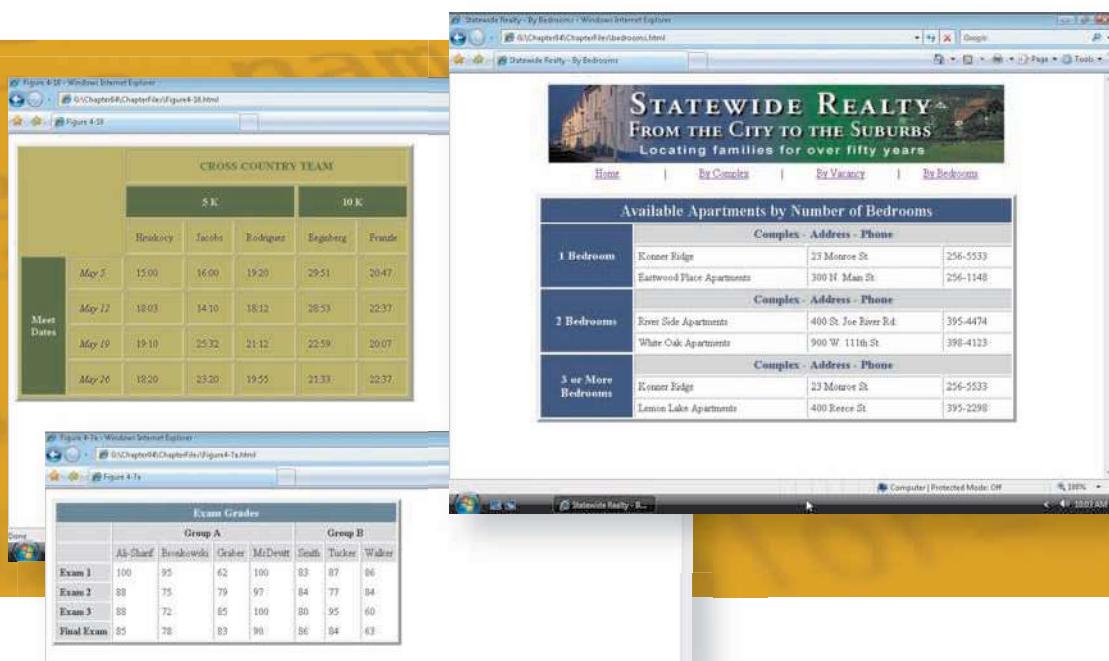


# 4 Creating Tables in a Web Site



## Objectives

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

- Define table elements
- Describe the steps used to plan, design, and code a table
- Create a borderless table to position images
- Create a horizontal menu bar with text links
- Copy and paste HTML code to a new file
- Create a borderless table to organize text
- Create a table with borders and insert text
- Change the horizontal alignment of text
- Add background color to rows and cells
- Alter the spacing between and within cells using the cellspacing and cellpadding attributes
- Insert a caption below a table
- Create headings that span rows and columns using the rowspan and colspan attributes

# 4 Creating Tables in a Web Site

## Introduction

The project in Chapter 4 adds to your HTML knowledge by teaching you how to organize and present information on a Web page using tables with rows and columns. In this chapter, you learn about the elements used in a table and how to plan, design, and code a table. You also learn how to create tables to organize text and images and to use a table to create a horizontal menu bar with text links. You also learn how to enhance tables by using a variety of attributes and formats, such as borders, colors, spacing, spanning cells, and by adding a caption.

## Project — Statewide Realty Web site

Many articles and case studies indicate that having a solid Web site makes it easier for companies' customers to find them, provides a way to communicate the company's brand, and allows the company to provide additional services. As advertising director for Statewide Realty, you want to enhance Statewide's Web site to increase the company's exposure to current and new customers, and to incorporate ideas gathered from customer feedback surveys. The new site will allow customers to browse through an apartment database by complex name, vacancy, or the number of bedrooms needed.

As shown in Figure 4–1a, the Statewide Realty home page includes two borderless tables to position an image and a menu bar at the top of the Web page. The By Complex, By Vacancy, and By Bedrooms Web pages (Figures 4–1b, 4–1c, and 4–1d) each include two borderless tables at the top as well as one table with borders that displays the contents of the Web pages. You will edit the vacancy.html Web page (Figure 4–1c) to add cellspacing and cellpadding attributes, thereby adjusting the spacing between cells, and to add a caption with information about the table. The bedrooms.html Web page file (Figure 4–1d) is edited to use the colspan and rowspan attributes to create headings that span several columns and rows.

As you read through this chapter and work on the project, you will learn how to plan, design, and code tables to create a user-friendly Web site. You also will learn to format tables and to combine table features to make the pages more readable. In addition, you will learn to create a menu bar with text links.

**(a) Statewide Realty home page.**

borderless table with image

menu bar with text links

e-mail link

Search for apartments by complex, vacancy, or number of bedrooms using the links above. Send any comments to statewide@isp.com or call us at 1-555-BUY-SELL.

**(b) Apartments by complex.**

menu bar with text links

table with background color in header row

Apartment Complex	Address	Phone Number
Konner Ridge	23 Monroe St.	256-5533
Eastwood Place Apartments	300 N. Main St.	256-1148
Blair House	900 S. Wood Dale	365-0162
River Side Apartments	400 St. Joe River Rd.	395-4474

**(c) Apartments by vacancy.**

cellpadding and cellspacing attributes used on table

caption aligned below table

Vacancy	Apartment Complex	Address	Phone Number
Yes	Konner Ridge	23 Monroe St.	256-5533
Yes	Eastwood Place Apartments	300 N. Main St.	256-1148
No	Blair House	900 S. Wood Dale	365-0162
Yes	River Side Apartments	400 St. Joe River Rd.	395-4474
No	Rock Creek Village	900 Rock Creek Rd.	395-8822
No	The French Quarter	800 La Broi	865-0805
Yes	Lemon Lake Apartments	400 Reece St.	395-2298

*Listing of apartments by vacancy*

**(d) Apartments by number of bedrooms.**

row spanning

column spanning

Available Apartments by Number of Bedrooms		
Complex - Address - Phone		
<b>1 Bedroom</b>	Konner Ridge	23 Monroe St.
	Eastwood Place Apartments	300 N. Main St.
<b>2 Bedrooms</b>	River Side Apartments	400 St. Joe River Rd.
	White Oak Apartments	900 W. 111th St.
<b>3 or More Bedrooms</b>	Konner Ridge	23 Monroe St.
	Lemon Lake Apartments	400 Reece St.

Figure 4-1

## Overview

As you read this chapter, you will learn how to create the Web pages shown in Figures 4–1a through 4–1d 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.
- Create a borderless table that contains both text and graphical images.
- Create a table with borders to display information in an organized manner.
- Add a horizontal menu bar with text links.
- Add HTML tags that enhance a table with cellpadding and cellspacing.
- Enhance a Web table with row- and column-spanning.
- View the Web pages and HTML code in your browser.
- Validate the Web pages.
- Print the HTML code and Web pages.

### 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 those shown in Figures 4–1a through 4–1d 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 environment, and decide who owns the information on the Web page.
2. **Analyze the organization of the Web page.** In the analysis phase of the Web development life cycle, you should analyze what content to include on the Web page and how to organize that information. In this phase, you need to determine what information you want specifically to convey so that you can highlight that information on the Web page using different techniques. Refer to Table 1–4 on page HTML 12 for information on the phases of the Web development life cycle.
3. **Choose the organization for the Web page.** Once you have completed the analysis, you need to determine what content to include on the Web page. With tables, you are able to display the Web page content in a very organized manner. Tables can be used to display text only as well as for graphical images or combinations of text and images. Some text is better highlighted by using different colors for column or row headings. Other information is displayed more effectively with row- and column-spanning techniques. This should all be determined before coding the Web pages.
4. **Identify how to format various elements of the Web page.** The overall appearance of a Web page significantly affects its ability to communicate clearly. Additionally, you want to provide easy navigation for your Web site visitors. Adding images and color helps to communicate your message and adding a menu bar with links to the other Web pages within the Web site makes it easy to navigate 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. You also can indicate a specific location on the storage media for saving the Web page.
6. **Create the Web page and links.** After analyzing and designing the Web site, you need to develop the individual Web pages. It is important to maintain a consistent look throughout the Web site. Use graphics and links consistently so that your Web site visitor does not become confused.

(continued)

(continued)

**7. Test all Web pages within the Web site.** An important part of Web development is testing to assure that you are following XHTML standards. In this book, we use the World Wide Web Consortium (W3C) validator that allows you to test your Web page and clearly explains any errors you have. Additionally when testing, you should check all content for accuracy. Finally, all links should be tested.

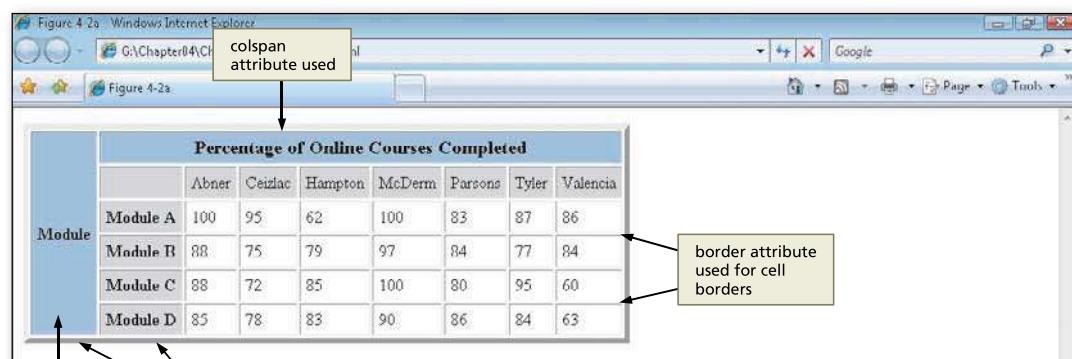
When necessary, more specific details concerning the above guidelines are presented at appropriate points in the chapter. The chapter also will identify the actions performed and decisions made regarding these guidelines during the creation of the Web pages shown in Figures 4–1a through 4–1d on page HTML 145.

## Plan Ahead

## Creating Web Pages with Tables

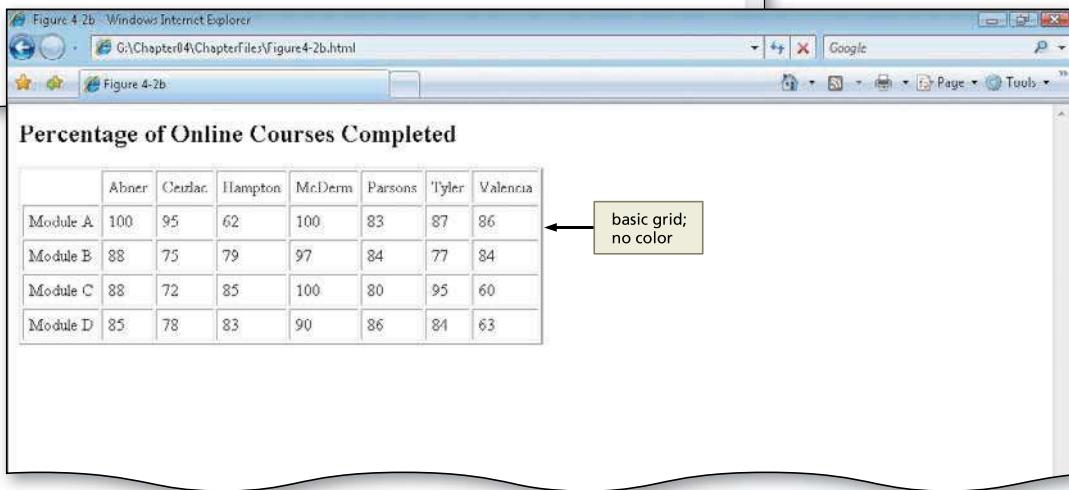
Tables allow you to organize information on a Web page using HTML tags. Tables are useful when you want to arrange text and images into rows and columns in order to make the information straightforward and clear to the Web page visitor. You can use tables to create Web pages with newspaper-type columns of text or structured lists of information. Tables can be complex, using the rowspan and colspan attributes to span rows and columns, background colors in cells, and borders to provide formatting (Figure 4–2a). Tables also can be simple, with a basic grid format and no color (Figure 4–2b). The purpose of the table helps to define what formatting is appropriate.

**(a) Complex table.**



The screenshot shows a table titled "Percentage of Online Courses Completed" with 8 columns and 5 rows. The first column is labeled "Module". The first row is a header. The data rows are: Module A (100, 95, 62, 100, 83, 87, 86), Module B (88, 75, 79, 97, 84, 77, 84), Module C (88, 72, 85, 100, 80, 95, 60), and Module D (85, 78, 83, 90, 86, 84, 63). A callout box points to the first cell of the first row with the text "colspan attribute used". Another callout box points to the first cell of the first column with the text "rowspan attribute used". A third callout box points to the cell borders with the text "border attribute used for cell borders".

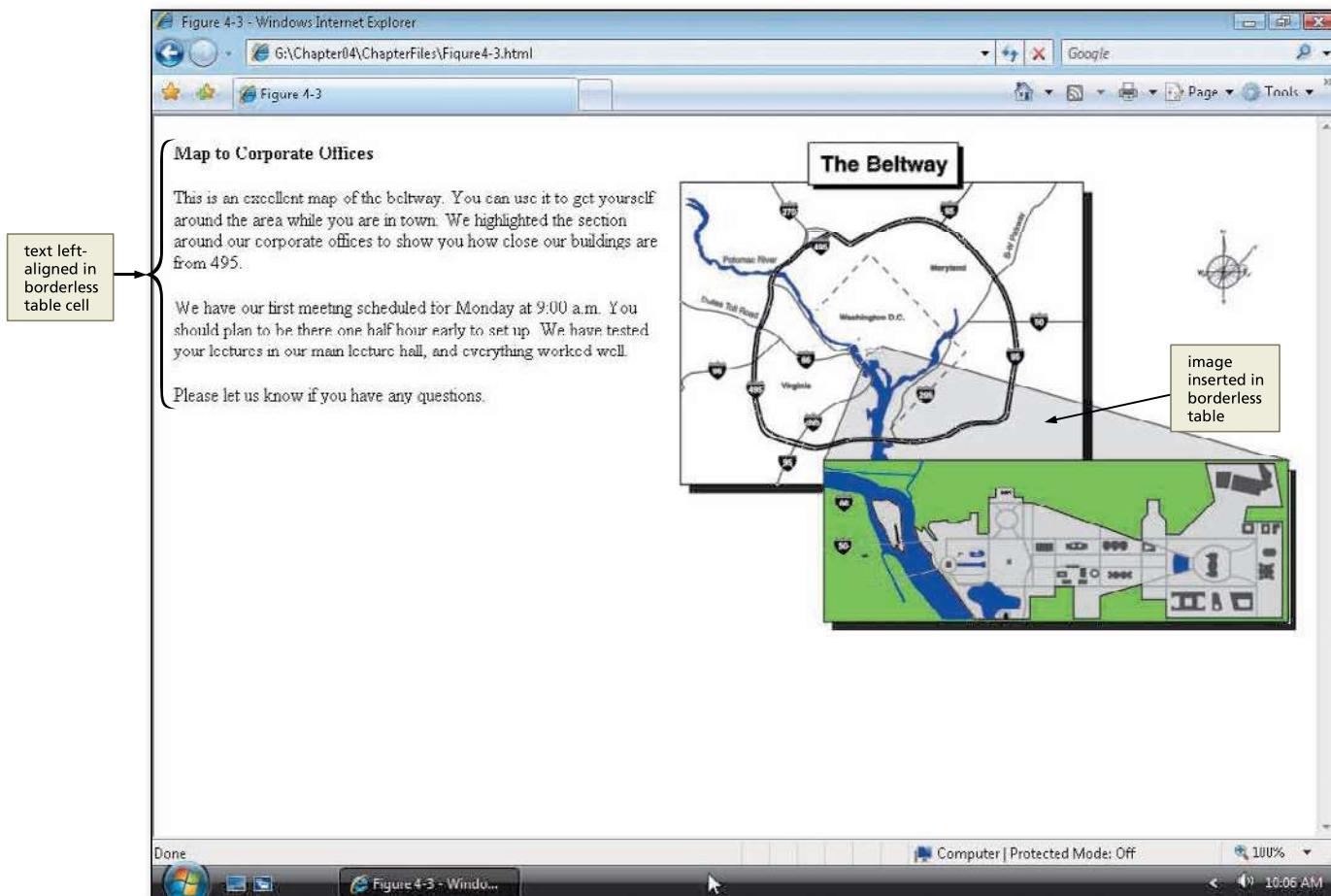
**(b) Simple table.**



The screenshot shows a table titled "Percentage of Online Courses Completed" with 8 columns and 5 rows. The first column is labeled "Module". The first row is a header. The data rows are: Module A (100, 95, 62, 100, 83, 87, 86), Module B (88, 75, 79, 97, 84, 77, 84), Module C (88, 72, 85, 100, 80, 95, 60), and Module D (85, 78, 83, 90, 86, 84, 63). A callout box points to the table with the text "basic grid; no color".

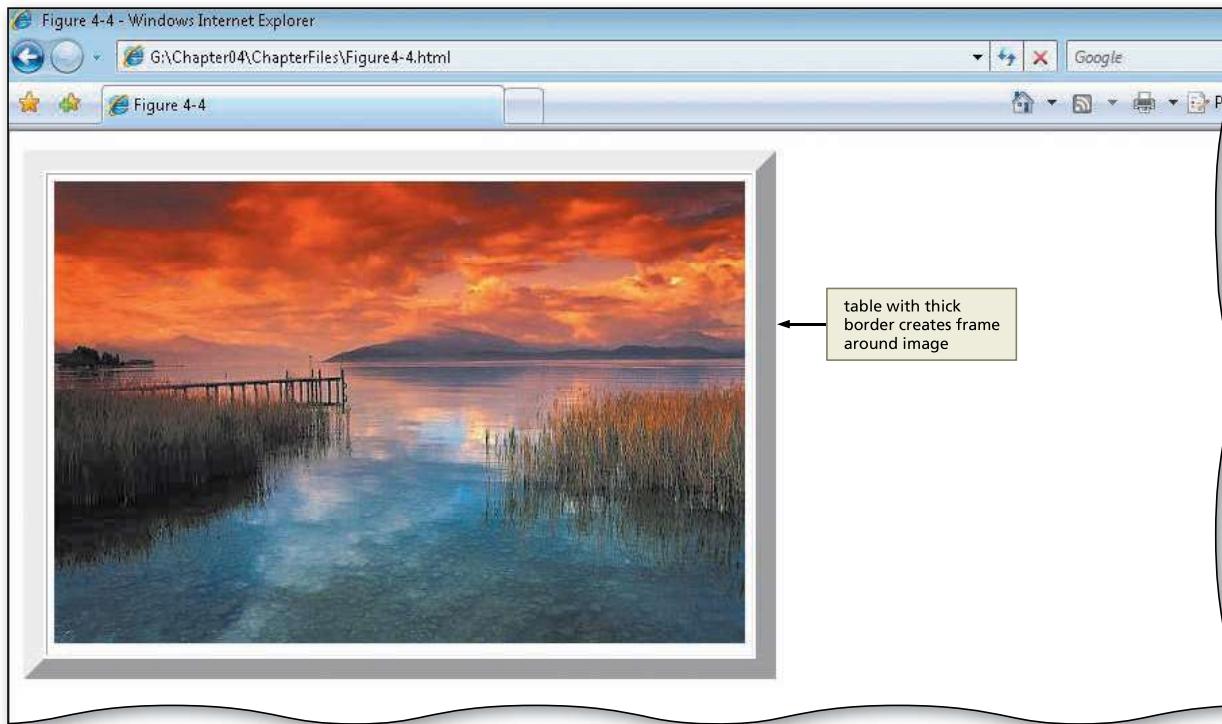
**Figure 4–2**

In Chapter 3, you learned how to wrap text around an image. You also can use tables to position text and images, such as the one shown in Figure 4–3, which uses a borderless table to position text to the left of the map images. An advantage of using a table to position text and images instead of just wrapping the text around the image is that you have more control over the placement of the text and image.



**Figure 4–3 Image and text positioned in table.**

Tables also can be used to create a border or frame around an image. Figure 4–4 shows a Web page with an image inserted into a table with one row and one cell. The border is set to a pixel width of 15 to create the appearance of a frame. Using a table to create a frame is a simple technique that gives an image a polished look and highlights the image.



**Figure 4–4 Table used as image frame.**

## Table Elements

Tables consist of rows, columns, and cells, much like spreadsheets. A **row** is a horizontal line of information. A **column** is a vertical line of information. A **cell** is the intersection of a row and a column. Figure 4–5 on the next page shows examples of these three elements. In Figure 4–5a, the fifth row in the table has a gray background. In Figure 4–5b, the fourth column has a peach background. In Figure 4–5c, the cell at the intersection of column 2 and row 6 has a gold background.

As shown in Figure 4–5c, a cell can be one of two types: a heading cell or a data cell. A **heading cell** displays text as bold and center-aligned. A **data cell** displays normal text that is left-aligned.

Understanding the row, column, and cell elements is important as you create a table using HTML. Attributes are set relative to these table elements. For example, you can set attributes for an entire row of information, for a single cell, or for one or more cells within a row.

BTW

**Tables**  
Tables are useful for a variety of purposes. They can store information in tabular form or create a layout on a Web page. Layouts created with tables give the Web developer more flexibility. You have more control over the placement of information or images. Many popular Web sites use tables.

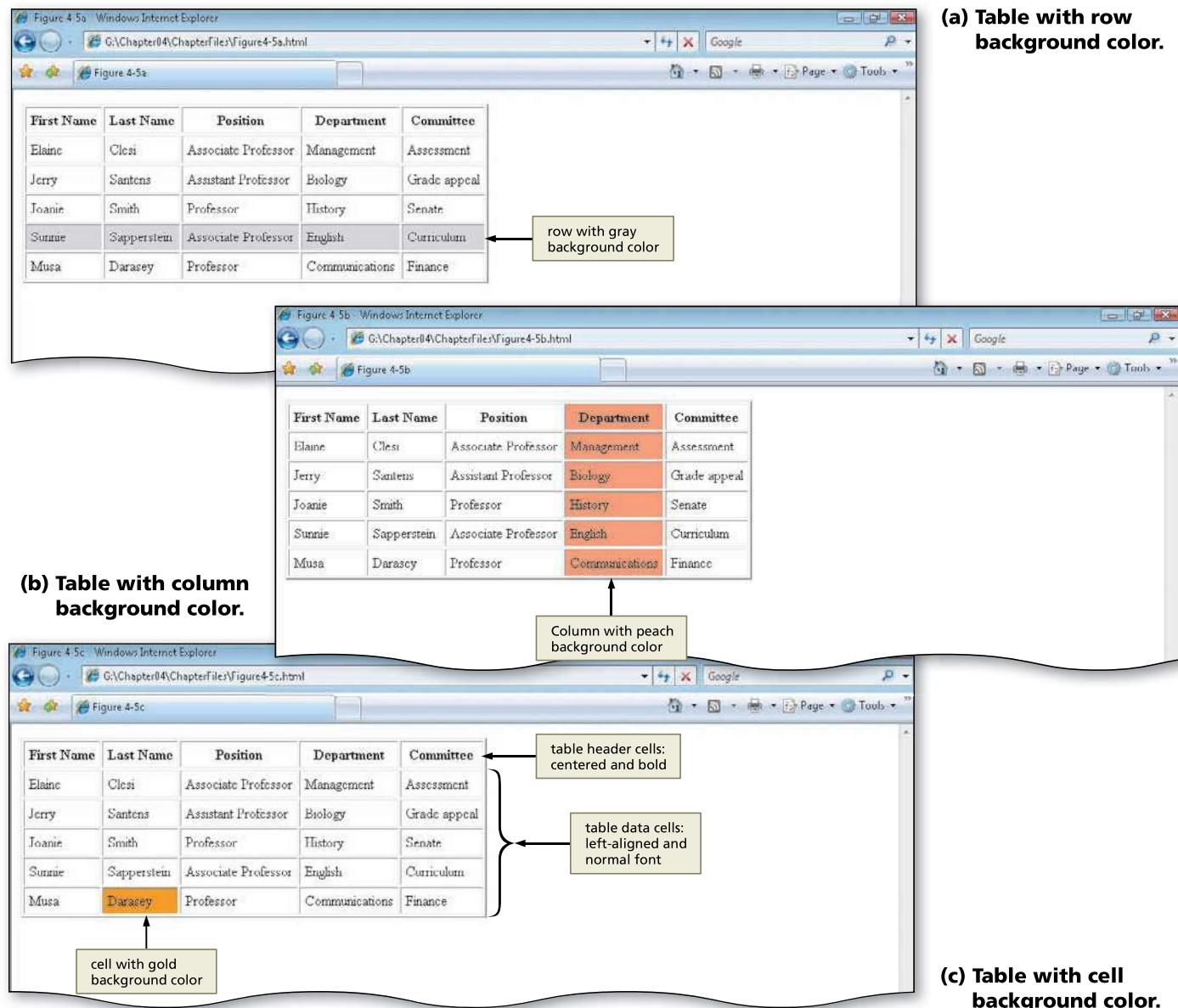


Figure 4-5

## Table Borders, Headers, Captions, and Rules

BTW

### Table Elements

Many Web sources discuss table parts, giving numerous examples and tips. For more information about HTML table parts, search the Web for key terms such as HTML Table Elements or HTML Table Properties.

Tables include features such as table borders, table headers, table captions, and rules (Figure 4-6). A **table border** is the line that encloses the perimeter of the table. A **table header** is the same as a heading cell — it is any cell with bold text that indicates the purpose of the row or column. A header row is used to identify the meaning of the numbers in each column, and headings that span columns and rows are used to provide additional information. Headers also are used by non-visual browsers to identify table content. A **table caption** is descriptive text located above or below the table that further describes the purpose of the table.

Tables can use these features individually or in combination. The purpose for the table dictates which of these features are used. For example, the table shown in Figure 4-6 lists columns of numbers. A header row is used to identify the meaning of the numbers in each column, and headings that span columns and rows are used to provide additional information. Finally, the table caption explains that each number is based on thousands (that is, the 10 listed in the table represents 10,000).

**Safety Equipment for Roller Blading**

Units Sold in First Quarter	Helmets	Wrist Protectors	Elbow Pads	Knee Pads
	10	35	7	36
	8	25	17	9
	36	7	20	15

Numbers listed in thousands

table caption

table header with colspan attribute used

table border

table header with rowspan attribute used

**Figure 4–6** Table headers, border, and caption.

Another useful table attribute is the **rules** attribute, which creates horizontal or vertical lines in a table. The **rules** attribute allows a Web developer to select which internal borders to show in a table. It supports several values to provide different formatting options. For example, using **rules="none"** creates a table with no internal borders. Using **rules="cols"** creates a table with vertical rules between each column in the table (Figure 4–7a), while **rules="rows"** creates a table with horizontal rules between each row in the table (Figure 4–7b). Appendix A provides additional information on values supported by the **rules** attribute.

**(a) Table with column rules.**

**Exam Grades**

		Group A				Group B		
		Ali-Sharif	Bronkowski	Graber	McDevitt	Smith	Tucker	Walker
Exam 1	100	95	62	100	83	87	86	
	88	75	79	97	84	77	84	
Exam 2	88	72	85	100	80	95	60	
Final Exam	85	78	83	90	86	84	63	

rules="cols" attribute used; no row borders

**(b) Table with row rules.**

**Exam Grades**

		Group A				Group B		
		Ali-Sharif	Bronkowski	Graber	McDevitt	Smith	Tucker	Walker
Exam 1	100	95	62	100	83	87	86	
	88	75	79	97	84	77	84	
Exam 2	88	72	85	100	80	95	60	
Final Exam	85	78	83	90	86	84	63	

rules="rows" attribute used; no column borders

**Figure 4–7** Table with row rules.

## Planning, Designing, and Coding a Table

Creating tables for a Web page is a three-step process: (1) determining if a table is needed; (2) planning the table; and (3) coding the table. Each of these steps is discussed in detail in the following sections.

### Determining If a Table Is Needed

First, you must determine whether a table is necessary. Not all Web pages require the use of tables. A general rule is that a table should be used when it will help organize information or Web page elements in such a way that it is easier for the Web page visitor to read. Tables generally are useful on a Web page if the Web page needs to display a structured, organized list of information or includes text and images that must be positioned in a very specific manner. Figures 4–8a and 4–8b show examples of information displayed as text in both a table and a bulleted list. To present this information, a table (Figure 4–8a) would be the better choice. The bulleted list (Figure 4–8b) might give the Web page an acceptable look, but the table presents the information more clearly.

**Metric Conversions**

Weight	1 ounce	28.4 grams
	1 pound	454 grams
	2.2 pounds	1 kilogram
Volume Liquid	1 teaspoon	4.7 milliliters
	1 tablespoon	14.2 milliliters
	1 cup	227 milliliters
	1.06 quarts	1000 milliliters or 1 liter

**(a) Web page with table.**

**Metric Conversions**

**Weight**

- 1 ounce = 28.4 grams
- 1 pound = 454 grams
- 2.2 pounds = 1 kilogram

**Volume**

- 1 teaspoon = 4.7 milliliters
- 1 tablespoon = 14.2 milliliters
- 1 cup = 227 milliliters
- 1.06 quarts = 1000 milliliters or 1 liter

**(b) Web page with bulleted lists.**

**Figure 4–8**

## Planning the Table

To create effective tables, you must plan how the information will appear in the table and then create a good design. Before writing any HTML code, sketch the table on paper. After the table is sketched on paper, it is easier to see how many rows and columns to create, if the table will include headings, and if any of the headings span rows or columns. Conceptualizing the table on paper first saves time when you try to determine which HTML table tags to use to create the table.

For example, to create a simple table that lists the times run by various cross-country team members, you might sketch the table shown in Figure 4–9a. If runners participate in two different race lengths, such as 5K and 10K, that information can be included in a table designed as shown in Figure 4–9b. If the table needs to include different race dates for each race length, that information can be included in a table such as the one shown in Figure 4–9c. Finally, to make the table easier for the Web page visitor to understand, the table should include headings that span rows and columns and a caption. For instance, in Figure 4–9b, the headings 5K and 10K each span two columns of data. Because column spanning is used, you can easily see which runners ran in the 5K or 10K races. In Figure 4–9c, because of row spanning, you can easily tell what date each race was run. Design issues such as these should be considered while planning the table, before any HTML code is entered. Figure 4–10 on the next page shows how the table might look after it is coded.

NAME1	NAME2	NAME3	NAME4
TIME	TIME	TIME	TIME

**(a) Simple table.**

5K		10K	
NAME1	NAME2	NAME3	NAME4
TIME	TIME	TIME	TIME

**(b) Column spanning added.**

		5K		10K	
		NAME1	NAME2	NAME3	NAME4
Meet Dates	MAY 5	TIME	TIME	TIME	TIME
	MAY 12	TIME	TIME	TIME	TIME
	MAY 19	TIME	TIME	TIME	TIME
	MAY 26	TIME	TIME	TIME	TIME

**(c) Row spanning added.**

**Figure 4–9**

**BTW**

### Table Tutorials

Table tutorials are available through online sources. Tutorials take you step-by-step through a creation process. Search the Web for the phrase HTML Table Tutorial to find excellent sources of information.

CROSS COUNTRY TEAM					
	5 K		10 K		
	Hruskocy	Jacobs	Rodriguez	Eeginberg	Franzle
Meet Dates	May 5	15:00	16:00	19:20	29:51
	May 12	18:03	14:10	18:12	28:53
	May 19	19:10	25:32	21:12	22:59
	May 26	18:20	23:20	19:55	21:33
					22:37

Figure 4–10 Table with row and column spanning.

## Coding the Table

After you have completed the table design, you can begin coding the table using HTML tags. Table 4–1 shows the four main HTML tags used to create a table. Each of these tags has a number of attributes, which are discussed later in this chapter.

Table 4–1 HTML Table Tags

Tag	Function
<table></table>	<ul style="list-style-type: none"> <li>Indicates the start and end of a table</li> <li>All other table tags are inserted within these tags</li> </ul>
<tr> </tr>	<ul style="list-style-type: none"> <li>Indicates the start and end of a table row</li> <li>Rows consist of heading or data cells</li> </ul>
<th> </th>	<ul style="list-style-type: none"> <li>Indicates the start and end of a table heading (also called a heading cell)</li> <li>Table headings default to bold text and center alignment</li> </ul>
<td> </td>	<ul style="list-style-type: none"> <li>Indicates the start and end of a data cell in a table</li> <li>Data cells default to normal text and left-alignment</li> </ul>

Figure 4–11a shows an example of these tags used in an HTML file, and Figure 4–11b shows the resulting Web page. As shown in Figure 4–11b, the table has four rows (a table header and three rows of data cells) and two columns. The rows are indicated in the HTML file in Figure 4–11a by the start `<tr>` tags and the end `</tr>` tags. For this simple table, the number of columns in the table is determined based on the number of cells within each row. As shown in Figure 4–11b, each row has two cells, which results in a table with two columns. (Later in this chapter, you will learn how to indicate the number of columns within the `<table>` tag.)

As shown in the HTML in Figure 4–11a, the first row includes table heading cells, as indicated by the start **<th>** tag and end **</th>** tag. In the second, third, and fourth rows, the cells contain data, indicated by the start **<td>** tag and end **</td>** tag. In the resulting table, as shown in Figure 4–11b, the table header in row 1 appears as bold and centered text. The text in the data cells in rows 2 through 4 is left-aligned and normal text. The table in Figure 4–11b has a border, and cellspacing of 5 pixels was added to highlight further the differences between the cells. You learn about cellspacing later in the chapter.

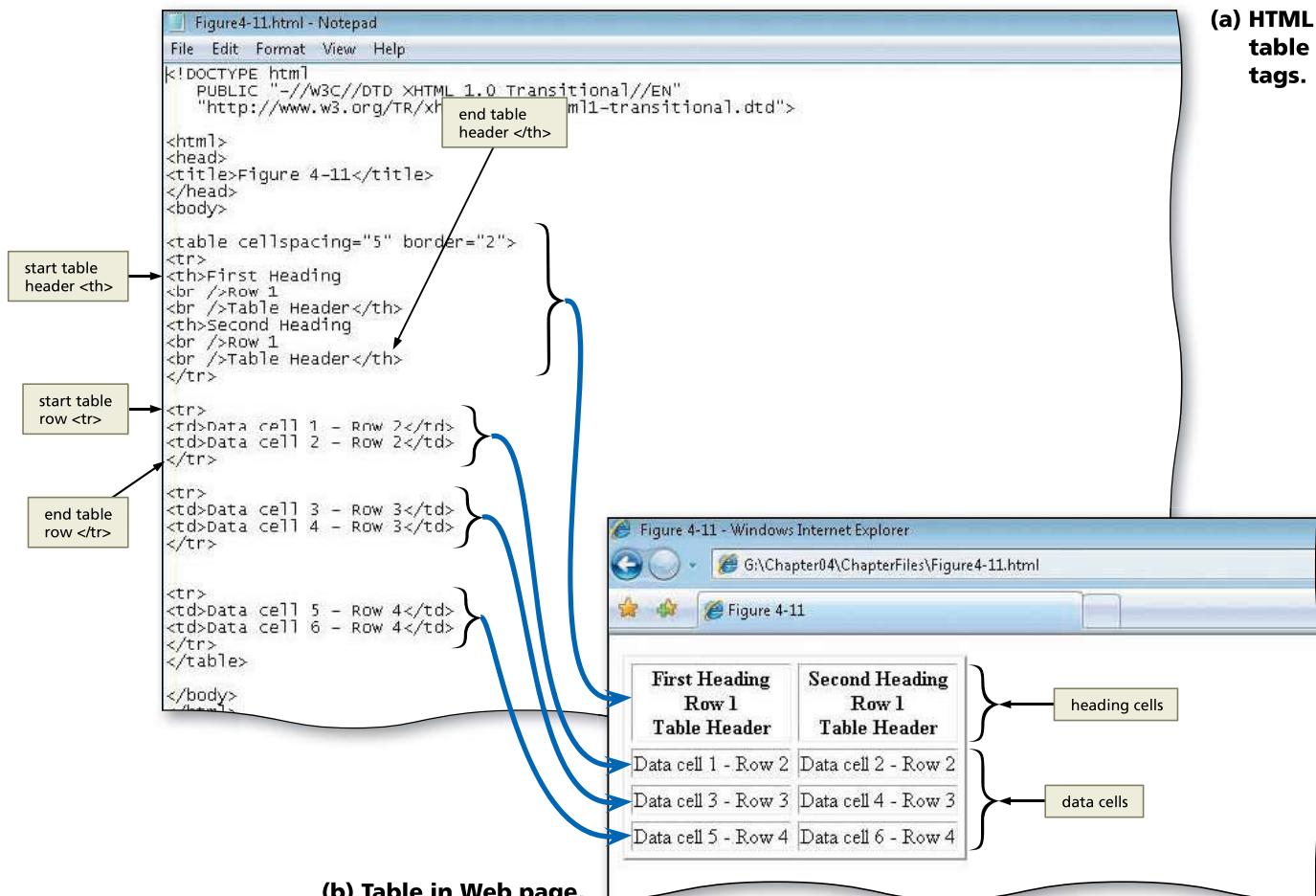


Figure 4–11

## Table Tag Attributes

Each of the four main table tags listed in Table 4–1 on page HTML 154 has different attributes. Table 4–2 on the next page lists these tags and the main attributes associated with each tag. The **<th>** and **<td>** tags, which are both used to specify the contents of a cell, have the same attributes. Many of the table tags and attributes listed in Table 4–2 are used in creating the Statewide Realty Web site.

**Table 4–2 Table Tag Attributes and Functions**

Tag	Attribute	Function
<table> </table>	align bgcolor border cellspacing cellpadding cols width	<ul style="list-style-type: none"> <li>Controls table alignment (left, center, right)</li> <li>Sets background color for table</li> <li>Defines width of table border in pixels</li> <li>Defines space between cells in pixels</li> <li>Defines space between a cell's contents and its border in pixels</li> <li>Defines number of columns</li> <li>Sets table width relative to window width</li> </ul>
<tr> </tr>	align bgcolor valign	<ul style="list-style-type: none"> <li>Horizontally aligns row (left, center, right, justify)</li> <li>Sets background color for row</li> <li>Vertically aligns row (top, middle, bottom)</li> </ul>
<th> </th> and <td> </td>	align bgcolor colspan rowspan valign	<ul style="list-style-type: none"> <li>Horizontally aligns cell (left, center, right, justify)</li> <li>Sets background color for cell</li> <li>Sets number of columns spanned by a cell</li> <li>Sets number of rows spanned by a cell</li> <li>Vertically aligns cell (top, middle, bottom)</li> </ul>

## Creating a Home Page with a Borderless Table

The first Web page developed in this chapter's project is the home page of the Statewide Realty Web site. As you have learned, the home page is the main page of a Web site, and is what Web site visitors generally view first. Visitors then click links to move from the home page to the other Web pages in the site. The Statewide Realty home page includes three links to other pages: the By Complex Web page, the By Vacancy Web page, and the By Bedrooms Web page. The home page also provides an e-mail link, so visitors can contact Statewide Realty easily.

### To Start Notepad

The first step in creating the Statewide Realty Web site is to start Notepad and ensure that word wrap is enabled. The following step, which assumes Windows Vista is running, starts Notepad based on a typical installation. You may need to ask your instructor how to start Notepad for your computer.

**1**

- Click the Start button on the Windows Vista 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 Accessories in the All Programs list.
- Click Notepad in the Accessories list to display the Notepad window.
- If the Notepad window is not maximized, click the Maximize button on the Notepad title bar to maximize it.
- Click Format on the menu bar.
- If the Word Wrap command does not have a check mark next to it, click Word Wrap.

## To Enter Initial HTML Tags to Define the Web Page Structure

Just as you did in Chapters 2 and 3, you start your file with the initial HTML tags that define the structure of the Web page. Table 4–3 contains the tags and text for this task.

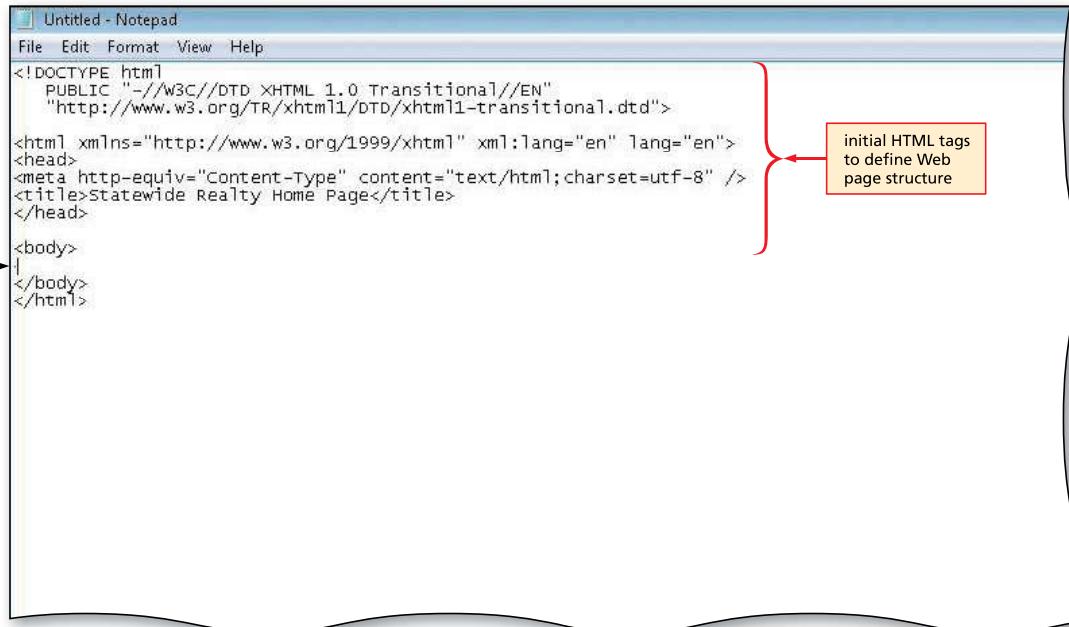
**Table 4–3 Initial HTML Tags**

Line	Html Tag And Text
1	<!DOCTYPE html
2	PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
3	"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
4	
5	<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
6	<head>
7	<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
8	<title>Statewide Realty Home Page</title>
9	</head>
10	
11	<body>
12	
13	</body>
14	</html>

The following step illustrates how to enter the initial tags that define the structure of the Web page.

**1**

- Enter the HTML code shown in Table 4–3. 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, then continue typing.



**Figure 4–12**

- Compare what you typed to Figure 4–12. 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.
- Position the insertion point on the blank line between the <body> and </body> tags (line 12).

## Plan Ahead

### Identify how to format various elements of the text.

Before inserting tables or graphical elements on a Web page, you should plan how you want to format them. By effectively utilizing tables and graphics, you can better organize the most important topics on the Web page. Consider the following formatting suggestions.

- **Format tables to organize Web page content.** Sometimes it is better to have no border around the table, while other times borders enhance the look of the table, depending on the content and purpose of the table. In this chapter, you will use both bordered and borderless tables. Another consideration is where to place the table (left-, right-, or center-aligned).
- **Effectively utilize graphics.** An important part of Web development is the use of graphics to call attention to a Web page. Generally, companies utilize the same logo on their Web site as they use on print material associated with the company, such as business cards and letterheads. Using the same graphical image on all marketing materials, including the Web site, is a good way to provide a consistent visual and brand message to customers. Colorful company logos add an attention-grabbing element to a Web page.

## Creating a Borderless Table and Inserting an Image

The HTML code to create a borderless table to hold the Statewide Realty logo image as shown in Figure 4-13 is as follows:

```
<table align="center">
```

where the align="center" attribute creates a table centered on the Web page. This is to be a borderless table, so you do not need to add the border attribute.

BTW

### Table Borders

Table borders frame an image. You can insert a single image into a one-row, one-column table. Using a border gives the image a 3-D appearance, making the image appear to have a frame around it. A border of 1 pixel (border="1") is too small to use as a frame, but border="25" is too large.

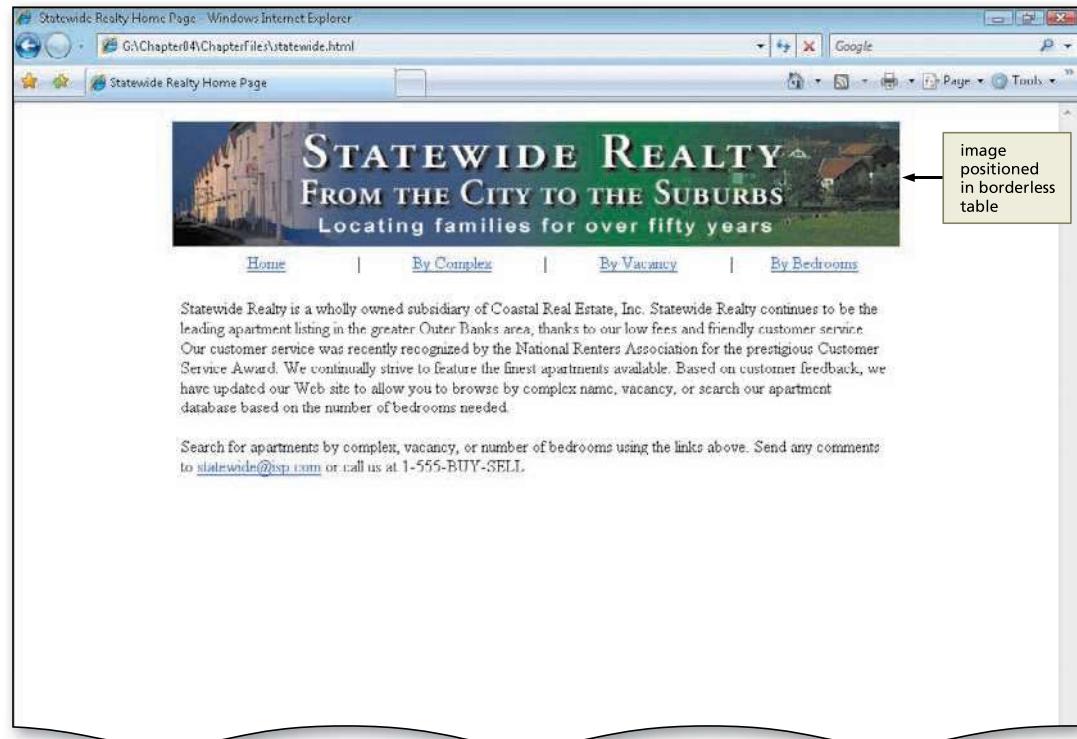


Figure 4-13

The table shown in Figure 4–13 contains one row with one data cell in the row. The data cell contains the logo image statewidebanner.jpg. To create data cells in a row, the HTML tags must include one or more sets of `<td> </td>` (table data) tags between the `<tr> </tr>` (table row) tags. Data cell (`<td> </td>`) tags are used rather than header cell (`<th> </th>`) tags, so that the image files can be left-aligned in the cell, instead of using the default center-alignment for heading cells.

## To Create a Borderless Table to Position Images

1

- If necessary, click line 12 to position the insertion point.
- Type `<table align="center">` and then press the ENTER key to center the table (Figure 4–14).

**Q&A** I see many other table tag attributes in Table 4–2 on page HTML 156. Why am I not using more of those?

The first table is a very simple table that only contains the graphic for the top of the Web page. In later steps, you will utilize other attributes, as necessary, in the table tag.

**Q&A** What kind of border will this table have because I have not identified a border size?

When you do not specifically identify the border size, the table will be borderless. You can identify the size of a table border (see Appendix A) in number of pixels, which you will do in subsequent steps.

**Q&A** Is there another way to define table attributes?

You can define table attributes (for example, colors and alignment) by using style sheets. This is the preferred technique when defining specific characteristics of a table. This project concentrates on table basics, which must be understood to utilize style sheets effectively for those characteristics.



**Figure 4–14**

## To Insert Images in a Table

The following step shows how to enter HTML code to add a left-aligned image at the top of the Web page.

1

- If necessary, click line 13, type `<tr>` as the table row tag, and then press the ENTER key.

- Type `<td>` `` `</td>` to enter the image as table data, and then press the ENTER key.
- Type `</tr>` to end the table row and then press the ENTER key.
- Type `</table>` to end the table and then press the ENTER key twice (Figure 4-15).

**Q&A**

How can I determine the height and width of an image?

You can determine the height and width of an image using a paint or image editing program. Once you know the height and width, you also can adjust the width and height by using the width and height attributes in the `<img>` tag. Be aware that, in doing so, you might cause the image to look distorted on the Web page.

**Q&A**

Why do I need both the `<tr>` and the `<td>` tags for a one-cell row? It seems that I could use one or the other, rather than both tags.

Although the one-cell table would display in the browser with only the `<tr>` or `<td>` tags, you should always use both the row and cell tags when creating a table. Good Web development techniques include using the tags that are required whether or not eliminating some of them allows them to display in the browser.



```

<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>Statewide Realty Home Page</title>
</head>
<body>
<table align="center">
<tr>
<td></td>
</tr>
</table>
</body>
</html>

```

Figure 4-15

- **Determine what table formatting to use.** When using a table to organize text links, it is important to first decide how to format the table. Although you may not want to distract from the text links by creating a table with a heavy border, you need to separate the text links in such a way that they are easy to find. Creating a borderless table with separators (e.g., pipe symbols) between the text links helps organize but not distract from the links.
- **Identify what links are needed.** Each Web page in a multipage Web site should have a link back to the home page of the Web site. Web developers often use the company logo to link back to the home page. In this project, the logo is also the central image of the Web pages. Because of that, a better option might be to provide a text link called "Home" that visitors can use to return to the home page. There also should be links to the other pages on the Web site from each Web page. Putting these links in a table at the top of each Web page helps visitors navigate easily. If a Web page is very long, it also might be a good idea to put the same text link table at the bottom of the Web page. Again, the purpose of providing links is to make it easy to navigate the Web site.

## Plan Ahead

### BTW

#### Navigation

Studies have been conducted to assess the best location on a Web page for navigation bars and lists. The research indicated that navigation options on the top, side, and bottom of a Web page show slight differences in visitor usability. The most important aspect of Web page navigation is to make the options easy to locate so visitors do not have to search for them.

## Creating a Horizontal Menu Bar with Text Links

The Web site created in this project consists of four Web pages. Visitors should be able to move easily from one Web page to any of the other three Web pages. Providing a menu bar prominently across the top of the Web page (Figure 4–16) gives the visitor ready access to navigation links.

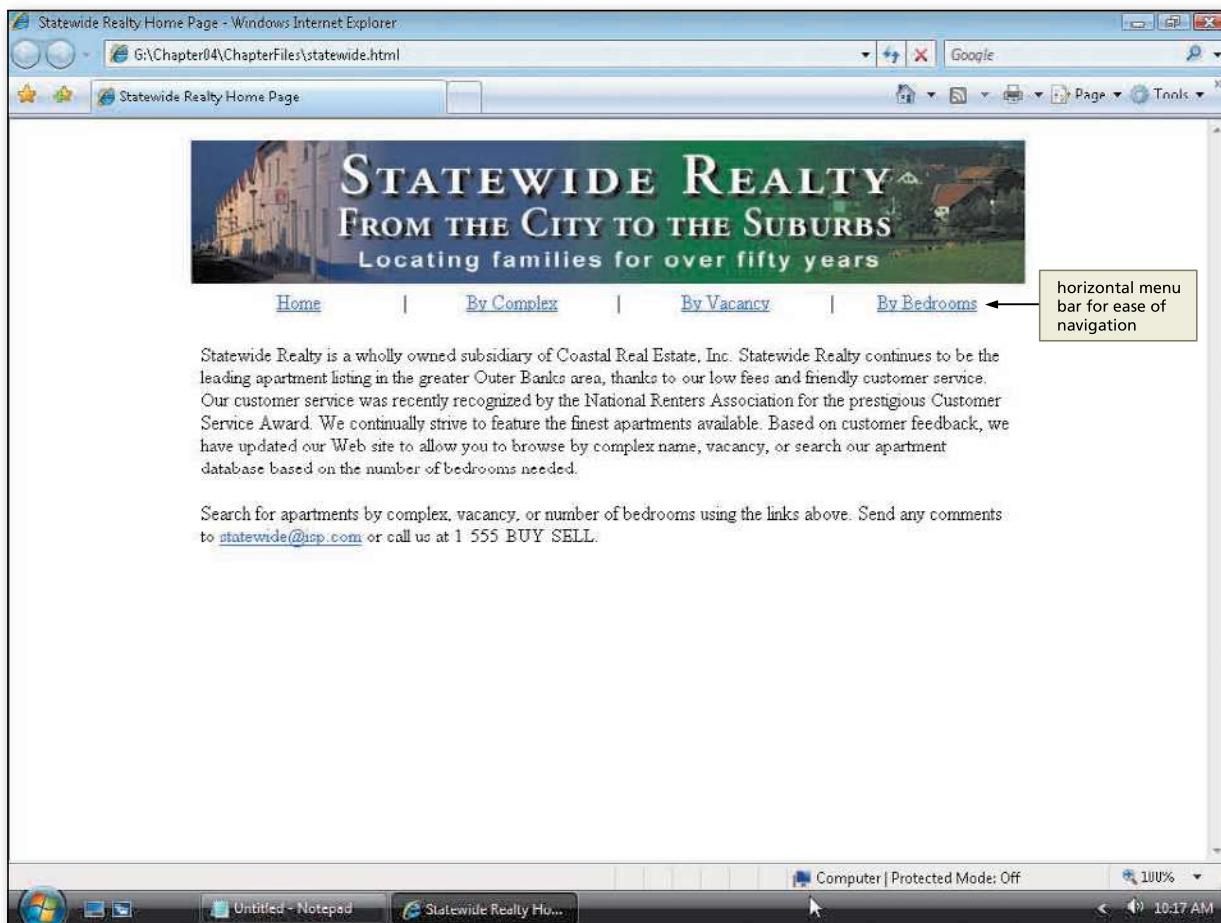


Figure 4–16

The table created for the horizontal menu bar is a borderless (no border attribute used), one-row, seven-column table. To better align the menu bar with the Statewide Realty logo, the table is set to 70% of the window's width, so that it is not as wide as the logo table. The menu bar consists of four links — Home, By Complex, By Vacancy, and By Bedrooms — that link to the Web pages statewide.html, complex.html, vacancy.html, and bedrooms.html, respectively. Each link is inserted in a single column (cell). The | (pipe) symbol is included in a column between each of the four links to separate them visually.

The width of each column in the table is specified using the width attribute of the `<td>` tag. For the four cells with text links, the column widths are set to a width of 25%. The column widths for the cells with the | (pipe) symbols are set to 1%, because the symbol does not require much space in the menu bar.

## To Create a Horizontal Menu Bar with Text Links

Table 4–4 shows the HTML code for the horizontal menu bar.

**Table 4–4** HTML Code to Insert a Menu Bar

Line	HTML Tag and Text
18	<code>&lt;table width="70%" align="center"&gt;</code>
19	<code>&lt;tr align="center"&gt;</code>
20	<code>&lt;td width="25%"&gt;&lt;a href="statewide.html"&gt;Home&lt;/a&gt;&lt;/td&gt;</code>
21	<code>&lt;td width="1%"&gt; &lt;/td&gt;</code>
22	<code>&lt;td width="25%"&gt;&lt;a href="complex.html"&gt;By Complex&lt;/a&gt;&lt;/td&gt;</code>
23	<code>&lt;td width="1%"&gt; &lt;/td&gt;</code>
24	<code>&lt;td width="25%"&gt;&lt;a href="vacancy.html"&gt;By Vacancy&lt;/a&gt;&lt;/td&gt;</code>
25	<code>&lt;td width="1%"&gt; &lt;/td&gt;</code>
26	<code>&lt;td width="25%"&gt;&lt;a href="bedrooms.html"&gt;By Bedrooms&lt;/a&gt;&lt;/td&gt;</code>
27	<code>&lt;/tr&gt;</code>
28	<code>&lt;/table&gt;</code>

The following step shows how to create a borderless table that contains a horizontal menu bar that is 70% of the width of the window, and contains text links to four pages on the Web site, separated by pipe symbols. The pipe symbol is usually found above the ENTER key; it is inserted when you press Shift and the \ (backslash) key.

**1**

- If necessary, click line 18 (Figure 4–17).
- Enter the HTML code as shown in Table 4–4, pressing ENTER after each line.
- Press the ENTER key once.

**Q&A**

Why do I use the | (pipe) symbol to separate the text links within this table?

Using the pipe symbol | is a neat way to separate text links. If you did not have a separator between those links, they would run together and be difficult to read. Having a separator between them makes it easy to see that there are four distinct text links on the menu bar. You also could have used a table with borders to separate the text links, but that might not be as attractive an option directly underneath the banner.

```

<!DOCTYPE html>
PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>Statewide Realty Home Page</title>
</head>
<body>
<table align="center">
<tr>
<td><img alt="Statewide Realty banner.jpg" width="699" height="120" alt="Statewide Realty Logo" /></td>

```

Web pages that display when link is clicked – statewide.html, complex.html, vacancy.html, bedrooms.html

table is only 70% of Web page width

line 18

```

<td width="70%" align="center">
<tr align="center">
<td width="25%"><a href="statewide.html">Home</a></td>
<td width="1%">|</td>
<td width="25%"><a href="complex.html">By Complex</a></td>
<td width="1%">|</td>
<td width="25%"><a href="vacancy.html">By Vacancy</a></td>
<td width="1%">|</td>
<td width="25%"><a href="bedrooms.html">By Bedrooms</a></td>
</tr>
</table>

```

pipe symbol used as divider between link text

link text that displays on Web page – Home, By Complex, By Vacancy, By Bedrooms

**Figure 4–17**

## To Add Text to a Table Cell

Next, paragraphs of text must be added to the Web page. A separate, borderless table is used to display that text so that the width of the table can be controlled. This allows the table with the horizontal menu bar and the table with the paragraph of text to display as the same width on the Web page to give the page a more cohesive look. Table 4–5 contains the code to add the paragraphs of text.

**Table 4–5 HTML Code to Add Paragraphs of Text**

Line	HTML Tag and Text
30	 <table width="70%" align="center">
31	<tr>
32	<td>Statewide Realty is a wholly owned subsidiary of Coastal Real Estate, Inc.
33	Statewide Realty continues to be the leading apartment listing in the greater Outer Banks area,
34	thanks to our low fees and friendly customer service. Our customer service was recently
35	recognized by the National Renters Association for the prestigious Customer Service Award.
36	We continually strive to feature the finest apartments available. Based on customer feedback,
37	we have updated our Web site to allow you to browse by complex name, vacancy, or search our
38	apartment database based on the number of bedrooms needed.
39	

Table 4-5 HTML Code to Add Paragraphs of Text (continued)

Line	HTML Tag and Text
40	<p>Search for apartments by complex, vacancy, or number of bedrooms using the links above.
41	Send any comments to <a href="mailto:statewide@isp.com">statewide@isp.com</a> or call us at
42	1-555-BUY-SELL.</p></td>
43	</tr>
44	</table>

The following step illustrates how to add text to a table cell.

**1**

- If necessary, click line 30.
- Enter the HTML code as shown in Table 4-5 to specify the table width and add text to the table, pressing the ENTER key after each line (Figure 4-18).

**Q&A**

How would the paragraphs of text display if I had not put them in another borderless table?

The text would have displayed across the whole Web page from left to right. The text would not have been centered under the Statewide Realty banner image and the horizontal menu bar. This would have given the Web page a less consistent look. By using borderless tables that are both 70% of the Web page, the page looks neat and clean.

**line 30**

make table only 70% of Web page to match menu bar table

paragraphs of text added

e-mail link

end table

Figure 4-18

**Q&A** Why did I use only one table data cell for the two paragraphs of text? Could I have used two data cells and put one paragraph in each?

Using two data cells would not have given you the same effect as using one data cell with a paragraph tag (<p>) between the two paragraphs. Two data cells would have positioned the second paragraph directly under the first paragraph with no blank line. Using a paragraph tag within one data cell separates the two paragraphs with a blank line in between.

## To Save and Print the HTML File

With the HTML code for the Statewide Realty home page complete, you should save and print the file as a reference. The following step illustrates how to save and print the HTML file.

**1**

- With a USB flash drive connected to one of the computer's USB ports, click File on the Notepad menu bar and then click Save As. Type statewide.html in the File name text box (do not press ENTER).

- Navigate to the g:\Chapter04\ChapterFiles folder, or the folder where you store your chapter files.

- Click the Save button in the Save As dialog box to save the file with the name statewide.html.

- Click File on the menu bar, click Print on the File menu then click the Print button in the Print dialog box (Figure 4-19).

```

<!DOCTYPE html
  PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
  "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>Statewide Realty Home Page</title>
</head>
<body>
<table align="center">
<tr>
<td></td>
</tr>
</table>
<table width="70%" align="center">
<tr align="center">
<td width="25%"><a href="statewide.html">Home</a></td>
<td width="18%">|</td>
<td width="25%"><a href="complex.html">By Complex</a></td>
<td width="18%">|</td>
<td width="25%"><a href="vacancy.html">By Vacancy</a></td>
<td width="18%">|</td>
<td width="25%"><a href="bedrooms.html">By Bedrooms</a></td>
</tr>
</table>
<br /><table width="70%" align="center">
<tr>
<td>Statewide Realty is a wholly owned subsidiary of Coastal Real Estate, Inc. Statewide Realty continues to be the leading apartment listing in the greater Outer Banks area, thanks to our low fees and friendly customer service. Our customer service was recently recognized by the National Renters Association for the prestigious Customer Service Award. We continually strive to feature the finest apartments available. Based on customer feedback, we have updated our web site to allow you to browse by complex name, vacancy, or search our apartment database based on the number of bedrooms needed.
<p>Search for apartments by complex, vacancy, or number of bedrooms using the links above. Send any comments to <a href="mailto:statewide@isp.com">statewide@isp.com</a> or call us at 1-555-BUY-SELL.</p>
</td>
</tr>
</table>
|
</body>
</html>

```

**Figure 4-19**

## Validating and Viewing the Web Page and Testing Links

After you save and print the HTML file for the Statewide Realty home page, it should be validated to ensure that it meets current XHTML standards, and viewed in a browser to confirm the Web page appears as desired. It also is important to test the four links on the Statewide Realty home page to verify they function as expected.

## To Validate a Web Page

The following step illustrates how to validate an HTML file.

1

- Open Internet Explorer and navigate to the Web site [validator.w3.org](http://validator.w3.org).
- Click the Validate by File Upload tab.
- Click the Browse button.
- Locate the statewide.html file on your storage device and click the file name.
- Click the Open button in the Choose file dialog box and the file name will be inserted into the File box.
- Click the Check button.

**Q&A** What if my HTML code does not pass the validation process?  
If your file does not pass validation, you need to make changes to the file to correct your errors. You should then revalidate the file.

## To View a Web Page

The following step illustrates how to view the HTML file in a browser.

1

- In Internet Explorer, click the Address bar to select the URL on the Address bar.
- Type `g:\Chapter04\ChapterFiles\statewide.html` on the Address bar of your browser and press ENTER to display the Web page (Figure 4-20).

**Q&A**

What if my page does not display correctly?

Check your statewide.html code carefully in Notepad to make sure you have not made any typing errors or left anything out. Correct the errors, resave the file, and try again.

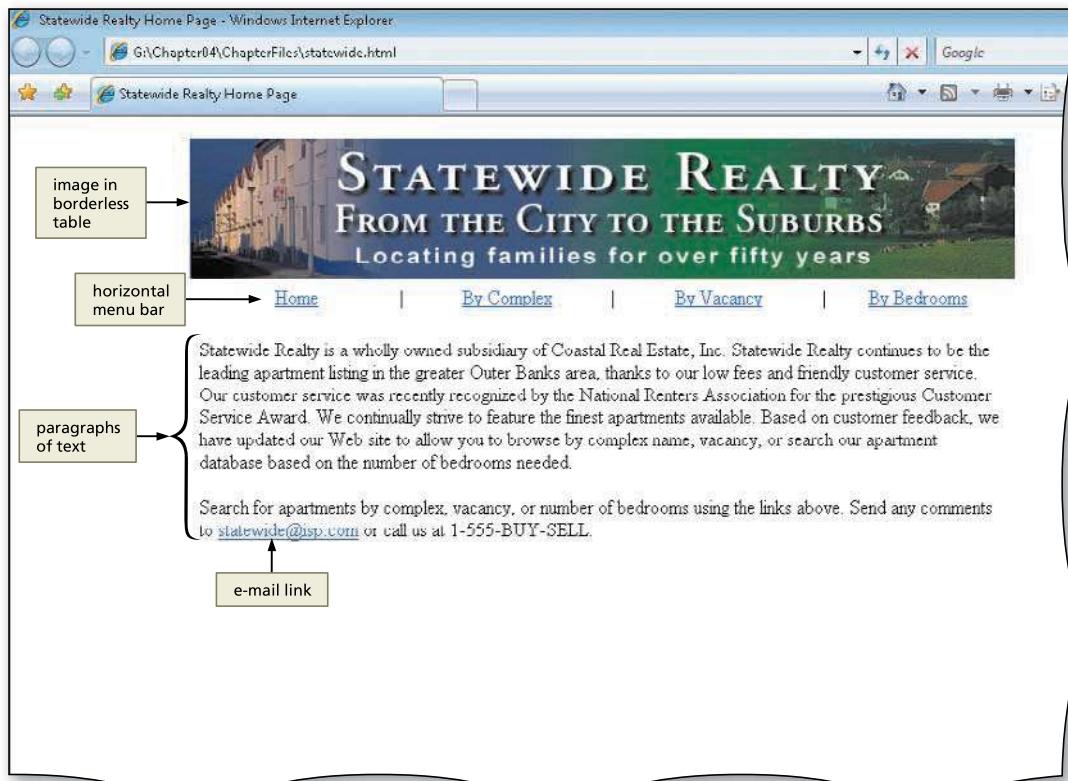


Figure 4-20

## To Test Links on a Web Page

The following step shows how to test the links on the Statewide Realty home page to verify that they work correctly.

**1**

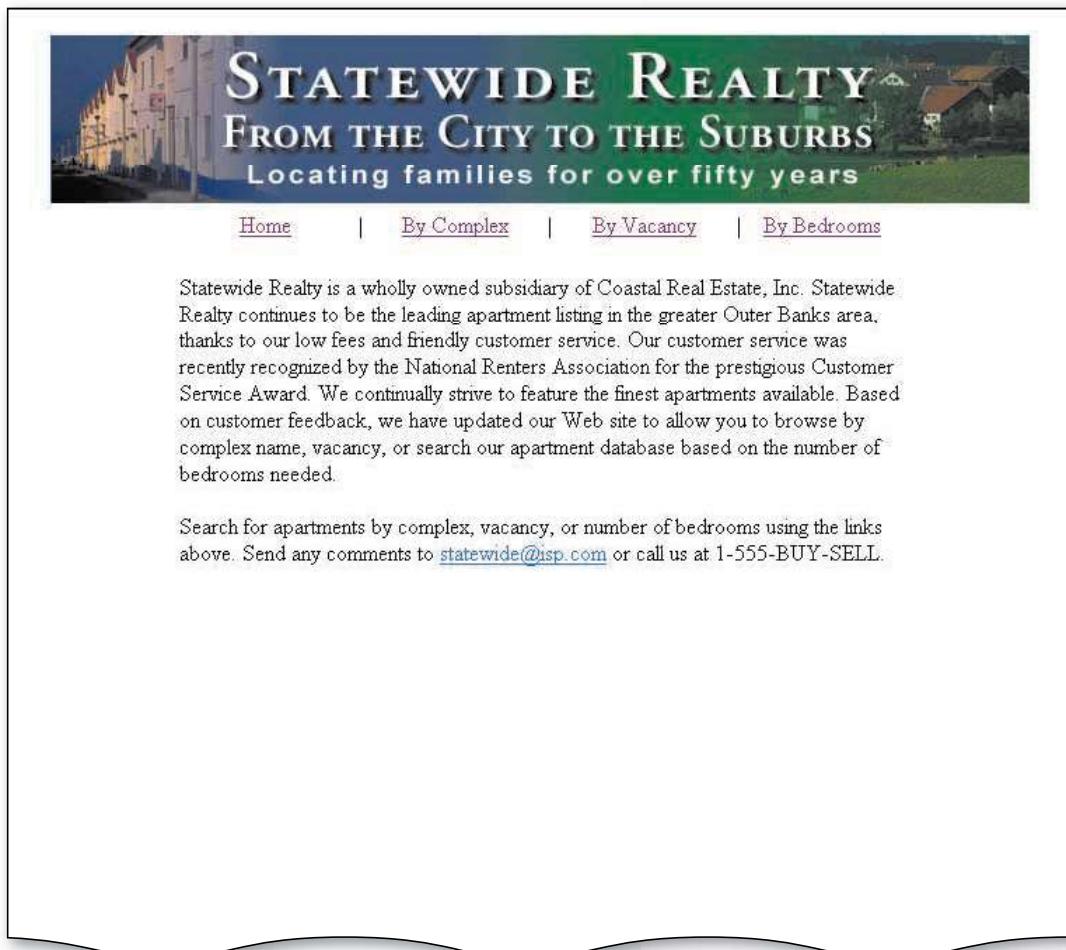
- With the home page displayed in the browser, point to the e-mail link, statewide@isp.com and click the link to open the default e-mail program with the address statewide@isp.com in the To: text box.
- Click the Close button in the New Message window. If a dialog box asks if you want to save changes, click No.
- With the USB flash drive in drive G, click the By Vacancy link and the By Bedrooms link to test these links to the additional Web pages provided on the Data Disk for Students (vacancy.html and bedrooms.html). Test the link to the home page from each of those Web pages. (The link for the By Complex Web page will not work because that Web page is not yet created; you will create it in the next section of this chapter.)

## To Print a Web Page

The following step shows how to print the Web page for future reference.

**1**

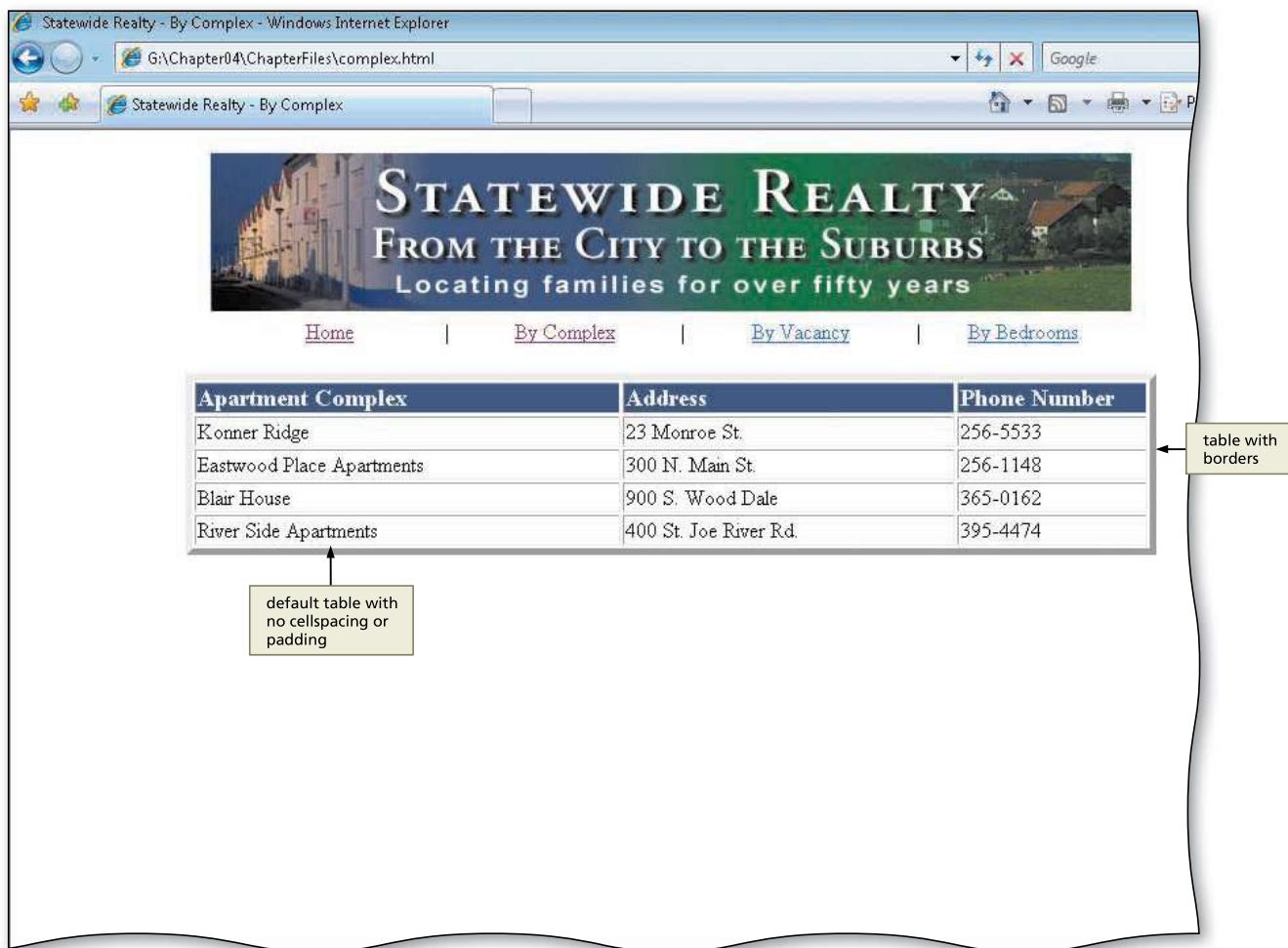
- Return to the Statewide Realty home page.
- Click the Print icon on the Command bar to print the Web page (Figure 4-21).



**Figure 4-21**

## Creating a Second Web Page

Now that you have created the Statewide Realty home page with a horizontal menu bar of text links for easy navigation to other pages in the site, it is time to create one of those linked pages — the By Complex page (Figure 4–22). Like the home page, the By Complex page includes the logo image and a horizontal menu bar of text links. Having the Statewide Realty logo and the horizontal menu bar at the top of each page provides consistency throughout the Web site. The menu bar lists the four Web pages — Home, By Complex, By Vacancy, and By Bedrooms — with a | (pipe) symbol between links. Beneath the menu bar is a table listing available apartments by apartment complex.



**Figure 4–22** By Complex Web page.

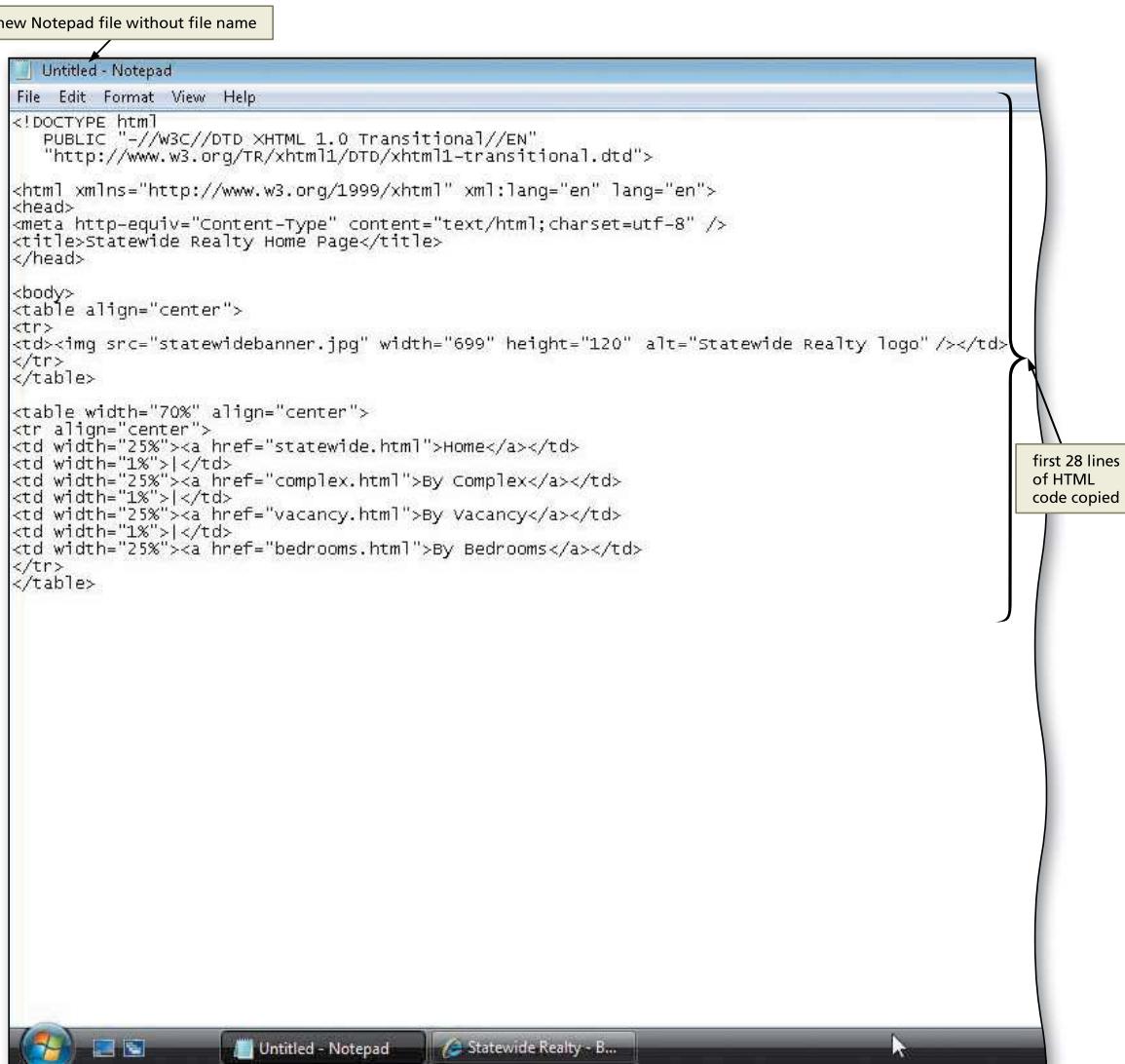
The first step in creating the By Complex Web page is to add the HTML tags to define the Web page structure and the two borderless tables with the Statewide Realty banner image and the horizontal menu bar. Because the logo image and menu bar are the same as on the home page, you can copy and paste HTML code from the home page and then edit it for the By Complex page.

## To Copy and Paste HTML Code to a New File

The following step shows how to copy the HTML tags to define the Web page structure and the two borderless tables from the HTML file, statewide.html, to a new HTML file.

**1**

- Click the statewide - Notepad button on the taskbar.
- Click immediately to the left of the < in the <!DOCTYPE html tag on line 1.
- Drag through the second </table> tag on line 28 to highlight lines 1 through 28.
- Press CTRL+C to copy the selected lines to the Clipboard.
- Click File on the Notepad menu bar and then click New.



**Figure 4-23**

- Press CTRL+V to paste the contents from the Clipboard into a new file (Figure 4-23).

## To Change the Web Page Title

The next step is to edit the copied HTML to change the title of the Web page from Statewide Realty Home Page to Statewide Realty - By Complex, so that the title of the current Web page is displayed on the title bar of the Web browser. You also need to add end tags for the `<body>` and `<html>` tags. The following step shows how to change the title of the Web page and add the end tags.

1

- Highlight the words Home Page between the `<title>` and `</title>` tags on line 8. Type – By Complex as the text.
- Click immediately to the right of the `</table>` tag on line 28. Press the ENTER key three times.
- Type `</body>` and then press the ENTER key.
- Type `</html>` as the end tag (Figure 4-24).

```

<!DOCTYPE html
  PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
  "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>statewide Realty - By Complex</title>
</head>

<body>
<table align="center">
<tr>
<td></td>
</tr>
</table>

<table width="70%" align="center">
<tr align="center">
<td width="25%"><a href="statewide.html">Home</a></td>
<td width="18%">|</td>
<td width="25%"><a href="complex.html">By Complex</a></td>
<td width="18%">|</td>
<td width="25%"><a href="vacancy.html">By Vacancy</a></td>
<td width="18%">|</td>
<td width="25%"><a href="bedrooms.html">By Bedrooms</a></td>
</tr>
</table>

</body>
</html>

```

## Q&amp;A

Will my Web page display correctly without changing the title?

Yes, your Web page will display correctly, but the wrong information will show on the title bar of the browser. The title tag is used to display information about the Web page to the visitor. If you had not changed this title, the By Complex Web page would have shown Home Page in the title. The title also is what displays in the Favorites or Bookmarks section of the browser.

Figure 4-24

### Plan Ahead

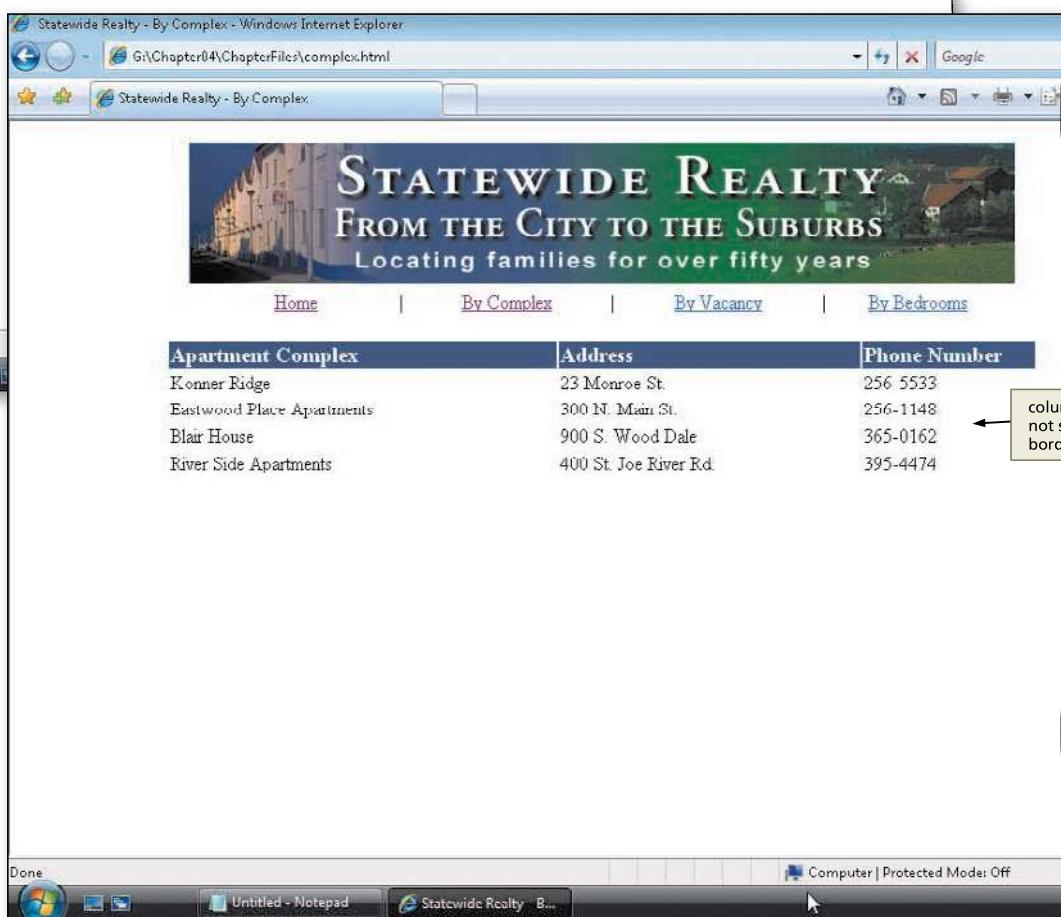
- Determine what table formatting to use.** Borderless tables often are appropriate when the tables are used to position text and image elements. In other instances, such as when a table is used to structure columns and rows of information, borders are appropriate. For example, the By Complex Web page lists three columns and five rows of information about available apartments by apartment complex. Figure 4-25a shows this information in a table with borders. Figure 4-25b shows the same information in a table without borders. As shown in this figure, using a table with borders makes the information on the By Complex Web page easier to read and provides a frame that gives the table a three-dimensional appearance.
- Identify what color schemes work and do not distract from the purpose.** It is important to add an element of color to your Web pages in order to make the appearance attractive. You need to make sure, though, that the color does not distract from the message of the content. In the case of the By Complex table, you will add background color to the table header cell `<th>` to bring attention to the text in the header, using a color from the banner image to tie the table together with the image. Because the background color is so dark, you need to change the text to white (or a lighter color) to make reading easier. The default black text does not show up well on very dark background colors.

**(a) Table with borders.**



<b>Apartment Complex</b>	<b>Address</b>	<b>Phone Number</b>
Konner Ridge	23 Monroe St.	256-5533
Eastwood Place Apartments	300 N. Main St.	256-1148
Blair House	900 S. Wood Dale	365-0162
River Side Apartments	400 St. Joe River Rd.	395-4474

**(b) Borderless table.**



<b>Apartment Complex</b>	<b>Address</b>	<b>Phone Number</b>
Konner Ridge	23 Monroe St.	256 5533
Eastwood Place Apartments	300 N. Main St.	256-1148
Blair House	900 S. Wood Dale	365-0162
River Side Apartments	400 St. Joe River Rd.	395-4474

**Figure 4-25**

## To Create a Table with Borders and Insert Text

Creating the table shown in Figure 4-25a involves first creating a table with three columns and five rows. The first row of the table is for column headings; the other rows are for data. As you have learned, heading cells differ from data cells in their appearance. Text in a heading cell appears as bold and centered, while text in a data cell appears as normal and left-aligned. Table 4-6 on the next page contains the HTML tags and text used to create the table of apartment complexes on the By Complex Web page.

**Table 4–6** HTML Code to Create a Table with Borders and Insert Text into Cells

Line	HTML Tag and Text
29	 <table border="5" width="75%" align="center">
30	<tr bgcolor="#4b5781">
31	<th align="left"><font color="white" size="+1">Apartment Complex</font></th>
32	<th align="left"><font color="white" size="+1">Address</font></th>
33	<th align="left"><font color="white" size="+1">Phone Number</font></th>
34	</tr>
35	
36	<tr>
37	<td width="45%">Konner Ridge</td>
38	<td width="35%">23 Monroe St.</td>
39	<td width="20%">256-5533</td>
40	</tr>
41	
42	<tr>
43	<td>Eastwood Place Apartments</td>
44	<td>300 N. Main St.</td>
45	<td>256-1148</td>
46	</tr>
47	
48	<tr>
49	<td>Blair House</td>
50	<td>900 S. Wood Dale</td>
51	<td>365-0162</td>
52	</tr>
53	
54	<tr>
55	<td>River Side Apartments</td>
56	<td>400 St. Joe River Rd.</td>
57	<td>395-4474</td>
58	</tr>
59	</table>

The following step illustrates how to create a table with borders and insert text into heading and data cells.

**1**

- Click line 29 (blank line immediately above the `</body>` tag) to position the insertion point.
- Enter the HTML code as shown in Table 4–6, pressing ENTER after each line except the last line (Figure 4–26).

**Q&A**

When you set the table border, what does the number represent? It represents the number of pixels that you want the border to be. The higher the number you use, the wider the border will be. You need to analyze how large or small the border should be based on the other elements of your Web page and the content in the table.

line 29

```

<body>
<table align="center">
<tr>
<td></td>
</tr>
</table>

<table width="70%" align="center">
<tr align="center">
<td width="25%"><a href="statewide.html">Home</a></td>
<td width="18%"></td>
<td width="25%"><a href="complex.html">By Complex</a></td>
<td width="25%"><a href="vacancy.html">Vacancy</a></td>
<td width="18%"></td>
<td width="18%" background-color="#4b5781"><br /><table border="5" width="75%" align="center">
<tr bkgcolor="#4b5781">
<th align="left"><font color="white" size="+1">Apartment Complex</font></th>
<th align="left"><font color="white" size="+1">Address</font></th>
<th align="left"><font color="white" size="+1">Phone Number</font></th>
</tr>
<tr>
<td width="45%>Konner Ridge</td>
<td width="35%>23 Monroe St.</td>
<td width="20%>256-5533</td>
</tr>
<tr>
<td>Eastwood Place Apartments</td>
<td>300 N. Main St.</td>
<td>256-1148</td>
</tr>
<tr>
<td>Blair House</td>
<td>900 S. Wood Dale</td>
<td>365-0162</td>
</tr>
<tr>
<td>River Side Apartments</td>
<td>400 St. Joe River Rd.</td>
<td>395-4474</td>
</tr>
</table>
</td>
</tr>
</table>
</body>
</html>

```

**Figure 4–26****Q&A**

Are there other attributes that can be used in the `<table>` tag?

Many other attributes can be used in the `<table>` tag (see Appendix A). The `frame` and `rules` attributes can be used to vary the look of your table significantly.

**Q&A**

Are there other attributes that can be used in the `<tr>`, `<th>`, and `<td>` tags?

Other attributes also can be used in the `<tr>`, `<th>`, and `<td>` tags (see Appendix A). The best way to review these attributes is to try them in simple tables to see the effect. Viewing tables with various attributes designated side by side on a Web page helps you to determine which attributes to use.

## To Save and Print the HTML File

With the HTML code for the table with borders added, the By Complex Web page is complete. The HTML file now should be saved and a copy printed as a reference.

1

- With a USB drive plugged into the computer, click File on the menu bar and then click Save As. Type complex.html in the File name text box.
- If necessary, click USB (G:) in the Save in list. Click the Chapter04 folder and then click the ChapterFiles folder in the list of available folders. Click the Save button in the Save As dialog box.
- Click File on the menu bar, click Print on the File menu, and then click the Print button in the Print dialog box (Figure 4-27).

```

<!DOCTYPE html
  PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
  "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>Statewide Realty - By Complex</title>
</head>
<body>
<table align="center">
<tr>
<td> </td>
</tr>
</table>

<table width="70%" align="center">
<tr align="center">
<td width="25%"><a href="statewide.html">Home</a></td>
<td width="1%">|</td>
<td width="25%"><a href="complex.html">By Complex</a></td>
<td width="1%">|</td>
<td width="25%"><a href="vacancy.html">By Vacancy</a></td>
<td width="1%">|</td>
<td width="25%"><a href="bedrooms.html">By Bedrooms</a></td>
</tr>
</table>

<br /><table border="5" width="75%" align="center">
<tr bgcolor="#4b5781">
<th align="left"><font color="white" size="+1">Apartment Complex</font></th>
<th align="left"><font color="white" size="+1">Address</font></th>
<th align="left"><font color="white" size="+1">Phone Number</font></th>
</tr>
<tr>
<td width="45%">Konner Ridge</td>
<td width="35%">23 Monroe St.</td>
<td width="20%">256-5533</td>
</tr>
<tr>
<td>Eastwood Place Apartments</td>
<td>300 N. Main St.</td>
<td>256-1148</td>
</tr>
<tr>
<td>Blair House</td>
<td>900 S. Wood Dale</td>
<td>365-0162</td>
</tr>
<tr>
<td>River Side Apartments</td>
<td>400 St. Joe River Rd.</td>
<td>395-4474</td>
</tr>
</table>
</body>
</html>

```

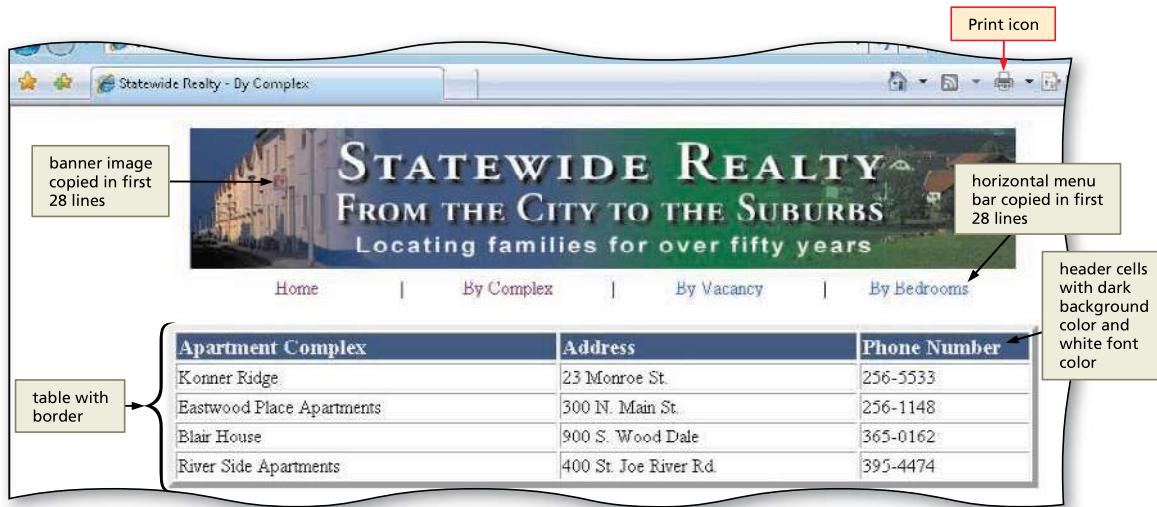
Figure 4-27

## To Validate, View, and Print the Web Page Using the Browser

After saving and printing the HTML file, perform the following step to validate, view, and print the Web page.

**1**

- Click the Internet Explorer button on the taskbar.
- Use the W3C validator service to validate the complex.html Web page.
- Use the Back button or click the Statewide Realty Home Page button on the taskbar to return to the Statewide Realty home page.



**Figure 4-28**

Print icon

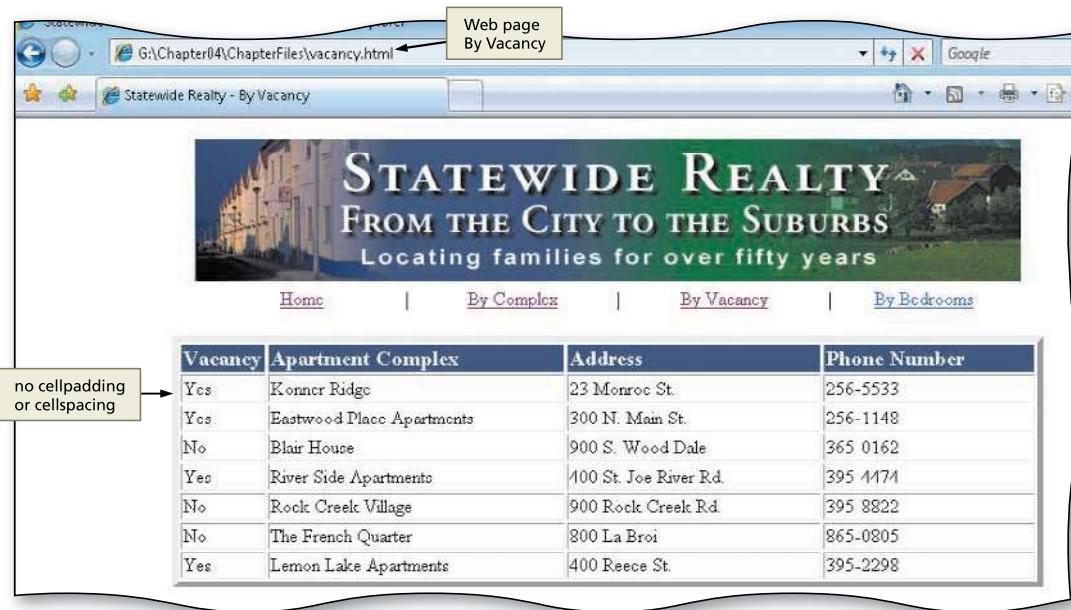
- Click the By Complex link to display the By Complex page (Figure 4-28).
- Click the Print button on the Command bar to print the Statewide Realty - By Complex Web page.

## To Test Links on a Web Page

After confirming that the Web page appears as desired, the four links on the horizontal menu bar should be tested to verify that they function as expected. The following step shows how to test the links on the complex.html Web page.

**1**

- Click the Home link to change to the Statewide Realty home page.
- Click the By Complex link to return to the complex.html Web page.
- Click the By Bedrooms link. (You will add a heading to the By Bedrooms page later in the project.)
- Click the By Vacancy link. (Figure 4-29).



**Figure 4-29**

**BTW** **Cellspacing**

The cellspacing attribute adds pixels between cells. The purpose of cellspacing is to add space between cells, whether or not a border exists. With a border, cellspacing increases the size of the border between the cells. Without a border, cellspacing increases the amount of white space between the cells.

## Adding Cellspacing, Cellpadding, and a Caption

The table of information on the By Complex Web page did not use the cellspacing or cellpadding attributes. The size of each data cell, therefore, automatically was set to the minimum size needed for the text inserted in the data cell. The `vacancy.html` Web page, however, should be modified to use cellspacing and cellpadding by adding the cellspacing and cellpadding attributes to the `<table>` tag. **Cellspacing** defines the number of pixels of space between cells in a table. **Cellpadding** defines the number of pixels of space between a cell's contents and its border. Figures 4–30a through 4–30c illustrate how using the cellspacing and cellpadding `<table>` tag attributes can affect a table's appearance.

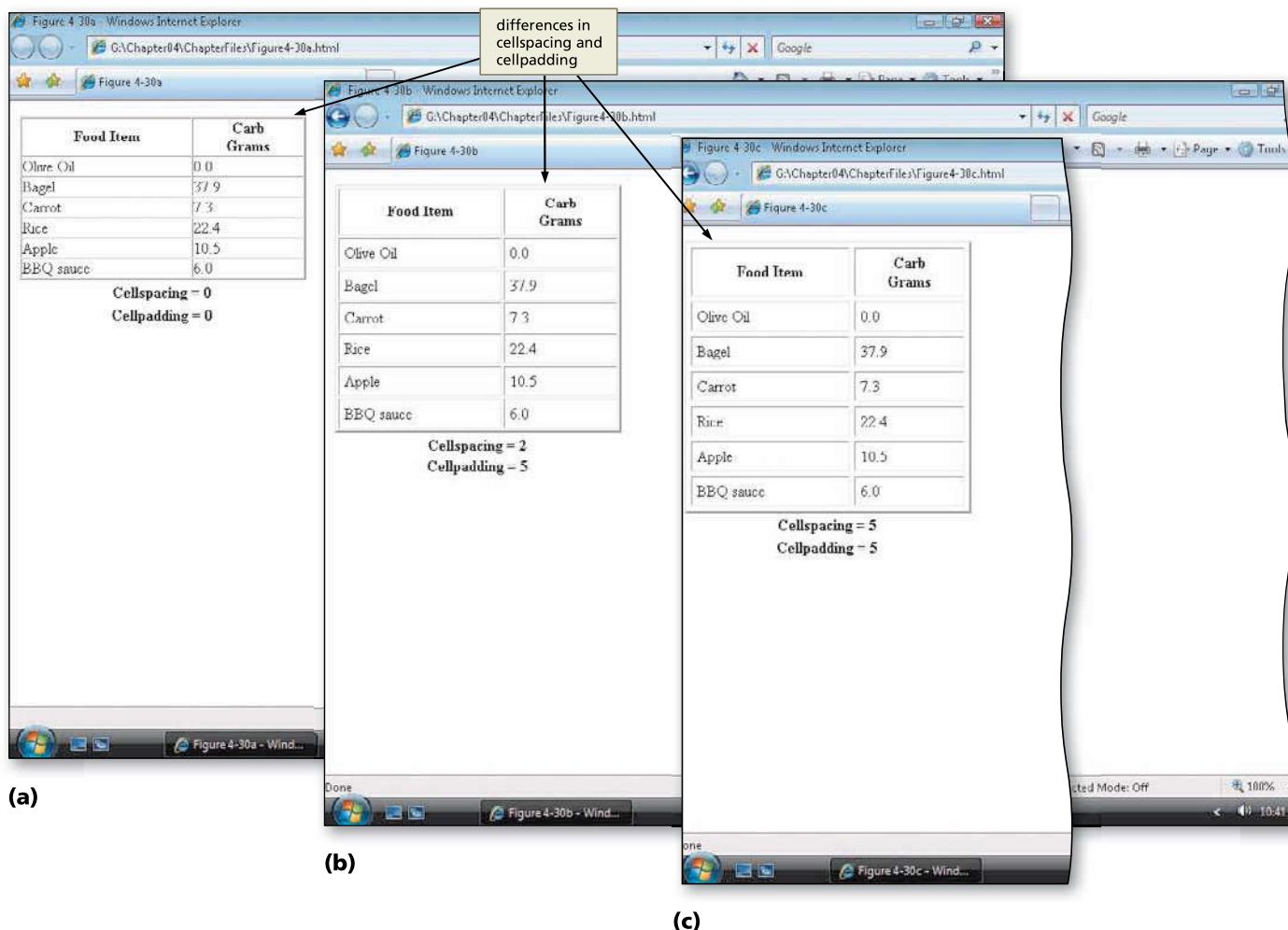


Figure 4-30 Tables with cellspacing and cellpadding.

**BTW****Cellpadding**

The cellpadding attribute adds pixels within a cell border. The purpose of cellpadding is to keep the content within each cell from looking too close to the content of another cell. Cellpadding sets a margin for the right, left, top, and bottom of the cell with the specification of one tag.

Figure 4–31a shows how the vacancy.html file from the Student Data Files looks as currently designed. Figure 4–31b shows how the Vacancy Web page will appear after cellspacing, cellpadding, and a caption are added.

**(a) Vacancy Web page before enhancements.**



Vacancy	Apartment Complex	Address	Phone Number
Yes	Konner Ridge	23 Monroe St.	256-5533
Yes	Eastwood Place Apartments	300 N. Main St.	256-1148
No	Blair House	900 S. Wood Dale	365-0162
Yes	River Side Apartments	400 St. Joe River Rd.	395-4474
No	Rock Creek Village	900 Rock Creek Rd.	395-8822
No	The French Quarter	800 La Broi	865-0805
Yes	Lemon Lake Apartments	400 Reece St.	395-2298

**(b) Vacancy Web page after enhancements.**



Vacancy	Apartment Complex	Address	Phone Number
Yes	Konner Ridge	23 Monroe St.	256-5533
Yes	Eastwood Place Apartments	300 N. Main St.	256-1148
No	Blair House	900 S. Wood Dale	365-0162
Yes	River Side Apartments	400 St. Joe River Rd.	395-4474
No	Rock Creek Village	900 Rock Creek Rd.	395-8822
No	The French Quarter	800 La Broi	865-0805
Yes	Lemon Lake Apartments	400 Reece St.	395-2298

*Listing of apartments by vacancy*

**Figure 4–31**

## Plan Ahead

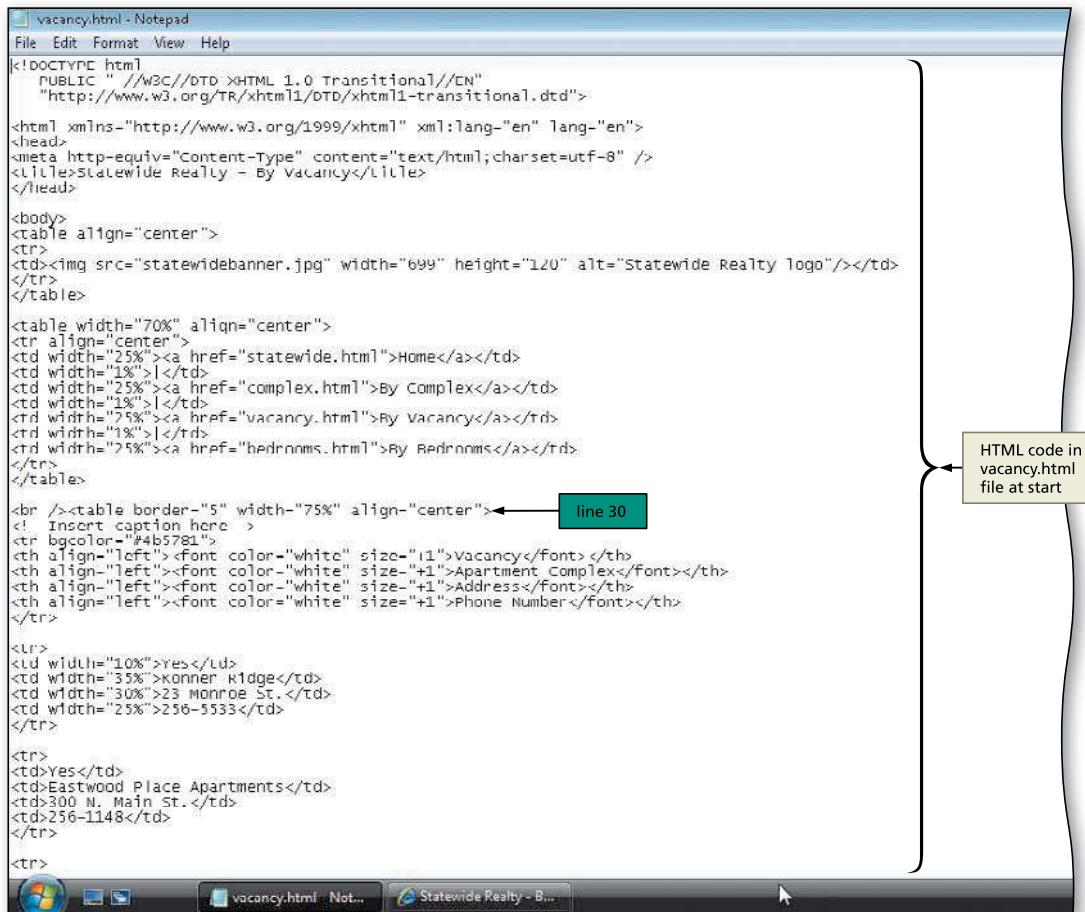
- **Determine what table spacing to use.** Another consideration to make when designing tables is how much space to provide within the table. Cellspacing is the space between the borders of each cell. Cellpadding is the space between a cell's content and its border. Both attributes serve the purpose of making the table of information easier to read. No rule of thumb says how much cellpadding or cellspacing should be used. Try various values to see the effect on the table.
- **Determine if a caption is needed.** A caption can help clarify the table's purpose. For some tables, such as the table used to position images and the tables used to create menu bars, captions are not appropriate. Tables used to structure columns and rows of information, such as the vacancy table, can benefit from having a caption to clarify the contents of the table. Captions can run above, below, to the left, or to the right of the table. The placement of the caption depends on the purpose of the caption, but captions often appear below the table.

## To Open an HTML File

In the following step you activate Notepad and open the vacancy.html Web page file.

1

- Click the complex - Notepad button on the taskbar.
- Click File on the menu bar and then click Save on the File menu to save any changes to the complex.html file.
- With a USB drive plugged into your computer, click File on the menu bar and then click Open on the File menu.
- If necessary, navigate to the Chapter04\ChapterFiles folder on the USB drive.
- If necessary, click the Files of type box arrow and then click All Files to display all files in the g:\Chapter04\ChapterFiles folder.
- Click vacancy.html in the list of files.
- Click the Open button to open the vacancy.html file in Notepad (Figure 4–32).



```

<!DOCTYPE html
  PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
  "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>Statewide Realty - By Vacancy</title>
</head>

<body>
<table align="center">
<tr>
<td></td>
</tr>
</table>

<table width="70%" align="center">
<tr align="center">
<td width="25%"><a href="statewide.html">Home</a></td>
<td width="1%">|</td>
<td width="25%"><a href="complex.html">By Complex</a></td>
<td width="1%">|</td>
<td width="7%"><a href="vacancy.html">By Vacancy</a></td>
<td width="1%">|</td>
<td width="25%"><a href="bedrooms.html">By Bedrooms</a></td>
</tr>
</table>

<br /><table border="5" width="75%" align="center"><!-- Insert caption here -->
<tr>
<td bgcolor="#4b5782">
<th align="left"><font color="white" size="+1">Vacancy</font></th>
<th align="left"><font color="white" size="+1">Apartment Complex</font></th>
<th align="left"><font color="white" size="+1">Address</font></th>
<th align="left"><font color="white" size="+1">Phone Number</font></th>
</tr>

<tr>
<td width="10%">Yes</td>
<td width="35%">Konner Ridge</td>
<td width="30%">23 Monroe St.</td>
<td width="25%">256-5533</td>
</tr>

<tr>
<td>Yes</td>
<td>Eastwood Place Apartments</td>
<td>300 N. Main St.</td>
<td>256-1148</td>
</tr>
<tr>

```

Figure 4–32

## To Add Cellspacing and Cellpadding to a Table

With the `vacancy.html` file open, the HTML code to add cellspacing and cellpadding can be added. The following step shows how to add cellspacing and cellpadding to a table.

**1**

- Click immediately to the right of the `width="75%"` on line 30 and then press the SPACEBAR.
- Type `cellspacing="2"` `cellpadding="5"` as the attributes and values (Figure 4-33).

**Q&A** Is there another way to set the cellpadding and cellspacing attributes for a Web page?

You can set padding and border-spacing styles with Cascading Style Sheets (CSS), but that is not yet supported by all browsers.

**Q&A** What is the amount of cellpadding and cellspacing if I do not specify this in the table tag?

The default value for cellpadding is 1, while the default value for cellspacing is 2.

**Q&A** Can I set the cellpadding and cellspacing differently for different cells?

No, you cannot set cellpadding and cellspacing differently for various cells. This attribute is only available for the `<table>` (whole table) tag.

```

vacancy.html - Notepad
File Edit Format View Help
<!DOCTYPE html
  PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
  "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>Statewide Realty - By Vacancy</title>
</head>
<body>
<table align="center">
<tr>
<td></td>
</tr>
</table>

<table width="70%" align="center">
<tr align="center">
<td width="25%"><a href="statewide.html">Home</a></td>
<td width="18%"></td>
<td width="25%"><a href="complex.html">By Complex</a></td>
<td width="18%"></td>
<td width="25%"><a href="vacancy.html">Vacancy</a></td>
<td width="25%"><a href="bedrooms.html">Bedrooms</a></td>
</tr>
</table>

<br /><table border="5" width="75%" cellspacing="2" cellpadding="5" align="center">
<!--Insert caption here-->
<tr bcolor="#4b5781">
<th align="left"><font color="white" size="+1">Vacancy</font></th>
<th align="left"><font color="white" size="+1">Apartment Complex</font></th>
<th align="left"><font color="white" size="+1">Address</font></th>
<th align="left"><font color="white" size="+1">Phone Number</font></th>
</tr>

<tr>
<td width="10%>Yes</td>
<td width="35%>Konner Ridge</td>
<td width="30%>23 Monroe St.</td>
<td width="25%>256-5533</td>
</tr>

<tr>
<td>Yes</td>
<td>Eastwood Place Apartments</td>
<td>300 N. Main St.</td>
<td>256-1148</td>
</tr>
</table>

```

**Figure 4-33**

## To Add a Table Caption

Captions are added to tables using the `<caption> </caption>` tags to enclose the caption text. You add formatting to make the caption italic, and the `align` attribute to place the caption at the bottom of the table.

The following step shows how to add a caption below the vacancy table.

1

- Highlight the text  
`<!--Line 31 - Insert  
caption here -->`.
- Type `<caption  
align="bottom">`  
`<em>Listing of  
apartments by  
vacancy</em>`  
`</caption>` as the  
`caption` tag to add the italic  
`caption` below the  
`table` (Figure 4-34).

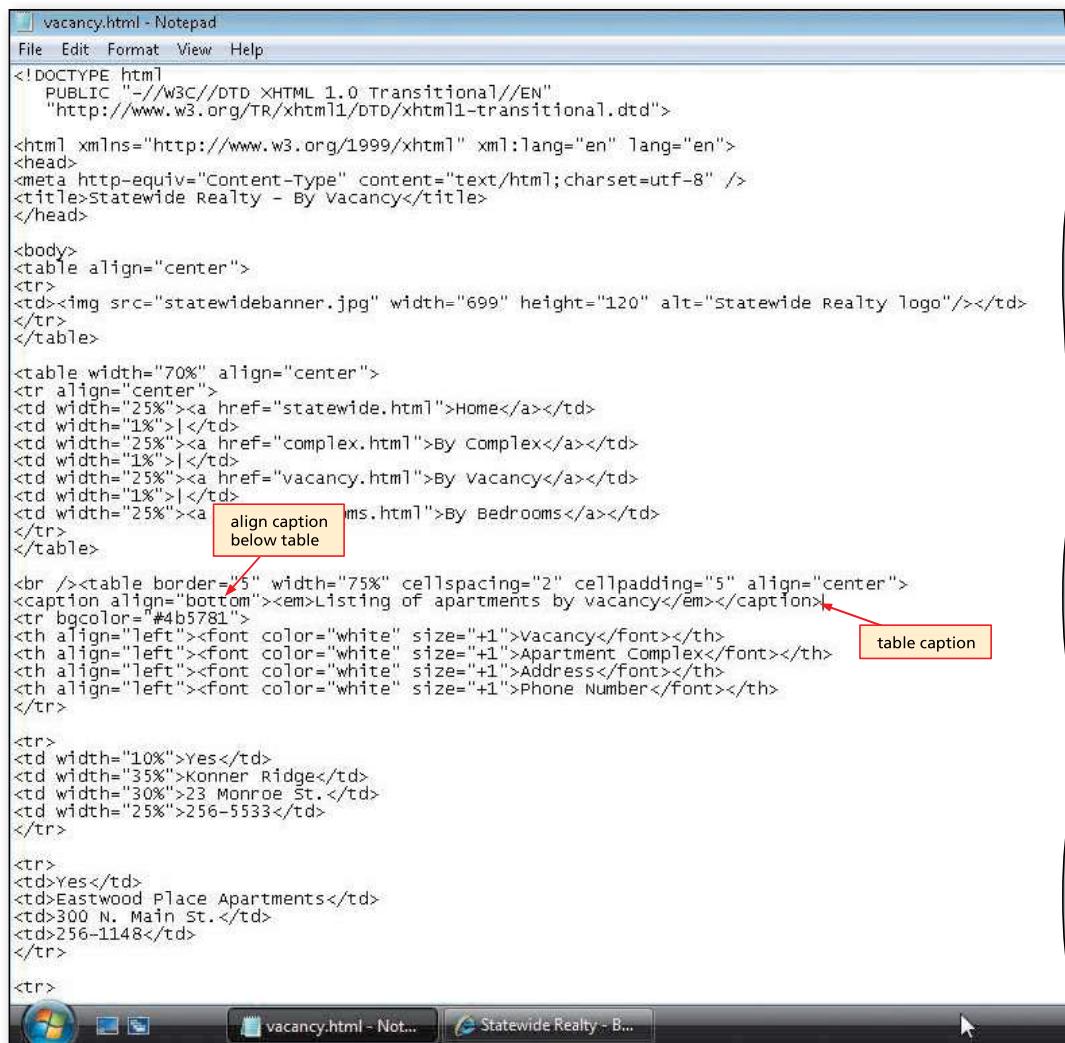
### Experiment

- Substitute  
`align="top",  
align="left", or  
align="right" for  
align="bottom" and  
display the page in  
a browser to see dif-  
ferent caption place-  
ments. End with  
align="bottom".`

### Q&A

Why would I use the caption tag?

You might use the caption to further explain the main purpose of the table. In the example above, you are further notifying the visitors that the table shows a listing of apartments by vacancy. Other uses are shown earlier in the chapter where the caption is added to identify the unit of measure used in the table.



The screenshot shows a Notepad window with the file 'vacancy.html'. The code is as follows:

```

<!DOCTYPE html
  PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
  "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>Statewide Realty - By Vacancy</title>
</head>
<body>
<table align="center">
<tr>
<td></td>
</tr>
</table>

<table width="70%" align="center">
<tr align="center">
<td width="25%"><a href="statewide.html">Home</a></td>
<td width="18%"></td>
<td width="25%"><a href="complex.html">By Complex</a></td>
<td width="18%"></td>
<td width="25%"><a href="vacancy.html">By Vacancy</a></td>
<td width="18%"></td>
<td width="25%"><a href="bedrooms.html">By Bedrooms</a></td>
</tr>
</table>

<br /><table border="1" width="75%" cellspacing="2" cellpadding="5" align="center">
<caption align="bottom"><em>Listing of apartments by vacancy</em></caption>
<tr bgcOLOR="#4b5781">
<th align="left"><font color="white" size="+1">Vacancy</font></th>
<th align="left"><font color="white" size="+1">Apartment Complex</font></th>
<th align="left"><font color="white" size="+1">Address</font></th>
<th align="left"><font color="white" size="+1">Phone Number</font></th>
</tr>
<tr>
<td width="10%">Yes</td>
<td width="35%">Konner Ridge</td>
<td width="30%">23 Monroe St.</td>
<td width="25%">256-5533</td>
</tr>
<tr>
<td>Yes</td>
<td>Eastwood Place Apartments</td>
<td>300 N. Main St.</td>
<td>256-1148</td>
</tr>
<tr>

```

Annotations in the code:

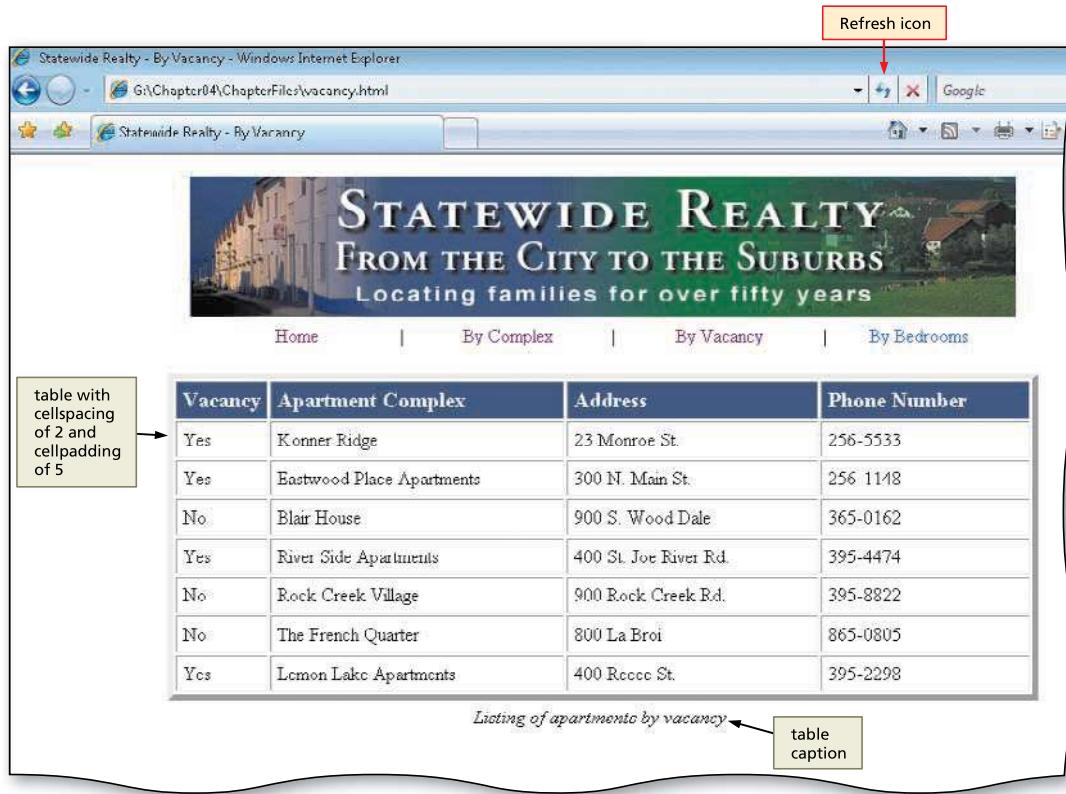
- A red box highlights the text `align caption below table` in the `<td>` tag of the first row of the inner table.
- A red box highlights the text `table caption` in the `<caption align="bottom">` tag of the outer table.

Figure 4-34

## To Save, Validate, Print, and View the HTML File and Print the Web Page

1

- With the USB drive plugged into your computer, click File on the menu bar and then click Save to save the vacancy.html file.
- Click File on the menu bar, click Print on the File menu, and then click the Print button to print the file.
- Click the Internet Explorer button on the taskbar to display the Statewide Realty - By Vacancy page (Figure 4-35).
- Validate the Web page using the W3C validator service.
- Use the Back button or taskbar to return to the Statewide Realty - By Vacancy page.
- Click the Refresh icon on the Address bar to show the most recent file.
- Click the Print button on the Command bar to print the Web page.



**Figure 4-35**

## Spanning Rows and Columns

If you need to merge several cells into one, you can use row or column spanning. You can span rows or columns anywhere in a table. Generally, row and column spanning is used to create headings in tables. The **colspan attribute** of the `<th>` or `<td>` tag sets a number of columns spanned by a cell. The **rowspan attribute** of the `<th>` or `<td>` tag sets a number of rows spanned by a cell. Figure 4-10 on page HTML 154 shows examples of both column and row spanning. Notice that the heading 5K spans (or goes across) three columns, while the heading 10K spans (or goes across) two columns. The heading Meet Dates spans (or goes across) four rows of information.

Figure 4-36 on the next page shows what the bedrooms.html Web page looks like at the start of the process. All of the table content is there, but no row or column spanning is done yet. You will enter the HTML code to complete the row and column spanning (Figure 4-37). In Figure 4-37, the heading Complex - Address - Phone is an example of column spanning. In this case, this heading spans three columns. In the same figure, the words "1 Bedroom," "2 Bedrooms," and "3 or More Bedrooms" are used as headings that span rows of information. All of these headings span three rows in the table.

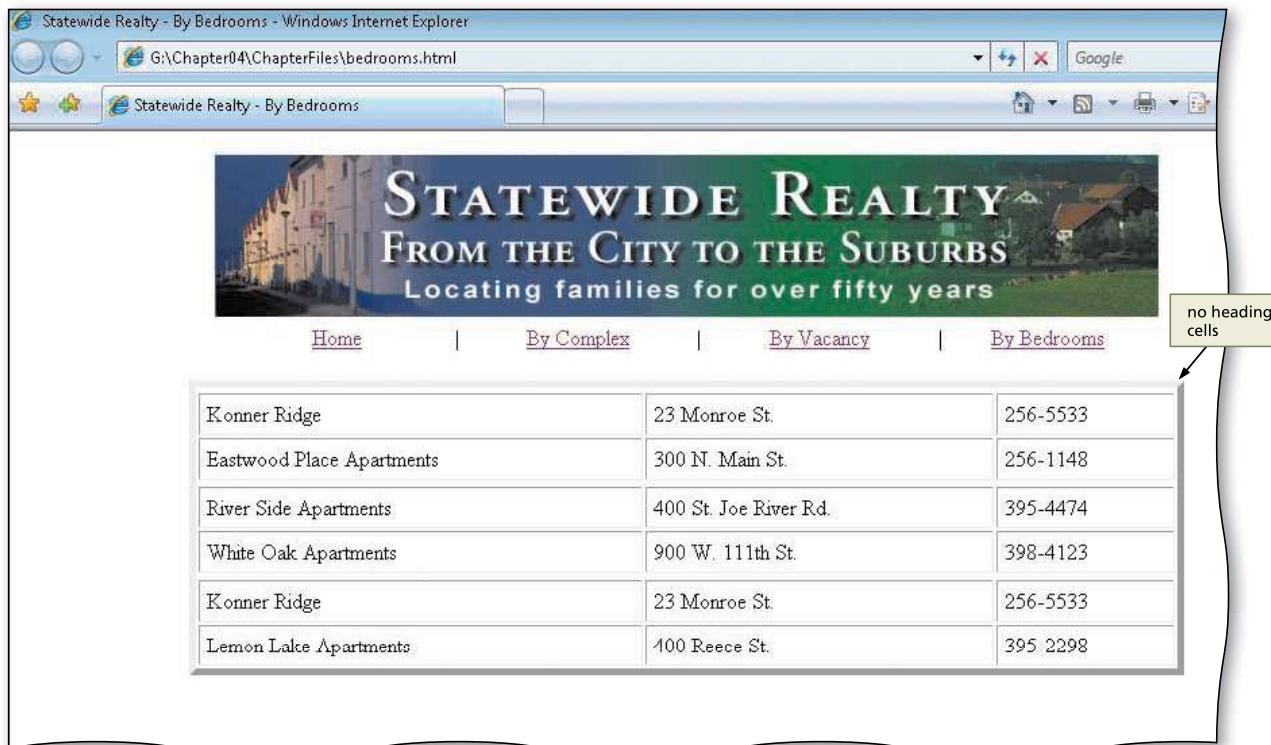


Figure 4-36 By Bedrooms Web page before enhancements.



Figure 4-37 By Bedrooms Web page after enhancements.

The first step when deciding to span rows or columns is to sketch the table design on a piece of paper, as shown in Figure 4–38. The table organizes available apartments by number of bedrooms and thus should have a main heading, such as Available Apartments by Number of Bedrooms. Three different numbers of bedrooms are represented by the information in the rows: 1 Bedroom, 2 Bedrooms, and 3 or More Bedrooms. The columns in the table also require subheadings to indicate what information is included about each apartment.

Available Apartments by Number of Bedrooms			
1 Bedroom	Complex - Address - Phone		
	Konner Ridge	23 Monroe St.	256-5533
	Eastwood Place Apartments	300 N. Main St.	256-1148
2 Bedrooms	Complex - Address - Phone		
	River Side Apartments	400 St. Joe River Rd.	395-4474
	White Oak Apartments	900 W. 111th St.	398-4123
3 or More Bedrooms	Complex - Address - Phone		
	Konner Ridge	23 Monroe St.	256-5533
	Lemon Lake Apartments	400 Reece St.	395-2298

**Figure 4–38**

After defining the main sections of a table, you must determine how many rows or columns each heading should span. For example, the title heading for the table (Available Apartments by Number of Bedrooms) should span all four table columns. The heading for the first main section (1 Bedroom) should span three rows, while the heading for the second section (2 Bedrooms) also should span three rows. Finally, the heading for the third main section (3 or More Bedrooms) should span three rows. The row headings, Complex - Address - Phone, should span three columns.

In the following steps you open the file, bedrooms.html, and add rowspan and colspan attributes to create table headings that span rows and columns.

#### Row and Column Spanning

Creating headings that span rows and columns defines tables more clearly. For more information about row and column spanning, search the Web. Many HTML tutorials have good suggestions for the use of column and row spanning.

**Plan  
Ahead**

- **Determine whether to use row and column spanning.** The purpose of the table determines whether you need to add row or column spanning. If the content is broken into logical segments of information, you may need to include row or column spanning in order to make the content clear. If you decide to add row or column spanning, it is best to sketch your ideas on paper first. This could help you understand more clearly what tags you need to use where.
- **Determine if different colors are needed for backgrounds.** You can help visitors more easily read a table full of information by varying the background colors effectively. If you use the same color background for the same level (or type) of information, it can help visually organize the information. Again, you may have to use a light font color if the background color is very dark.

**To Open an HTML File****1**

- Click the vacancy - Notepad button on the taskbar.
- With the USB drive plugged into your computer, click File on the menu bar and then click Open on the File menu.
- If necessary, navigate to the Chapter04\ChapterFiles folder on the USB drive.
- If necessary, click the Files of type box arrow, click All Files, and then double-click bedrooms.html in the list of files to open the file in Notepad.

**To Create the First Heading That Spans Columns**

The first step is to create three headings that span three rows each in the body of the table. Figure 4–37 on page HTML 183 shows three occurrences of the (Complex - Address - Phone headings.) You use the colspan attribute to span three columns of the table for each heading. Table 4–7 lists the HTML code required to create a heading column that spans three columns.

**Table 4–7 HTML Code for Headings**

```

35 <th colspan="3" bgcolor="gainsboro">
36   <font color="#4b5781" size="+1">Complex - Address - Phone</font>
37   </th>
38 </tr>

```

The step on the next page illustrates how to enter HTML code to create a heading column that spans three columns.

**1**

- Highlight <!--Insert first colspan heading here --> on line 35.
- Enter the code as shown in Table 4-7 on the previous page (Figure 4-39).

**Q&A**

I see that the new column heading has a background color exactly like one of the colors in the banner image. How did you figure out which color code to use?

Using advanced graphic editing software, you can select a color within an image by clicking with an editing tool on the color you want. You can then review the color code for the color selected and use that in your HTML code as the font color as shown in line 36. This same color code will be used later as the cell background color.

first colspan section of code

comments that show where to insert other colspan and rowspan sections of code

```

<!DOCTYPE html
  PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
  "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>Statewide Realty - By Bedrooms</title>
</head>
<body>
<table align="center">
<tr>
<td></td>
</tr>
</table>

<table width="70%" align="center">
<tr align="center">
<td width="25%"><a href="statewide.html">Home</a></td>
<td width="18%"><!--Insert main colspan heading here --></td>
<td width="25%"><a href="complex.html">By Complex</a></td>
<td width="18%"><!--Insert 1 Bedroom rowspan heading here --></td>
<td width="25%"><a href="vacancy.html">By Vacancy</a></td>
<td width="18%"><!--Insert 2 Bedrooms rowspan heading here --></td>
<td width="25%"><a href="bedrooms.html">By Bedrooms</a></td>
</tr>
</table>

<br /><table border="5" cellspacing="2" cellpadding="5" width="75%" align="center">
<!--Insert main colspan heading here -->

<tr>
<th colspan="3" bgcolor="#gainsboro">
<font color="#4b5781" size="+1">Complex - Address - Phone</font>
</th>
</tr>

<tr>
<td>Konner Ridge</td>
<td>23 Monroe St.</td>
<td>256-5533</td>
</tr>

<tr>
<td>Eastwood Place Apartments</td>
<td>300 N. Main St.</td>
<td>256-1148</td>
</tr>

<tr>
<td colspan="3" rowspan="2" style="text-align: center; vertical-align: middle; font-size: 2em; font-weight: bold; color: #4b5781;">View All Properties

```

**Figure 4-39****Q&A**

What does the "size= +1" attribute in the <font> tag do?

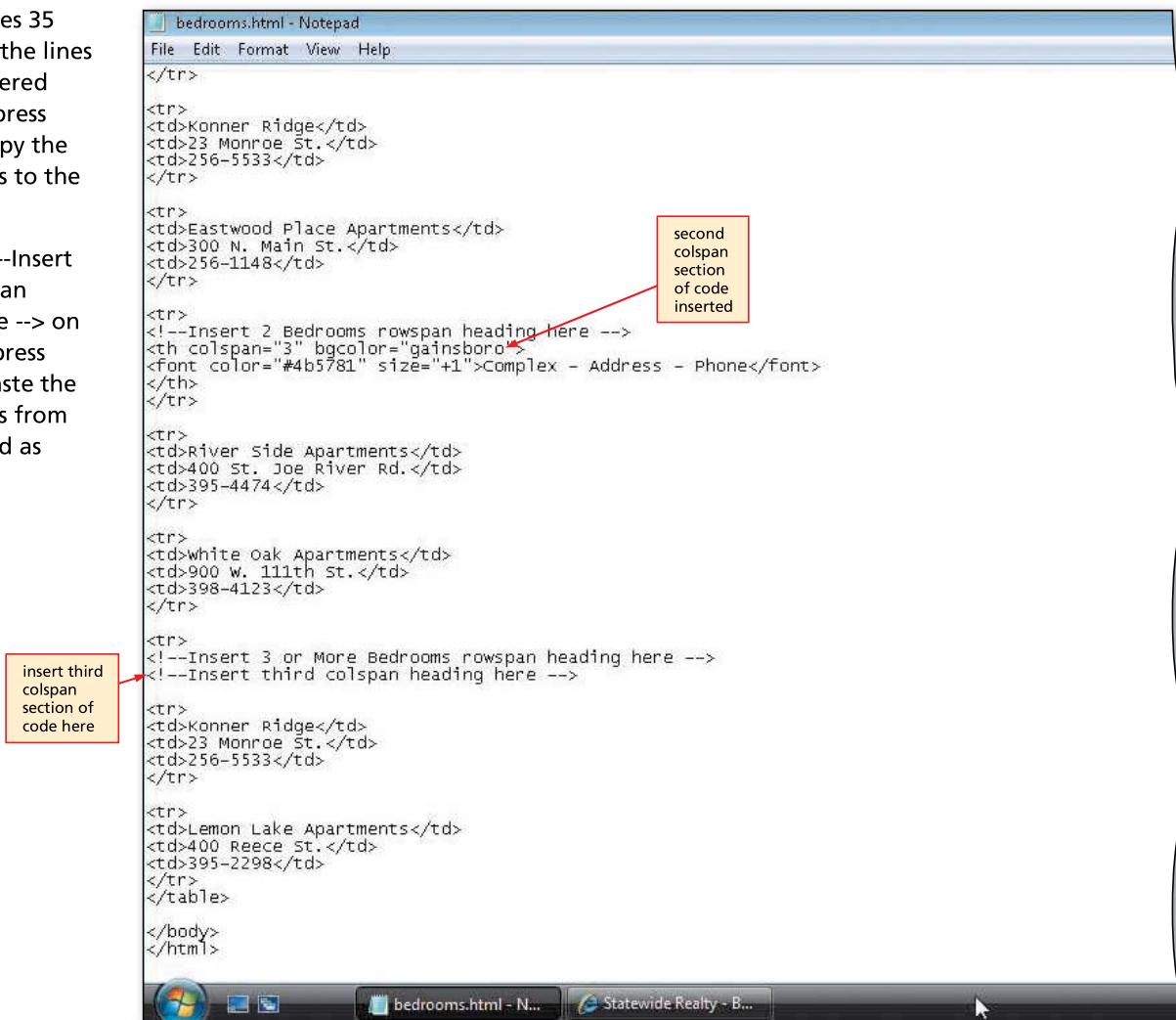
The +1 is a relative value for the font size that makes the font for the heading slightly larger than normal. This helps to call attention to the words in the heading.

## To Create the Second and Third Headings That Span Columns

The simplest way to create the second and third column spans is to copy the code that you entered above and paste that code into the remaining sections designated for colspans.

1

- Highlight lines 35 through 38 (the lines that you entered above) and press CTRL+C to copy the selected lines to the Clipboard.
- Highlight <!--Insert second colspan heading here --> on line 55 and press CTRL+V to paste the selected lines from the Clipboard as shown in Figure 4-40.



```

</tr>
<tr>
<td>Konner Ridge</td>
<td>23 Monroe St.</td>
<td>256-5533</td>
</tr>

<tr>
<td>Eastwood Place Apartments</td>
<td>300 N. Main St.</td>
<td>256-1148</td>
</tr>

<tr>
<td colspan="3" bgcolor="gainsboro">
<font color="#4b5781" size="+1">Complex - Address - Phone</font>
</td>
</tr>

<tr>
<td>River Side Apartments</td>
<td>400 St. Joe River Rd.</td>
<td>395-4474</td>
</tr>

<tr>
<td>white oak Apartments</td>
<td>900 W. 111th St.</td>
<td>398-4123</td>
</tr>

<tr>
<td colspan="3" bgcolor="gainsboro">
<!--Insert 3 or More Bedrooms rowspan heading here -->
<!--Insert third colspan heading here -->
</td>
</tr>

<tr>
<td>Konner Ridge</td>
<td>23 Monroe St.</td>
<td>256-5533</td>
</tr>

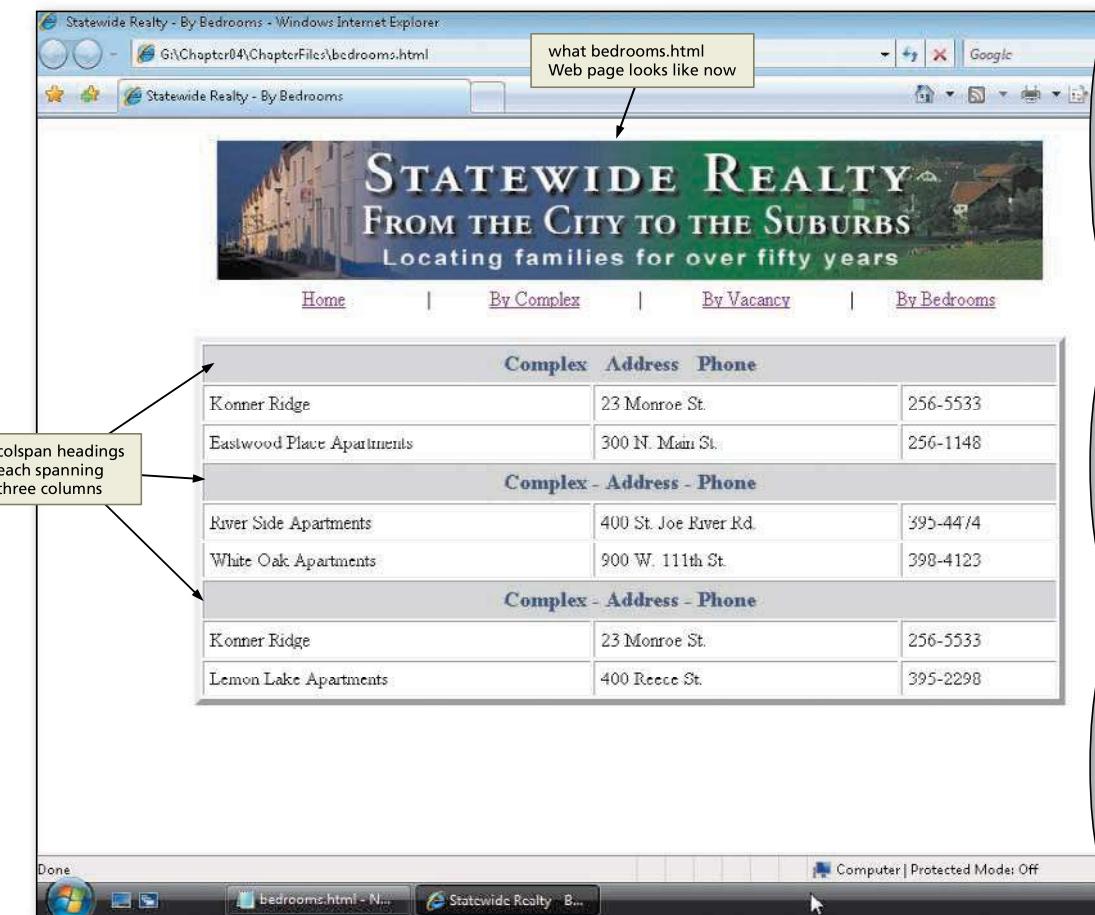
<tr>
<td>Lemon Lake Apartments</td>
<td>400 Reece St.</td>
<td>395-2298</td>
</tr>
</table>
</body>
</html>

```

Figure 4-40

**2**

- Highlight <!--Insert third colspan heading here --> on line 74 and press CTRL+V to paste the selected lines from the Clipboard. If the HTML file was saved and viewed in a browser at this point, the table would appear as shown in Figure 4-41.



what bedrooms.html  
Web page looks like now

**STATEWIDE REALTY**  
FROM THE CITY TO THE SUBURBS  
Locating families for over fifty years

[Home](#) | [By Complex](#) | [By Vacancy](#) | [By Bedrooms](#)

**Complex Address Phone**

Konner Ridge	23 Monroe St.	256-5533
Eastwood Place Apartments	300 N. Main St.	256-1148

**Complex - Address - Phone**

River Side Apartments	400 St. Joe River Rd.	395-4474
White Oak Apartments	900 W. 111th St.	398-4123

**Complex - Address - Phone**

Konner Ridge	23 Monroe St.	256-5533
Lemon Lake Apartments	400 Reece St.	395-2298

**Figure 4-41**

## To Create the Headings That Span Rows

The following steps illustrate how to enter HTML code to create a heading that spans three rows.

**1**

- Highlight `<!--Insert 1 Bedroom rowspan heading here -->` on line 34.

- Type
 

```
<th rowspan="3" width="20%" bgcolor="#4b5781"> and then press the ENTER key.
```

- Type
 

```
<font color="#ffffff" size="+1"> 1 Bedroom</font> and then press the ENTER key.
```

- Type
 

```
</th> and then press the ENTER key (Figure 4-42).
```

first of three rowspan headings

**2**

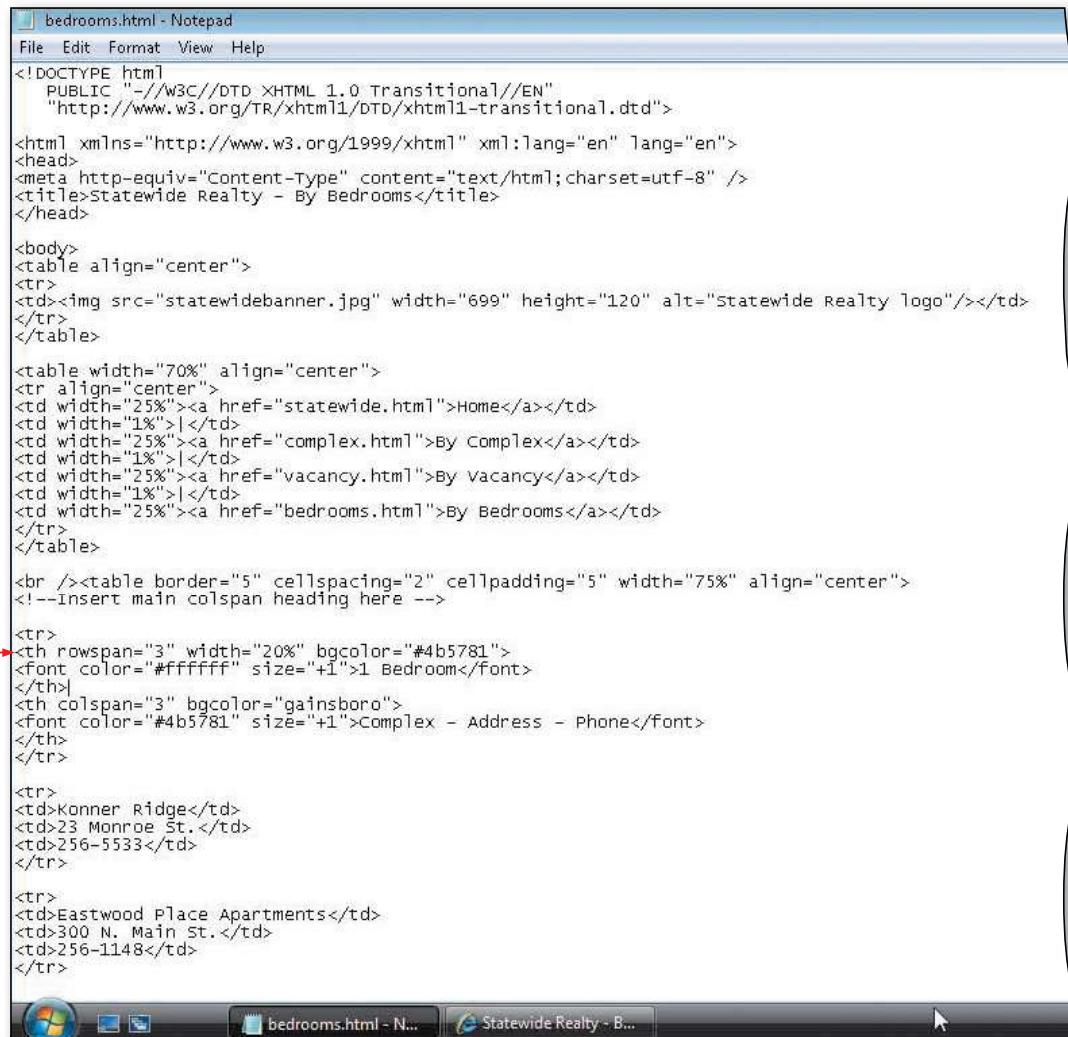
- Highlight `<!--Insert 2 Bedrooms rowspan heading here -->`.

- Type
 

```
<th rowspan="3" width="20%" bgcolor="#4b5781"> and then press the ENTER key.
```

- Type
 

```
<font color="#ffffff" size="+1">2 Bedrooms</font> and then press the ENTER key.
```



The screenshot shows a Notepad window with the following HTML code:

```

<!DOCTYPE html
  PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
  "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>Statewide Realty - By Bedrooms</title>
</head>
<body>
<table align="center">
<tr>
<td></td>
</tr>
</table>
<table width="70%" align="center">
<tr align="center">
<td width="25%><a href="statewide.html">Home</a></td>
<td width="18%>|</td>
<td width="25%><a href="complex.html">By Complex</a></td>
<td width="18%>|</td>
<td width="25%><a href="vacancy.html">By Vacancy</a></td>
<td width="18%>|</td>
<td width="25%><a href="bedrooms.html">By Bedrooms</a></td>
</tr>
</table>
<br /><table border="5" cellspacing="2" cellpadding="5" width="75%" align="center">
<!--Insert main colspan heading here -->
<tr>
<th rowspan="3" width="20%" bgcolor="#4b5781">
<font color="#ffffff" size="+1">1 Bedroom</font>
</th>
<th colspan="3" bgcolor="gainsboro">
<font color="#4b5781" size="+1">Complex - Address - Phone</font>
</th>
</tr>
<tr>
<td>Konner Ridge</td>
<td>23 Monroe St.</td>
<td>256-5533</td>
</tr>
<tr>
<td>Eastwood Place Apartments</td>
<td>300 N. Main St.</td>
<td>256-1148</td>
</tr>

```

Figure 4-42

**3**

- Highlight <!--Insert 3 or More Bedrooms rowspan heading here-->.
- Type <th rowspan="3" width="20%" bgcolor="#4b5781"> and then press the ENTER key.
- Type <font color="#ffffff" size="+1"> 3 or More and then press the ENTER key.
- Type <br /> Bedrooms </font> and then press the ENTER key.
- Type </th> as the end tag. If you save the file now, the Web page looks like that shown in Figure 4-43.

	Complex	Address	Phone
1 Bedroom	Konner Ridge	23 Monroe St.	256-5533
	Eastwood Place Apartments	300 N. Main St.	256-1148
<b>Complex - Address - Phone</b>			
2 Bedrooms	River Side Apartments	400 St. Joe River Rd.	395-44/4
	White Oak Apartments	900 W. 111th St.	398-4123
<b>Complex - Address - Phone</b>			
3 or More Bedrooms	Konner Ridge	23 Monroe St.	256-5533
	Lemon Lake Apartments	400 Recce St.	395-2298

**Figure 4-43****Q&A**

Why are we using a white font color (#ffffff) for the headings?

Because the background color is so dark (#4b5781), you could not easily read the heading if it was the default color of black. Changing the font color to white on a dark background color makes it easier to read.

**Q&A**

Why did we use a <br /> tag in Step 3 above?

We wanted to maintain a consistent look in the rowspan text. Because the first two cells contain approximately the same number of characters (i.e., 1 Bedroom and 2 Bedrooms), we wanted to maintain that width for the cell. By using the <br /> tag, you move the word Bedrooms to the second line of the third heading cell.

## To Span the Main Heading Across All Columns

As shown in the sketch in Figure 4–38 on page HTML 183, the main heading for the table is in a new row above the first row of text that is currently in the table. The main heading spans across all three of the existing columns, as well as the new column that is created on the left. The main heading has one line — Available Apartments by Number of Bedrooms. Table 4–8 shows the HTML code needed to create this heading.

**Table 4–8 HTML Code for Additional Headings**

Line	HTML Tag and Text
31	<tr>
32	<th colspan="4" bgcolor="#4b5781">
33	<font color="white" face="chaucer" size="+2">Available Apartments by Number of Bedrooms</font>
34	</th>
35	</tr>

The following step illustrates how to enter HTML code to create a main heading that spans all columns.

**1**

- If necessary, click bedrooms - Notepad on the taskbar.
- Highlight the <!--Insert main colspan heading here --> text on line 31.
- Enter the code as shown in Table 4–8 (Figure 4–44).

**Q&A** Why do we need the <tr> tag at the start of this code?

Entering the <tr> tag in Step 1 created a new row that contains the overall heading for this table.

**Q&A** I notice that all rowspan and colspan headings use <th> tags. Could we have had the same effect using <td> tags?

```

<!DOCTYPE html
  PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
  "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>Statewide Realty - By Bedrooms</title>
</head>
<body>
<table align="center">
<tr>
<td></td>
</tr>
</table>
<table width="70%" align="center">
<tr align="center">
<td width="25%"><a href="statewide.html">Home</a></td>
<td width="18%"><a href="complex.html">By Complex</a></td>
<td width="18%"><a href="vacancy.html">By Vacancy</a></td>
<td width="40%"><a href="complex.html">Complex - Address - Phone</a></td>
</tr>
<tr>
<th colspan="4" bgcolor="#4b5781">
<font color="white" face="chaucer" size="+2">Available Apartments by Number of Bedrooms</font>
</th>
</tr>
<tr>
<th rowspan="2" colspan="2" style="text-align: center; font-size: 1.2em; font-weight: bold; background-color: #4b5781; color: white; padding: 5px;">Complex - Address - Phone
<th style="text-align: center; font-size: 1.1em; font-weight: bold; background-color: #4b5781; color: white; padding: 5px;">Available Apartments by Number of Bedrooms
<th style="text-align: center; font-size: 1.1em; font-weight: bold; background-color: #4b5781; color: white; padding: 5px;">Complex - Address - Phone
</tr>
<tr>
<th style="text-align: center; font-size: 1.1em; font-weight: bold; background-color: #4b5781; color: white; padding: 5px;">Complex - Address - Phone
<th style="text-align: center; font-size: 1.1em; font-weight: bold; background-color: #4b5781; color: white; padding: 5px;">Available Apartments by Number of Bedrooms
<th style="text-align: center; font-size: 1.1em; font-weight: bold; background-color: #4b5781; color: white; padding: 5px;">Complex - Address - Phone
</tr>
<tr>
<td colspan="2" style="text-align: center; padding: 10px;">Complex - Address - Phone
<td style="text-align: center; padding: 10px;">Available Apartments by Number of Bedrooms
<td style="text-align: center; padding: 10px;">Complex - Address - Phone
</tr>
</table>
<br />

```

**Figure 4–44**

Because these are all used as headings, we wanted them to be bold and centered. Text contained within <th> tags default to bold and centered. If we had used <td> tags, the text would have been left-aligned and normal font.

## To Save and Print the HTML File and View and Print the Web Page

1

- With the USB drive plugged into your computer, click File on the menu bar and then click Save to save the bedrooms.html file.
- Click File on the menu bar. Click Print on the File menu, and then click the Print button (Figure 4-45).

```
<!DOCTYPE html
  PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
  "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>Statewide Realty - By Bedrooms</title>
</head>
<body>
<table align="center">
<tr>
<td></td>
</tr>
</table>
<table width="70%" align="center">
<tr align="center">
<td width="25%><a href="statewide.html">Home</a></td>
<td width="18%>|</td>
<td width="25%><a href="complex.html">By Complex</a></td>
<td width="18%>|</td>
<td width="25%><a href="vacancy.html">By Vacancy</a></td>
<td width="18%>|</td>
<td width="25%><a href="bedrooms.html">By Bedrooms</a></td>
</tr>
</table>
<br /><table border="5" cellspacing="2" cellpadding="5" width="75%" align="center">
<tr>
<th colspan="4" bgcolor="#4b5781">
<font color="white" face="chaucer" size="+2">Available Apartments by Number of Bedrooms</font>
</th>
</tr>
<tr>
<th rowspan="3" width="20%" bgcolor="#4b5781">
<font color="#ffffff" size="+1">1 Bedroom</font>
</th>
<th colspan="3" bgcolor="gainsboro">
<font color="#4b5781" size="+1">Complex - Address - Phone</font>
</th>
</tr>

```

Figure 4-45

2

- Click the Statewide Realty- By Bedrooms button on the taskbar.
- Click the Refresh button on the Standard Buttons toolbar. With this final colspan entered, the Web page now looks like that shown in Figure 4-46.
- Click the Print button on the Standard Buttons toolbar to print the Web page.

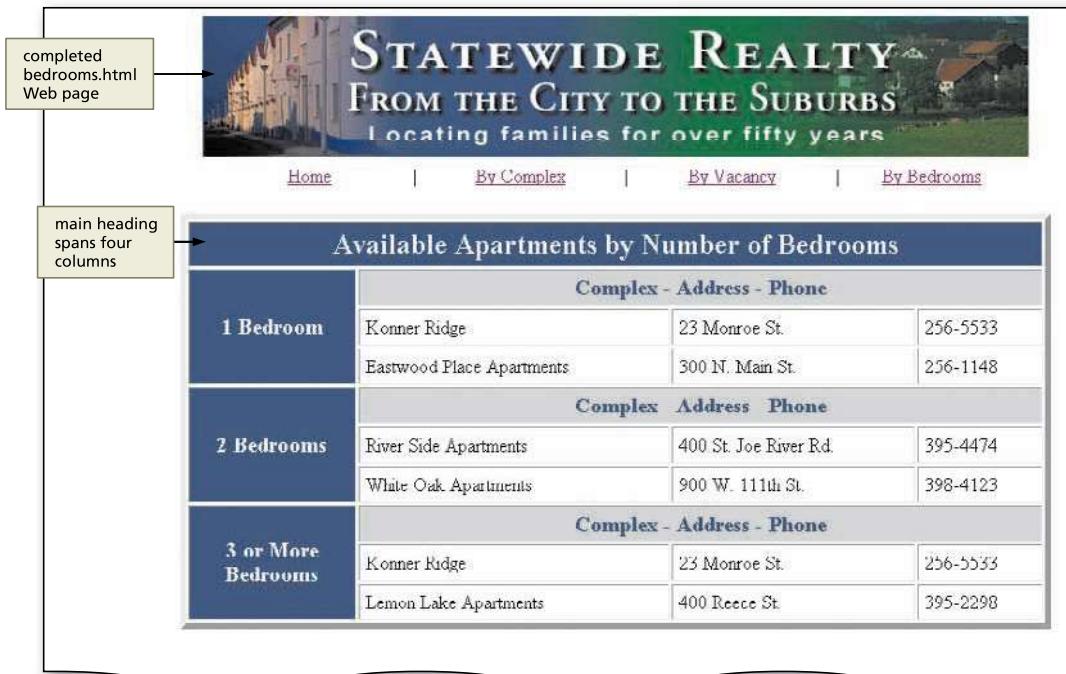


Figure 4-46

## To Quit Notepad and a Browser

1

- Click the Close button on the browser title bar.
- Click the Close button on the Notepad window title bar.

## Chapter Summary

In this chapter, you learned about table elements and the steps to plan, design, and code a table in HTML. You learned to enhance a table with background color, cellspacing, cellpadding, a caption, and headers that span rows and columns. The items listed below include all the new HTML skills you have learned in this chapter.

1. Create a Borderless Table to Position Images (HTML 159)
2. Insert Images in a Table (HTML 160)
3. Create a Horizontal Menu Bar with Text Links (HTML 162)
4. Add Text to a Table Cell (HTML 163)
5. Copy and Paste HTML Code to a New File (HTML 169)
6. Change the Web Page Title (HTML 170)
7. Create a Table with Borders and Insert Text (HTML 171)
8. Add Cellspacing and Cellpadding to a Table (HTML 179)
9. Add a Table Caption (HTML 180)
10. Create the First Heading That Spans Columns (HTML 184)
11. Create the Second and Third Headings That Span Columns (HTML 186)
12. Create the Headings That Span Rows (HTML 188)
13. Span the Main Heading Across All Columns (HTML 190)

## Learn It Online

Test your knowledge of chapter content and key terms.

*Instructions:* To complete the Learn It Online exercises, start your browser, click the Address bar, and then enter the Web address [scsite.com/html5e/learn](http://scsite.com/html5e/learn). When the HTML Learn It Online page is displayed, click the link for the exercise you want to complete and read the instructions.

### 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.