

Microsoft[®] Office Excel[®] 2007

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Curtis D. Frye

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Note: Use a desktop web browser, as files may not be accessible from all ereader devices.

Questions? Please contact: mspinput@microsoft.com

Microsoft Press

Microsoft[®]

Microsoft[®] Office Excel[®] 2007 Step by Step

Curtis D. Frye

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About the Author

Curtis Frye

Curt Frye is a freelance writer and Microsoft Most Valuable Professional for Microsoft Office Excel. He lives in Portland, Oregon, and is the author of eight books from Microsoft Press, including *Microsoft Office Excel 2007 Step by Step, Microsoft Office Access 2007 Plain & Simple, Microsoft Office Excel 2007 Plain & Simple,* and *Microsoft Office Small Business Accounting 2006 Step By Step.* He has also written numerous articles for the Microsoft Work Essentials web site.

Before beginning his writing career in June 1995, Curt spent four years with The MITRE Corporation as a defense trade analyst and one year as Director of Sales and Marketing for Digital Gateway Systems, an Internet service provider. Curt graduated from Syracuse University in 1990 with an honors degree in political science. When he's not writing, Curt is a professional improvisational comedian with ComedySportz Portland.

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Features and Conventions

You can save time when you use this book by understanding how the *Step by Step* series shows special instructions, keys to press, buttons to click, and so on.

Convention	Meaning
1 2	Numbered steps guide you through hands-on exercises in each topic.
\bigcirc	This icon at the beginning of a chapter indicates information about the practice files provided on the companion CD for use in the chapter.
USE	This paragraph preceding a step-by-step exercise indicates the practice files that you will use when working through the exercise.
BE SURE TO	This paragraph preceding a step-by-step exercise indicates any requirements you should attend to before beginning the exercise.
OPEN	This paragraph preceding a step-by-step exercise indicates files that you should open before beginning the exercise.
CLOSE	This paragraph following a step-by-step exercise provides instructions for closing open files or programs before moving on to another topic.
Тір	These paragraphs provide helpful hints or shortcuts that make working through a task easier.
Important	These paragraphs point out information that you need to know to complete a procedure.
Troubleshooting	These paragraphs explain how to fix common problems that might prevent you from continuing through an exercise.
See Also	These paragraphs direct you to more information in this book about a topic.
Enter	In step-by-step exercises, keys you must press appear as they do on the keyboard.
Alt + Tab	A plus sign (+) between two key names means that you must press those keys at the same time. For example, "Press At + Tab" means that you hold down the Alt key while you press the Tab key.

Convention	Meaning
Program elements	In steps, program elements such as buttons, commands, and dialog boxes are shown in black bold type.
Glossary terms	Terms that are explained in the glossary at the end of the book are shown in blue italic type.
User input	Text that you are supposed to type appears in blue bold type in the procedures.
Files, folders, URLs, and emphasis	Files, folder paths, URLs, and emphasized words appear in italic type.

Using the Companion CD

The companion CD included with this book contains practice files you can use as you work through the book's exercises. By using practice files, you won't waste time creating samples and typing spreadsheet data. Instead, you can jump right in and concentrate on learning how to use Microsoft Office Excel 2007.

CD Contents

The following table lists the practice files supplied on the companion CD.

Chapter	Folder\File
Chapter 1: What's New in Excel 2007	None
Chapter 2:	Creating\Exception Summary.xlsx
Setting Up a Workbook	Creating\Route Volume.xlsx
Chapter 3: Working with Data	Data and Data Tables\2007Q1ShipmentsByCategory.xlsx
and Data Tables	Data and Data Tables\Average Deliveries.xlsx
	Data and Data Tables\Driver Sort Times.xlsx
	Data and Data Tables\Series.xlsx
	Data and Data Tables\Service Levels.xlsx
Chapter 4: Performing	Formulas\ConveyerBid.xlsx
Calculations on Data	Formulas\ITExpenses.xlsx
	Formulas\PackagingCosts.xlsx
	Formulas\VehicleMiles.xlsx

Chapter	Folder\File
Chapter 5: Changing	Appearance\acbluprt.jpg
Document Appearance	Appearance\callcenter.jpg
	Appearance\CallCenter.xlsx
	Appearance\Dashboard.xlsx
	Appearance\ExecutiveSearch.xlsx
	Appearance\HourlyExceptions.xlsx
	Appearance\HourlyTracking.xlsx
	Appearance\VehicleMileSummary.xlsx
Chapter 6: Focusing on	<i>Focusing\Credit.xlsx</i>
Specific Data Using Filters	Focusing\ForFollowUp.xlsx
	Focusing\PackageExceptions.xlsx
Chapter 7: Reordering and	Sorting\GroupByQuarter.xlsx
Summarizing Data	Sorting\ShipmentLog.xlsx
	Sorting\ShippingSummary.xlsx
Chapter 8: Combining Data	MultipleFiles\Consolidate.xlsx
from Multiple Sources	MultipleFiles\Daily Call Summary.xlsx
	MultipleFiles\February Calls.xlsx
	MultipleFiles\Fleeting Operating Costs.xlsx
	MultipleFiles\January Calls.xlsx
	MultipleFiles\Operating Expense Dashboard.xlsx
Chapter 9: Analyzing	Alternatives\2DayScenario.xlsx
Alternative Data Sets	Alternatives\Ad Buy.xlsx
	Alternatives\Driver Sort Times.xlsx
	Alternatives\Multiple Scenarios.xlsx
	Alternatives\Target Values.xlsx
Chapter 10: Creating Dynamic	PivotTables\Creating.txt
Lists with PivotTables	PivotTables\Creating.xlsx
	PivotTables\Editing.xlsx
	PivotTables\Focusing.xlsx
	PivotTables\Formatting.xlsx
Chapter 11: Creating Charts	Charting\Future Volumes.xlsx
and Graphics	Charting\Org Chart.xlsx
	Charting\Revenue Analysis.xlsx
	Charting\Volume by Center.xlsx
	Charting\Yearly Package Volume.xlsx

Chapter	Folder\File
Chapter 12: Printing	Printing\ConsolidatedMessenger.png
	Printing\Corporate Revenue.xlsx
	Printing\Hourly Pickups.xlsx
	Printing\Pickups by Hour.xlsx
	Printing\Revenue by Customer.xlsx
	Printing\Summary by Customer.xlsx
Chapter 13: Automating	Macros\Performance Dashboard.xlsm
Repetitive Tasks with Macros	Macros\RunOnOpen.xlsm
	Macros\VolumeHighlights.xlsm
	Macros\Yearly Sales Summary.xlsx
Chapter 14: Working with	Other Programs\2007 Yearly Revenue Summary.pptx
Other Microsoft Office	Other Programs\Hyperlink.xlsx
System Programs	Other Programs\Level Descriptions.xlsx
	Other Programs\Revenue Chart.xlsx
	Other Programs\Revenue Summary.pptx
	Other Programs\RevenueByServiceLevel.xlsx
	Other Programs\Summary Presentation.xlsx
Chapter 15: Collaborating	Sharing\Cost Projections.xlsx
with Colleagues	Sharing\Projection Change Tracking.xlsx
	Sharing\Projections for Comment.xlsx
	Sharing\Projections Signed.xlsx
	Sharing\SecureInfo.xlsx
	Sharing\Shipment Summary.xlsx

Minimum System Requirements

To run Excel 2007, your computer needs to meet the following minimum hardware requirements:

- 500 megahertz (MHz)
- 256 megabytes (MB) RAM
- 1.5 gigabytes (GB) available space
- CD or DVD drive
- 1024 × 768 or higher resolution monitor

Installing the Practice Files

You need to install the practice files in the correct location on your hard disk before you can use them in the exercises. Follow the steps below:

Important If for any reason you are unable to install the practice files from the CD, the files can also be downloaded from the Web at *http://www.microsoftpressstore.com/title/9780735623040*.

 Remove the companion CD from the envelope at the back of the book, and insert it into the CD drive of your computer. If the AutoPlay window opens, click Run startcd.exe.

The Microsoft Software License Terms appear. To use the practice files, you must accept the terms of the license agreement.

2. Click I accept the agreement, and then click Next.

After you accept the license agreement, the CD interface appears.

Important If the menu screen does not appear, click the Start button and then click Computer. Display the Folders list in the Navigation pane, click the icon for your CD drive, and then in the right pane, double-click the StartCD executable file.

- Click Practice Files. If the File Download and/or Internet Explorer Security dialog boxes open, click Yes and/or Run.
- On the Welcome page of the InstallShield Wizard, click Next. On the License Agreement page, click I accept the terms in the license agreement, and then click Next.
- If you want to install the practice files to a location other than the default folder (*Documents**Microsoft Press**Excel2007SBS*), click the Browse button, select the new drive and path, and then click OK.

Important If you are using Windows XP or earlier, the default folder will be *My Documents\Microsoft Press\Excel2007SBS*.

- 6. On the Custom Setup page, click Next, and then on the Ready to Install the Program screen, click Install.
- 7. After the practice files have been installed, click Finish.
- 8. Close the Step by Step Companion CD window.
- **9.** Remove the companion CD from the CD drive, and return it to the envelope at the back of the book.

Using the Practice Files

When you install the practice files from the companion CD that accompanies this book, the files are stored on your hard disk in chapter-specific subfolders under *Documents*\ *Microsoft Press**Excel2007SBS*. Each exercise is preceded by a paragraph that lists the files needed for that exercise and explains any preparations needed before you start working through the exercise. Here are examples:

USE the ForFollowUp workbook. This practice file is located in the Documents\Microsoft Press\Excel2007SBS\Focusing folder.

BE SURE TO start Excel 2007 before beginning this exercise.

OPEN the *ForFollowUp* workbook.

You can browse to the practice files in Windows Explorer by following these steps:

On the Windows taskbar, click the Start button, and then click Documents.
 Or

If you are using Windows XP or earlier, click My Documents instead.

 In the Documents or My Documents folder, double-click Microsoft Press, double-click Excel2007SBS, and then double-click a specific chapter folder.

You can browse to the practice files from a dialog box by following these steps:

1. In the **Favorite Links** pane in the dialog box, click *Documents*.

Or

If you are using Windows XP or earlier, click *My Documents* on the **Places bar** instead.

2. In the *Documents* or *My Documents* folder, double-click *Microsoft Press*, double-click *Excel2007SBS*, and then double-click a specific chapter folder.

Tip You can also view the practice files by selecting Browse on the CD menu.

Uninstalling the Practice Files

You can free up hard disk space by uninstalling the practice files that were installed from the companion CD. The uninstall process also deletes any files that you created in the *Microsoft Press**Excel2007SBS* chapter-specific folders while working through the exercises. Follow these steps:

- **1.** On the **Windows taskbar**, click the **Start** button, and then click **Control Panel**.
- 2. In Control Panel, under Programs, click the Uninstall a program task.

Or

In Control Panel, click Add or Remove Programs.

 If you are using Windows Vista, in the Programs and Features window, click Microsoft Office Excel 2007 Step by Step, and then on the toolbar at the top of the window, click the Uninstall button.

Or

In the Add or Remove Programs window, click Microsoft Office Excel 2007 Step by Step, and then click Remove.

4. If a message box asks you to confirm the deletion, click Yes.

See Also If you need additional help installing or uninstalling the practice files, see "Getting Help" later in this book.

Important Microsoft Product Support Services does not provide support for this book or its companion CD.

Getting Help

Every effort has been made to ensure the accuracy of this book and the contents of its companion CD. If you do run into problems, please contact the sources listed below for assistance.

Errata & Book Support

If you find an error, please report it on our Microsoft Press site:

- **1.** Go to www.microsoftpressstore.com.
- 2. In the Search box, enter the book's ISBN or title.
- 3. Select your book from the search results.
- 4. On your book's catalog page, find the Errata & Updates tab.
- 5. Click View/Submit Errata.

You'll find additional information and services for your book on its catalog page. If you need additional support, please e-mail Microsoft Press Book Support at *mspinput@microsoft.com*.

If for any reason you are unable to install the practice files from the CD, the files can also be downloaded from the Web here:

http://www.microsoftpressstore.com/title/9780735623040

Please note that product support for Microsoft software is not offered through the addresses above.

Getting Help with Excel 2007

If your question is about Microsoft Office Excel 2007, and not about the content of this Microsoft Press book, please search the Office 2007 Solution Center or the Microsoft Knowledge Base at:

support.microsoft.com

In the United States, Microsoft software product support issues not covered by the Microsoft Knowledge Base are addressed by Microsoft Product Support Services. Location-specific software support options are available from:

support.microsoft.com/gp/selfoverview/

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The Microsoft Business Certification Program

Desktop computing proficiency is becoming increasingly important in today's business world. As a result, when screening, hiring, and training employees, more employers are relying on the objectivity and consistency of technology certification to ensure the competence of their workforce. As an employee or job seeker, you can use technology certification to prove that you already have the skills you need to succeed, saving current and future employers the trouble and expense of training you.

The Microsoft Business Certification program is designed to assist employees in validating their Windows Vista skills and 2007 Microsoft Office program skills. The following certification paths are available:

- A Microsoft Certified Application Specialist (MCAS) is an individual who has demonstrated proficiency in Windows Vista or in a 2007 Office program by passing a certification exam in Windows Vista or in one or more of the 2007 Office programs, including Microsoft Office Word 2007, Microsoft Office Excel 2007, Microsoft Office PowerPoint 2007, Microsoft Office Outlook 2007, and Microsoft Office Access 2007.
- A Microsoft Certified Application Professional (MCAP) is an individual who has taken his or her knowledge of the 2007 Office system and of Microsoft SharePoint Products and Technologies to the next level and has demonstrated by passing a certification exam that he or she can use the collaborative power of the Office system to accomplish job functions such as *Budget Analysis and Forecasting*, or *Content Management and Collaboration*.

Selecting a Certification Path

When selecting a Microsoft Business Certification path that you would like to pursue, you should assess the following:

- The program and program version(s) with which you are familiar
- The length of time you have used the program
- Whether you have had formal or informal training in the use of that program

Candidates for MCAS-level certification are expected to successfully complete a wide range of standard business tasks, such as formatting a document or worksheet. Successful candidates generally have six or more months of experience with Windows Vista or the specific Office program, including either formal, instructor-led training or self study using MCAS-approved books, guides, or interactive computer-based materials.

Candidates for MCAP-level certification are expected to successfully complete more complex, business-oriented tasks that involve using the advanced functionality of the combined 2007 Office suite of products, as well as SharePoint. Successful candidates generally have at least six months and may have several years of experience with the programs, including formal, instructor-led training or self study using MCAP-approved materials.

Becoming a Microsoft Certified Application Specialist—Microsoft 2007 Office System

Every MCAS and MCAP certification exam is developed from a set of exam skill standards that are derived from studies of how the 2007 Office programs are used in the workplace. Because these skill standards dictate the scope of each exam, they provide critical information about how to prepare for certification.

Exam	Skill sets
77-601: Using Microsoft Office	Creating and Customizing Documents
Word 2007	Formatting Content
	Working with Visual Content
	Organizing Content
	Reviewing Documents
	Sharing and Securing Content
77-602: Using Microsoft Office	Creating and Manipulating Data
Excel 2007	Formatting Data and Content
	Creating and Modifying Formulas
	Presenting Data Visually
	Collaborating and Securing Data
77-603: Using Microsoft Office	Creating and Manipulating Data
PowerPoint 2007	Formatting Data and Content
	Creating and Modifying Formulas
	Presenting Data Visually
	Collaborating and Securing Data
77-604: Using Microsoft Office	Managing Messaging
Outlook 2007	Managing Scheduling
	Managing Tasks
	Managing Contacts and Personal Contact Information
	Organizing Information
77-605: Using Microsoft Office	Structuring a Database
Access 2007	Creating and Formatting Database Elements
	Entering and Modifying Data
	Creating and Modifying Queries
	Presenting and Sharing
	Managing and Maintaining Databases

To become a Microsoft Certified Application Specialist in one of the 2007 Office programs, you must demonstrate the proficiency in these areas:

Taking a Microsoft Business Certification Exam

The MCAS and MCAP certification exams for Windows Vista and the 2007 Office programs are performance-based and require you to complete business-related tasks using interactive simulation (a digital model) of the Windows Vista operating system or one or more programs in the Office suite.

Test Taking Tips

- Follow all instructions provided in each question completely and accurately.
- Enter requested information as it appears in the instructions, but without duplicating the formatting unless you are specifically instructed to do otherwise.
- Close all dialog boxes before proceeding to the next exam questions unless you are specifically instructed to do otherwise.
- Don't close task panes proceeding to the next exam questions unless you are specifically instructed to do otherwise.
- If you are asked to print a document, spreadsheet, chart, report, or slide, perform the task, but be aware that nothing will actually be printed.
- Don't worry about extra keystrokes or mouse clicks. Your work is scored based on its result, not on the method you use to achieve that result, and not on the time you take to complete the question.
- If your computer becomes unstable during the exam or if a power outage occurs, contact a testing center administrator immediately. The administrator will restart the computer and return the exam to the point where the interruption occurred with your score intact.

Certification Benefits

At the conclusion of the exam, you will receive a score report, which you can print with the assistance of the testing center administrator. If your score meets or exceeds the passing standard (the minimum required score), you will be contacted by e-mail by the Microsoft Certification Program team and mailed a printed certificate within approximately 14 days. The e-mail message you receive will include your Microsoft Certification ID and links to online resources, including the Microsoft Certified Professional site. On this site, you can order a welcome kit and ID card, view and send your certification transcript, build a personalized certification logo, and access other useful and interesting resources, including special offers from Microsoft and affiliated companies.

Using the Logo Builder, you can create a personalized certification logo that includes the MCAS logo and the specific programs in which you have achieved certification. If you achieve MCAS certification in multiple programs, you can include all of them in one logo, like this:



Microsoft Office Access 2007 Certified Microsoft Office Excel 2007 Certified Microsoft Office Outlook 2007 Certified Microsoft Office Powerpoint 2007 Certified Microsoft Office Word 2007 Certified Microsoft Windows Vista Certified

You can include your personalized logo on business cards and other personal promotional materials. This logo attests to the fact that you are proficient in the applications or cross-application skills necessary to achieve the certification.

For More Information

To learn more about the Microsoft Certified Application Specialist exams, the Microsoft Certified Application Professional exams, and related courseware, visit

www.microsoft.com/learning/mcp/msbc

Quick Reference

2 Setting Up a Workbook

To open a workbook

- **1.** Click the **Microsoft Office Button**, and then click **Open**.
- 2. Navigate to the folder that contains the workbook you want to open.
- **3.** Click the workbook, and then click **Open**.

To create a new workbook

- 1. Click the Microsoft Office Button, and then click New.
- 2. In the New Workbook window, click Blank Workbook.
- 3. Click Create.

To save a workbook

- **1.** On the **Quick Access Toolbar**, click the **Save** button.
- **2.** Type a name for the file.
- 3. Click Save.

To set file properties

- 1. Click the Microsoft Office Button, point to Prepare, and then click Properties.
- In the Document Information Panel, click the type of properties you want to set in the Property Views and Options list.
- **3.** Add information describing your file, and then close the **Document Information Panel**.

To define custom properties

- **1.** Click the **Microsoft Office Button**, point to **Prepare**, and then click **Properties**.
- 2. In the Property Views and Options list, click Advanced Properties.
- **3.** In the **Properties** dialog box, click the **Custom** tab.
- **4.** In the **Name** box, type a property name, select the type of data contained in the property, and then type a value for the property.
- 5. Click Add, and then click OK.

To display a worksheet

→ Click the sheet tab of the worksheet you want to display.

To create a new worksheet

- **1.** Right-click the sheet tab of the worksheet that follows the location where you want to insert a worksheet, and then click **Insert**.
- 2. In the Insert dialog box, double-click Worksheet.

To rename a worksheet

- **1.** Double-click the sheet tab of the worksheet you want to rename.
- 2. Type the new name of the worksheet, and then press Enter.

To copy a worksheet to another workbook

- **1.** Open the workbook that will receive the new worksheets.
- 2. Switch to the workbook that contains the worksheets you want to copy, hold down the ^{cm} key, and click the sheet tabs of the worksheets you want to copy.
- **3.** Right-click the selection, and then click **Move Or Copy**.
- 4. Select the Create A Copy check box.
- In the To Book list, click the workbook to which you want the worksheet(s) copied.
- 6. Click OK.

To change the order of worksheets in a workbook

→ Drag the sheet tab of the worksheet you want to move.

To hide a worksheet

- 1. Hold down the ^[m] key and click the sheet tabs of the worksheets you want to hide.
- 2. Right-click any selected worksheet tab, and then click Hide.

To unhide a worksheet

- **1.** Right-click any worksheet tab, and then click **Unhide**.
- 2. Click the worksheet you want to unhide, and then click OK.

To delete a worksheet

- 1. Hold down the end key and click the sheet tabs of the worksheets you want to delete.
- **2.** Right-click the selection, and then click **Delete**.

To change a row's height or column's width

- **1.** Select the rows and columns you want to resize.
- 2. Drag a row or column border until it is the desired size.

To insert a column or row

→ Right-click the column header to the right of, or the row header below, where you want the new column or row to appear, and then click Insert.

To delete columns or rows

- **1.** Select the rows or columns you want to delete.
- **2.** Right-click the selection, and then click **Delete**.

To hide columns or rows

- **1.** Select the rows or columns you want to hide.
- Right-click a row or column header in the selection, and then click Hide.

To unhide columns or rows

- **1.** Click the row or column header of the row above or the column to the left of the rows or columns you want to unhide.
- 2. Hold down the shift key and click the row or column header of the row or column below or to the right of the rows or columns you want to unhide.
- **3.** Right-click the selection, and then click **Unhide**.

To insert a cell

- **1.** Select the cells in the location where you want to insert new cells.
- 2. Display the Home tab.
- **3.** In the **Cells** group, in the **Insert** list, click **Insert Cells**.
- **4.** Select the option representing how you want to move the existing cells to make room for the inserted cells. Then click **OK**.

To delete cells

- **1.** Select the cells you want to delete.
- 2. Display the Home tab.
- 3. In the Cells group, in the Delete list, click Delete Cells.
- **4.** Select the option representing how you want the remaining cells to fill in the deleted space.
- 5. Click OK.

To move a group of cells to a new location

- 1. Select the cells you want to move.
- 2. Point to the outline of the selected cells.
- **3.** Drag the cells to the desired location.

To zoom in or out on a worksheet

- Click the Zoom In control to make your window's contents 10 percent larger.
- Click the Zoom Out control to make your window's contents 10 percent smaller.
- Drag the **Zoom** slider control to the left to zoom out, or to the right to zoom in.

To zoom in or out to a specific zoom level

- **1.** On the **View** tab, in the **Zoom** group, click **Zoom**.
- 2. Select the Custom option.
- **3.** Type a new zoom level in the **Custom** field.
- 4. Click OK.

To change to another open workbook

- **1.** On the **View** tab, in the **Window** group, click **Switch Windows**.
- **2.** Click the name of the workbook you want to display.

To arrange all open workbooks in the program window

- **1.** On the **View** tab, in the **Window** group, click **Arrange All**.
- **2.** Select the desired arrangement.
- 3. Click OK.

To add a button to the Quick Access Toolbar

- Click the Customize Quick Access Toolbar button, and then click More Commands.
- **2.** In the **Choose Commands From** list, click the category from which you want to choose the command.
- 3. Click the command you want to add, and then click the Add button.
- 4. After you finish adding commands, click OK.

To move a button on the Quick Access Toolbar

- Click the Customize Quick Access Toolbar button, and then click More Commands.
- 2. In the active command list, click the command you want to move.
- 3. Click the Move Up button or the Move Down button.

To remove a button from the Quick Access Toolbar

- **1.** Right-click the button you want to remove.
- 2. Click Remove from Quick Access Toolbar.

To hide and display the Ribbon

- To hide the Ribbon, double-click the active tab label.
- To temporarily redisplay the Ribbon, click the tab label you want. Then click any button on the tab, or click away from the tab, to rehide it.
- To permanently redisplay the Ribbon, double-click any tab label.

To hide the formula bar

→ On the View tab, in the Show/Hide group, clear the Formula Bar check box.

To hide column and row headings

→ On the View tab, in the Show/Hide group, clear the Headings check box.

3 Working with Data and Data Tables

To enter a data series using AutoFill

- **1.** Type the first label or value for your list.
- **2.** Drag the fill handle to the cell containing the last label or value in the series.

To change how dragging the fill handle extends a series

- **1.** Type the first label or value for your list.
- 2. Hold down the cm key, and drag the fill handle to the cell containing the last label or value in the series.

To enter data by using AutoComplete

- **1.** Type the beginning of an entry.
- **2.** Press **b** to accept the AutoComplete value.

To enter data by picking from a list

- Right-click a cell in a column with existing values, and then click Pick from Drop-down List.
- 2. Click the item in the list you want to enter.

To copy and paste cells

- **1.** Select the cells you want to copy.
- 2. On the Home tab, in the Clipboard group, click Copy.
- **3.** Click the cells into which you want to paste the values.
- **4.** On the **Home** tab, in the **Clipboard** group, click **Paste**.

To transpose data when pasting

- **1.** Copy the cells you want to transpose.
- **2.** Click the cell in which you want to paste the contents of the top or left copied cell.
- 3. In the Paste list, click Transpose.

To copy and paste a row or column

- **1.** Select the row or column you want to copy.
- 2. On the Home tab, in the Clipboard group, click Copy.
- **3.** Click the header of the row or column into which you want to paste the values.
- **4.** On the **Home** tab, in the **Clipboard** group, click **Paste**.

To find data within a worksheet

- **1.** On the **Home** tab, in the **Editing** group, click **Find & Select**, and then, in the list, click **Find**.
- **2.** Type the text you want to find, and then click **Find Next**.

To replace a value with another value within a worksheet

- **1.** In the **Editing** group, click **Find & Select**, and then, in the list, click **Replace**.
- **2.** Type the text you want to replace.
- 3. Type the text you want to take the place of the existing text, and then click Find Next.
- **4.** For each search term located, click **Find Next**, follow any of these steps, and then repeat:
 - O Click **Replace** to replace the text.
 - Click Find Next to skip this instance of the text and move to the next time it occurs.
 - Click **Replace All** to replace every instance of the text.

To edit a cell's contents by hand

- **1.** Click the cell you want to edit.
- 2. In the formula bar, select the text you want to edit.
- Type the new text, and then press Enter.

To check spelling

- **1.** On the **Review** tab, in the **Proofing** group, click **Spelling**. If you are asked whether you want to save your work, do so.
- **2.** Follow any of these steps:
 - Click **Ignore Once** to ignore the current misspelling.
 - Click **Ignore All** to ignore all instances of the misspelled word.
 - Click Add to Dictionary to add the current word to the dictionary.
 - Click the correct spelling, and then click Change to replace the current misspelling with the correct word.
 - Click the correct spelling, and then click Change All to replace all instances of the current misspelling with the correct word.
 - Click **Cancel** to stop checking spelling.
- **3.** Click **OK** to clear the dialog box that appears after the spelling check is complete.

To look up a word in the Thesaurus

- **1.** Select the word you want to look up.
- On the Review tab, in the Proofing group, click Thesaurus.

To translate a word to another language

- **1.** Select the word you want to look up.
- 2. On the **Review** tab, in the **Proofing** group, click **Translate**.

To create a data table

- **1.** Type your table headers in a single row.
- Type your first data row directly below the header row.
- 3. Click any cell in the range from which you want to create a table.
- **4.** On the **Home** tab, in the **Styles** group, click **Format as Table**.
- 5. Click the desired table style.
- **6.** Verify that Excel identified the data range correctly.
- 7. If your table has headers, select the My table has headers check box.
- 8. Click OK.

To add rows to a data table

- → Click the cell at the bottom right corner of the data table and press to create a new table row.
- → Type data into the cell below the bottom left corner of the data table and press Excel will make the new row part of the data table.

To resize a table

- **1.** Click any cell in the table.
- **2.** Drag the resize handle to expand or contract the table.

To add a Total row to a column

- **1.** Click any cell in the table.
- 2. On the Design tab, in the Table Style Options group, click Total Row.

To change the Total row summary function

- **1.** Click any cell in the table's **Total** row.
- 2. Click the down arrow that appears.
- **3.** Click the desired summary function.

To rename a table

- **1.** Click any cell in the table.
- On the Design tab, in the Properties group, type a new value in the Table Name box.

4 Performing Calculations on Data

To create a named range

- **1.** Select the cells you want to name.
- 2. On the formula bar, click the Name Box.
- **3.** Type the name you want for the range.
- 4. Press Enter

To create a named range from a selection

- **1.** Select the cells you want to name as a range. Be sure either the first or last cell contains the name for the range.
- On the Formulas tab, in the Defined Names group, click Create from Selection.
- Select the check box that represents the cell that contains the range's desired name.
- 4. Click OK.

To display the Name Manager

On the Formulas tab, in the Defined Names group, click Name Manager.

To edit a named range

- **1.** On the **Formulas** tab, in the **Defined Names** group, click **Name Manager**.
- **2.** Click the named range you want to edit, and then click the **Edit** button.
- **3.** Click the **Collapse Dialog** button.
- **4.** Select the cells you want the range to include, and then click **Close**.
To delete a named range

→ In the Edit Name dialog box, click the range you want to delete, and then click the Delete button.

To create a formula

- **1.** Click the cell into which you want to enter a formula.
- **2.** Type =.
- **3.** Type the expression representing the calculation you want to perform.
- 4. Press Enter

To create a formula using the Insert Function dialog box

- **1.** On the **Formulas** tab, in the **Function Library** group, click **Insert Function**.
- **2.** Select the function you want to use, and click **OK**.
- **3.** Fill in the **Function Arguments** dialog box, and click **OK**.

To use a named range in a formula

- **1.** Begin typing the formula.
- **2.** Type the name of the named range as a function's argument.

To refer to a table column or row in a formula

- **1.** Click the cell in which you want to create the formula.
- Type =, followed by the function to include in the formula and a left parenthesis; for example, =SUM(would be a valid way to start.
- **3.** Point to the header of the table column you want to use in the formula. When the mouse pointer changes to a black, downward-pointing arrow, click the column header.
- 4. Type a right parenthesis and press Enter.

To create a formula using Formula AutoComplete

- **1.** Begin typing the formula.
- **2.** Click the desired function from the list that appears.

To create a formula that doesn't change when copied between cells

- **1.** Begin typing the formula.
- **2.** Precede all column and row references with a dollar sign (for example, \$C\$4).

To create a formula that does change when copied between cells

- **1.** Begin typing the formula.
- Type all column and row references without a dollar sign (for example, C4).

To create a conditional formula

- **1.** Click the cell in which you want to enter an *IF* function.
- 2. On the Formulas tab, in the Function Library group, click Logical, and then click IF.
- **3.** Type a conditional statement that evaluates to true or false.
- **4.** Type the text you want to appear if the condition is true.
- **5.** Type the text you want to appear if the condition is false.
- 6. Click OK.

To display cells that provide values for a formula

- **1.** Click the cell you want to track.
- On the Formulas tab, in the Formula Auditing group, click the Trace Precedents button.

To display formulas that use a cell's contents

- **1.** Click the cell you want to track.
- On the Formulas tab, in the Formula Auditing group, click the Trace Dependents button.

To remove tracer arrows

- 1. Click the cell you want to track.
- On the Formulas tab, in the Formula Auditing group, click the Remove Arrows button.

To locate errors in a worksheet

- **1.** On the **Formulas** tab, in the **Formula Auditing** group, click the **Error Checking** button.
- 2. Click the Edit in Formula Bar button.
- **3.** Edit the formula.
- Click the Next button to view the next error.

To step through a formula to locate an error

- **1.** Click the cell with the formula you want to evaluate.
- 2. On the Formulas tab, in the Formula Auditing group, click Evaluate Formula.
- 3. Click Evaluate (one or more times) to move through the formula's elements.
- 4. Click Close.

To watch a value in a cell

- **1.** On the **Formulas** tab, in the **Formula Auditing** group, click **Watch Window**.
- 2. Click Add Watch.
- **3.** Select the cells you want to watch.
- 4. Click Add.
- 5. Click Watch Window.

To delete a watch

- **1.** On the **Formulas** tab, in the **Formula Auditing** group, click **Watch Window**.
- **2.** Click the watch you want to delete.
- 3. Click Delete Watch.
- **4.** Click the **Close** button.

5 Changing Workbook Appearance

To change a cell's font, font style, font color, or background color

- **1.** Select the cells you want to change.
- 2. On the Home tab, use the controls in the Font group to format the cells.

To add a border to a cell

- **1.** Select the cells around which you want to draw a border.
- 2. On the Home tab, in the Font group, click the Border arrow, and then, in the list, click the type of border you want to apply.

To apply a style to a cell

- **1.** Select the cells you want to change.
- 2. On the Home tab, in the Styles group, click Cell Styles.
- **3.** Click a style.

To create a new style

- **1.** On the **Home** tab, in the **Styles** group, click **Cell Styles**.
- 2. Click New Cell Style.
- **3.** Type a new style name.
- **4.** Click **Format**.
- **5.** Specify the formatting you want this style to contain.
- 6. Click OK twice.

To delete a style

- **1.** On the **Home** tab, in the **Styles** group, click **Cell Styles**.
- **2.** Right-click the style you want to delete.
- 3. Click Delete.

To copy a cell's formatting onto another cell

- **1.** Click the cell that contains the format you want to apply to another cell.
- 2. On the Home tab, in the Clipboard group, click the Format Painter button.
- **3.** Select the cells to which you want to apply the formatting.

To apply a workbook theme

- **1.** On the **Page Layout** tab, in the **Themes** group, click **Themes**.
- 2. Click the theme you want to apply.

To change theme fonts, colors, and graphic effects

- Using the Controls on the Page Layout tab, in the Themes group, follow one of these steps:
 - O Click the **Fonts** button and select a new font.
 - Click the **Colors** button and select a new color set.
 - Click the Effects button and select a new default effect.

To save a workbook's format as a new theme

- **1.** Format your worksheet using the colors, fonts, and effects you want to include in your theme.
- 2. On the Page Layout tab, in the Themes group, click Themes.
- 3. Click Save Current Theme.

- **4.** Type a name for your theme.
- 5. Click Save.

To create a new table style

- On the Home tab, in the Styles group, click Format as Table, and then click New Table Style.
- 2. In the Name field, type a name for the table style.
- 3. In the Table Element list, click the element you want to format.
- Click Format, and use the controls in the Format dialog box to format the table element.
- 5. Click OK.
- 6. Repeat as desired to format other elements, and then click OK.

To format a cell value as a phone number

- **1.** On the **Home** tab, click the **Number** dialog box launcher.
- 2. Click Special.
- 3. Click Phone Number.
- 4. Click OK.

To format cell data as a currency value

 On the Home tab, in the Number group, click the Accounting Number Format button.

To select a foreign currency symbol

On the Home tab, in the Number group, click the Accounting Number Format arrow, and then, in the list, click the currency symbol you want to apply.

To add words to a cell's value

- **1.** On the **Home** tab, click the **Number** dialog box launcher.
- 2. Click Custom.
- **3.** Click the format to serve as the base for your custom format.
- **4.** Type the text to appear in the cell, enclosed in quotes (for example, "cases").
- 5. Click OK.

To apply a conditional format to a cell

- **1.** Select the cells you want to change.
- 2. On the Home tab, in the Styles group, click Conditional Formatting.
- 3. Click New Rule.
- 4. Click Format Only Cells That Contain.
- 5. In the Comparison Phrase list, click the comparison phrase you want.
- **6.** Type the constant values or formulas you want evaluated.
- 7. Click Format.
- **8.** Specify the formatting you want and click **OK** twice.

To edit a conditional formatting rule

- **1.** Select the cells that contain the rule you want to edit.
- 2. On the Home tab, in the Styles group, click Conditional Formatting.
- **3.** Click Manage Rules.
- **4.** Click the rule you want to change.
- 5. Click Edit Rule.
- 6. Use the controls to make your changes.
- 7. Click OK twice to save your changes.

To delete a conditional formatting rule

- **1.** Select the cells that contain the rule you want to edit.
- 2. On the Home tab, in the Styles group, click Conditional Formatting.
- **3.** Click Manage Rules.
- **4.** Click the rule you want to delete.
- 5. Click Delete Rule.
- 6. Click OK.

To display data bars in one or more cells

- **1.** Select the cells that contain your data.
- 2. On the Home tab, in the Styles group, click Conditional Formatting.
- **3.** Point to **Data Bars**.
- **4.** Click the data bar option you want to apply.

To display a color scale in one or more cells

- **1.** Select the cells that contain your data.
- 2. On the Home tab, in the Styles group, click Conditional Formatting.
- **3.** Point to Color Scales.
- 4. Click the color scale pattern you want to apply.

To display icon sets in one or more cells

- **1.** Select the cells that contain your data.
- 2. On the Home tab, in the Styles group, click Conditional Formatting.
- 3. Point to Icon Sets.
- 4. Click the icon set you want to apply.

To add a picture to a worksheet

- **1.** On the **Insert** tab, in the **Illustrations** group, click **Picture**.
- **2.** Double-click the picture you want to insert.

To change a picture's characteristics

- **1.** Click the picture.
- 2. Use the controls on the **Format** tab to edit the picture.

6 Focusing on Specific Data by Using Filters

To apply a filter to a worksheet

- **1.** Click any cell in the range you want to filter.
- 2. On the Data tab, in the Sort & Filter group, click Filter.
- 3. Click the filter arrow for the column by which you want to filter your worksheet.
- **4.** Select the check boxes next to the values by which you want to filter the list.
- 5. Click OK.

To clear a filter

- **1.** Click any cell in the filtered range.
- 2. On the Data tab, in the Sort & Filter group, click Clear.

To display the top or bottom values in a column

- **1.** Click the filter arrow at the top of the column by which you want to filter the list.
- 2. Click Number Filters.
- **3.** Click **Top 10**.
- **4.** Select whether to display the top or bottom values.
- 5. Select how many values to display.
- 6. Select whether the value in the middle box represents the number of items to display, or the percentage of items to display.

To create a custom filter

- **1.** Click any cell in the list you want to filter.
- If necessary, on the Data tab, in the Sort & Filter group, click Filter to display the filter arrows.
- **3.** Click the filter arrow of the column for which you want to create a custom filter.
- **4.** Point to **Text Filters**.
- 5. Click Custom Filter.
- **6.** In the **Comparison Operator** list, click the comparison you want to use.
- **7.** Type the value by which you want to compare the values in the selected column.
- 8. Click OK.

To generate a random value

→ Type the formula =RAND().

To generate a random value between two other values

→ Type the formula =RANDBETWEEN(low, high), replacing low and high with the lower and upper bound of values you want to generate.

To summarize data quickly using AutoCalculate

- **1.** Select the cells you want to summarize.
- **2.** View the summary on the status bar, at the bottom right of the Excel program window.

To summarize filtered data using a SUBTOTAL formula

→ Type the formula =SUBTOTAL(function, ref), replacing function with the desired summary function, and ref with the cell range you want so summarize.

To find list rows that contain unique values

- **1.** Select the cells in which you want to find unique values.
- 2. On the Data tab, in the Sort & Filter group, click Advanced.
- 3. Select the Unique Records Only check box.
- 4. Click OK.

To create a validation rule

- **1.** Select the cells you want to validate.
- On the Data tab, in the Data Tools group, click the Data Validation, and then, in the list, click Data Validation.
- **3.** In the **Allow** list, click the type of data you want to allow.
- **4.** In the **Data** list, click the condition for which you want to validate.
- **5.** Type the appropriate values in the boxes.
- 6. Click the Input Message tab.
- 7. Select the Show input message when cell is selected check box.
- **8.** Type the message you want to appear when the cell is clicked.
- 9. Click the Error Alert tab.
- **10.** Select the **Show error alert after invalid data is entered** check box.
- **11.** In the **Style** list, click the icon you want to appear next to your message.
- **12.** Type a title for the error message box.
- **13.** Type the error message you want.
- **14.** Click **OK**.

To identify which cells contain invalid data

→ In the Data Validation list, click Circle Invalid Data.

To turn off data validation in a cell

→ In the Data Validation list, click Clear Invalidation Circles.

7 Reordering and Summarizing Data

To sort a data list

- **1.** Click any cell in the column by which you want to sort your data.
- On the Data tab, in the Sort & Filter group, click the Sort Ascending button or the Sort Descending button.

To sort a data list by values in multiple columns

- **1.** Select a cell in the data list or table you want to sort.
- 2. On the Data tab, in the Sort & Filter group, click Sort.
- **3.** In the **Sort By** list, click the first column by which you want to sort.
- **4.** In the **Sort On** list, click the criteria by which you want to sort.
- 5. In the Order list, click A to Z or Z to A to indicate the order into which the column's values should be sorted.
- 6. Click Add Level.
- If necessary, repeat steps 3–6 to set the columns and order for additional sorting rules.
- 8. Click OK.

To add a sorting level

- **1.** Select a cell in the data list or table you want to sort.
- 2. On the Data tab, in the Sort & Filter group, click Sort.
- **3.** Click **Add Level**, and define the sort using the tools in the dialog box.

To delete a sorting level

- **1.** Select a cell in the sorted data list.
- 2. On the Data tab, in the Sort & Filter group, click Sort.
- **3.** Click the level you want to delete.
- **4.** Click **Delete Level**.

To create a custom list for sorting

- **1.** Click the **Microsoft Office Button**.
- 2. Click Excel Options.
- 3. Click Popular.
- 4. Click Edit Custom Lists.
- 5. Click New List.
- 6. Type the custom list you want. Separate each entry by pressing Enter.
- 7. Click Add.
- Click OK twice to close the Custom Lists dialog box and the Excel Options dialog box.

To sort worksheet data by a custom list of values

- **1.** Click any cell in the list you want to sort.
- 2. On the Data tab, in the Sort & Filter group, click Sort.
- **3.** In the **Sort By** list, click the column you want to sort by.
- **4.** In the **Sort On** list, click the criteria you want to sort by.
- 5. In the Order list, click Custom List.
- **6.** Click a custom list.
- 7. Click OK to close the Custom Lists dialog box.
- 8. Click OK to sort the data list.

To organize worksheet data into groups

- **1.** Click any cell in the range you want to group.
- 2. On the Data tab, in the Outline group, click Subtotal.
- In the At Each Change In list, click the value on which you want to base the subtotals.
- **4.** In the **Use Function** list, click the subtotal function you want to use.
- **5.** Select which columns should have subtotals calculated.
- 6. Click OK.

To show and hide levels of detail in a grouped data list

- → Follow either of these steps:
 - Click the **Show Detail** control on a hidden grouping level to display that level's contents.
 - Click the Hide Detail control to hide rows that are currently displayed.

To remove grouping levels from a data list

- **1.** Click any cell in the subtotaled range.
- 2. On the Data tab, in the Outline group, click Subtotal, and then click Remove All.

To look up data in a data list

- **1.** Create a sorted data list or data table that has column headers.
- 2. Create a VLOOKUP formula of the form =VLOOKUP(lookup_value, table_array, col_index_num, range_lookup).
- **3.** Type a value in the cell referred to by the *lookup_value* argument.

8 Combining Data from Multiple Sources

To create a workbook template

- **1.** Click the **Microsoft Office Button**, and click **Save As**.
- 2. In the Save As Type list, click Excel Template.
- **3.** Type the name you want for the template.
- 4. Click Save.

To create a new workbook that is based on a template

- **1.** Click the **Microsoft Office Button**, and click **New**.
- 2. Click **Installed Templates**, and double-click the template you want to use to create your workbook.
- 3. Click the Microsoft Office Button, and click Save As.
- **4.** Type a name for the file.
- 5. In the Save As Type list, click Excel Workbook.
- 6. Click Save.

To create a worksheet template

- **1.** Remove all but one worksheet from a workbook, and format the worksheet as you want the template to appear.
- 2. Click the Microsoft Office Button, and click Save As.
- 3. In the Save As Type list, click Excel Template.
- **4.** Type the name you want for the template.
- 5. Click Save.

To add a template-based worksheet to a workbook

- **1.** Right-click a sheet tab, and then click **Insert**.
- 2. On the Spreadsheet Solutions tab, click the template you want to use.
- 3. Click OK.

To create a link between two cells

- **1.** In the cell you want to be target of the link, type =, but do not press [Enter].
- 2. On the View tab, in the Window group, click Switch Windows, and then click the workbook that contains the data for your target cell.
- 3. Click the cell that contains the data, and press Enter.

To open multiple workbooks simultaneously

- **1.** Open the workbooks you want to open simultaneously.
- 2. On the View tab, in the Window group, click Save Workspace.
- **3.** Type a name for the workspace.
- 4. Click Save.

9 Analyzing Alternative Data Sets

Define an alternative data set

- On the Data tab, in the Data Tools group, click What-If Analysis, and then click Scenario Manager.
- **2.** Click **Add**.
- **3.** In the **Scenario Name** field, type a name for the scenario.
- 4. At the right edge of the Changing cells field, click the Contract Dialog button.
- 5. Select the cells to change, and then click the **Expand Dialog** button.

- 6. Click OK.
- 7. Type new values for the cells, and then click OK.
- 8. Click Close.

To change a worksheet's values using a scenario

- On the Data tab, in the Data Tools group, click What-If Analysis, and then click Scenario Manager.
- **2.** Click the scenario you want to display.
- **3.** Click **Show**.

To summarize the values in multiple scenarios

- On the Data tab, in the Data Tools group, click What-If Analysis, and then click Scenario Manager.
- 2. Click Summary.
- **3.** Verify that the **Scenario summary** option is selected and that the correct cells appear in the **Result cells** field.
- 4. Click OK.

To determine the required inputs for a formula to generate a specific result

- On the Data tab, in the Data Tools group, click What-If Analysis, and then click Goal Seek.
- 2. In the Set cell field, type the address of the cell that contains the formula you want to generate a target value.
- **3.** In the **To value** field, type the target value.
- 4. In the By changing cell field, type the cell that contains the value you want to vary.
- 5. Click OK.
- 6. Click Cancel to close the Goal Seek dialog box without saving your changes.

To analyze data by using Descriptive Statistics

- **1.** On the **Data** tab, in the **Analysis** group, click **Data Analysis**.
- 2. Click Descriptive Statistics, and then click OK.
- 3. Click in the Input Range field, and then select the cells you want to summarize.
- **4.** Select the **Summary Statistics** check box.
- 5. Click OK.

10 Creating Dynamic Lists by Using PivotTables

To create a PivotTable from a data list

- **1.** Click any cell in the data table.
- 2. On the Insert tab, in the Tables group, click PivotTable.
- **3.** Verify that the proper table name or cell range appears in the **Table/Range** field and that the **New Worksheet** option is selected.
- 4. Click OK.
- **5.** In the **PivotTable Field List** task pane, drag the available fields to the desired spots in the PivotTable.

To pivot a PivotTable

→ In the PivotTable Field List task pane, drag a field header to a new position.

To filter a PivotTable

- **1.** On the PivotTable worksheet, click any cell in the PivotTable.
- In the PivotTable Field List task pane's Choose fields to add to report section, click the target field header. Then click the down arrow next to the field header and clear the (Select All) check box.
- 3. Select the check boxes of the values you do want to show, and then click OK.

To show or hide the PivotTable Field List task pane

- **1.** Click any cell in the PivotTable.
- 2. On the Options tab, in the Show/Hide group, click the Field List button.

To show or hide levels of detail within a PivotTable

- → In the body of the PivotTable, follow either of these steps:
 - Click the **Show Detail** control to display hidden rows.
 - Click the **Hide Detail** control to hide rows displayed in the PivotTable.

To rename a PivotTable

- **1.** On the PivotTable worksheet, click any cell in the PivotTable.
- On the Options contextual tab, in the PivotTable group, in the PivotTable Name field, type a new name for the PivotTable.

To control how and where subtotals and grand totals appear in your PivotTable

- **1.** On the PivotTable worksheet, click any cell in the PivotTable.
- **2.** On the **Design** contextual tab, in the **Layout** group, click **Subtotals**, and then click the option representing how you want subtotals to appear in your PivotTable.
- **3.** On the **Design** contextual tab, in the **Layout** group, click **Grand Totals**, and then click the option representing how you want grand totals to appear in your PivotTable.

To change the PivotTable summary function

→ Right-click any data cell in the PivotTable, point to Summarize Data By, and then click the desired summary function.

To apply a number format to a PivotTable

- **1.** On the PivotTable worksheet, right-click any data cell, and then click **Number Format**.
- 2. In the Category list, click Number.
- **3.** Use the controls on the **Number** tab to create your format.
- 4. Click OK.

To apply a conditional format to a PivotTable

- **1.** Select the cell ranges you want to format.
- 2. On the Home tab, in the Styles group, click Conditional Formatting, point to the type of conditional format you want to use, and then click the specific format you want to apply.

To apply a PivotTable Style to a PivotTable

- **1.** Click any cell in the PivotTable.
- 2. On the **Design** tab, in the **PivotTable Styles** gallery, click the style you want to apply to the PivotTable.

To create a new PivotTable style

- **1.** Click any cell in the PivotTable.
- 2. On the **Design** contextual tab, in the **PivotTable Styles** group, click the **More** button at the bottom-right corner of the style gallery.
- 3. Click New PivotTable Style.

- 4. In the Name field, type a name for the style.
- **5.** In the **Table Element** list, click the element you want to change, and then click **Format**.
- 6. Use the controls in the Format Cells dialog box to format the element.
- 7. If desired, repeat step 6 for other elements.
- 8. Click OK twice.

To import data from an external source

- **1.** On the **Data** tab, in the **Get External Data** group, click **From Text**.
- 2. Navigate to the folder that contains the source file, and double-click the file.
- **3.** Verify that the **Delimited** option is selected, and then click **Next**.
- **4.** In the **Delimiters** section, verify that the correct check box is selected, and also verify that the data displayed in the **Data preview** area reflects the structure you expect.
- 5. Click Finish.

11 Creating Charts and Graphics

To create a chart

- **1.** Click any cell in the data table.
- **2.** On the **Insert** tab, in the **Charts** group, click the desired chart type, and then click the desired chart subtype.

To change how Excel plots your data

- **1.** On the **Design** tab, in the **Data** group, click **Select Data**.
- **2.** In the Legend Entries (Series) area, click the data series you want to change.
- 3. Click Remove.
- **4.** In the Horizontal (Categories) Axis Labels area, click Edit.
- 5. Select the cells you want to plot on this axis, and then click **OK**.

To remove a series from an axis

- **1.** On the **Design** tab, in the **Data** group, click **Select Data**.
- In the Legend Entries (Series) area, click the data series you want to remove from the chart.
- 3. Click Remove.

To add a series to an axis

- **1.** On the **Design** tab, in the **Data** group, click **Select Data**.
- 2. In the Legend Entries (Series) area, click Add.
- 3. In the Series name box, type a name for the series.
- 4. Click in the Series values box, and select the cells to provide values for the series.
- 5. Click OK.

To move a chart to its own worksheet

- **1.** Click the chart.
- 2. On the Design tab, in the Location group, click Move Chart.
- **3.** Select the target sheet for the chart, and click **OK**.

To apply a Chart Style to a chart

- **1.** Click the chart.
- 2. On the Design tab, in the Chart Styles gallery, click the style you want to apply.

To apply a different layout to a chart

- **1.** Click the chart.
- 2. On the **Design** tab, in the **Chart Layouts** gallery, click the layout you want to apply.

To change the appearance of a chart's gridlines

- **1.** Click the chart.
- On the Layout tab, in the Axes group, click Gridlines, and then click the gridline settings you want.

To select a chart element for formatting

- 1. Click the chart.
- **2.** On the **Layout** tab, in the **Current Selection** group, click the **Chart Elements** arrow and then, in the list, click the element you want to select.

To select a data point in a series

- **1.** Click the chart.
- 2. Click any point in the data series.
- **3.** Click the specific data point you want to select.

To format a chart element

- **1.** Select the chart element you want to format.
- 2. On the Layout tab, in the Current Selection group, click Format Selection.
- 3. Use the controls in the Format dialog box to format the chart element.

To save a chart as a chart template

- **1.** Click the chart.
- 2. On the Design tab, in the Type group, click Save As Template.
- **3.** Type a name for the template.
- 4. Click Save.

To add a trendline to a chart

- **1.** Select the chart.
- On the Layout contextual tab, in the Analysis group, click Trendline, and then click More Trendline Options.
- 3. In the Trend/Regression Type area, click Linear.
- In the Forecast area, in the Forward field, type the number of periods you want to project.
- 5. Click Close.

To create a PivotChart

- **1.** On the data worksheet, click any cell in the data table.
- On the Insert tab, in the Tables group, click the PivotTable arrow and then, in the list, click PivotChart.
- **3.** Verify that the correct data source appears in the **Table/Range** field and that the **New Worksheet** option is selected.
- 4. Click OK.

To change the chart type of a chart or PivotChart

- **1.** Click the chart.
- 2. On the Design contextual tab, in the Type group, click Change Chart Type.
- **3.** Click the desired chart type and subtype.
- 4. Click OK.

To create a SmartArt diagram

- **1.** On the **Insert** tab, in the **Illustrations** group, click **SmartArt**.
- **2.** Click the desired graphic type.
- **3.** Click the desired subtype, and then click **OK**.

To add text to a diagram shape

→ Click the shape, and type the text.

To add a shape to a diagram

- Click the shape above or to the right of where you want the new shape to appears.
- On the Design contextual tab, in the Create Graphic group, click the Add Shape arrow and then, in the list, click the option representing where you want the shape to appear.

To change the format of a diagram shape

- **1.** Right-click the shape, and then click **Format Shape**.
- Use the controls in the Format Shape dialog box to change the shape's appearance.

12 Printing

To display a worksheet in Page Layout View

→ On the View tab, in the Workbook Views group, click Page Layout.

To add a header or footer to a worksheet

- **1.** On the **View** tab, in the **Workbook Views** group, click **Page Layout**.
- 2. Follow either of these steps:
 - At the top of the worksheet, click the target header section.
 - At the bottom of the worksheet, click the target footer section.
- 3. In the active header or footer section, type the text that you want to have appear, and press Enter.

To create an AutoHeader

- 1. On the View tab, in the Workbook Views group, click Page Layout.
- 2. At the top of the worksheet, click Click to add header.
- **3.** Click in the target header section.
- On the Design contextual tab, in the Header & Footer Elements group, click the auto text you want to add.

To add an image to a header or footer

- 1. On the View tab, in the Workbook Views group, click Page Layout.
- 2. Click the desired header or footer section.
- On the Design contextual tab, in the Header & Footer Elements group, click Picture.
- **4.** Double-click the picture you want to add to the header or footer.

To format an image in a header or footer

- **1.** Click the image in the footer and then, on the **Design** contextual tab, click **Format Picture**.
- **2.** Use the controls in the **Format Picture** dialog box to change the picture's appearance.
- 3. Click OK.

To change a worksheet's margins

→ On the Page Layout tab, in the Page Setup group, click Margins, and then click the desired margins, or click Custom Margins to enter the margins manually.

To change a worksheet's page orientation

On the Page Layout tab, in the Page Setup group, click Orientation, and then click the desired orientation.

To print a worksheet on a specific number of pages

- **1.** On the **Page Layout** tab, in the **Scale to Fit** group, click the **Width** arrow and then, in the list, click the desired number of pages.
- 2. On the Page Layout tab, in the Scale to Fit group, click the Height arrow and then, in the list, click the desired number of pages.

To preview a worksheet before printing

 While displaying the worksheet you want to preview, click the Microsoft Office Button, point to Print, and then click Print Preview.

To add a page break to a worksheet

- **1.** Click the row or header below or to the right of where you want the page break to appear.
- 2. On the Page Layout tab, in the Page Setup group, click Breaks, and then click Insert Page Break.

To remove a page break from a worksheet

- **1.** Click the row or header below or to the right of the page break.
- On the Page Layout tab, in the Page Setup group, click Breaks, and then click Remove Page Break.

To change the order in which worksheets print

- **1.** On the **Page Layout** tab, click the **Page Setup** dialog box launcher.
- 2. If necessary, click the Sheet tab.
- 3. In the Page order section, click the desired option.
- 4. Click OK.

To print a worksheet

→ Click the Microsoft Office Button, and then click Print.

To print part of a worksheet

- 1. On the Page Layout tab, in the Page Setup group, click Print Titles.
- 2. At the right edge of the Columns to repeat at left field, click Collapse Dialog.
- Select the column header of the columns you want to repeat.
- **4.** At the right edge of the **Columns to repeat at left** field, click the **Expand Dialog** button.

To center material on the printed page

- **1.** On the **Page Layout** tab, click the **Page Setup** dialog box launcher.
- **2.** On the **Margins** page of the dialog box, select the **Horizontally** and **Vertically** check boxes.
- 3. Click OK.

To print a chart

- **1.** Select the chart.
- 2. Click the Microsoft Office Button, and then click Print.
- **3.** Verify that the **Selected Chart** option is selected, and then click **OK** (or click **Cancel** if you don't want to print the chart).

13 Automating Repetitive Tasks by Using Macros

To save a workbook as a macro-enabled workbook

- **1.** Click the **Microsoft Office Button**, and then click **Save As**.
- 2. In the Save as type list, click Excel Macro-Enabled Workbook (*.xlsm).
- 3. Click Save.

To enable macros to run in a workbook

- **1.** On the **Message Bar**, click **Options**.
- 2. Click Enable this content.
- 3. Click OK.

To view a macro

- **1.** On the **View** tab, in the **Macros** group, click the **Macros** arrow and then, in the list, click **View Macros**.
- 2. Click the macro you want to view, and then click Edit.

To step through a macro

- **1.** In the **Macros** list, click **View Macros**.
- 2. Click the macro you want to view, and then click **Step Into**.
- **3.** Press **FB** to execute the first macro step.

To run a macro

- **1.** In the Macros list, click View Macros.
- 2. Click the desired macro, and then click Run.

To record a macro

- **1.** In the **Macros** list, click **Record Macro**.
- **2.** In the **Record Macro** dialog box, delete the existing name from the **Macro name** box, and then type a new name for the macro.
- 3. Click OK.
- **4.** Perform the actions you want to record.
- 5. In the Macros list, click Stop Recording.

To edit a macro

- 1. In the Macros list, click View Macros.
- 2. Click the macro you want to view, and then click Edit.
- **3.** Make any desired changes.
- 4. Click the Visual Basic Editor Close button.

To run a macro when a Quick Access Toolbar button is clicked

- **1.** On the **Quick Access Toolbar**, click the **Customize Quick Access Toolbar** button, and then click **More Commands**.
- 2. If necessary, in the Choose commands from list, click the desired category.
- **3.** In the **Commands** panel, click the desired command.
- **4.** Click **Add**.
- 5. In the Choose commands from list, click Macros.
- **6.** In the **Commands** panel, click the macro you want to run.
- 7. Click Add, and then cick OK.

To change the appearance of a Quick Access Toolbar button

- **1.** On the **Quick Access Toolbar**, click the **Customize Quick Access Toolbar** button, and then click **More Commands**.
- **2.** In the **Customize Quick Access Toolbar** command panel, click the command you want to change.
- 3. Click Modify.
- **4.** Click the desired button design.
- **5.** Click **OK** twice to close the **Modify Button** dialog box and the **Excel Options** dialog box.

To run a macro when a shape is clicked

- **1.** Right-click the shape, and then click **Assign Macro**.
- 2. Click the macro you want to assign to the shape, and then click OK.

To run a macro when a workbook is opened

→ Name the macro Auto_Open.

14 Working with Other Microsoft Office System Programs

To link to another Microsoft Office system document

- **1.** On the **Insert** tab, in the **Text** group, click the **Insert Object** button.
- 2. On the Create from File tab of the Object dialog box, click Browse.
- 3. Click the file to which you want to link, and then click Insert.
- 4. Select the Link to file check box, and then click OK.

To embed another document in a workbook

- **1.** On the **Insert** tab, in the **Text** group, click **Object**.
- 2. On the Create from File tab of the Object dialog box, click Browse.
- 3. Click the file to which you want to link, and then click Insert.
- 4. Click OK.

To view a linked or embedded document

→ Double-click the document.

To create a hyperlink

- **1.** On the **Insert** tab, in the **Links** group, click **Hyperlink**.
- Click the type of hyperlink you want to create.
- **3.** If necessary, use the controls in the **Look in** box to locate the file or location to which you want to link.
- **4.** In the file list, click the hyperlink's target.
- 5. In the Text to display box, type the text you want displayed.
- 6. Click OK.

To edit a hyperlink

- **1.** Right-click the cell that contains the hyperlink, and then click **Edit Hyperlink**.
- 2. Edit the values in the Hyperlink dialog box.
- 3. Click OK.

To delete a hyperlink

→ Right-click the cell that contains the hyperlink, and then click **Delete Hyperlink**.

To paste a chart into another document

- **1.** Right-click the chart, and then click **Copy**.
- **2.** Open the destination document.
- **3.** Right-click the place you want to paste the chart, and then click **Paste**.
- **4.** In the **Paste Options** list, click the desired option.

15 Collaborating with Colleagues

To turn on workbook sharing

- 1. On the Review tab, in the Changes group, click Share Workbook.
- 2. Select the Allow changes by more than one use at the same time check box.
- 3. Click OK.

To add a comment to a cell

- **1.** Click the cell where you want the comment to appear.
- 2. On the Review tab, in the Comments group, click New Comment.
- **3.** Type the comment text, and then click outside the body of the comment.

To edit a comment

- **1.** Click the cell that contains the comment.
- 2. On the Review tab, in the Comments group, click Edit Comment.
- **3.** Type the new comment text, and then click outside the body of the comment.

To delete a comment

- **1.** Click the cell that contains the comment.
- 2. On the **Review** tab, in the **Comments** group, click **Delete Comment**.

To track changes made to a workbook

- **1.** On the **Review** tab, in the **Changes** group, click **Track Changes**, and then in the list click **Highlight Changes**.
- 2. Select the Track changes while editing. This also shares your workbook check box.
- **3.** Click **OK**.

To accept and reject changes

- **1.** In the **Track Changes** list, click **Accept/Reject Changes**.
- 2. Click OK.
- For each change, click Accept to accept the change, or click Reject to reject the change. You can also click Accept All or Reject All.

To record workbook changes on a History worksheet

- **1.** In the **Track Changes** list, click **Highlight Changes**.
- 2. Select the List changes on a new sheet check box, and click OK.

To require a password to open a workbook

- **1.** Click the **Microsoft Office Button**, and then click **Save As**.
- 2. Click the **Tools** button, and then click **General Options**.
- **3.** Type a password in the **Password to open** box.
- **4.** Type a different password in the **Password to modify** box.
- 5. In the General Options dialog box, click OK.
- 6. In the Reenter password to proceed box, type the first password, and then click OK.
- 7. In the **Reenter password to modify** box, type the second password, and then click **OK**.

To password protect a worksheet

- **1.** On the **Review** tab, in the **Changes** group, click **Protect Sheet**.
- **2.** In the **Password to unprotect sheet** box, type a password.
- Clear the Select locked cells and Select unlocked cells check boxes, and then click OK.
- **4.** In the **Reenter password to proceed** box, type the password you entered before, and then click **OK**.

To password protect a cell range

- **1.** On the **Review** tab, in the **Changes** group, click **Allow Users to Edit Ranges**.
- 2. In the Allow users to edit ranges dialog box, click New.
- 3. In the Title box, type a title for the range.
- **4.** In the **Range password** box, type a password, and then click **OK**.

To sign a workbook using a digital signature

- Click the Microsoft Office Button, click Prepare, and then click Add a Digital Signature.
- 2. Click OK to clear the dialog box that appears.
- **3.** In the **Purpose for signing this document** box, type a reason.
- **4.** Verify that your certificate appears in the **Signing as** area of the dialog box, and then click **Sign**.
- 5. Click OK.

To publish a workbook to the Web

- **1.** Click the **Microsoft Office Button**, and then click **Save As**.
- 2. In the File name box, type a name for the file.
- 3. In the Save as type list, click Web Page.
- **4.** Click **Save**.
- 5. Click Yes to save the workbook as a Web file.

Chapter at a Glance





In this chapter, you will learn to:

- ✓ Format cells.
- ✓ Define styles.
- Apply workbook themes and table styles.
- Make numbers easier to read.
- ✓ Change the appearance of data based on its value.
- ✓ Add images to worksheets.

Entering data into a workbook efficiently saves you time, but you must also ensure that your data is easy to read. Microsoft Office Excel 2007 gives you a wide variety of ways to make your data easier to understand; for example, you can change the font, character size, or color used to present a cell's contents. Changing how data appears on a work-sheet helps set the contents of a cell apart from the contents of surrounding cells. The simplest example of that concept is a data label. If a column on your worksheet has a list of days, you can set a label (for example, Day) apart easily by presenting it in bold type that's noticeably larger than the type used to present the data to which it refers. To save time, you can define a number of custom formats and then apply them quickly to the desired cells.

You might also want to specially format a cell's contents to reflect the value in that cell. For instance, Jenny Lysaker, the chief operating officer of Consolidated Messenger, might want to create a worksheet that displays the percentage of improperly delivered packages from each regional distribution center. If that percentage exceeds a threshold, she could have Excel 2007 display a red traffic light icon, indicating that the center's performance is out of tolerance and requires attention.

In addition to changing how data appears in the cells of your worksheet, you can also use headers and footers to add page numbers, current data, or graphics to the top and bottom of every printed page.

In this chapter, you'll learn how to change the appearance of data, apply existing formats to data, make numbers easier to read, change data's appearance based on its value, make printouts easier to follow, and position your data on the printed page.

See Also Do you need only a quick refresher on the topics in this chapter? See the Quick Reference section at the beginning of this book.



Important Before you can use the practice files in this chapter, you need to install them from the book's companion CD to their default location. See "Using the Companion CD" at the beginning of this book for more information.

Formatting Cells

Excel 2007 spreadsheets can hold and process lots of data, but when you manage numerous spreadsheets it can be hard to remember from a worksheet's title exactly what data is kept in that worksheet. Data labels give you and your colleagues information about data in a worksheet, but it's important to format the labels so that they stand out visually. To make your data labels or any other data stand out, you can change the format of the cells in which the data is stored.

	Α	В	С	D	E
1					
2					
3					
4		Call Volume			
5		Northeast	13769		
6		Atlantic	19511		
7		Southeast	11111		
8		North Central	24972		
9		Midwest	11809		
10		Southwest	20339		
11		Mountain West	20127		
12		Northwest	12137		
13		Central	20047		

Most of the tools you need to change a cell's format can be found on the Home tab. You can apply the formatting represented on a button by selecting the cells you want to apply the style to and then clicking the appropriate button. If you want to set your data labels apart by making them appear bold, click the Bold button. If you have already made a cell's contents bold, selecting the cell and clicking the Bold button will remove the formatting.

Tip Deleting a cell's contents doesn't delete the cell's formatting. To delete a selected cell's formatting, on the **Home** tab, in the **Editing** group, click the **Clear** button, and then click **Clear Formats**.

Buttons in the Home tab's Font group that give you choices, such as the Font Color control, have an arrow at the right edge of the button. Clicking the arrow displays a list of options accessible for that control, such as the fonts available on your system or the colors you can assign to a cell.

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3		Call Volume	Standard Colors										
5		Northeast											
6		Atlantic	More Colors										
7		Southeast	11111										
8		North Central	24972										
9		Midwest	11809										
10		Southwest	20339										
11		Mountain West	20127										
12		Northwest	12137										-
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Another way you can make a cell stand apart from its neighbors is to add a border around the cell. To place a border around one or more cells, select the cells, and then choose the border type you want by selecting the type of border to apply from the Border list in the Font group. Excel 2007 does provide more options—to display the full range of border types and styles, in the Border list, click More Borders. The Border tab of the Format Cells dialog box contains the full range of tools you can use to define your cells' borders.

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······ -·-·	<u>None Quaine</u> Inside	
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	OK Car	icel

Another way you can make a group of cells stand apart from its neighbors is to change its shading, or the color that fills the cells. On a worksheet that tracks total package volume for the past month, Jenny Lysaker could change the fill color of the cells holding her data labels to make the labels stand out even more than by changing the formatting of the text used to display the labels.

Tip You can display the most commonly used formatting controls by right-clicking a selected range. When you do, a Mini toolbar containing a subset of the Home tab formatting tools appears above the shortcut menu.

If you want to change the attributes of every cell in a row or column, you can click the header of the row or column you want to format and then select your desired format.

One task you can't perform using the tools on the Home tab is to change the standard font for a workbook, which is used in the Name box and on the formula bar. The standard font when you install Excel 2007 is Calibri, a simple font that is easy to read on a computer screen and on the printed page. If you want to choose another font, click the Microsoft Office Button, and then click Excel Options. On the Popular page of the Excel Options dialog box, set the values in the Use This Font and Font Size list boxes to pick your new display font. **Important** The new standard font doesn't take effect until you exit Excel 2007 and restart the program.

In this exercise, you will emphasize a worksheet's title by changing the format of cell data, adding a border to a cell range, and then changing a cell range's fill color. After those tasks are complete, you will change the default font for the workbook.

USE the *VehicleMileSummary* workbook. This practice file is located in the *Documents*\ *Microsoft Press**Excel2007SBS**Appearance* folder.

BE SURE TO start Excel 2007 before beginning this exercise.

OPEN the *VehicleMileSummary* workbook.

- **1.** Click cell D2.
- 2. On the Home tab, in the Font group, click the Bold button.

Excel 2007 displays the cell's contents in bold type.

In the Font group, click the Font Size arrow, and then in the list, click 18.
 Excel 2007 increases the size of the text in cell D2.

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7		V102	113	106	111	116	119	97							
8		V103	87	154	124	128	111	100							
9		V104	137	100	158	96	127	158							
10		∨105	86	132	154	97	154	165							
11		∨106	159	163	155	101	89	160							
12		V107	111	165	155	92	91	94							
13		V108	101	162	123	87	93	140							
14		∨109	164	159	116	97	149	120							
15		V110	100	107	143	144	152	132							
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Font Size

- **4.** Select cells B5 and C4.
- On the Home tab, in the Font group, click the Bold button.
 Excel 2007 displays the cells' contents in bold type.
- 6. Select the cell ranges B6:B15 and C5:H5.
- 7. In the Font group, click the Italic button.

Excel 2007 displays the cells' contents in italic type.

	A	В	C	D	E	F	G	н	
1									
2									
3									
4			Day						
5		VehicleID	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
6		V101	159	144	124	108	125	165	
7		V102	113	106	111	116	119	97	
8		V103	87	154	124	128	111	100	
9		V104	137	100	158	96	127	158	
10		V105	86	132	154	97	154	165	
11		V106	159	163	155	101	89	160	
12		V107	111	165	155	92	91	94	
13		V108	101	162	123	87	93	140	
14		V109	164	159	116	97	149	120	
15		V110	100	107	143	144	152	132	
16									

- 8. Select the cell range C6:H15.
- Border
- **9.** In the Font group, click the Border arrow, and then in the list, click Outside Borders.

Excel 2007 places a border around the outside edge of the selected cells.

- **10.** Select the cell range B4:H15.
- **11.** In the **Border** list, click **Thick Box Border**.

Excel 2007 places a thick border around the outside edge of the selected cells.

12. Select the cell ranges B4:B15 and C4:H5.



13. In the **Font** group, click the **Fill Color** arrow, and then in the **Standard Colors** section of the color palette, click the yellow button.



	11) = (11 -) =				Vehicle	viileSummar	y - Microsoft	Excel					-	σx
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Clipboard		font		Alignment	9	Num	ber 🐄		Styles		Cells		Editing	
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4		Day												
5	VehicleID	Monday	Tuesday \	Vednesday 1	hursday	Friday 3	Saturday							
6	V101	159	144	124	108	125	165							
/	V102	113	105	111	116	119	97							
0	V103	127	100	124	120	111	150							
10	V105	100	132	154	97	154	165							
11	V105	159	163	155	101	89	160							
12	V107	111	165	155	92	91	94							
13	V108	101	162	123	07	93	140							
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Excel 2007 changes the selected cells' background color to yellow.



The Excel Options dialog box opens.

14. Click the Microsoft Office Button, and then click Excel Options.

- Microsoft Office Button
- **15.** If necessary, click **Popular** to display the **Popular** tab.
- **16.** In the When creating new workbooks section, in the Use this font list, click Verdana.

Verdana appears in the Use This Font field.

17. Click Cancel.

The Excel Options dialog box closes without saving your change.

CLOSE the *VehicleMileSummary* workbook.
Defining Styles

As you work with Excel 2007, you will probably develop preferred formats for data labels, titles, and other worksheet elements. Instead of adding the format's characteristics one element at a time to the target cells, you can have Excel 2007 store the format and recall it as needed. You can find the predefined formats available to you by displaying the Home tab, and then in the Styles group, clicking Cell Styles.

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Paste	X Ca V			≫~- ∰ (eneral \$ · % • 50	Conditional Formatting *	Format Cell as Table * Styles *	Tinsert * Σ * M Delete * 3 * Format * 2 *	Sort & Find & Filter * Select *
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7		Southeast	11111	20	% - Accent1	20% - Accenta	20% - Accent3	20% - Accent4	20% - Accent5	20% - Accent6
8		North Central	24972	40	% - Accent1	40% - Accent2	40% - Accent3	40% - Accent4	40% - Accent5	40% - Accent6
9		Midwest	11809		0/ 0	CON	200V A	C00/ 0 0	CON Annahr	CON
10		Southwest	20339	50	% - Accent1	60% - Accenta	e 60% Accenta	60% - Accent4	60% - Accents	60% - Accente
11		Mountain West	20127	A	cent1	Accent2	Accent3	Accent4	Accent5	Accent6
12		Northwest	12137	N	umber Format					
13		Central	20047	Co	omma	Comma[0]	Currency	Currency [0]	Percent	
14				114	New Cell Stul	e				
16				Ť	Merge Styles					
17										
18										
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21										
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26										
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Clicking a style from the Cell Styles gallery applies the style to the selected cells, but Excel 2007 goes a step beyond previous versions of the program by displaying a live preview of a format when you point to it. If none of the existing styles is what you want, you can create your own style by displaying the Cell Styles gallery and, at the bottom of the gallery, clicking New Cell Style to display the Style dialog box. In the Style dialog box, type the name of your new style in the Style Name field, and then click Format. The Format Cells dialog box opens.

Format Cells	? 🗙
Number Alignment Font Border Fill	Protection
Eont:	Font style: <u>S</u> ize:
Calibri	Bold 18
Tr Cambria (Headings) A Tr Calibri (Body) Tr Tr Agency FB Tr Tr Algerian Tr Tr Algerian Tr	Regular Italic Bold Italic 20 22
Underline:	Color:
None	Normal font
Effects	Preview
Strikethrough	AaBbCcYyZz
This is a TrueType font. The same font will be used o	n both your printer and your screen.
	OK Cancel

After you set the characteristics of your new style, click OK to make your style available in the Cell Styles gallery. If you ever want to delete a style, display the Cell Styles gallery, right-click the style, and then click Delete.

The Style dialog box is quite versatile, but it's overkill if all you want to do is apply formatting changes you made to a cell to the contents of another cell. To do so, use the Format Painter button, found in the Home tab's Clipboard group. Just click the cell that has the format you want to copy, click the Format Painter button, and select the target cells to have Excel 2007 apply the copied format to the target range.

In this exercise, you will create a style, apply the new style to a data label, and then use the Format Painter to apply the style to the contents of another cell.

USE the *HourlyExceptions* workbook. This practice file is located in the *Documents*\ *Microsoft Press\Excel2007SBS\Appearance* folder. **OPEN** the *HourlyExceptions* workbook.



 On the Home tab, in the Styles group, click Cell Styles, and then click New Cell Style. The Style dialog box opens.

Style	? 🗙
Style name: St	yle 1
	Format
Style Includes (B	y Example)
Vumber	h:mm;@
📝 Alignment	General, Bottom Aligned
🔽 <u>F</u> ont	Calibri (Body) 11, Text 1
<u>▼</u> Border	No Borders
📝 Fill	No Shading
Protection	Locked
	OK Cancel

- 2. In the Style name field, type Crosstab Column Heading.
- **3.** Click the **Format** button.

The Format Cells dialog box opens.

4. Click the **Alignment** tab.

Format Cells	? 🗙
Number Alignment Font Border Fill Protection	
Text alignment Horizontal: General Indent: Yertical: Bottom Justify distributed Text control Wrap text Shrink to fit Marken collec	Orientation T e x t T ext T ext • • • • • • • • • • • • •
Right-to-left Iaxt direction: Context	OK Cancel

5. In the Horizontal list, click Center.

Center appears in the Horizontal field.

- 6. Click the Font tab.
- 7. In the Font style list, click Italic.

The text in the Preview pane appears in italicized text.

Format Cells		? ×
Number Alignment Font Border Fill	Protection	
Eont: Calibri Ty Cambria (Headings) Ty Agency FB Ty Aharoni Ty Agerian	Font style: Size: Italic 11 Regular 8 Italic 9 Bold 11 Bold Italic 11 12	^
T Andalus	Color:	*
None		
Effects	Preview	l
Strikethrough Superscript Subscript	AaBbCcYyZz	
This is a TrueType font. The same font will be used or	both your printer and your screen.	
	ОК	Cancel

8. Click the Number tab.

The Number tab of the Format Cells dialog box is displayed.

9. In the Category list, click Time.

The available time formats appear.

- **10.** In the **Type** pane, click **1:30** PM.
- **11.** Click **OK** to accept the default time format.

The Format Cells dialog box closes, and your new style's definition appears in the Style dialog box.

12. Click **OK**.

The Style dialog box closes.

13. Select cells C4:N4.

14. On the Home tab, in the Styles group, click Cell Styles.

Your new style appears at the top of the gallery, in the Custom group.

Custom						-			
Crosstab Col									
Good, Bad and	osstah Column Head	ling							
Normal	Bad	Good	Neutral						
Data and Model									
Calculation	Check Cell	Explanatory	Input	Linked Cell	Note				
Output	Warning Text								
Titles and Heading	ļs								
Heading 1	Heading 2	Heading 3	Heading 4	Title	Total				
The med Cell Style:	5								
20% - Accent1	20% - Accent2	20% - Accent3	20% - Accent4	20% - Accent5	20% - Accent6				
40% - Accent1	40% - Accent2	40% - Accent3	40% - Accent4	40% - Accent5	40% - Accent6				
60% - Accent1	60% - Accent2	60% - Accent3	60% - Accent4	60% - Accent5	60% - Accent6				
Accent1	Accent2	Accent3	Accent4	Accent5	Accent6				
Number Format									
Comma	Comma [0]	Currency	Currency [0]	Percent		-			
New Cell Style Merge Styles	New Cell Style Merge Styles								

15. Click the **Crosstab Column Heading** style.

Excel 2007 applies your new style to the selected cells.

CLOSE the *HourlyExceptions* workbook.

Applying Workbook Themes and Table Styles

The 2007 Microsoft Office system includes powerful new design tools that enable you to create attractive, professional documents quickly. The Excel 2007 product team implemented the new design capabilities by defining workbook themes and table styles. A *theme* is a way to specify the fonts, colors, and graphic effects that appear in a workbook. Excel 2007 comes with many themes installed.

Cn			CallCente	er - Microso	ft Excel
Home Insert Page Layout	Formulas D	ata Review	View		
Aa A Fonts * Themes & Effects *	ize Print Brea	iks Background	Print Titles	₩idth: ∰ Height: ∰ Scale:	Automatic - Automatic - 100% 0
Built-In	p		B.	Scale 1	to Fit
Aa Aa Aa Aa Aa	ivic e	D	E	F	G
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More Themes on Microsoft Office Online Browse for Themes Save Current Theme 20					

To apply an existing workbook theme, display the Page Layout tab. Then, in the Themes group, click Themes, and click the theme you want to apply to your workbook. By default, Excel 2007 applies the Office theme to your workbooks.



The theme colors appear in the top segment of the color palette—the standard colors and the More Colors link, which displays the Colors dialog box, appear at the bottom of the palette. If you format workbook elements using colors from the theme colors portion of the color palette, applying a different theme changes that object's colors. You can change a theme's colors, fonts, and graphic effects by displaying the Page Layout tab, and in the Themes group, selecting new values from the Colors, Fonts, and Effects lists. To save your changes as a new theme, display the Page Layout tab, and in the Themes group, click Themes, and then click Save Current Theme. Use the controls in the dialog box that opens to record your theme for later use. Later, when you click the Themes button, your custom theme will appear at the top of the gallery.

Tip When you save a theme, you save it as an Office Theme file. You can apply the theme to Microsoft Office Word 2007 and Microsoft Office PowerPoint 2007 files as well.

Just as you can define and apply themes to entire workbooks, you can apply and define table styles. You select a table's initial style when you create it; to create a new style, display the Home tab, and in the Styles group, click Format As Table. In the Format As Table gallery, click New Table Style to display the New Table Quick Style dialog box.

New Table Quick Style	? ×
Name: Table Style 1	
Table Element:	Preview
Whole Table First Column Stripe Second Column Stripe First Row Stripe Last Column First Column First Column Header Row <u>Eormat</u> Element Formatting:	Mat Bas Bas
Set as default table quick style for this	document OK Cancel

Type a name for the new style, select the first table element you want to format, and then click Format to display the Format Cells dialog box. Define the element's formatting, and then click OK. When the New Table Quick Style dialog box reopens, its Preview pane displays the overall table style and the Element Formatting section displays the selected element's appearance. Also, in the Table Element list, Excel 2007 displays the element's name in bold to indicate it has been changed. To make the new style the default for new tables created in the current workbook, select the Set As Default Table Quick Style For This Document check box. When you click OK, Excel 2007 saves the new table style.

See Also For more information about creating Excel tables, see "Defining a Table" in Chapter 3, "Working with Data and Data Tables."

In this exercise, you will create a new workbook theme, change a workbook's theme, create a new table style, and apply the new style to a table.

USE the *HourlyTracking* workbook. This practice file is located in the *Documents*\ *Microsoft Press**Excel2007SBS**Appearance* folder. **OPEN** the *HourlyTracking* workbook.

- **1.** If necessary, click any cell in the table.
- 2. On the Home tab, in the Styles group, click Format as Table, and then click the style at the upper-left corner of the Table Styles gallery.

Excel 2007 applies the style to the table.

3. On the **Home** tab, in the **Styles** group, click **Format as Table**, and then click **New Table Style**.

The New Table Quick Style dialog box opens.

- 4. In the Name field, type Exception Default.
- 5. In the Table Element list, click Header Row.
- 6. Click Format.

The Format Cells dialog box opens.

7. Click the Fill tab.

The Fill tab appears.

Format Cells	? 🗙
Font Border Fill	
Background <u>C</u> olor: No Color	Pattern Color: Automatic Pattern Style:
Fill Effects More Colors	
	Clear
	OK Cancel



8. In the first row of color squares, just below the **No Color** button, click the third square from the left.

The new background color appears in the Sample pane of the dialog box.

9. Click OK.

The Format Cells dialog box closes. When the New Table Quick Style dialog box reopens, the Header Row table element appears in bold, and the Preview pane's header row is shaded.

10. In the **Table Element** list, click **Second Row Stripe**, and then click **Format**.

The Format Cells dialog box opens.

11. Click the **No Color** button, and click the third square from the left again.

The new background color appears in the Sample pane of the dialog box.

12. Click **OK**.

The Format Cells dialog box closes. When the New Table Quick Style dialog box reopens, the Second Row Stripe table element appears in bold, and every second row is shaded in the Preview pane.

New Ta	ble Quick Style	? x
<u>N</u> ame:	Exception Default	
<u> </u>	Element:	Preview
Whol First Seco First Last First Head Total	e Table Column Stripe Advector Stripe E Column Stripe E E Column Column Column Column Column Column Advector Row E E Corrat Clear	Stripe Size
Elemer	nt Formatting:	
Shade	ed	
🔲 <u>S</u> et	as default table quick style for this do	ocument OK Cancel

13. Click **OK**.

The New Table Quick Style dialog box closes.

14. On the **Home** tab, in the **Styles** group, click **Format as Table**. In the gallery that appears, in the **Custom** section, click the new format.

Excel 2007 applies the new format.



15. On the **Page Layout** tab, in the **Themes** group, click the **Theme Fonts** arrow, and then in the list, click **Verdana**.

Excel 2007 changes the theme's font to Verdana.

	1 19 × (1	~) v	HourlyTracking - N	licrosoft Exce	ŧ	Table Tools				- 1	5)	×
	Home I	nsert Page Lay	out Formulas D	ata Revi	iew View	Design				@ -	•	X
Themes	Colors * A Fonts * Effects * Themes	Margins Orientat	ion Size Print Brea Area Page Setup	ks Backgrou	nd Print Titles	Width: Automatic + Gr Height: Automatic + Scale: 100% + Scale to Fit	idlines Headings View View Print Print Sheet Options	C Bring to Front C Send to Back Selection Pane Arran	・ ID Align 回 Group 品 Rotati	* >* e *		
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2	A	В	С		D	E	F	G	Н	Ι		E
1												ſ
2		Day -	Region	v	Hour V	Exceptions						ł
3		6/20/2006	Atlantia		5:00 PM	27						1
5		6/20/2006	Southeast		5:00 PM	22						1
6		6/20/2006	North Central		5:00 PM	19						1
7		6/20/2006	Midwest		5:00 PM	37						1
8		6/20/2006	Southwest		5:00 PM	72	1					11
9		6/20/2006	Mountain West		5:00 PM	8						11
10		6/20/2006	Northwest		5:00 PM	35						
11		6/20/2006	Central		5:00 PM	14	-					
12		6/20/2006	Northeast		6:00 PM	119						
13		6/20/2006	Atlantic		6:00 PM	44						
14		6/20/2006	Southeast		6:00 PM	37						1
15		6/20/2006	North Central		6:00 PM	28						I
16		6/20/2006	Midwest		6:00 PM	45						J
17		6/20/2006	Southwest		6:00 PM	75						1
18		6/20/2006	Mountain West		6:00 PM	10	l					1
19		6/20/2006	Northwest		6:00 PM	44						1
20		6/20/2006	Central		6:00 PM	1/						ł
21												ł
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24												1
26												U
27												1
28												1
20									_			1
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 In the Themes group, click the Themes button, and then click Save Current Theme. The Save Current Theme dialog box opens.

Save Current Them	e mplates 🕨 Document Themes 🕨	✓ ⁴ y Search	<u>×</u> م
File name: Save as type:	Theme1 Office Theme		•
💌 Browse Folders		Tools 🔻 Save	Cancel

- **17.** In the File name field, type Verdana Office, and then click Save. Excel 2007 saves your theme.
- 18. In the Themes group, click the Themes button, and then click Origin.Excel 2007 applies the new theme to your workbook.

CLOSE the *HourlyTracking* workbook.

Making Numbers Easier to Read

Changing the format of the cells in your worksheet can make your data much easier to read, both by setting data labels apart from the actual data and by adding borders to define the boundaries between labels and data even more clearly. Of course, using formatting options to change the font and appearance of a cell's contents doesn't help with idiosyncratic data types such as dates, phone numbers, or currency.

For example, consider U.S. phone numbers. These numbers are 10 digits long and have a 3-digit area code, a 3-digit exchange, and a 4-digit line number written in the form (###) ###-####. Although it's certainly possible to type a phone number with the expected formatting in a cell, it's much simpler to type a sequence of 10 digits and have Excel 2007 change the data's appearance.

You can tell Excel 2007 to expect a phone number in a cell by opening the Format Cells dialog box to the Number tab and displaying the formats available for the Special category.

Format Cell	s						? ×				
Number	Alignment	Font	Border	Fill	Protection						
Category: General Number Currency Accountin Date Time Percentag Fraction Scientific Text Special Custom	g je	Sampl Call V Type: Zip Co Zip Co Phone Social	Sample Call Volume Type: Zip Code Zip Code + 4 Phone Number Social Security Number								
Special for	mats are usef	English	n (United St sing list and	ates) database	values.		T				
						ОК	Cancel				

Clicking Phone Number in the Type list tells Excel 2007 to format 10-digit numbers in the standard phone number format. As you can see by comparing the contents of the active cell and the contents of the formula box in the next graphic, the underlying data isn't changed, just its appearance in the cell.

	F4	-	0	f_{x}	5035	550106					
	A	В	С		D	E	F	G	Н	1	J
1											
2											
3							Phone Number				
4							(503) 555-0106	1			
5											
6											
7											

Troubleshooting If you type a 9-digit number in a field that expects a phone number, you won't see an error message; instead, you'll see a 2-digit area code. For example, the number 425555012 would be displayed as (42) 555-5012. An 11-digit number would be displayed with a 4-digit area code.

Just as you can instruct Excel 2007 to expect a phone number in a cell, you can also have it expect a date or a currency amount. You can make those changes from the Format Cells dialog box by choosing either the Date category or the Currency category. The Date category enables you to pick the format for the date (and determine whether the date's appearance changes due to the Locale setting of the operating system on the computer viewing the workbook). In a similar vein, selecting the Currency category displays controls to set the number of places after the decimal point, the currency symbol to use, and the way in which Excel 2007 should display negative numbers.

Tip The new Excel 2007 user interface enables you to set the most common format changes by using the controls in the Home tab's Number group.

You can also create a custom numeric format to add a word or phrase to a number in a cell. For example, you can add the phrase per month to a cell with a formula that calculates average monthly sales for a year to ensure that you and your colleagues will recognize the figure as a monthly average. To create a custom number format, click the Home tab, and then click the Number dialog box launcher to display the Format Cells dialog box. Then, if necessary, click the Number tab.

In the Category list, click Custom to display the available custom number formats in the Type list. You can then click the base format you want and modify it in the Type box. For example, clicking the 0.00 format causes Excel 2007 to format any number in a cell with two digits to the right of the decimal point.

Tip The zeros in the format indicate that the position in the format can accept any number as a valid value.

To customize the format, click in the Type box and add any symbols or text you want to the format. For example, typing a dollar (\$) sign to the left of the existing format and then typing *"per month"* to the right of the existing format causes the number 1500 to be displayed as \$1500.00 per month.

Important You need to enclose any text in quotes so that Excel 2007 recognizes the text as a string to be displayed in the cell.

In this exercise, you will assign date, phone number, and currency formats to ranges of cells. After assigning the formats, you will test them by entering customer data.

USE the *ExecutiveSearch* workbook. This practice file is located in the *Documents*\ *Microsoft Press**Excel2007SBS**Appearance* folder. **OPEN** the *ExecutiveSearch* workbook.

- **1.** Click cell A3.
- 2. On the Home tab, click the Font dialog box launcher.

The Format Cells dialog box opens.

- 3. If necessary, click the Number tab.
- 4. In the Category list, click Date.

The Type list appears with a list of date formats.

Format Cells		? X
Number Alignment	Font Border Fill Protection	
Category: General Number Currency Accounting Date Time Percentage Fraction Scientific Text Special Custom	Sample 1/25/2007 Type: **//4/2001 *Wednesday, March 14, 2001 3/14 3/14/01 03/14/01 03/14/01 14-Mar 14-Mar 14-Mar-01 Locale (location): English (United States)	÷ T
Date formats display date asterisk (*) respond to ch system. Formats without	and time serial numbers as date values. Date formats that begin v anges in regional date and time settings that are specified for the o an asterisk are not affected by operating system settings. OK	vith an perating Cancel



5. In the Type list, click 3/14/01.

Important Be sure to click the format without the asterisk (*) in front of the sample date.

- 6. Click OK to assign the chosen format to the cell.
- 7. Click cell G3.
- **8.** On the **Home** tab, click the **Font** dialog box launcher.
- **9.** If necessary, click the **Number** tab in the **Format Cells** dialog box.
- **10.** In the **Category** list, click **Special**.

The Type list appears with a list of special formats.

11. In the **Type** list, click **Phone Number**, and then click **OK**.

The contents of the cell change to (425) 555-0102, matching the format you chose earlier, and the Format Cells dialog box closes.

- **12.** Click cell H3.
- **13.** Click the **Font** dialog box launcher.
- **14.** If necessary, click the **Number** tab in the **Format Cells** dialog box.
- **15.** In the **Category** list, click **Custom**.

The contents of the Type list are updated to reflect your choice.

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16. In the **Type** list, click the **#**,**##0** item.

#,##0 appears in the Type box.

- **17.** In the **Type** box, click to the left of the existing format, and type \$. Then click to the right of the format, and type "before bonuses".
- **18.** Click **OK** to close the dialog box.

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CLOSE the *ExecutiveSearch* workbook.

Changing the Appearance of Data Based on Its Value

Recording package volumes, vehicle miles, and other business data in a worksheet enables you to make important decisions about your operations. And as you saw earlier in this chapter, you can change the appearance of data labels and the worksheet itself to make interpreting your data easier.

Another way you can make your data easier to interpret is to have Excel 2007 change the appearance of your data based on its value. These formats are called *conditional formats* because the data must meet certain conditions to have a format applied to it. For instance, if chief operating officer Jenny Lysaker wanted to highlight any Thursdays with higher-than-average weekday package volumes, she could define a conditional format that tests the value in the cell recording total sales, and that will change the format of the cell's contents when the condition is met.

In previous versions of Excel, you could have a maximum of three conditional formats. There's no such limit in Excel 2007; you may have as many conditional formats as you like. The other major limitation of conditional formats in Excel 2003 and earlier versions was that Excel stopped evaluating conditional formats as soon as it found one that applied to a cell. In other words, you couldn't have multiple conditions be true for the same cell! In Excel 2007, you can control whether Excel 2007 stops or continues after it discovers that a specific condition applies to a cell.

To create a conditional format, you select the cells to which you want to apply the format, display the Home tab, and then in the Styles group, click Conditional Formatting to display a menu of possible conditional formats. Excel 2007 enables you to create all the conditional formats available in previous versions of the program and offers many more conditional formats than were previously available. Prior to Excel 2007, you could create conditional formats to highlight cells that contained values meeting a certain condition. For example, you could highlight all cells that contain a value over 100, contain a date before 1/28/2007, or contain an order amount between \$100 and \$500. In Excel 2007, you can define conditional formats that change how the program displays data in cells that contain values above or below the average values of the related cells, that contain values near the top or bottom of the value range, or that contain values duplicated elsewhere in the selected range.

When you select which kind of condition to create, Excel 2007 displays a dialog box that contains fields and controls you can use to define your rule. To display all your rules, display the Home tab, and then in the Styles group, click Conditional Formatting. From the menu that appears, click Manage Rules to display the Conditional Formatting Rules Manager.

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Show formatting rules for: Cur	rent Selection			
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Rule (applied in order shown)	Format	Applies to		Stop If True 🔺
Cell Value > 14000	AaBbCcYyZz	=\$C\$5:\$C\$13	1	
				-
		ОК	Cancel	Apply

The Conditional Formatting Rules Manager, which is new in Excel 2007, enables you to control your conditional formats in the following ways:

- Create a new rule by clicking the **New Rule** button.
- Change a rule by clicking the rule and then clicking the **Edit Rule** button.
- Remove a rule by clicking the rule and then clicking the **Delete Rule** button.
- Move a rule up or down in the order by clicking the Move Up or Move Down button.
- Control whether Excel 2007 continues evaluating conditional formats after it finds a rule to apply by selecting or clearing a rule's Stop If True check box.
- Save any new rules and close the **Conditional Formatting Rules Manager** by clicking **OK**.
- Save any new rules without closing the Conditional Formatting Rules Manager by clicking Apply.
- Discard any unsaved changes by clicking Cancel.

Tip Clicking the New Rule button in the Conditional Formatting Rules Manager opens the New Formatting Rule dialog box. The commands in the New Formatting Rule dialog box duplicate the options displayed when you click the Conditional Formatting button in the Styles group on the Home tab.

After you create a rule, you can change the format applied if the rule is true by clicking the rule and then clicking the Edit Rule button to display the Edit Formatting Rule dialog box. In that dialog box, click the Format button to display the Format Cells dialog box. After you define your format, click OK.

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► Format or	inly cells that contain	
► Format or	inly top or bottom ranked values	
► Format or	only values that are above or below average	
► Format or	only unique or duplicate values	
► Use a for	rmula to determine which cells to format	
Edit the Rule (Description: Ily cells with:	
Cell Value	▼ greater than ▼ =14000	ESE
Preview:	AaBbCcYyZz Eormat	Cancel

Important Excel 2007 doesn't check to make sure that your conditions are logically consistent, so you need to be sure that you enter your conditions correctly.

Excel 2007 also enables you to create three new types of conditional formats: data bars, color scales, and icon sets. Data bars summarize the relative magnitude of values in a cell range by extending a band of color across the cell.

Distribution Capacity	
Northeast	47%
Atlantic	75%
Southeast	39%
North Central	54%
Midwest	40%
Southwest	73%
Mountain West	51%
Northwest	69%
Central	41%

Color scales compare the relative magnitude of values in a cell range by applying colors from a two-color or three-color set to your cells. The intensity of a cell's color reflects the value's tendency toward the top or bottom of the values in the range.

Distribution Capacity									
Northeast	47%								
Atlantic	75%								
Southeast	39%								
North Central	54%								
Midwest	40%								
Southwest	73%								
Mountain West	51%								
Northwest	69%								
Central	41%								

Icon sets are collections of three, four, or five images that Excel 2007 displays when certain rules are met.

Distribution Capacity	
Northeast	
Atlantic	
Southeast	
North Central	
Midwest	
Southwest	
Mountain West	
Northwest	
Central	

When you click a color scale or icon set in the Conditional Formatting Rule Manager and then click the Edit Rule button, you can control when Excel 2007 applies a color or icon to your data.

Important Be sure to not include cells that contain summary formulas in your conditionally formatted ranges. The values, which could be much higher or lower than your regular cell data, could throw off your formatting comparisons.

In this exercise, you will create a series of conditional formats to change the appearance of data in worksheet cells displaying the package volume and delivery exception rates of a regional distribution center.

USE the *Dashboard* workbook. This practice file is located in the *Documents\Microsoft Press\Excel2007SBS\Appearance* folder. **OPEN** the *Dashboard* workbook.

1. Select cells C4:C12.



2. On the Home tab, in the Styles group, click Conditional Formatting. On the menu that appears, point to Color Scales, and then in the top row of the palette that appears, click the second pattern from the left.

Excel 2007 formats the selected range.

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- **3.** Select cells F4:F12.
- On the Home tab, in the Styles group, click Conditional Formatting. From the menu that appears, point to Data Bars, and then click the light blue data bar format.

Excel 2007 formats the selected range.

- 5. Select cells I4:I12.
- **6.** On the **Home** tab, in the **Styles** group, click **Conditional Formatting**. On the menu that appears, point to **Icon Sets**, and then in the left-hand column of the list of formats that appears, click the three traffic lights.

Excel 2007 formats the selected cells.

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7. With the range I4:112 still selected, on the **Home** tab, in the **Styles** group, click **Conditional Formatting**, and then click **Manage Rules**.

The Conditional Formatting Rules Manager opens.

8. Click the icon set rule, and then click Edit Rule.

The Edit Formatting Rule dialog box opens.

Edit Formatting Rule 🔋 💌
Select a Rule Type:
► Format all cells based on their values
 Format only cells that contain
 Format only top or bottom ranked values
 Format only values that are above or below average
 Format only unique or duplicate values
 Use a formula to determine which cells to format
Edit the Rule Description: Format all cells based on their values: Format Style: Icon Sets
Display each icon according to these rules:
Icon <u>Y</u> alue <u>T</u> ype
when value is >= 🔹 67 💽 Percent 💌
■ when < 67 and >= ▼ 33 ■ Percent ▼
when < 33
Icon Style: 3 Traffic Lights (Rimmed) 💌 🔲 Reverse Icon Order 📄 Show Icon Only
OK Cancel

9. Select the Reverse Icon Order check box.

Excel 2007 reconfigures the rules so the red light icon is at the top and the green light icon is at the bottom.

- **10.** In the red light icon's row, in the **Type** list, click **Percent**.
- **11.** In the red light icon's **Value** field, type **80**.
- **12.** In the yellow light icon's row, in the **Type** list, click **Percent**.
- **13.** In the yellow light icon Value field, type 67.
- **14.** Click **OK** twice to clear the **Edit Formatting Rule** dialog box and the **Conditional Formatting Rules Manager**.

Excel 2007 formats the selected cell range.

- **15.** Click cell C15.
- On the Home tab, in the Styles group, click Conditional Formatting. On the menu that appears, point to Highlight Cells Rules, and then click Less Than.

The Less Than dialog box opens.

- **17.** In the left field, type 96%.
- **18.** In the **With** list, click **Red text**.
- **19.** Click **OK**.

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5		Atlantic	0.008%		Atlantic		1933574		Atlantic	0	75%				
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1		North Central	0.004%		North Centra	ıl	1811459		North Central		54%				
3		Midwest	0.018%		Midwest		1140803		Midwest		40%				
8		Southwest	0.001%		Southwest		1911884		Southwest		73%				
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The Less Than dialog box closes, and Excel 2007 displays the text in cell C15 in red.

CLOSE the Dashboard workbook.

Adding Images to Worksheets

Establishing a strong corporate identity helps customers remember your organization and the products and services you offer. Setting aside the obvious need for sound management, two important physical attributes of a strong retail business are a wellconceived shop space and an eye-catching, easy-to-remember logo. After you or your graphic artist has created a logo, you should add the logo to all your documents, especially any that might be seen by your customers. Not only does the logo mark the documents as coming from your company but it also serves as an advertisement, encouraging anyone who sees your worksheets to call or visit your company.

One way to add a picture to a worksheet is to display the Insert tab, and then in the Illustrations group, click Picture. Clicking Picture displays the Insert Picture dialog box, which enables you to locate the picture you want to add from your hard disk. When you insert a picture, the Picture Tools Format contextual tab appears on the Ribbon. You can

use the tools on the Format contextual tab to change the picture's contrast, brightness, and so on. The controls in the Picture Styles group enable you to place a border around the picture, change the picture's shape, or change a picture's effects (such as shadow, reflection, or rotation in three dimensions). Other tools, found in the Arrange and Size groups, enable you to rotate, reposition, and resize the picture.

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You can also resize a picture by clicking it and then dragging one of the handles that appear on the graphic. If you accidentally resize a graphic by dragging a handle, just click the Undo button to remove your change. If you want to generate a repeating image in the background of a worksheet, forming a tiled pattern behind your worksheet's data, you can display the Page Layout tab, and then in the Page Setup group, click Background. In the Sheet Background dialog box, click the image that you want to serve as the background pattern for your worksheet, and click OK.

Tip To remove a background image from a worksheet, display the Page Layout tab, and then in the Page Setup group, click Delete Background.

To achieve a watermark-type effect with words displayed behind the worksheet data, save the watermark information as an image, and then use the image as the sheet background; or insert the image in the header or footer, and then resize or scale it to position the watermark information where you want it. In this exercise, you will add an image to an existing worksheet, change the graphic's location on the worksheet, reduce the size of the graphic, change the image's brightness and contrast, rotate and crop the image, delete the image, and then set the image as a repeating background for the worksheet.

USE the *CallCenter* workbook and the *callcenter* and *acbluprt* images. These practice files are located in the *Documents\Microsoft Press\Excel2007SBS\Appearance* folder. **OPEN** the *CallCenter* workbook.

- Picture
- **1.** On the **Insert** tab, in the **Illustrations** group, click **Picture**.

The Insert Picture dialog box opens.

2. Browse to the *Documents\Microsoft Press\Excel2007SBS\Appearance* folder, and then double-click *callcenter.jpg*.

The image appears on your worksheet.

3. Move the image to the upper-left corner of the worksheet, grab the handle at the lower-right corner of the image, and drag it up and to the left until it no longer obscures the Call Volume label.

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4. On the **Page Layout** tab, in the **Page Setup** group, click **Background**.

The Sheet Background dialog box opens.

5. Browse to the *Documents\Microsoft Press\Excel2007SBS\Appearance* folder, and then double-click *acbluprt.jpg*.

Excel 2007 repeats the image to form a background pattern.

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On the Page Layout tab, in the Page Setup group, click Delete Background.
 Excel 2007 removes the background image.

CLOSE the *CallCenter* workbook. If you are not continuing directly to the next chapter, exit Excel.

Key Points

- If you don't like the default font in which Excel 2007 displays your data, you can change it.
- You can use cell formatting, including borders, alignment, and fill colors, to emphasize certain cells in your worksheets. This emphasis is particularly useful for making column and row labels stand out from the data.
- Excel 2007 comes with a number of existing styles that enable you to change the appearance of individual cells. You can also create new styles to make formatting your workbooks easier.
- If you want to apply the formatting from one cell to another cell, use the Format Painter to copy the format quickly.
- There are quite a few built-in document themes and table formats you can apply to groups of cells. If you see one you like, use it and save yourself lots of formatting time.
- Conditional formats enable you to set rules so that Excel 2007 changes the appearance of a cell's contents based on its value.
- Adding images can make your worksheets more visually appealing and make your data easier to understand.

Chapter at a Glance



10 Creating Dynamic Lists by Using PivotTables

In this chapter, you will learn to:

- Analyze data dynamically by Using PivotTables.
- ✓ Filter, show, and hide PivotTable data.
- Edit PivotTables.
- Format PivotTables.
- Create PivotTables from external data.

When you create Microsoft Office Excel 2007 worksheets, you must consider how you want the data to appear when you show it to your colleagues. You can change the formatting of your data to emphasize the contents of specific cells, sort and filter your worksheets based on the contents of specific columns, or hide rows containing data that isn't relevant to the point you're trying to make.

One limitation of the standard Excel worksheet is that you can't change how the data is organized on the page. For example, in a worksheet in which each column represents an hour in the day, each row represents a day in a month, and the body of the worksheet contains the total sales for every hourly period of the month, you can't easily change the worksheet so that it displays only sales on Tuesdays during the afternoon.

An Excel 2007 tool enables you to create worksheets that can be sorted, filtered, and rearranged dynamically to emphasize different aspects of your data. That tool is the *PivotTable*.

In this chapter, you'll learn how to create and edit PivotTables from an existing worksheet and how to create a PivotTable with data imported from a text file.

See Also Do you need only a quick refresher on the topics in this chapter? See the Quick Reference section at the beginning of this book.



Important Before you can use the practice files in this chapter, you need to install them from the book's companion CD to their default location. See "Using the Companion CD" at the beginning of this book for more information.

Analyzing Data Dynamically by Using PivotTables

Excel 2007 worksheets enable you to gather and present important data, but the standard worksheet can't be changed from its original configuration easily. As an example, consider the worksheet in the following graphic.

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5	Central	6,006,191	2,932,222	3,167,705	2,909,245	3,576,763	2,973,900	3,364,402	3,191,591	2.0
6	Midwest	5,720,977	3,456,904	3.046.753	3,125,231	3,280,768	3,035,619	2,945,492	3,441,757	3.1
7	Mountain West	5,872,046	2,935,951	3,265,252	3,071,049	3,159,233	3,063,572	3,456,576	3,371,850	2,9
8	North Central	6,236,863	3,785,068	2,929,397	2,677,053	3,079,267	3,040,653	3,521,947	3,166,710	2,5
9	Northeast	6,370,982	3,281,469	3,725,669	3,148,289	3,165,070	2,990,986	3,329,821	3,217,496	3,3
10	Northwest	6,108,382	4,216,668	3,640,750	2,997,048	3,236,144	2,849,014	3, 403, 395	3,400,949	3,1
11	Southeast	6,396,724	4,077,750	4,307,252	3,503,479	3,513,150	3,009,637	3,175,059	3,160,220	2,5
12	Southwest	5,949,454	4,413,610	3,226,583	3,006,170	3,019,281	2,801,259	3,087,404	2,867,383	3,0
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This worksheet records monthly package volumes for each of nine distribution centers in the United States. The data in the worksheet is organized so that each row represents a distribution center, whereas the columns in the body of the worksheet represent a month of the year. When presented in this arrangement, the monthly totals for all centers and the yearly total for each distribution center are given equal billing: neither set of totals stands out. Such a neutral presentation of your data is versatile, but it has limitations. First, although you can use sorting and filtering to restrict the rows or columns shown, it's difficult to change the worksheet's organization. For example, in a standard worksheet you can't reorganize the contents of your worksheet so that the hours are assigned to the rows and the distribution centers are assigned to the columns.

The Excel 2007 tool to reorganize and redisplay your data dynamically is the PivotTable. You can create a PivotTable, or dynamic worksheet, that enables you to reorganize and filter your data on the fly. For instance, you can create a PivotTable with the same layout as the worksheet shown previously, which emphasizes totals by month, and then change the PivotTable layout to have the rows represent the months of the year and the columns represent a distribution center. The new layout emphasizes the totals by regional distribution center, as shown in the following graphic.

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4	Row Labels		Atlantic	Central	Midwest	Mountain West	North Centra	Northeast	Northwest	Southeast	Southwest	Grand Total	
5	January		6,042,042	6,006,191	5,720,977	5,072,046	6,236,86	3 6,370,902	6,100,302	6,396,724	5,949,454	54,704,461	
7	February		3,098,663	2,932,222	3,456,904	2,935,951	3, /85,06	5 3,281,465 7 0,705,666	4,215,555	4,8/7,758	4,413,610	32,998,313	- 1
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9	Mav		3,368,888	3.576.763	3,280,768	3,159,233	3.079.26	7 3.165.070	3,236,144	3,513,158	3.019.281	29,398,572	_
10	June		3,208,696	2,973,980	3,035,619	3,063,572	3,040,65	3 2,990,986	2,849,014	3,009,637	2,801,259	26,973,416	
11	July		3,115,29	1 3,364,482	2,945,492	3,456,576	3,521,94	7 3,329,821	3,403,395	3,175,859	3,087,404	29,400,270	
12	August		3,237,645	5 3,191,591	3,441,757	3,371,850	3,166,71	3,217,496	3,400,949	3,168,228	2,867,383	29,063,609	
13	September		3,072,723	3 2,807,222	3,166,599	2,942,925	2,996,90	1 3,364,148	3,220,056	2,985,491	3,018,941	27,575,006	
14	October		3,261,585	5 3,362,250	3,333,751	3,182,437	3,125,59	1 3,346,381	3,789,687	3,196,785	4,462,698	31,061,165	_
15	November		6,137,174	4 6,003,306	6,236,356	6,121,929	6,026,02	6,207,015	6,002,003	6,245,619	5,725,902	54,867,810	
16	December		6,279,73	6,546,678	6,099,560	5,880,670	6,093,51	4 6,462,075	5,768,374	5,981,613	6,539,476	55,651,701	
17	Grand Total		47,036,182	47,001,715	46,889,767	46,323,490	46,680,59	1 48,690,205	48,633,350	50,521,603	48,118,161	429,895,063	
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To create a PivotTable, you must have your data collected in a list. The new Excel 2007 data tables mesh perfectly with PivotTable dynamic views; not only do the data tables have a well-defined column and row structure but the ability to refer to a data table by its name also greatly simplifies PivotTable creation and management.

The following graphic shows the first few lines of the data table used to create the PivotTable just shown.

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5		Atlantic	1/3/2007	2007	January		1	3 Wedn	esday 45683	3		_
6		Atlantic	1/4/2007	2007	January		1	4 Thurse	lay 53152	2		
7		Atlantic	1/5/2007	2007	January		1	5 Friday	149776	5		
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9		Atlantic	1/7/2007	2007	January		1	7 Sunda	y 99919	3		
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11		Atlantic	1/9/2007	2007	January		2	9 Tuesd	ay 77451	L		_
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14		Atlantic	1/12/2007	2007	January		2	12 Friday	64125	5		
15		Atlantic	1/13/2007	2007	January		2	13 Saturo	ay 14692	7		
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17		Atlantic	1/15/2007	2007	January		3	15 Mond	ay 56662	2		
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22		Atlantic	1/20/2007	2007	January		3	20 Sature	ay 86771	L .		
23		Atlantic	1/21/2007	2007	January		3	21 Sunda	y 129079	2		
24		Atlantic	1/22/2007	2007	January		4	22 Mond	ay 82806	5		
25		Atlantic	1/23/2007	2007	January		4	23 Tuesd	ay 49040	D		
26		Atlantic	1/24/2007	2007	January		4	24 Wedn	esday 133663	3		_
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Notice that each line of the table contains a value representing the Distribution Center, Date, Month, Week, Weekday, Day, and Volume for every day of the years 2006 and 2007. Excel 2007 needs that data when it creates the PivotTable so that it can maintain relationships among the data. If you want to filter your PivotTable so that it shows all package volumes on Thursdays in January, for example, Excel 2007 must be able to identify January 11 as a Thursday.

After you create a data table, you can click any cell in that list, display the Insert tab and then, in the Tables group, click PivotTable to display the Create PivotTable dialog box.

Create PivotTable	? x
Choose the data that you want to analyze	
Select a table or range	
Table/Range: DailyVolumes	Es:
🔘 Use an external data source	
Choose Connection	
Connection name:	
Choose where you want the PivotTable report to be placed	
New Worksheet	
Existing Worksheet	
Location:	15
ОК	Cancel

In this dialog box, you verify the data source for your PivotTable and whether you want to create a PivotTable on a new worksheet. After you click OK, Excel 2007 creates a new worksheet and displays the PivotTable Field List task pane.

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Tip You should always place your PivotTable on its own worksheet to avoid unwanted edits and reduce the number of cells Excel 2007 must track when you rearrange your data. You might not notice a difference with a small data set, but it's noticeable when your table runs more than a few hundred rows.

To assign a *field*, or column in a data list, to an area of the PivotTable, drag the field head from the Choose Fields To Add To Report area at the top of the PivotTable Field List task pane to the Drag Fields Between Areas Below area at the bottom of the task pane. For example, if you drag the Volume field header to the Values area, the PivotTable displays the total of all entries in the Volume column.

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If the PivotTable Field List task pane isn't visible, click any cell in the PivotTable to display it. If you accidentally click the Close button at the upper-right corner of the PivotTable Field List task pane, you can redisplay the task pane by clicking any cell in the PivotTable to display the PivotTable Tools contextual tabs. On the Options contextual tab, in the Show/Hide group, click Field List.

It's important to note that the order in which you enter the fields in the Row Labels and Column Labels areas affects how Excel 2007 organizes the data in your PivotTable. As an example, the following graphic shows a PivotTable that groups the PivotTable rows by distribution center and then by month.

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6	February	3098663	3								Week	
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8	April	3002529	9							-	Weekday	
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And here is the same PivotTable data, but this time it's organized by month and then by distribution center.

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5	Atlantic	604284	2							Year		
6	Central	600619	1							Month		
7	Midwest	572097	7							- Week		
8	Mountain West	587204	6							Weekday		
9	North Central 623686		3							Volume		
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26	Central	316778	5									
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In the preceding examples, all the field headers are in the Row Labels area. If you drag the Center header from the Row Labels area to the Column Labels area, the PivotTable reorganizes (pivots) its data to form this configuration.

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6 F	ebruary		3098663	2932222	3456904	2935951	3785068	3 3281469	4216668	48777	Week	
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8 4	pril		3002529	2989245	3125231	3071049	2677853	3 3148289	2997048	35834	Weekday	
9 1	/lay		3368888	3576763	3280768	3159233	307926	7 3165070	3236144	351315	Volume	
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11 J	uly		3115294	3364482	2945492	3456576	352194	/ 3329821	3403395	317585		
12 4	ugust		3237645	3191591	3441757	3371850	3166710	3217496	3400949	316822		
13 5	eptember		3072723	2807222	3155399	2942925	299690	3364148	3220055	298545		
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To pivot a PivotTable, you drag a field header to a new position in the PivotTable Field List task pane. As you drag the task pane, Excel 2007 displays a blue line in the interior of the target area so you know where the field will appear when you release the left mouse button. If your data set is large or if you based your PivotTable on a data collection on another computer, it might take some time for Excel 2007 to reorganize the PivotTable after a pivot. You can have Excel 2007 delay redrawing the PivotTable by selecting the Defer Layout Update button in the lower-left corner of the PivotTable Field List task pane. When you're ready for Excel 2007 to display the reorganized PivotTable, click Update.

If you expect your PivotTable source data to change, such as when you link to an external database that records shipments or labor hours, ensure that your PivotTable summarizes all the available data. To do that, you can refresh the PivotTable connection to its data source. If Excel 2007 detects new data in the source table, it updates the PivotTable contents accordingly. To refresh your PivotTable, click any cell in the PivotTable and then, on the Options contextual tab, in the Data group, click Refresh.

In this exercise, you will create a PivotTable using data from a table, add fields to the PivotTable, and then pivot the PivotTable.

USE the *Creating* workbook. This practice file is located in the *Documents**Microsoft Press*\ *Excel2007SBS**PivotTables* folder.

BE SURE TO start Excel 2007 before beginning this exercise.

OPEN the *Creating* workbook.

- **1.** Click any cell in the data table.
- 2. On the Insert tab, in the Tables group, click PivotTable.

The Create PivotTable dialog box opens.

- **3.** Verify that the **DailyVolumes** table name appears in the **Table/Range** field and that the **New Worksheet** option is selected.
- 4. Click OK.

Excel 2007 creates a PivotTable on a new worksheet.

5. In the PivotTable Field List task pane, drag the Center field header to the Row Labels area.

Excel 2007 adds the Center field values to the PivotTable row area.

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6. In the **PivotTable Field List** task pane, drag the **Year** field header to the **Column Labels** area.

Excel 2007 adds the Year field values to the PivotTable column area.

7. In the **PivotTable Field List** task pane, drag the **Volume** field header to the **Values** area.

Excel 2007 fills in the body of the PivotTable with the Volume field values.

8. In the **PivotTable Field List** task pane, in the **Column Labels** area, drag the **Year** field header to the **Row Labels** area, and drop it beneath the **Center** field header.

Excel 2007 changes the PivotTable to reflect the new organization.

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CLOSE the *Creating* workbook.

Filtering, Showing, and Hiding PivotTable Data

PivotTables often summarize huge data sets in a relatively small worksheet. The more details you can capture and write to a table, the more flexibility you have in analyzing the data. As an example, consider all the details captured in the following data table.

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Each line of the table contains a value representing the Distribution Center, Date, Month, Week, Weekday, Day, and Volume for every day of the year. Each column, in turn, contains numerous values: there are nine distribution centers, data from two years, twelve months in a year, seven weekdays, and as many as five weeks and 31 days in a month. Just as you can filter the data that appears in a table, you can filter the data displayed in a PivotTable by selecting which values you want the PivotTable to include.

See Also For more information on filtering an Excel 2007 data table, see "Limiting Data That Appears on Your Screen" in Chapter 6, "Focusing on Specific Data by Using Filters."

To filter a PivotTable based on a field's contents, click the field's header in the Choose Fields To Add To Report area of the PivotTable Field List task pane to display a menu of sorting and filtering options.

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The PivotTable displays data that's related to the values with a checked box next to them. Clicking the Select All check box clears it, which enables you to select the check boxes of the values you want to display. Selecting only the Northwest check box, for example, leads to the following PivotTable configuration.

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11	June	1475038	1475038											-11
12	July	1832445	1832445											- 1
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14	September	1638024	1638024											-11
15	October	2045639	2045639											-11
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17	December	2035024	2035024											-11
18	2007	23604961	23604961											-11
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22	April	1648903	1648903											-11
23	May	1607655	1607655											-14
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If you'd rather display as much PivotTable data as possible, you can hide the PivotTable Field List task pane and filter the PivotTable by using the filter arrows on the Row Labels and Column Labels headers within the body of the PivotTable. Clicking either of those headers enables you to select a field by which you want to filter; you can then define the filter using the same controls you see when you click a field header in the PivotTable Field List task pane.

Excel 2007 indicates that a PivotTable has filters applied by placing a filter indicator next to the Column Labels or Row Labels header, as appropriate, and the filtered field name in the PivotTable Field List task pane.

So far, all the fields by which we've filtered the PivotTable have changed the organization of the data in the PivotTable. Adding some fields to a PivotTable, however, might create unwanted complexity. For example, you might want to filter a PivotTable by weekday, but adding the Weekday field to the body of the PivotTable expands the table unnecessarily.

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14	Southwest	3570147	3396272	3632371	387251	5 3427383	3739919	3178975	24817582	357815				
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Instead of adding the Weekday field to the Row Labels or Column Labels area, you can drag the field to the Report Filter area near the bottom of the PivotTable Field List task pane. Doing so leaves the body of the PivotTable in the same position, but adds a new area above the PivotTable in its worksheet.

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Tip In Excel 2003 and earlier versions, this area was called the Page Field area.

When you click the filter arrow of a field in the Report Filter area, Excel 2007 displays a list of the values in the field. In previous versions of Excel 2007, you could select only one Report Filter value by which to filter a PivotTable; in Excel 2007, selecting the Select Multiple Items check box enables you to filter by more than one value.

Finally, you can filter values in a PivotTable by hiding and collapsing levels of detail within the report. To do that, you click the Hide Detail control (which looks like a box with a minus sign in it) or the Show Detail control (which looks like a box with a plus sign in it) next to a header. For example, you might have your data divided by year; clicking the Show Detail control next to the 2006 year header would display that year's details. Conversely, clicking the 2007 year header Hide Detail control would hide the individual months' values and display only the year's total.

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In this exercise, you will focus the data displayed in a PivotTable by creating a filter, by filtering a PivotTable based on the contents of a field in the Report Filters area, and by showing and hiding levels of detail within the body of the PivotTable.

USE the Focusing workbook. This practice file is located in the Documents\Microsoft Press\ Excel2007SBS\PivotTables folder. OPEN the Focusing workbook.

- **1.** On the PivotTable worksheet, click any cell in the PivotTable.
- In the PivotTable Field List task pane's Choose fields to add to report section, click the Center field header, click the Center field filter arrow, and then clear the (Select All) check box.

Excel 2007 clears all the check boxes in the filter menu.

3. Select the **Northwest** check box, and then click **OK**.

Excel 2007 filters the PivotTable.

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June	1373976	1373976						Month 🔻	
July	1570950	1570950							
August	1767367	1767367							
September	1582032	1582032						Defer Layout Up	iate Update
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Close

4. On the Quick Access Toolbar, click the Undo button.

Excel 2007 removes the filter.

 In the PivotTable Field List task pane, drag the Weekday field header from the Choose fields to add to report section to the Report Filter area in the Drag fields between areas below section.



The PivotTable Field List task pane closes.

7. In the body of the worksheet, click the Weekday filter arrow, and then select the Select Multiple Items check box.

Excel 2007 adds check boxes beside the items in the Weekday field filter list.

8. Clear the All check box.

Excel 2007 clears each check box in the list.

9. Select the Tuesday and Thursday check boxes, and then click OK.

Excel 2007 filters the PivotTable, summarizing only those values from Tuesdays and Thursdays.



10. In cell A5, click the **Hide Detail** button.

Excel 2007 collapses rows that contain data from the year 2006, leaving only the subtotal row that summarizes that year's data.

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5	 2006	6304269	7050163	6613187	6715681	6830374	6676425	7172546	686848	4 7059754	61290883		
6	□2007	6408599	6396590	6560131	6770917	6403907	7100828	6958578	760312	9 6821849	61024528		
7	January	804732	754373	897073	797919	1046123	1011522	828808	91869	1 903898	7963139		
8	February	Sum of Volume	393253	404779	468433	317816	491253	496082	76947	3 505165	4200859		
9	March	Roser 2007 - Janua	505582	483626	552340	378419	675428	613523	62541	4 534474	4784265		
10	April	Column: Atlantic	344889	501087	398673	408752	464939	464709	54224	8 346562	3843676		
11	May	656248	544346	521495	518365	453737	558449	554031	57173	3 501347	4879751		
12	June	439783	379390	400158	469828	392332	399097	361672	52267	7 425300	3790237		
13	July	466464	472849	496806	477128	577545	514837	573958	45929	9 445427	4484313		
14	August	383976	476570	450256	471688	451592	490214	418089	41681	3 551905	4111103		
15	September	436658	354749	324506	448185	477363	358781	535014	38853	7 398376	3722169		
16	October	443686	439651	461195	409460	470179	422210	499294	48104	4 413044	4039763		
17	November	916393	954607	914420	1094204	753727	790101	050666	100036	2 977772	0340332		
18	December	718778	776331	704730	664614	676322	923997	754732	81883	8 818579	6856921		
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CLOSE the *Focusing* workbook.

Editing PivotTables

After you create a PivotTable, you can rename it, edit it to control how it summarizes your data, and use the PivotTable cell data in a formula. As an example, consider the following PivotTable.

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6	January	296626	4 3143004	2774877	2942544	3110234	1 3073073	3085352	347025	Month	
7	February	154172	6 1407340	2046448	1552098	2263148	1808452	2554130	19889:	Week	
8	March	168802	7 1594434	1600920	1641026	155334	9 1705210	1932304	14418:	Weekday	
9	April	144543	6 1548205	i 1395802	1653829	1476188	3 1515414	1348145	163124	Volume	
10	May	153031	9 1813746	1529086	1516453	1525048	1481044	1628489	17493		
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13	August	151953	8 1577651	1797139	1745152	1587655	5 1622240	1633582	167124		
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19	January	307657	8 2863187	2946100	2929502	3126625	3297909	3023030	29264:		Center
20	February	155693	7 1524882	1410456	1383853	1521920	1473017	1662538	28888:		
21	March	152237	9 1573351	1445033	1624226	1376040	2020459	1700446	294535		
22	April	155709	3 1441040	1729429	1417220	1201665	5 1632875	1648903	195223	Row Labels	Σ Values
23	May	183856	9 1763017	7 1751682	1642780	1554219	1684026	1607655	17637	Year	Sum of Volume
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Excel 2007 displays the PivotTable name on the Options contextual tab, in the PivotTable Options group. The name PivotTable5 doesn't help you or your colleagues understand the data the PivotTable contains, particularly if you use the PivotTable data in a formula on another worksheet. To give your PivotTable a more descriptive name, click any cell in the PivotTable and then, on the Options contextual tab, in the PivotTable Options group, type the new name in the PivotTable Name field.

When you create a PivotTable with at least one field in the Row Labels area and one field in the Column Labels area of the PivotTable Field List task pane, Excel 2007 adds a grand total row and column to summarize your data. You can control how and where these summary rows and columns appear by clicking any PivotTable cell and then, in the Design contextual tab, in the Layout group, clicking either the Subtotals or Grand Totals button and selecting the desired layout.

After you create a PivotTable, Excel 2007 determines the best way to summarize the data in the column you assign to the Values area. For numeric data, for example, Excel 2007 uses the *Sum* function. If you want to change a PivotTable summary function, right-click

any data cell in the PivotTable values area, point to Summarize Data By, and then click the desired operation. If you want to use a function other than those listed, click More Options to display the Value Field Settings dialog box. On the Summarize By tab of the dialog box, you can choose the summary operation you want to use.

Value Field Settings
Source Name: Volume
Custom Name: Sum of Volume
Summarize by Show values as
Summarize value field by
Choose the type of calculation that you want to use to summarize the data from selected field
Sum Count Average Max Min Product
Number Format OK Cancel

You can also change how the PivotTable displays the data in the Values area. On the Show Values As tab of the Value Field Settings dialog box, you can select whether to display each cell's percentage contribution to its column's total, its row's total, or its contribution to the total of all values displayed in the PivotTable.

Value Field Settings	? ×
Source Name: Volume	
Custom Name: Sum of Volume	
Summarize by Show values as	
Show values as	
Normal	•
Normal Difference From % Of % Difference From Running Total in % of row Week Day	E V
Number Format	OK Cancel

You can create a link from a cell in another workbook to a cell in your PivotTable. To create a link, you click the cell you want to link to your PivotTable, type an equal sign, and then click the cell in the PivotTable with the data you want linked. A *GETPIVOTDATA* formula appears in the formula box of the worksheet with the PivotTable. When you press Enter, the contents of the PivotTable cell appear in the linked cell.

In this exercise, you will rename a PivotTable, specify whether subtotal and grand total rows will appear, change the PivotTable summary function, display each cell's contribution to its row's total, and create a link to a PivotTable cell.

USE the *Editing* workbook. This practice file is located in the *Documents**Microsoft Press*\ *Excel2007SBS**PivotTables* folder.

OPEN the *Editing* workbook.

- **1.** On the PivotTable worksheet, click any cell in the PivotTable.
- On the Options contextual tab, in the PivotTable group, in the PivotTable Name field, type VolumeSummary.

Excel 2007 renames the PivotTable.

 On the Design contextual tab, in the Layout group, click Subtotals, and then click Do Not Show Subtotals.

Excel 2007 removes the subtotal rows from the PivotTable.

 On the Design contextual tab, in the Layout group, click Grand Totals, and then click On for columns only.

Excel 2007 removes the cells that calculate each row's grand total.

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14 September 1494735 1420065 1672046 1483296 1259651 1764576 1638024 1510884 1407402
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17 December 2909904 3452071 3142952 2013773 3230449 3327176 2035024 3111937 3100107
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27 September 15/7988 188/15/ 1494553 1459529 1737250 1599572 1582032 1474607 1611539
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5. On the Quick Access Toolbar, click the Undo button.

Excel 2007 reverses the last change.

6. Right-click any data cell in the PivotTable, point to **Summarize Data By**, and then click **Average**.

Excel 2007 changes the Value field summary operation.

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6	January	95685.93548	101387.2258	89512.16129	94920.77419	100330.129	99131.3871	99527.48387	111945	97725.48387	98901
7	February	55061.64286	50262.14286	73087.42857	55432.07143	80826.71429	64587.57143	91218.92857	71033.17857	96156.53571	70851
8	March	54452.48387	51433.35484	51642.58065	52936.32258	50108.03226	55006.77419	62332.3871	46512.70968	53127.29032	53061
9	April	48181.2	51606.83333	46526.73333	55127.63333	49206.26667	50513.8	44938.16667	54374.66667	50833.5	50145
10	May	49365.12903	58507.93548	49325.35484	48917.83871	49195.09677	47775.6129	52531.90323	56431.54839	46846	50988
11	June	57525.66667	47717.26667	48600.3	51723.96667	51194.6	51950.53333	49167.93333	47408.83333	47619.36667	50323
12	July	51010.96774	55038.3871	47501.09677	53948.3871	53602.35484	48605.54839	59111.12903	48764.90323	48487.09677	51785
13	August	49017.35484	50891.96774	57972.22581	56295.22581	51214.67742	52330.32258	52696.19355	53911.16129	45637.51613	52218
14	September	49824.5	47335.5	55734.86667	49443.2	41988.36667	58819.2	54600.8	50362.8	46913.4	50558
15	October	56243.25806	55219.67742	51610.54839	53415.03226	54606.80645	55995.3871	65988.35484	46034.3871	93179.51613	59143
16	November	101645.6333	97384.06667	105123.2	94925.06667	107428.1333	100172.0667	100673.9	94954.73333	90964.46667	99252
17	December	96451.09677	111357.129	101305.5404	90766.07097	104200.0323	107320.2501	91452.3071	100305.0645	100006.0323	10037
18	B2007										
19	January	99244.45161	92360.87097	95035.48387	94500.06452	100859	106384.1613	97517.09677	94400.93548	94192.3871	97166
20	February	55604.09206	54460.07143	50373.42057	49423.32143	54354.28571	52607.75	59376.35714	103172.4643	61472.39206	60093
21	March	49109	50753.25806	46639.77419	52394.3871	44388.64516	65176.09677	55111.16129	95011.54839	50956.03226	5661
22	April	51903.1	48034.66667	57647.63333	47240.66667	40055.5	54429.16667	54963.43333	65074.63333	49372.16667	52080
23	May	59308.67742	56071.51613	56505.07097	52992.90323	50136.09677	54323.41935	51059.03071	56096.12903	50550.16129	54302
24	June	49430.86667	51415.4	52587	50395.1	50160.5	47749	45799.2	52912.4	45755.93333	49578
25	July	49482.3871	53493.29032	47514.77419	57554.06452	60008.83871	58808.03226	50675.80645	53682.16129	51106.58065	53591
26	August	55422.00645	52062.50065	53052.19355	52474.12903	50937.25006	51459.07097	57011.03071	40209.74194	46050.70960	51952
27	September	52599.6	46238.56667	49818.43333	48654.3	57908.33333	53319.06667	52734.4	49153.56667	53717.96667	51571
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7. On the Quick Access Toolbar, click the Undo button.

Excel 2007 reverses the last change.

- Right-click any data cell in the PivotTable, and then click Value Field Settings. The Value Field Settings dialog box opens.
- 9. Click the Show values as tab.

The Show Values As tab appears.

- **10.** In the **Show values as** list, click % **of row**.
- **11.** Click **OK**.

Excel 2007 changes how it calculates the values in the PivotTable.

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5	□2006														
6	January		10.75%	11.39%	10.06%	10.66%	11.27	6 11.14%	11.18%	12.58%	10.98%	100.00%			
7	February		8.63%	7.88%	11.46%	8.69%	12.68	6 10.13%	14.31%	11.14%	15.08%	100.00%			
3	March		11.40%	10.77%	10.81%	11.08%	10.49	6 11.52%	13.05%	9.74%	11.12%	100.00%			
Э	April		10.68%	11.43%	10.31%	12.22%	10.90	6 11.19%	9.96%	12.05%	11.26%	100.00%			
0	May		10.76%	12.75%	10.75%	10.66%	10.72	6 10.41%	11.45%	12.30%	10.21%	100.00%			
1	June		12.70%	10.54%	10.73%	11.42%	11.30	6 11.47%	10.86%	10.47%	10.51%	100.00%			
2	July		10.94%	11.81%	10.19%	11.58%	11.50	6 10.43%	12.68%	10.46%	10.40%	100.00%			
3	August		10.43%	10.83%	12.34%	11.98%	10.90	6 11.13%	11.21%	11.47%	9.71%	100.00%			
4	September		10.95%	10.40%	12.25%	10.87%	9.23	6 12.93%	12.00%	11.07%	10.31%	100.00%			
5	October		10.57%	10.37%	9.70%	10.03%	10.26	6 10.52%	12.40%	8.65%	17.51%	100.00%			
6	November		11.38%	10.90%	11.77%	10.63%	12.03	6 11.21%	11.27%	10.63%	10.18%	100.00%			
7	December		10.60%	12.33%	11.22%	10.05%	11.54	6 11.00%	10.12%	11.11%	11.07%	100.00%			
8	B2007														
9	January		11.35%	10.56%	10.87%	10.81%	11.53	6 12.17%	11.15%	10.79%	10.77%	100.00%			
0	February		10.20%	10.07%	9.31%	9.14%	10.05	6 9.73%	10.90%	19.00%	11.37%	100.00%			
1	March		9.64%	9.96%	9.15%	10.28%	8.71	6 12.79%	10.82%	18.65%	10.00%	100.00%			
2	April		11.07%	10.25%	12.30%	10.08%	8.55	6 11.61%	11.73%	13.88%	10.53%	100.00%			
3	May		12.12%	11.62%	11.54%	10.03%	10.24	6 11.10%	10.60%	11.62%	10.33%	100.00%			
4	June		11.08%	11.52%	11.79%	11.29%	11.24	6 10.70%	10.26%	11.86%	10.25%	100.00%			
5	July		10.26%	11.09%	9.85%	11.93%	12.44	6 12.19%	10.51%	11.13%	10.60%	100.00%			
G	August		11.05%	11.13%	11.35%	11.22%	10.09	6 11.01%	12.19%	10.33%	10.02%	100.00%			
7	September		11.33%	9.96%	10.73%	10.48%	12.48	6 11.49%	11.36%	10.59%	11.57%	100.00%			
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12. On the **Quick Access Toolbar**, click the **Undo** button.

Excel 2007 reverses the last change.

13. On the **Design** tab, in the **Layout** group, click **Subtotals**, and then click **Show All Subtotals at Bottom of Group**.

Excel 2007 displays subtotals in the workbook.

14. Click the **Package Summary** sheet tab.

The Package Summary worksheet appears.

- **15.** In cell C4, type =, but do not press Enter.
- **16.** Click the **PivotTable** sheet tab.

The PivotTable worksheet appears.

17. Click cell K32, and then press Enter.

Excel 2007 creates the formula =*GETPIVOTDATA("Volume",PivotTable*!\$*A*\$*3,"Year",* 2007) in cell C4.

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2	Total Packages Handled										
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Formatting PivotTables

PivotTables are the ideal tools for summarizing and examining large data tables, even those containing in excess of 10 or even 100,000 rows. Even though PivotTables often end up as compact summaries, you should do everything you can to make your data more comprehensible. One way to improve your data's readability is to apply a number format to the PivotTable Values field. To apply a number format to a field, right-click any cell in the field, and then click Number Format to display the Format Cells dialog box. Select or define the format you want to apply, and then click OK to enact the change.

See Also For more information on selecting and defining cell formats by using the Format Cells dialog box, see "Formatting Cells" in Chapter 5, "Changing Workbook Appearance."

Analysts often use PivotTables to summarize and examine organizational data with an eye to making important decisions about the company. For example, chief operating officer Jenny Lysaker might examine monthly package volumes handled by Consolidated Messenger and notice that there's a surge in package volume during the winter months in the United States.

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7	Fobruary	15/1726	1/072/0	2014011	1552099	2262149	1909/52	255/1120	1900939	3023430	17954654		
8	March	1688027	1594434	1600920	1641026	1553349	1705210	1932304	1441894	1646946	14804110		
9	Anril	1445436	1548205	1395802	1653829	1476188	1515414	1348145	1631240	1525005	13539264		
10	May	1530319	1813746	1529086	1516453	1525048	1481044	1628489	1749378	1452226	14225789		
11	June	1725770	1431518	1458009	1551719	1535838	1558516	1475038	1422265	1428581	13587254		
12	July	1581340	1706190	1472534	1672400	1661673	1506772	1832445	1511712	1503100	14448166		
13	August	1519538	1577651	1797139	1745152	1587655	1622240	1633582	1671246	1414763	14568966		
14	September	1494735	1420065	1672046	1483296	1259651	1764576	1638024	1510884	1407402	13650679		
15	October	1743541	1711810	1599927	1655866	1692811	1735857	2045639	1427066	2888565	16501082		_
16	November	3049369	2921522	3153696	2847752	3222844	3005162	3020217	2848642	2728934	26798138		_
17	December	2989984	3452071	3142952	2013773	3230449	3327176	2035024	3111937	3100107	20003553		
18	≡2007	23760133	23274159	23246331	23247582	22561702	24586713	23604961	26736115	23300579	214318275		
19	January	3076578	2863187	2946100	2929502	3126629	3297909	3023030	2926429	2919964	27109328		
20	February	1556937	1524002	1410456	1303053	1521920	1473017	1662530	2000029	1721227	15143659		
21	March	1522379	1573351	1445833	1624226	1376048	2020459	1708446	2945358	1579637	15795737		
22	April	1557093	1441040	1729429	1417220	1201665	1632875	1648903	1952239	1481165	14061629		\rightarrow
23	May	1030569	1763017	1751602	1642780	1554219	1604026	1607655	1763700	1567055	15172703		
24	June	1482926	1542462	1577610	1511853	1504815	1432470	1373976	1587372	1372678	13386162		
25	July	1533954	1658292	14/2958	1784176	1860274	1823049	1570950	1664147	1584304	14952104		
26	August	1710107	1013940	1044610	1626690	1579055	1595256	1/6/36/	1496902	1452620	13934337		
27	September	107/988 Source Data	138/15/ Darkane 9	1494003	1459629	1/3/250	1099072	1382032	14/460/	1911233	13924327		
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Excel 2007 extends the capabilities of your PivotTables by enabling you to apply a conditional format to the PivotTable cells. What's more, you can select whether to apply the conditional format to every cell in the Values area, to every cell at the same level as the selected cell (that is, a regular data cell, a subtotal cell, or a grand total cell) or to every cell that contains or draws its values from the selected cell's field (such as the Volume field in the previous example).

To apply a conditional format to a PivotTable field, click a cell in the Values area. On the Home tab, in the Styles group, click Conditional Formatting, and then create the desired conditional format. After you do, Excel 2007 displays a Formatting Options smart tag, which offers three options on how to apply the conditional format:

- Selected cells, which applies the conditional format to the selected cells only
- All cells showing Sum of field_name values, which applies the conditional format to every cell in the data area, regardless of whether the cell is in the data area, a subtotal row or column, or a grand total row or column
- All cells showing Sum of field_name values for fields, which applies the conditional format to every cell at the same level (for example, data cell, subtotal, or grand total) as the selected cells

See Also For more information on creating conditional formats, see "Changing the Appearance of Data Based on Its Value" in Chapter 5.

In Excel 2003 and earlier versions of the program, you were limited to a small number of formatting styles, called autoformats, which you could apply to a PivotTable. In Excel 2007, you can take full advantage of the Microsoft Office system enhanced formatting capabilities to apply existing formats to your PivotTables. Just as you can create data table formats, you can also create your own PivotTable formats to match your organization's desired color scheme.

To apply a PivotTable style, click any cell in the PivotTable and then, on the Design contextual tab, in the PivotTable Styles group, click the gallery item representing the style you want to apply. If you want to create your own PivotTable style, click the More button in the PivotTable Styles gallery (in the lower-right corner of the gallery), and then click New PivotTable Style to display the New PivotTable QuickStyle dialog box.

New Piv	otTable Quick Style			?	×
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Type a name for the style in the Name field, click the first table element you want to customize, and then click Format. Use the controls in the Format Cells dialog box to change the element's appearance. After you click OK to close the Format Cells dialog box, the New PivotTable Quick Style dialog box Preview pane displays the style's appearance. If you want Excel 2007 to use the style by default, select the Set As Default PivotTable Quick Style For This Document check box. After you finish creating your formats, click OK to close the New PivotTable Quick Style dialog box and save your style.

The Design contextual tab contains many other tools you can use to format your PivotTable, but one of the most useful is the Banded Columns check box, which you can find in the PivotTable Style Options group. If you select a PivotTable style that offers banded rows as an option, selecting the Banded Rows check box turns banding on. If you prefer not to have Excel 2007 band the rows in your PivotTable, clearing the check box turns banding off. In this exercise, you will apply a number format to a PivotTable values field, apply a PivotTable style, create your own PivotTable style, give your PivotTable banded rows, and apply a conditional format to a PivotTable.

USE the Formatting workbook. This practice file is located in the Documents\Microsoft Press\Excel2007SBS\PivotTables folder.

OPEN the *Formatting* workbook.

 On the PivotTable worksheet, right-click any data cell, and then click Number Format.

The Format Cells dialog box opens.

2. In the Category list, click Number.

The Number tab page opens.

Format Cells	? 🗙
Number	
Category: General Number Currency Accounting Date Time Percentage Fraction Scientific Text Special Custom	Sample 1395802.00 Decimal places: 2 Use 1000 Separator (,) Negative numbers: 1234.10 (1234.10) (1234.10)
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Number is used for gener for monetary value.	al display of numbers. Currency and Accounting offer specialized formatting
	OK Cancel

- 3. In the Decimal places field, type 0.
- 4. Select the Use 1000 Separator (,) check box.
- 5. Click OK.

Excel 2007 reformats your PivotTable data.

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5	∃2006											
6	January	2,966,264	3,143,004	2,774,877	2,942,544	3,110,234	3,073,073	3,085,352	3,470,295	3,029,490	27,595,133	
7	February	1,541,726	1,407,340	2,046,448	1,552,098	2,263,148	1,808,452	2,554,130	1,988,929	2,692,383	17,854,654	
8	March	1,688,027	1,594,434	1,600,920	1,641,026	1,553,349	1,705,210	1,932,304	1,441,894	1,646,946	14,804,110	
9	April	1,445,436	1,548,205	1,395,802	1,653,829	1,476,188	1,515,414	1,348,145	1,631,240	1,525,005	13,539,264	
10	May	1,530,319	1,813,746	1,529,086	1,516,453	1,525,048	1,481,044	1,628,489	1,749,378	1,452,226	14,225,789	
11	June	1,725,770	1,431,518	1,458,009	1,551,719	1,535,838	1,558,516	1,475,038	1,422,265	1,428,581	13,587,254	
12	July	1,581,340	1,706,190	1,472,534	1,672,400	1,661,673	1,506,772	1,832,445	1,511,712	1,503,100	14,448,166	
13	August	1,519,538	1,577,651	1,797,139	1,745,152	1,587,655	1,622,240	1,633,582	1,671,246	1,414,763	14,568,966	
14	September	1,494,735	1,420,065	1,672,046	1,483,296	1,259,651	1,764,576	1,638,024	1,510,884	1,407,402	13,650,679	
15	October	1,743,541	1,711,810	1,599,927	1,655,866	1,692,811	1,735,857	2,045,639	1,427,066	2,888,565	16,501,082	
16	November	3,049,369	2,921,522	3,153,696	2,847,752	3,222,044	3,005,162	3,020,217	2,840,642	2,720,934	26,790,130	
17	December	2,989,984	3,452,071	3,142,952	2,813,773	3,230,449	3,327,176	2,835,024	3,111,937	3,100,187	28,003,553	
18	2006 Total	23,276,049	23,727,556	23,643,436	23,075,908	24,118,888	24,103,492	25,028,389	23,785,488	24,817,582	215,576,788	
19	2007											
20	January	3,076,578	2,863,187	2,946,100	2,929,502	3,126,629	3,297,909	3,023,030	2,926,429	2,919,964	27,109,328	
21	February	1,556,937	1,524,882	1,410,456	1,383,853	1,521,920	1,473,017	1,662,538	2,888,829	1,721,227	15,143,659	
22	March	1,522,379	1,573,351	1,445,033	1,624,226	1,376,040	2,020,459	1,700,446	2,945,350	1,579,637	15,795,737	

- 6. If necessary, on the Design contextual tab, in the PivotTable Style Options group, select the Banded Rows check box.
- On the Design contextual tab, in the PivotTable Styles group, click the third style from the left (when you point to it, Excel 2007 displays a ScreenTip that reads Pivot Style Light 2).

Excel 2007 applies the PivotTable style.

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5	□2006																
6	January		2,9	66,264	3,143,004	2,774,877	2,94	42,544	3,110,234	3,073,073	3,085,352	3,470,295	3,029,490	27,595,133			
7	Februar	f .	1,5	41,726	1,407,340	2,046,448	1,55	52,098	2,263,148	1,808,452	2,554,130	1,988,929	2,692,383	17,854,654			-11
8	March		1,6	88,027	1,594,434	1,600,920	1,64	41,026	1,553,349	1,705,210	1,932,304	1,441,894	1,646,946	14,804,110			
9	April		1,4	45,436	1,548,205	1,395,802	1,65	53,829	1,476,188	1,515,414	1,348,145	1,631,240	1,525,005	13,539,264			
10	May		1,5	30,319	1,813,746	1,529,086	1,51	16,453	1,525,048	1,481,044	1,628,489	1,749,378	1,452,226	14,225,789			
11	June		1,7.	25,770	1,431,518	1,458,009	1,55	51,719	1,535,838	1,558,516	1,475,038	1,422,265	1,428,581	13,587,254			
12	July		1,5	81,340	1,706,190	1,472,534	1,6	72,400	1,661,673	1,506,772	1,832,445	1,511,712	1,503,100	14,448,166			
13	August		1,5:	19,538	1,577,651	1,797,139	1,74	45,152	1,587,655	1,622,240	1,633,582	1,671,246	1,414,763	14,568,966			-11
14	Septem	oer	1,4	94,735	1,420,065	1,672,046	1,48	83,296	1,259,651	1,764,576	1,638,024	1,510,884	1,407,402	13,650,679			
15	October		1,7	43,541	1,711,810	1,599,927	1,65	55,866	1,692,811	1,735,857	2,045,639	1,427,066	2,888,565	16,501,082			
16	Novemb	er	3,0	49,369	2,921,522	3,153,696	2,84	47,752	3,222,044	3,005,162	3,020,217	2,840,642	2,728,934	26,790,130			-11
17	Decemb	er	2,9	89,984	3,452,071	3,142,952	2,81	13,773	3,230,449	3,327,176	2,835,024	3,111,937	3,100,187	28,003,553			
18	2006 Total		23,2	76,049	23,727,556	23,643,436	23,07	75,908	24,118,888	24,103,492	25,028,389	23,785,488	24,817,582	215,576,788			
19	□2007																
20	January		3,0	76,578	2,863,187	2,946,100	2,92	29,502	3,126,629	3,297,909	3,023,030	2,926,429	2,919,964	27,109,328			
21	Februar	1	1,5	56,937	1,524,882	1,410,456	1,38	83,853	1,521,920	1,473,017	1,662,538	2,888,829	1,721,227	15,143,659			
22	March		1,5	22,379	1,573,351	1,445,033	1,63	24,226	1,376,048	2,020,459	1,700,446	2,945,350	1,579,637	15,795,737			- 14



 In the lower-right corner of the PivotTable Styles gallery, click the More button. The gallery expands.

9. Click New PivotTable Style.

The New PivotTable Quick Style dialog box opens.

New Piv	votTable Quick Style	? x
<u>N</u> ame:	PivotTable Style 1	
<u>T</u> able	Element:	Preview
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<u>5</u> et	as default PivotTable quick style for	this document OK Cancel

- **10.** In the Name field, type Custom Style 1.
- **11.** In the Table Element list, click Header Row, and then click Format.

The Format Cells dialog box opens.

- **12.** On the **Font** tab, in the **Color** list, click the white square.
- **13.** On the **Border** tab, in the **Presets** area, click **Outline**.
- **14.** On the **Fill** tab, in the **Background Color** area, click the purple square at the lowerright corner of the color palette.
- **15.** Click **OK**.

The Format Cells dialog box closes, and the style change appears in the Preview pane of the New PivotTable Quick Style dialog box.

16. In the Table Element list, click Second Row Stripe, and then click Format.

The Format Cells dialog box opens.

- **17.** On the **Fill** tab, in the middle part of the **Background Color** section, click the eighth square in the second row (it's a light, dusty purple).
- **18.** Click **OK** twice.

The Format Cells dialog box closes, and your format appears in the PivotTable Styles gallery.

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6	January		2,966,26	4 3,143,004	2,774,877	2,942,5	44 3,110,23	4 3,073,073	3 3,085,352	3,470,295	3,029,490	27,595,133		
7	February		1,541,72	6 1,407,340	2,046,448	1,552,0	98 2,263,14	8 1,808,452	2 2,554,130	1,988,929	2,692,383	17,854,654		
8	March		1,688,02	7 1,594,434	1,600,920	1,641,0	26 1,553,34	9 1,705,210	1,932,304	1,441,894	1,646,946	14,804,110		_
9	April		1,445,43	6 1,548,205	1,395,802	1,653,8	29 1,476,18	8 1,515,414	1,348,145	1,631,240	1,525,005	13,539,264		_
10	May		1,530,31	9 1,813,746	1,529,086	1,516,4	53 1,525,04	8 1,481,044	4 1,628,489	1,749,378	1,452,226	14,225,789		-
11	June		1,725,77	0 1,431,518	1,458,009	1,551,7	19 1,535,83	8 1,558,516	5 1,475,038	1,422,265	1,428,581	13,587,254		-
12	July		1,581,34	0 1,706,190	1,472,534	1,672,4	00 1,661,67	3 1,506,772	2 1,832,445	1,511,712	1,503,100	14,448,166		_
13	August		1,519,53	8 1,577,651	1,797,139	1,745,1	52 1,587,65	5 1,622,240	1,633,582	1,671,246	1,414,763	14,568,966		-
14	September		1, 494, 73	5 1,420,065	1,672,046	1,483,2	96 1,259,65	1 1,764,576	5 1,638,024	1,510,884	1,407,402	13,650,679		-
15	October		1,743,54	1 1,711,810	1,599,927	1,655,8	66 1,692,81	¹ Sum of Vol	ume ,639	1,427,066	2,888,565	16,501,082		-
16	November		3,049,36	9 2,921,522	3,153,696	2,847,7	52 3,222,04	4 Value: 1,735	,857 ,217	2,840,642	2,720,934	26,790,130		
17	December		2,989,98	4 3,452,071	3,142,952	2,813,7	73 3,230,44	9 Row: 2006 -	October 1,024	3,111,937	3,100,187	28,003,553		
18	2006 Total		23,276,04	9 23,727,556	23,643,436	23,075,9	08 24,118,88	8 Column: No	,389),389	23,785,488	24,817,582	215,576,788		
19	2007													-
20	January		3,076,57	8 2,863,187	2,946,100	2,929,5	02 3,126,62	9 3,297,905	9 3,023,030	2,926,429	2,919,964	27,109,328		
21	February		1,556,93	/ 1,524,882	1,410,456	1,383,8	53 1,521,92	0 1,473,01	/ 1,662,538	2,888,829	1,721,227	15,143,659		-1
22	March		1,522,37	9 1,573,351	1,445,033	1,624,2	26 1,376,04	0 2.020.455	9 1,700,446	2,945,350	1,579,637	15,795,737		

19. Click the new style.

Excel 2007 formats your PivotTable using your custom PivotTable style.

20. On the **Design** contextual tab, in the **PivotTable Style Options** group, clear the **Banded Rows** check box.

Excel 2007 removes the banding from your PivotTable.

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6	January	2,966,26	4 3,143,004	2,774,877	2,942,544	3,110,234	3,073,073	3,085,352	3,470,295	3,029,490	27,595,133		
7	February	1,541,72	6 1,407,340	2,046,448	1,552,098	2,263,148	1,808,452	2,554,130	1,988,929	2,692,383	17,854,654		_
8	March	1,688,02	7 1,594,434	1,600,920	1,641,026	1,553,349	1,705,210	1,932,304	1,441,894	1,646,946	14,804,110		_
9	April	1,445,43	6 1,548,205	1,395,802	1,653,829	1,476,188	1,515,414	1,348,145	1,631,240	1,525,005	13,539,264		- 1
10	May	1,530,31	9 1,813,746	1,529,086	1,516,453	1,525,048	1,481,044	1,628,489	1,749,378	1,452,226	14,225,789		_
11	June	1,725,77	0 1,431,518	1,458,009	1,551,719	1,535,838	1,558,516	1,475,038	1,422,265	1,428,581	13,587,254		
12	July	1,581,34	0 1,706,190	1,472,534	1,672,400	1,661,673	1,506,772	1,832,445	1,511,712	1,503,100	14,448,166		- 1
13	August	1,519,53	8 1,577,651	1,797,139	1,745,152	1,587,655	1,622,240	1,633,582	1,671,246	1,414,763	14,568,966		- 1
14	September	1,494,73	5 1,420,065	1,672,046	1,483,296	1,259,651	1,764,576	1,638,024	1,510,884	1,407,402	13,650,679		
15	October	1,743,54	1 1,711,810	1,599,927	1,655,866	1,692,811	1,735,857	2,045,639	1,427,066	2,888,565	16,501,082		-
16	November	3,049,36	9 2,921,522	3,153,696	2,847,752	3,222,044	3,005,162	3,020,217	2,840,642	2,720,934	26,790,130		
17	December	2,989,98	4 3,452,071	3,142,952	2,813,773	3,230,449	3,327,176	2,835,024	3,111,937	3,100,187	28,003,553		
18	2006 Total	23,276,04	9 23,727,556	23,643,436	23,075,908	24,118,888	24,103,492	25,028,389	23,785,488	24,817,582	215,576,788		-1
19	= 2007												-
20	January	3,076,57	8 2,863,187	2,946,100	2,929,502	3,126,629	3,297,909	3,023,030	2,926,429	2,919,964	27,109,328		
21	February	1,556,93	7 1,524,882	1,410,456	1,383,853	1,521,920	1,473,017	1,662,538	2,888,829	1,721,227	15,143,659		
22	March	1,522,37	9 1,573,351	1,445,033	1,624,226	1,376,040	2,020,459	1,700,446	2,945,350	1,579,637	15,795,737		

21. Select the cell ranges K6:K17 and K20:K31.

 On the Home tab, in the Styles group, click Conditional Formatting, point to Color Scales, and in the top row, click the three-color scale with red at the top.

Excel 2007 applies the conditional format to the selected cells.

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4	A	B	С	D	E	F	G	Н	1	J	K	L
ő	∃2006											
6	January	2,966,264	3,143,004	2,774,877	2,942,544	3,110,234	3,073,073	3,085,352	3,470,295	3,029,490	27,595,133	
7	February	1,541,726	1,407,340	2,046,440	1,552,090	2,263,140	1,000,452	2,554,130	1,980,929	2,692,303	17,054,654	
3	March	1,688,027	1,594,434	1,600,920	1,641,026	1,553,349	1,705,210	1,932,304	1,441,894	1,646,946	14,804,110	
9	April	1,445,436	1,548,205	1,395,802	1,653,829	1,476,188	1,515,414	1,348,145	1,631,240	1,525,005	13,539,264	
.0	May	1,530,319	1,013,746	1,529,086	1,516,453	1,525,040	1,481,044	1,620,409	1,749,370	1,452,226	14,225,709	
1	June	1,725,770	1,431,518	1,458,009	1,551,719	1,535,838	1,558,516	1,475,038	1,422,265	1,428,581	13,587,254	
.2	July	1,581,340	1,706,190	1,472,534	1,672,400	1,661,673	1,506,772	1,832,445	1,511,712	1,503,100	14,448,166	
З	August	1,519,538	1,577,651	1,797,139	1,745,152	1,507,655	1,622,240	1,633,502	1,671,246	1,414,763	14,560,966	
4	September	1,494,735	1,420,065	1,672,046	1,483,296	1,259,651	1,764,576	1,638,024	1,510,884	1,407,402	13,650,679	
.5	October	1,743,541	1,711,810	1,599,927	1,655,866	1,692,811	1,735,857	2,045,639	1,427,066	2,888,565	16,501,082	
G	November	3,049,369	2,921,522	3,153,696	2,847,752	3,222,044	3,005,162	3,020,217	2,848,642	2,720,934	26,790,130	
7	December	2,989,984	3,452,071	3,142,952	2,813,773	3,230,449	3,327,176	2,835,024	3,111,937	3,100,187	28,003,553	
.8	2006 Total	23,276,049	23,727,556	23,643,436	23,075,908	24,118,888	24,103,492	25,028,389	23,785,488	24,817,582	215,576,788	
.9	∃2007											
0	January	3,076,578	2,863,187	2,946,100	2,929,502	3,126,629	3,297,909	3,023,030	2,926,429	2,919,964	27,109,328	
1	February	1,556,937	1,524,882	1,410,456	1,383,853	1,521,920	1,473,017	1,662,538	2,888,829	1,721,227	15,143,659	
2	March	1,522,379	1,573,351	1,445,033	1,624,226	1,376,040	2,020,459	1,700,446	2,945,350	1,579,637	15,795,737	

CLOSE the Formatting workbook.

Creating PivotTables from External Data

Although most of the time you will create PivotTables from data stored in Excel 2007 worksheets, you can also bring data from outside sources into Excel 2007. For example, you might need to work with data created in another spreadsheet program with a file format that Excel 2007 can't read directly. Fortunately, you can export the data from the original program into a text file, which Excel 2007 then translates into a worksheet.

Spreadsheet programs store data in cells, so the goal of representing spreadsheet data in a text file is to indicate where the contents of one cell end and those of the next cell begin. The character that marks the end of a cell is a delimiter, in that it marks the end (or "limit") of a cell. The most common cell delimiter is the comma, so the delimited sequence 15, 18, 24, 28 represents data in four cells. The problem with using commas to delimit financial data is that larger values—such as 52,802—can be written by using commas as thousands markers. To avoid confusion when importing a text file, the most commonly used delimiter for financial data is the Tab character.

To import data from a text file, on the Data tab, in the Get External Data group, click From Text to display the Import Text File dialog box.

📧 Import Text File						×
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From within the Import Text File dialog box, you browse to the directory that contains the text file you want to import. Double-clicking the file launches the Text Import Wizard.

Text Import Wizard - Step 1 of 3	? ×
The Text Wizard has determined that your data is Delimited.	
If this is correct, choose Next, or choose the data type that best describes your data.	
Original data type	
Choose the file type that best describes your data:	
Delimited - Characters such as commas or tabs separate each field.	
Fixed width - Fields are aligned in columns with spaces between each field.	
Start import at row: 1 File origin: 437 : OEM United States	•
Preview of file E:\Users\Curt\Documents\Microsoft Press\Excel SBS\PivotTables\Creating.txt.	
1 CenterDateYearMonthWeekDayWeekdayVolume 2 Atlantic1/1/20072007January11Monday120933	Â.
3 Atlantic1/2/20072007January12Tuesday52979	
4 Atlantic1/3/20072007January13Wednesday45683	
s Actancici/4/200720073andary141ndrsday33132	
	,
Cancel < Back <u>N</u> ext >	Einish

The first page of the Text Import Wizard enables you to indicate whether the data file you are importing is Delimited or Fixed Width; Fixed Width means that each cell value will fall within a specific position in the file. Clicking Next to accept the default choice, Delimited (which Excel 2007 assigns after examining the data source you selected), advances you to the next wizard screen.

Text Import W	'izard - Step	2 of 3						? ×
This screen lets below.	; you set the	delimite	rs your dat	a conta	ins. Y	ou can see how	your text is affected in	the preview
Delimiters	Tex	T <u>r</u> eat c	onsecutive i	delimite	rs as o	ne V		
Center Atlantic Atlantic Atlantic Atlantic	Date 1/1/2007 1/2/2007 1/3/2007 1/4/2007	Year 2007 2007 2007 2007	Month January January January January	Week 1 1 1 C	Day 1 2 3 4 ancel	Weekday Monday Tuesday Wednesday Thursday	Volume 120933 52979 45683 53152 k <u>Next ></u>	Einish

This screen enables you to choose the delimiter for the file (in this case, Excel 2007 detected tabs in the file and selected the Tab check box for you) and gives you a preview of what the text file will look like when imported. Clicking Next advances you to the final wizard screen.

Text Import Wizard - Step 3 of 3							? X				
This screen lets you select each co	lumn and sel	t the Da	ita Forn	nat.							
Column data format											
<u>G</u> eneral											
C Text	General converts numeric values to numbers, date values to dates, and all Text remaining values to text										
○ Date: MDY	remaining	Values	LO LEXL	<u>A</u> dvar	iced						
💿 Do not import column (skip)											
Data preview											
General General Gener	General	Gener	Gener	General	General						
Center Date Year	Month	Week	Day	Weekday	Volume		A				
Atlantic 1/1/2007 2007	January	բ	ի	Monday	120933						
Atlantic 1/2/2007 2007	January	բ	2	Tuesday	52979						
Atlantic 1/3/2007 2007	January	բ	в	Wednesday	45683						
Atlantic 1/4/2007 2007	January	۴	4	Thursday	53152		T				
•							F				
		Ca	ancel	< <u>B</u> ack	K Ne	ext >	Einish				

This screen enables you to change the data type and formatting of the columns in your data list. Because you'll assign number styles and PivotTable Quick Styles after you create the PivotTable, you can click Finish to import the data into your worksheet. After the data is in Excel 2007, you can work with it normally.

In this exercise, you will import a data list into Excel 2007 from a text file and then create a PivotTable based on that list.

USE the *Creating* text file.

On the Data tab, in the Get External Data group, click From Text.

The Import Text File dialog box opens.

 Navigate to the Documents\Microsoft Press\Excel2007SBS\PivotTables folder, and then double-click Creating.txt.

The Text Import Wizard starts.

3. Verify that the **Delimited** option is selected, and then click **Next**.

The next Text Import Wizard page appears.

- In the Delimiters section, verify that the Tab check box is selected and also verify that the data displayed in the Data preview area reflects the structure you expect.
- 5. Click Finish.

The Import Data dialog box opens.

Import Data	? ×
Where do you want to put the data	?
=\$A\$1	
🔘 <u>N</u> ew worksheet	
Properties OK	Cancel

6. Verify that the **Existing worksheet** option is selected, and then click **OK**.

Excel 2007 imports the data into your workbook.

7. On the Insert tab, in the Tables group, click PivotTable.

The Create PivotTable dialog box opens.

- Verify that the Select a table or range option is selected, that the range Sheet1\$A\$1:\$H\$6571 appears in the Table/Range field, and that the New Worksheet option is selected.
- 9. Click OK.

Excel 2007 creates a new worksheet.

 In the PivotTable Field List task pane, drag the Volume field header to the Values area.

- **11.** Drag the **Weekday** field header to the **Column Labels** area.
- **12.** Drag the **Center** field header to the **Row Labels** data area.

)	(u ~) ∓		Book3	- Microsof	t Excel		PivotTable To	ools				_ = X
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Pivo Pivo	tTable Name: tTable5 Options * PivotTable	Active Field: Sum of Vol Field Se Active	ume ettings	 Group Se Ungroup Group Field Group 	eld	↓ AZA Sort Re	fresh Chang Sour	e Data C	lear Select	Move PivotTable	PivotChart I	Formulas OLAP tools *	Field +/ Field List Buttons Headers Show/Hide
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1 2 3	Sum of Volun	ne Colum	nn Labels 🔽									Choose fields to	add to report:
4 5 7 8 9 10 11 12 13 14	Row Labels Atlantic Central Midwest Mountain Wo North Central Northeast Northwest Southeast Southeast Southwest Grand Total	sunda	v 6681845 6930783 6923875 6673335 6937060 7166215 6974586 7229890 7148300 62665905	Monday 9 6718491 3 6787961 5 6358123 9 6661710 0 6295847 5 6941642 5 6750727 8 7272423 1 6736137 5 60523061	Tuesday 6065016 6530917 6705800 6698354 6767203 7068465 7213121 7600635 7145226 61794741	Wednesday 699914 6543992 6629517 6629517 66808329 7093316 6808329 7087334 7193113 7010575 61928538	Ihursday 6647852 6915836 6467518 6788244 6467078 6708788 6918003 6870974 60520670	Friday 6592351 6523218 7011908 6457215 6443849 7049366 6639912 7236536 6863256 60817611	Saturday 7331478 6769008 6793026 6481411 6676237 6947400 7049667 7118020 6478290 61644537	Grand Lot 4703614 470017 468897 463234 466805 4869024 4869024 486333 5052164 4811810 4298950	al 82 82 85 85 85 85 85 85 85 85 85 85 85 85 85	Date Year Month Week Day Veekday Veekday Volume	
15												Drag fields betwe	en areas below:
17 18 19 20													Weekday -
21 22												Row Labels	Σ Values
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13. On the **Quick Access Toolbar**, click the **Save** button.

The Save As dialog box opens.

- **14.** Browse to the *Documents\Microsoft Press\Excel2007SBS\PivotTables* folder.
- **15.** In the File name field, type Imported Data.
- **16.** Click **OK**.

Excel 2007 saves your file.

CLOSE the *Imported Data* workbook. If you are not continuing directly to the next chapter, exit Excel.



Key Points

- A PivotTable is a versatile tool you can use to rearrange your data dynamically, enabling you to emphasize different aspects of your data without creating new worksheets.
- PivotTable data must be formatted as a list. Using a data table as the PivotTable data source enables you to streamline the creation process by referring to the table name instead of being required to select the entire range that contains the data you want to summarize.
- Excel 2007 comes with many attractive styles for PivotTables; you'll probably find one you like.
- The PivotTable Field List task pane enables you to create your PivotTable by using a straightforward, compact tool.
- Just as you can limit the data shown in a static worksheet, you can use filters to limit the data shown in a PivotTable.
- If you have data in a compatible format, such as a text file, you can import that data into Excel 2007 and create a PivotTable from it.

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