apply2-1solution.html.
7. Validate your HTML code at validator.w3.org.
8. Enter g:\Chapter02\Apply\apply2-1solution.html (or the path where your data file is stored) as the URL to view the revised Web page in your browser.
9. Print the Web page.
10. Submit the revised HTML file and Web page in the format specified by your instructor.

Extend Your Knowledge

Extend the skills you learned in this chapter and experiment with new skills.

Creating a Definition List

Instructions: Start Notepad++. Open the file, extend2-1.html from the Chapter02\Extend folder of the Data Files for Students. See the inside back cover of this book for instructions on downloading the Data Files for Students, or contact your instructor for information about accessing the required files. This sample Web page contains all of the text for the Web page. You will add the necessary tags to make this a definition list with terms that are bold, as shown in Figure 2-45.

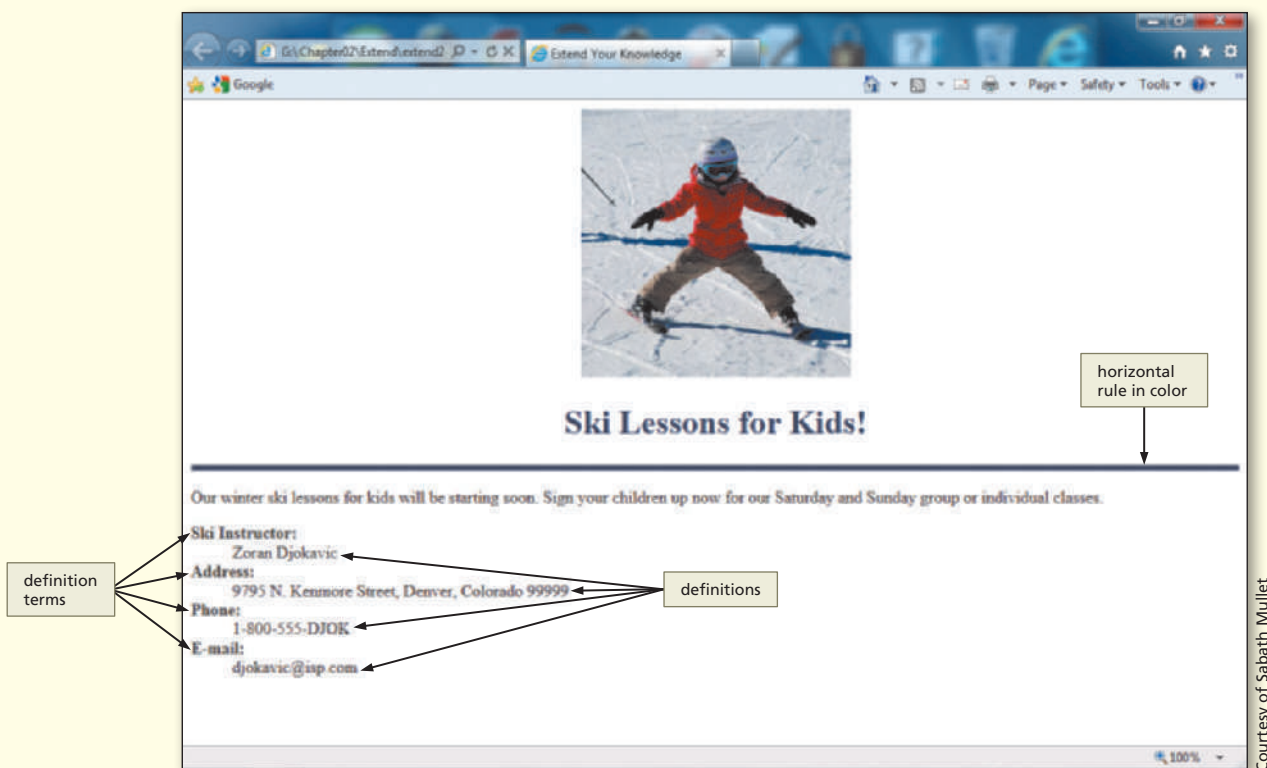


Figure 2-45

Perform the following tasks:

1. Using the text given in the file extend2-1.html, make changes to the HTML code to change the Web page from a single line of text to a definition list by following the definition list code shown in Table 2-6 on page HTML 52.

Continued >

Extend Your Knowledge *continued*

2. Add the additional HTML code necessary to make the terms bold. (*Hint:* Review the font-weight property with a value of bold.)
3. Add the image skier.jpg. Find the dimensions of the image by reviewing the image properties.
4. Add a horizontal rule that is 5 pixels high and color #414565. The <h1> heading is also color #414565.
5. Save the revised document in the Chapter02\Extend folder with the file name extend2-1solution.html, validate the Web page, and then submit it in the format specified by your instructor.

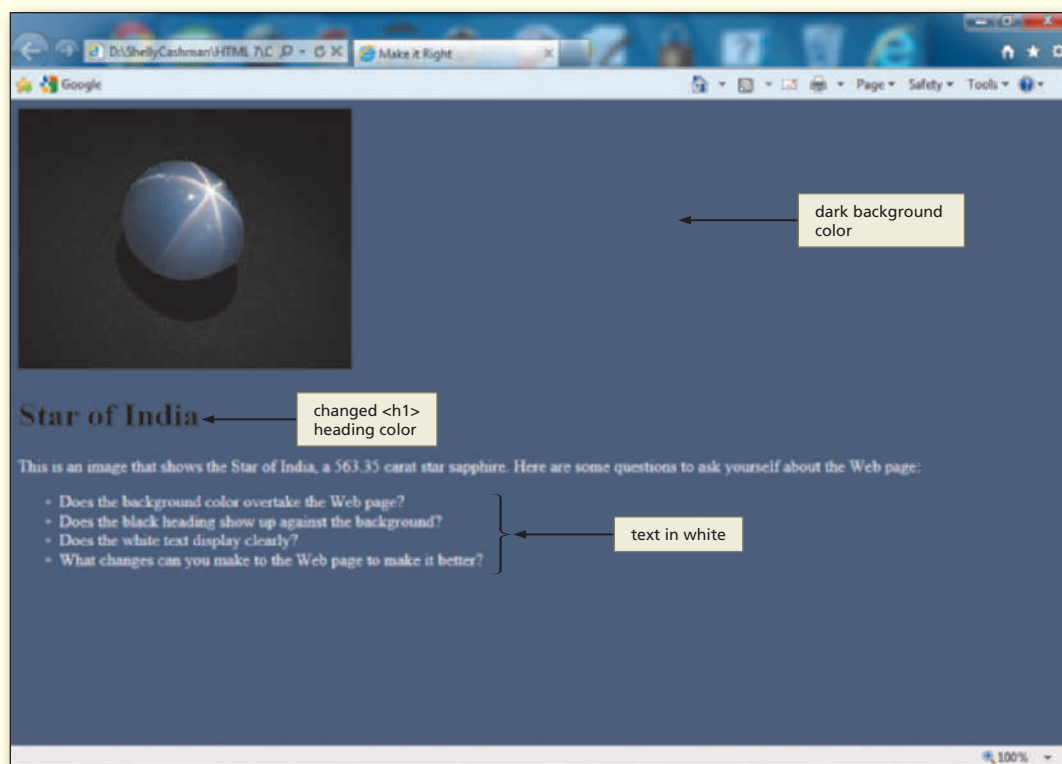
Make It Right

Analyze a document and correct all errors and/or improve the design.

Correcting the Star of India Web Page

Instructions: Start Notepad++. Open the file makeitright2-1.html from the Chapter02\MakeItRight folder of the Data Files for Students. See the inside back cover of this book for instructions on downloading the Data Files for Students, or contact your instructor for information about accessing the required files.

The data file is a modified version of what you see in Figure 2–46. Make the necessary corrections to the Web page to make it look like Figure 2–46. Add a background color to the Web page using color #515c7a. (*Hint:* Use an inline style in the <body> tag.) Format the heading to use the Heading 1 style with the color black. Add a paragraph of text in white and four circle bullets also in white. (*Hint:* Use the color property in the heading, paragraph, and bullet tags.) Save the file in the Chapter02\MakeItRight folder as makeitright2-1solution.html, validate the Web page, and then submit it in the format specified by your instructor. Be prepared to discuss the four questions posed in the bullet list.



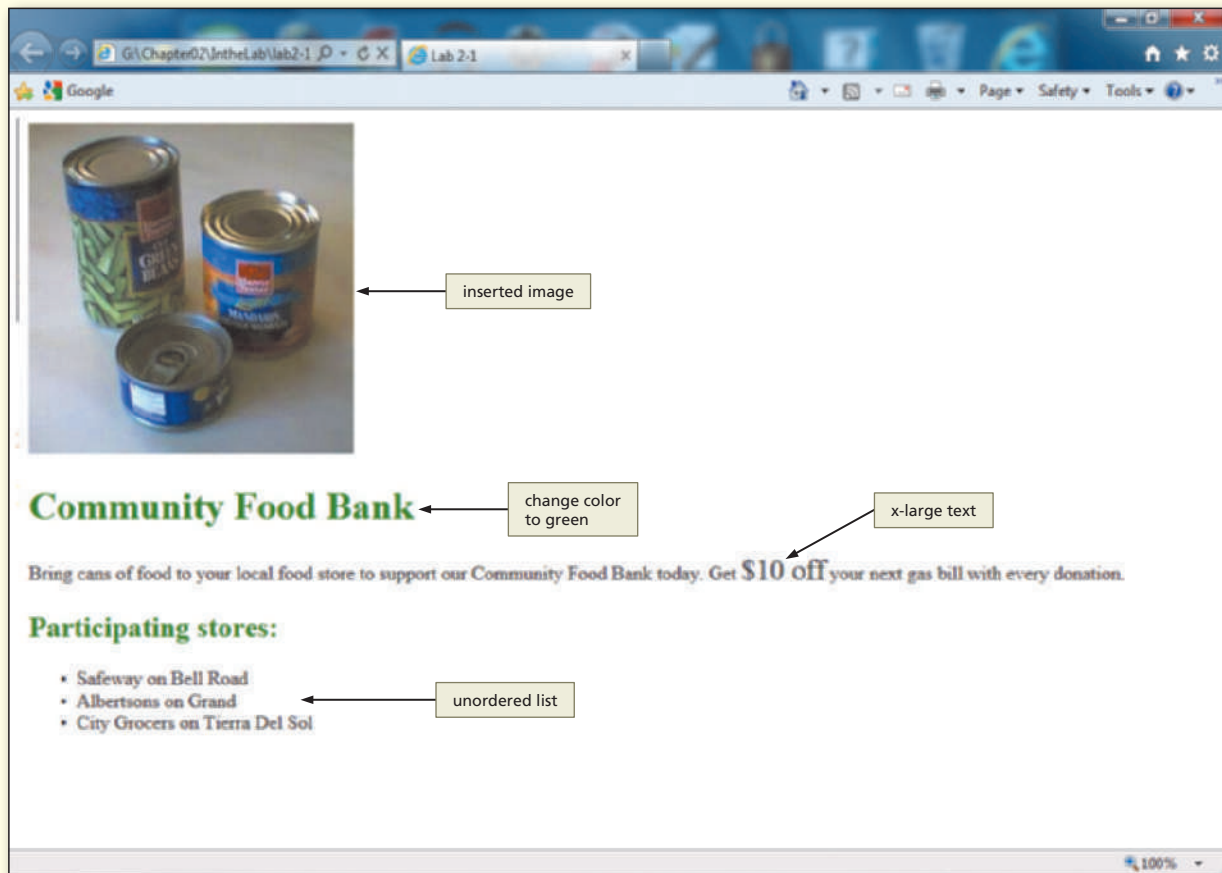
Courtesy of Daniel Torres Jr./Wikimedia

Figure 2–46

In the Lab

Lab 1: Creating an Informational Web Page

Problem: You enjoy volunteering and decide to prepare a Web page announcement, such as the one shown in Figure 2–47, to promote the latest food drive.



Courtesy of Seth Ilyswikimedia

Figure 2–47

Instructions: Perform the following steps:

1. Create a new HTML file in Notepad++ with the title Lab 2-1 within the <title> </title> tags.
2. Add the donations.jpg image file, which has a width of 272 and a height of 277. Place the image on the left side of the Web page. Use the color green for both headings.
3. Add the paragraph of text, as shown in Figure 2–47. Make the words “\$10 off” x-large style of font. (*Hint:* Review the HTML tag in Appendix A.)
4. Create one bulleted list with the information shown.
5. Save the file in the Chapter02\IntheLab folder using the file name lab2-1solution.html.
6. Print the lab2-1solution.html file.
7. Enter g:\Chapter02\IntheLab\lab2-1solution.html (or the path where your data file is stored) as the URL to view the Web page in your browser.
8. Print the Web page.
9. Submit the revised HTML file and Web page in the format specified by your instructor.

In the Lab

Lab 2: Creating a Healthy Living Web Page

Problem: You work for the Healthy Living Commission in your city. You would like to create a Web page showing two great ideas for healthy living, as shown in Figure 2–48.



Figure 2–48

Instructions: Perform the following steps:

1. Create a new HTML file in Notepad++ with the title, Lab 2-2, within the <title> </title> tags. For the initial HTML tags, you can use the structure.html file if you created one at the start of this chapter's project, otherwise type the initial tags.
2. Begin the body section by adding an <h1> heading, Healthy Living Plan. Format the heading to use the heading 1 style center-aligned on the Web page. (*Hint:* See the text-align property in Appendix D to center the heading.)
3. Add the centered paragraph of text shown in Figure 2–47. Make sure the fourth sentence displays on the next line with no blank line in between. (*Hint:* Use the
 tag.)
4. Add a horizontal rule with a height of 10 pixels, a width of 80%, and a background color of #2fb66a.
5. Add a centered heading, as shown, using the heading 2 style.
6. Add the healthy.png image. Find the height and width properties for that image and include them together with alternate text.

7. Add another <h2> heading and horizontal rule.
8. Save the file in the Chapter02\IntheLab folder as lab2-2 solution.html.
9. Print the lab2-2.html file.
10. Enter g:\Chapter02\IntheLab\lab2-2solution.html (or the path where your data file is stored) as the URL to view the Web page in your browser.
11. Print the Web page.
12. Submit the revised HTML file and Web page in the format specified by your instructor.

In the Lab

Lab 3: Composing a Personal Web Page

Problem: Your friends are concerned that they aren't able to save money. They have asked you for help, since you seem to always have money saved for a rainy day. You decide to compose a Web page with some advice for them. You plan to use a paragraph of text, an image and a bulleted list, as shown in Figure 2-49. The text and bullets in the figure should be replaced with your own money-saving experience and tips.

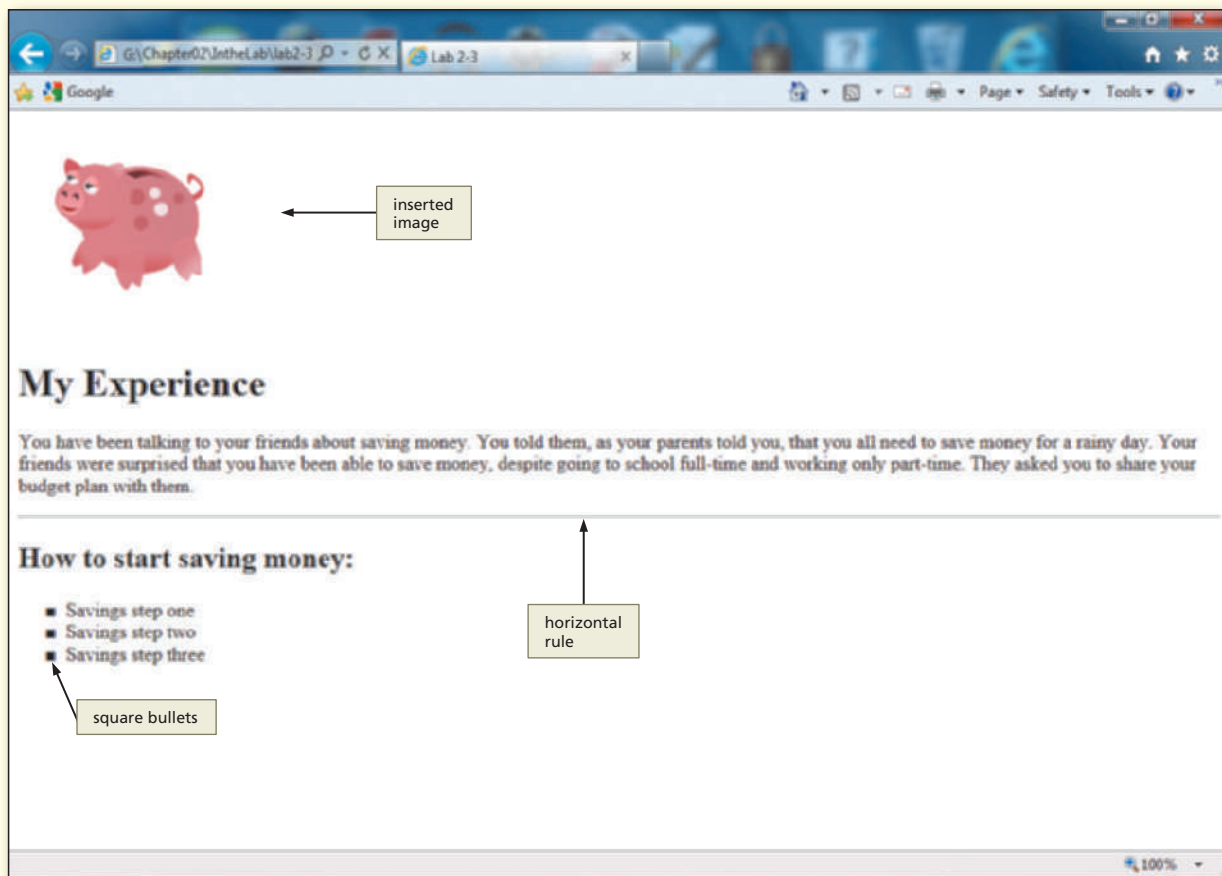


Figure 2-49

Instructions: Perform the following steps:

1. Create a new HTML file with the title Lab 2-3 within the <title> </title> tags.
2. Include a short paragraph of information and a bulleted list, using a format similar to the one shown in Figure 2-49, to provide information about your money-saving experience.

Continued >

In the Lab *continued*

3. Insert the image file piggybank.png, stored in the Chapter02\IntheLab folder. You can find the dimensions of an image by clicking on the image using Windows Explorer. You can also right-click the image, click Properties, and then click the Details tab to find out the image's dimensions, or open it in a graphics program. Note that the bullets used for the list are square in shape.
4. Save the HTML file in the Chapter02\IntheLab folder using the file name lab2-3solution.html.
5. Enter g:\Chapter02\IntheLab\lab2-3solution.html (or the path where your data file is stored) as the URL to view the Web page in your browser.
6. Print the Web page from your browser.
7. Submit the revised HTML file and Web page in the format specified by your instructor.

Cases and Places

Apply your creative thinking and problem-solving skills to design and implement a solution.

1: Research HTML5 Structural Tags

Academic

There are many Web sites dedicated to HTML5. Search the Web to find sites that have training modules for HTML5. Discover training specifically targeting the new structural elements discussed in the chapter. How do these new tags differ from the <div> tag? Are there situations in which the <div> tag is a better option? Write a brief report. Identify the URLs for the training Web sites and share them with your fellow students in class.

2: Create a Personal Web Page

Personal

Your class instructor wants to post all of the students' Web pages on the school server to show what his or her students are interested in. Create a Web page of personal information, listing items such as your school major, jobs that you have had in the past, and your hobbies and interests. To make your personal Web page more visually interesting, search the Web for images that reflect your interests. (Remember that if the image is copyrighted, you cannot use it on a personal Web page unless you follow the guidelines provided with the image.) Insert an image or two onto the Web page to help explain who you are.

3: Investigate Methods for Working with Images

Professional

You are creating a new Web site for a local photographer. The photographer has asked that you determine methods to help his Web site load quickly despite having so many large images. To this end, find information on using thumbnail images. Review other photography Web sites and create a list of suggestions for loading large images. Additionally, search the Web for information on adding useful, descriptive alt attributes for images. Write a brief synopsis explaining the information that you found in your research.