How to access your CD files

The print edition of this book includes a CD. To access the CD files, go to http://aka.ms/623033/files, and look for the Downloads tab.

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

Questions? Please contact: mspininput@microsoft.com

Microsoft Press
Contents

About the Authors .......................................................... ix
Introducing Access 2007 ...................................................... xi
  New Features ................................................................. xi
  Let’s Get Started! ........................................................... xiv
Information for Readers Running Windows XP .............................. xv
  Managing the Practice Files ............................................... xv
  Using the Start Menu ...................................................... xvi
  Navigating Dialog Boxes .................................................. xvii
The Microsoft Business Certification Program ................................ xix
  Selecting a Certification Path .............................................. xx
  Becoming a Microsoft Certified Application Specialist—Microsoft Office Access 2007 ................................................ xx
  Taking a Microsoft Business Certification Exam .......................... xxi
  More Information ........................................................... xxii
Features and Conventions of This Book .................................... xxiii
Using the Companion CD .................................................... xxv
  What’s on the CD? ............................................................ xxv
  Minimum System Requirements ......................................... xxviii
  Installing the Practice Files ............................................... xxix
  Adding the Practice File Folder to the Trusted Locations List ........... xxx
  Using the Practice Files .................................................... xxxi
  Removing and Uninstalling the Practice Files ............................. xxxii

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# Contents

Getting Help ................................ ............................................... xxxiii
Errata & Book Support ................................ ................................ xxxiii
Getting Help with Access 2007 ................................ .................. xxxiii
More Information ................................ ....................................... xxxvii
We Want to Hear from You ................................ ....................... xxxvii
Stay in Touch ................................ ............................................. xxxvii

Quick Reference ................................ .......................................... xxxix

## 1  Exploring Access 2007

Working in Access 2007 ................................ ................................. 2
Understanding Database Concepts ................................ ........... 9
Opening an Existing Database ................................ .................... 11
    Sidebar: Enabling Macros and Other Database Content. .......... 12
Exploring Tables ................................ ........................................... 14
Exploring Queries ................................ ........................................ 20
Exploring Forms ................................ ......................................... 23
Exploring Reports ................................ ...................................... 27
Exploring Other Access Objects ................................ ............... 30
    Macros ................................ .................................................. 30
    Modules ................................ .............................................. 30
Previewing and Printing Access Objects ................................ ... 31
Key Points ................................ .................................................... 35

## 2  Creating a Database

Creating a Database from a Template ................................ ........ 38
Creating a Table Manually ................................ ......................... 41
    Sidebar: Attaching Files to Database Records. ....................... 46
Creating a Table from a Template. ................................ .......... 46
Manipulating Table Columns and Rows ................................ ... 48
Key Points ................................ .................................................. 51

## 3  Populating a Database

Importing Information from Another Access Database ............... 54
    Sidebar: Migrating a Database from a Previous Version of Access 57
Importing Information from an Excel Worksheet ........................ 57
    Sidebar: Linking to Information. ........................................... 60
Importing or Linking to a SharePoint List ................................ 60
6  Locating Specific Information  143
   Sorting Information in a Table  .................................................. 144
      Sidebar: How Access Sorts  ............................................... 145
   Filtering Information in a Table  ....................................... 148
      Sidebar: Wildcards  ................................................... 148
      Sidebar: Expressions  .............................................. 152
   Filtering Information by Using a Form  .......................... 153
   Locating Information That Matches Multiple Criteria  ................. 156
   Creating a Query Manually  ........................................... 160
      Sidebar: Filters and Sorts vs. Queries  .................. 162
      Sidebar: Joining Fields in a Query  .............. 164
      Sidebar: Expression Builder  .............................. 170
   Creating a Query by Using a Wizard  ......................... 170
   Performing Calculations by Using a Query  ..................... 174
   Key Points  .......................................................... 177

7  Keeping Your Information Accurate  179
   Restricting the Type of Data in a Field  .......................... 180
   Restricting the Amount of Data in a Field  .............. 184
   Specifying the Format of Data in a Field  .................. 186
   Restricting Data by Using Validation Rules  ............ 191
   Creating a Simple Lookup List  ..................................... 194
   Creating a Multi-Column Lookup List  .................... 198
   Updating Information in a Table  ................................... 202
   Deleting Information from a Table  ............................ 206
   Preventing Database Problems  ..................................... 210
   Key Points  .......................................................... 217

8  Working with Reports  219
   Sidebar: Forms vs. Reports  ........................................... 220
   Creating a Report by Using a Wizard  .......................... 221
   Modifying Report Design  ............................................ 227
   Creating a Report Manually  ....................................... 233
   Modifying Report Content  ........................................... 237
   Adding a Subreport to a Report  .................................. 239
   Previewing and Printing a Report  ................................ 247
   Key Points  .......................................................... 249
9 Making Your Database Easy to Use 251
  Creating a Switchboard ................................................................. 252
  Creating Custom Categories ......................................................... 259
  Controlling the Features Available to Database Users ....................... 262
  Making Favorite Access Commands Quickly Available ...................... 267
  Key Points ...................................................................................... 271

10 Securing and Sharing Information 273
  Assigning a Password to a Database ................................................ 274
    Sidebar: Creating a Secure Password ............................................ 274
    Sidebar: Database Encrypting ...................................................... 275
  Preventing Changes to Database Code .............................................. 277
  Securing a Database for Distribution .............................................. 281
    Sidebar: Splitting a Database for Distribution ................................. 282
    Sidebar: Collaborating Through SharePoint .................................. 283
  Key Points ...................................................................................... 284

Glossary ....................................................................................... 285

Index .......................................................................................... 291
About the Authors

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Steve has written 18 books, most of which are about Microsoft applications. As President of Online Publishing and Programming Solutions, Inc. (OP²S), he has managed the development of many tools for creating and viewing training material. Steve takes advantage of the Internet and computer technology to work from home—a ten-acre horse ranch on the Olympic Peninsula. When not working on technology products, he and his wife Gale spend their time working on the property, training and riding horses, and picking up horse poop.

**M. Dow Lambert III**

During 20 years in academia, Dow authored or co-authored 19 social science research publications, developed curriculum and training programs for social services professionals, and managed longitudinal studies of human behavior. In 1995, he moved from academia to the private sector, where he worked for a small company that developed and maintained reservation systems for the travel industry. Here he learned the difference between writing research reports for scientific journals, writing technical specifications for programmers, and writing user guides for the people who actually needed to understand and use the software that his company produced. In his spare time, Dow and his wife Marlene enjoy birding and bird photography.

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Joan has worked in the training and certification industry for 12 years. As President of Online Training Solutions, Inc. (OTSI), Joan is responsible for guiding the translation of technical information and requirements into useful, relevant, and measurable training, learning, and certification deliverables. Joan is a Microsoft Certified Technology Specialist, a Microsoft Certified Applications Specialist (MCAS) Instructor, and the author of more than two dozen books about Windows and Office (for Windows and Mac). Joan lives in America’s Finest City—San Diego, California—with her husband Barry, daughter Trinity, and stepson Charles.
The Team

Without the support of the hard-working members of the OTSI publishing team, this book would not exist. Susie Bayers and Marlene Lambert guided the editorial process, and Robert (RJ) Cadranell guided the production process. Lisa Van Every laid out the book using Adobe InDesign, and Jeanne Craver processed the graphics. Jaime Odell proofread the book, and Jan Bednarczuk created its index. Another important member of our team, Microsoft Press Series Editor Sandra Haynes, provided invaluable support throughout the writing and production processes.

Online Training Solutions, Inc. (OTSI)

OTSI specializes in the design, creation, and production of Office and Windows training products for information workers and home computer users. For more information about OTSI, visit

www.otsi.com
Introducing Access 2007

Microsoft Office Access 2007 is a powerful relational database application that includes hundreds of tools that allow you to quickly start tracking, sharing, and reporting information, even if you are new to database development. Users have access to a large library of professionally designed application templates, wizards that automatically create tables, forms, queries, and reports, and extensive local and online help resources.

Access supports sharing data with other sources, including other programs in the 2007 Microsoft Office system, Microsoft SQL Server, Microsoft SharePoint Products and Services, and documents in XML, HTML, XPS, and PDF formats. Advanced features allow you to create sophisticated executable database applications for use by employees and customers to gather and view data without their needing to know anything at all about database design or development.

This book gives you straightforward instructions for using Access to create databases. It takes you from knowing little or nothing about Access—or, for that matter, about databases—to a level of expertise that will enable you to create complex databases for use by one person or by many people.

New Features

There’s no question that Microsoft Office Access has been extensively reworked and improved with this version. The new Microsoft Office Fluent user interface, designed to make the features you need easily available when you need them, is an obvious indicator. But beyond the appearance and navigation, Access 2007 also has a lot of new and improved features that really do make this a superior program to its predecessors. Because there are so many changes in this version, we don’t identify new features with a special margin icon (as we did in previous versions of this book). We do, however, list them here. Throughout this book, we include complete coverage of features that are new in Access 2007, including the benefits of the feature, how to use it, and any potential problems you might encounter.

If you’re upgrading to Access 2007 from a previous version, you’re probably more interested in the differences between the old and new versions and how they will affect you than you are in the basic functionality of Access. To help you identify the entire scope of change from the version of Access you’re familiar with, we’ve listed here the new features introduced in Access 2002 and Access 2003, as well as in Access 2007.
If You Are Upgrading from Access 2003

Access 2007 has a long list of new and improved features that make it easier than ever to create databases to track, share, manage, and audit information. To locate information about a specific feature, see the index at the back of this book:

- **The Ribbon.** This feature of the Office Fluent user interface organizes the most common commands for any database object into tabs and groups so that the appropriate commands are immediately accessible for the current object.

- **Quick Access Toolbar.** You can customize a portion of this toolbar, displayed above or below the Ribbon, to include commands you regularly use, regardless of which Ribbon tab or database object is currently active.

- **Navigation Pane.** The customizable Navigation Pane replaces the Database window from Access 2003. You can display or hide all tables, queries, forms, reports, macros, and modules, or create a custom group to display only the objects that you select. You can hide the Navigation Pane to make more room on the screen for your database object.

- **View toolbar.** This context-sensitive toolbar located in the lower-right corner of the program window provides single-click switching among supported views of the current database object, including Datasheet view, Design view, PivotTable view, PivotChart view, Form view, and Layout view.

- **Database object display options.** Choose from Tabbed Documents, in which you can quickly switch between multiple database objects by clicking tabs at the top of the database window, and Overlapping windows that you can arrange individually on the screen.

- **Template library.** Quickly locate and download professionally designed templates for common database projects.

- **Improved sorting and filtering.** Easily sort all records in a table based on one or more fields, or filter a table or form to display or not display records matching multiple criteria.

- **Layout view.** Redesign a form or report while viewing it.

- **Stacked and Tabular layouts.** Group controls in a form or report layout so you can easily manipulate the entire group as one unit.

- **Automatic calendar.** The date/time data type includes an optional calendar control. Click the calendar, and select the date you want.

- **Rich Text.** Memo fields now support most common formatting options, including fonts, color, and character formatting. The formatting is stored with the database.
- **Create tab.** Quickly create a new table, form, query, report, macro, SharePoint list, or other Access object.

- **Totals function.** Add a totals row to a query, and select from a list of formulas to automatically calculate aggregate values for forms and reports.

- **Field List pane.** Drag and drop fields from one or more related or unrelated tables onto your active table.

- **Attachment data type.** Attach photos and other files to a database record.

- **Embedded macros.** Macros embedded in a form or report offer a higher level of security in database applications.

- **Microsoft Access Help system.** Easily search built-in and online end-user and developer support content from within Access.

- **Share information.** Easily import and export data between Access and other Microsoft Office applications, or XML, HTML, PDF, and dBase files; collect information through e-mail surveys in Microsoft Office Outlook and automatically update your database with the responses; create or link a database with a SharePoint list; publish your database to a SharePoint library and allow users to update and extract information.

- **Improved report design.** Quickly create a professional-looking report, complete with logo, header, and footer. Use Report view, combined with filters, to browse only selected records in the report.

- **Group, Sort, and Total pane.** This feature makes it much easier to group and sort data in reports, and add totals from a drop-down list.

- **Enhanced security.** Adding password protection to a database now causes Access to automatically encrypt the database when it closes, and decrypt it when it opens.

### If You Are Upgrading from Access 2002

In addition to the features listed in the previous section, if you’re upgrading from Access 2002 (part of the Microsoft Office XP program suite), you’ll find the following:

- **Smart Tags.** Track types of data, such as dates, names, and addresses, which can be used in multiple ways.

- **Transform.** Transform script to data when you import or export it.

- **Support for Windows Theming.** Change your display theme.

- **Property Update Options.** Quickly update input mask options.

- **Automatic Error Checking.** Identify and correct errors in forms and reports.

- **Back Up Database.** Quickly back up your database with the click of a button.
If You Are Upgrading from Access 2000

In addition to the features listed in the previous sections, if you’re upgrading from Access 2000, you’ll find the following:

- **Speech recognition.** Give commands and dictate text.
- **Data Access Page Designer.** Efficiently design data access pages.
- **Save as data access pages.** Save existing forms and reports as pages that can be viewed over the Web.
- **Conversion error logging.** Log errors when converting Access 95, Access 97, and Access 2000 databases to Access 2002 file format.
- **Multiple undo and redo.** Undo or redo several actions instead of just the last one.
- **PivotTables and PivotCharts.** Analyze data by creating dynamic views of data.
- **XML input and output.** Import XML data and publish Access data to the Web by exporting it in XML format.
- **Stored Procedure Designer.** Create simple SQL Server stored procedures.
- **Batch updating.** Save updates to records on a local computer, and send them to the server all at once.
- **Script language support.** Set preferences for complex script languages, including the reading direction.

Let's Get Started!

There are so many new and improved features to this already feature-rich program that there are bound to be some exciting discoveries for even the most advanced users. If you are new to Access, you will find many automated features that let you painlessly create databases and add queries, forms, and professional-looking reports to track and share your data. We look forward to showing you around Microsoft Office Access 2007.
Information for Readers Running Windows XP

The graphics and the operating system–related instructions in this book reflect the Windows Vista user interface. However, Windows Vista is not required; you can also use a computer running Windows XP.

Most of the differences you will encounter when working through the exercises in this book on a computer running Windows XP center around appearance rather than functionality. For example, the Windows Vista Start button is round rather than rectangular and is labeled with the Windows Vista logo rather than the word Start; window frames and window-management buttons look different; and if your system supports Windows Aero, the window frames might be transparent.

In this section, we provide steps for navigating to or through menus and dialog boxes in Windows XP that differ from those provided in the exercises in this book. For the most part, these differences are small enough that you will have no difficulty in completing the exercises.

Managing the Practice Files

The instructions given in the “Using the Companion CD” section are specific to Windows Vista. The only differences when installing, using, uninstalling, and removing the practice files supplied on the companion CD are the default installation location and the uninstall process.

On a computer running Windows Vista, the default installation location of the practice files is Documents\Microsoft Press\Access2007SBS. On a computer running Windows XP, the default installation location is My Documents\Microsoft Press\Access2007SBS. If your computer is running Windows XP, whenever an exercise tells you to navigate to your Documents folder, you should instead go to your My Documents folder.

To uninstall the practice files from a computer running Windows XP:

1. On the Windows taskbar, click the Start button, and then click Control Panel.
2. In Control Panel, click (or in Classic view, double-click) Add or Remove Programs.
3. In the Add or Remove Programs window, click Microsoft Office Access 2007 Step by Step, and then click Remove.

4. In the Add or Remove Programs message box asking you to confirm the deletion, click Yes.

**Important** If you need help installing or uninstalling the practice files, please see the “Getting Help” section later in this book. Microsoft Product Support Services does not provide support for this book or its companion CD.

Using the Start Menu

To start Access 2007 on a computer running Windows XP:

- Click the Start button, point to All Programs, click Microsoft Office, and then click Microsoft Office Access 2007.

Folders on the Windows Vista Start menu expand vertically. Folders on the Windows XP Start menu expand horizontally. You will notice this variation between the images shown in this book and your Start menu.
Navigating Dialog Boxes

On a computer running Windows XP, some of the dialog boxes you will work with in the exercises not only look different from the graphics shown in this book but also work differently. These dialog boxes are primarily those that act as an interface between Access and the operating system, including any dialog box in which you navigate to a specific location. For example, here are the Open dialog boxes from Access 2007 running on Windows Vista and Windows XP and some examples of ways to navigate in them.

Windows XP version

Windows Vista version

To navigate to the Exploring folder in Windows Vista:

→ In the Favorite Links pane, click Documents. Then in the folder content pane, double-click Microsoft Press, Access2007SBS, and then Exploring.

To move back to the Access2007SBS folder in Windows Vista:

→ In the upper-left corner of the dialog box, click the Back button.

To navigate to the Exploring folder in Windows XP:

→ On the Places bar, click My Documents. Then in the folder content pane, double-click Microsoft Press, Access2007SBS, and then Exploring.

To move back to the Access2007SBS folder in Windows XP:

→ On the toolbar, click the Up One Level button.
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. There are two paths to certification:

- A Microsoft Certified Application Specialist (MCAS) is an individual who has demonstrated worldwide skill standards for Windows Vista or the 2007 Microsoft Office suite through a certification exam in Windows Vista or in one or more of the 2007 Microsoft 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 Microsoft Office suite and of Microsoft SharePoint products and technologies to the next level and has demonstrated through a certification exam that he or she can use the collaborative power of the Office suite to accomplish job functions such as Budget Analysis and Forecasting, or Content Management and Collaboration.

After attaining certification, you can include the MCAS or MCAP logo with the appropriate certification designator on your 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.
Selecting a Certification Path

When selecting the 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 spreadsheet. 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 utilizing advanced functionality with the combined 2007 Microsoft Office suite of products. Successful candidates generally have between six months and one or more 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 Office Access 2007

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

To become certified as a Microsoft Certified Application Specialist for Microsoft Office Access 2007, you must demonstrate proficiency in these six areas:

- **Structuring a database.** You must demonstrate the ability to define the appropriate tables, fields, and data types for a database; create, modify, and print table relationships; set, change, and remove primary keys; and split a database.

- **Creating and formatting database elements.** You must demonstrate the ability to create a database from scratch and from a template; create, modify, rename, summarize, and delete tables; create and modify fields and field properties; create and modify various types of forms and reports.
• **Entering and modifying data.** You must demonstrate the ability to enter, edit, delete, and move among records; find and replace data; attach documents to records; and import data or link to external data.

• **Creating and modifying queries.** You must demonstrate the ability to create various types of queries based on one table or multiple tables; add tables to and remove tables from queries; add criteria, joins, calculated fields, and aliases; and create sum, average, min, max, and count queries.

• **Presenting and sharing data.** You must demonstrate the ability to sort and filter data in tables, queries, reports, and forms; create and modify charts; export data from tables and queries; save database objects as other file types; and print database objects.

• **Managing and maintaining databases.** You must demonstrate the ability to back up, compact, and repair a database; encrypt a database by using a password; set database options and properties; identify object dependencies; print database information; and reset or refresh table links.

---

**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 by using an interactive simulation (a digital model) of the Windows Vista operating system of one or more of the 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. For example, the text and values you are asked to enter might appear in the instructions in bold and underlined (for example, **text**), but you should enter the information without applying these formats.

• Close all dialog boxes before proceeding to the next exam question, unless you are specifically instructed to do otherwise.

• Don’t close task panes before proceeding to the next exam question 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 (unless a specific method is indicated in the instructions), and not on the time you take to complete the question.

• If your computer becomes unstable during the exam (for example, if the exam does not respond or the mouse no longer functions) 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**

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 mailed a printed certificate within approximately 14 days.

**More Information**

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

www.microsoft.com/learning/mcp/mcas/

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

www.microsoft.com/learning/mcp/mcap/
Features and Conventions of This Book

This book has been designed to lead you step by step through all the tasks you are most likely to want to perform in Microsoft Office Access 2007. If you start at the beginning and work your way through all the exercises, you will gain enough proficiency to be able to manage complex databases through Access. However, each topic is self contained. If you have worked with a previous version of Access, or if you completed all the exercises and later need help remembering how to perform a procedure, the following features of this book will help you locate specific information:

- **Detailed table of contents.** A listing of the topics and sidebars within each chapter.
- **Chapter thumb tabs.** Easily locate the beginning of the chapter you want.
- **Topic-specific running heads.** Within a chapter, quickly locate the topic you want by looking at the running head of odd-numbered pages.
- **Quick Reference.** General instructions for each procedure covered in specific detail elsewhere in the book. Refresh your memory about a task while working with your own documents.
- **Detailed index.** Look up specific tasks and features and general concepts in the index, which has been carefully crafted with the reader in mind.
- **Companion CD.** Contains the practice files needed for the step-by-step exercises, as well as a fully searchable electronic version of this book and other useful resources.

In addition, we provide a glossary of terms for those times when you need to look up the meaning of a word or the definition of a concept.

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.
### Features and Conventions of This Book

<table>
<thead>
<tr>
<th>Convention</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Disk Icon]</td>
<td>This icon at the end of a chapter introduction indicates information about the practice files provided on the companion CD for use in the chapter.</td>
</tr>
<tr>
<td><strong>USE</strong></td>
<td>This paragraph preceding a step-by-step exercise indicates the practice files that you will use when working through the exercise.</td>
</tr>
<tr>
<td><strong>BE SURE TO</strong></td>
<td>This paragraph preceding or following an exercise indicates any requirements you should attend to before beginning the exercise or actions you should take to restore your system after completing the exercise.</td>
</tr>
<tr>
<td><strong>OPEN</strong></td>
<td>This paragraph preceding a step-by-step exercise indicates files that you should open before beginning the exercise.</td>
</tr>
<tr>
<td><strong>CLOSE</strong></td>
<td>This paragraph following a step-by-step exercise provides instructions for closing open files or programs before moving on to another topic.</td>
</tr>
<tr>
<td>![Numbered Steps]</td>
<td>Black numbered steps guide you through procedures in sidebars and expository text.</td>
</tr>
<tr>
<td>![Arrow]</td>
<td>An arrow indicates a procedure that has only one step.</td>
</tr>
<tr>
<td><strong>See Also</strong></td>
<td>These paragraphs direct you to more information about a given topic in this book or elsewhere.</td>
</tr>
<tr>
<td><strong>Troubleshooting</strong></td>
<td>These paragraphs explain how to fix a common problem that might prevent you from continuing with an exercise.</td>
</tr>
<tr>
<td><strong>Tip</strong></td>
<td>These paragraphs provide a helpful hint or shortcut that makes working through a task easier, or information about other available options.</td>
</tr>
<tr>
<td><strong>Important</strong></td>
<td>These paragraphs point out information that you need to know to complete a procedure.</td>
</tr>
<tr>
<td>![Save]</td>
<td>The first time you are told to click a button in an exercise, a picture of the button appears in the left margin. If the name of the button does not appear on the button itself, the name appears under the picture.</td>
</tr>
<tr>
<td>![Enter]</td>
<td>In step-by-step exercises, keys you must press appear as they would on a keyboard.</td>
</tr>
<tr>
<td>![Ctrl + Home]</td>
<td>A plus sign (+) between two key names means that you must hold down the first key while you press the second key. For example, “press <code>Ctrl</code> + <code>Home</code>” means “hold down the <code>Ctrl</code> key while you press the <code>Home</code> key.”</td>
</tr>
<tr>
<td><strong>Program interface elements</strong></td>
<td>In steps, the names of program elements, such as buttons, commands, and dialog boxes, are shown in black bold characters.</td>
</tr>
<tr>
<td><strong>User input</strong></td>
<td>Anything you are supposed to type appears in blue bold characters.</td>
</tr>
<tr>
<td><strong>Glossary terms</strong></td>
<td>Terms that are explained in the glossary at the end of the book are shown in blue italic characters.</td>
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Using the Companion CD

The companion CD included with this book contains the practice files you’ll use as you work through the book’s exercises, as well as other electronic resources that will help you learn how to use Microsoft Office Access 2007.

What’s on the CD?

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

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Files</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 1: Exploring Access 2007</td>
<td>Exploring/Working.accdb</td>
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<td>Exploring/Opening.accdb</td>
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<td>Exploring/Tables.accdb</td>
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<td>Exploring/Print.accdb</td>
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<td>Chapter 2: Creating a Database</td>
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<td>Chapter 3: Populating a Database</td>
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<td>Sharing/CopyOffice.accdb</td>
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<td>Chapter 5: Simplifying Data Entry by Using Forms</td>
<td>Simplifying/CreateFormTool.accdb</td>
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<td>Locating/Calculate.accdb</td>
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<td>Chapter 7: Keeping Your Information Accurate</td>
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<td>Accuracy/Delete.accdb</td>
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<td>Accuracy/Prevent.accdb</td>
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In addition to the practice files, the CD contains some exciting resources that will really enhance your ability to get the most out of using this book and Access 2007, including the following:

- *Microsoft Office Access 2007 Step by Step* in eBook format
- *Microsoft Computer Dictionary, Fifth Edition*
- Sample chapter and poster from *Look Both Ways: Help Protect Your Family on the Internet* (Linda Criddle, 2007)

### Important
The companion CD for this book does not contain the Access 2007 software. You should purchase and install that program before using this book.
Minimum System Requirements

2007 Microsoft Office System

The 2007 Microsoft Office system includes the following programs:

- Microsoft Office Access 2007
- Microsoft Office Communicator 2007
- Microsoft Office Excel 2007
- Microsoft Office Groove 2007
- Microsoft Office InfoPath 2007
- Microsoft Office OneNote 2007
- Microsoft Office Outlook 2007
- Microsoft Office Outlook 2007 with Business Contact Manager
- Microsoft Office PowerPoint 2007
- Microsoft Office Publisher 2007
- Microsoft Office Word 2007


To install and run these programs, your computer needs to meet the following minimum requirements:

- 500 megahertz (MHz) processor
- 256 megabytes (MB) RAM
- CD or DVD drive
- 2 gigabytes (GB) available hard disk space; a portion of this disk space will be freed if you select the option to delete the installation files

**Tip** Hard disk requirements will vary depending on configuration; custom installation choices might require more or less hard disk space.

- Monitor with 800×600 screen resolution; 1024×768 or higher recommended
- Keyboard and mouse or compatible pointing device
Installing the Practice Files

- Internet connection, 128 kilobits per second (Kbps) or greater, for download and activation of products, accessing Microsoft Office Online and online Help topics, and any other Internet-dependent processes
- Windows Vista with Service Pack 1 (SP1) or later, Microsoft Windows XP with Service Pack 2 (SP2), or Microsoft Windows Server 2003 or later
- Windows Internet Explorer 7 or Microsoft Internet Explorer 6 with service packs


Step-by-Step Exercises

In addition to the hardware, software, and connections required to run the 2007 Microsoft Office system, you will need the following to successfully complete the exercises in this book:

- Access to a printer
- 52 MB of available hard disk space for the practice files

Installing the Practice Files

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

**Note** 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/9780735623033.

1. 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.
3. Click Practice Files. If the File Download and/or Internet Explorer Security dialog boxes open, click Run.

4. 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. Click Next on the first screen, and then click Next to accept the terms of the license agreement on the next screen.

5. If you want to install the practice files to a location other than the default folder (Documents\Microsoft Press\Access2007SBS), click the Change button, select the new drive and path, and then click OK.

   Important If you install the practice files to a location other than the default, you will need to substitute that path within the exercises.

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.


9. Remove the companion CD from the CD drive, and return it to the envelope at the back of the book.

Adding the Practice File Folder to the Trusted Locations List

The databases provided as practice files for this book contain macros. You can enable the macros in all the practice databases by adding the practice file folder to the list of Trusted Locations for Access 2007.

Follow these steps:

1. Click the Microsoft Office Button, and then click Access Options.

2. On the Trust Center page of the Access Options dialog box, click Trust Center Settings.

3. On the Trusted Locations page of the Trust Center dialog box, click Add new location.

4. In the Microsoft Office Trusted Location dialog box, click Browse.
5. In the **Browse** dialog box, browse to your `Documents\Microsoft Press\Access2007SBS` folder, and then click **OK**.

6. In the **Microsoft Office Trusted Location** dialog box, select the **Subfolders of this location are also trusted** check box, and then click **OK** in each of the open dialog boxes.

If you prefer to not do this, you can enable macros in an individual database by clicking Options in the Security Warning area that appears at the top of the content pane. In the Microsoft Office Security Options dialog box, selecting the **Enable This Content** option, and then clicking **OK**.

**See Also**  For more information about the Access 2007 Trust Center macro settings, see the sidebar “Enabling Macros and Other Database Content” in Chapter 1, “Exploring Access 2007.”

### 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\Access2007SBS`. 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 **Opening** database. This practice file is located in the `Microsoft Press\Access2007SBS\Exploring` folder.

**BE SURE TO** start your computer, but don’t start Access before starting this exercise.

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

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

2. In your **Documents** folder, double-click **Microsoft Press**, double-click **Access2007SBS**, and then double-click a specific chapter folder.

You can browse to the practice files from an Access 2007 dialog box by following these steps:

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

2. In your **Documents** folder, double-click **Microsoft Press**, double-click **Access2007SBS**, and then double-click the specified chapter folder.
Removing and Uninstalling the Practice Files

After you finish working through this book, delete the practice messages, appointments, contacts, and other Outlook items you created while working through the exercises, and then uninstall the practice files that were installed from the companion CD. 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.
3. In the Programs and Features window, click Microsoft Office Access 2007 Step by Step, and then on the toolbar at the top of the window, click the Uninstall button.
4. If the Programs and Features message box asking you to confirm the deletion appears, 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.

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

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.

If you need additional support, please e-mail Microsoft Press Book Support at mspinput@microsoft.com.

Getting Help with Access 2007

If your question is about Microsoft Office Access 2007, and not about the content of this Microsoft Press book, your first recourse is the Access Help system. This system is a combination of tools and files stored on your computer when you installed the 2007 Microsoft Office system and, if your computer is connected to the Internet, information available from Microsoft Office Online. There are several ways to find general or specific Help information:

- To find out about an item on the screen, you can display a ScreenTip. For example, to display a ScreenTip for a button, point to the button without clicking it. The ScreenTip gives the button’s name, the associated keyboard shortcut if there is one, and unless you specify otherwise, a description of what the button does when you click it.

- In the Access program window, you can click the Microsoft Office Access Help button (a question mark in a blue circle) at the right end of the Ribbon to display the Access Help window.
After opening a dialog box, you can click the Help button (also a question mark) at the right end of the dialog box title bar to display the Access Help window with topics related to the functions of that dialog box already identified.

To practice getting help, you can work through the following exercise.

**BE SURE TO** start Access before beginning this exercise.

1. At the right end of the Ribbon, click the **Microsoft Office Access Help** button.

   The Access Help window opens.

2. In the list of topics in the **Access Help** window, click **Activating Access**.

   Access Help displays a list of topics related to activating Microsoft Office system programs. You can click any topic to display the corresponding information.
3. On the toolbar, click the **Show Table of Contents** button.

The Table Of Contents appears in the left pane, organized by category, like the table of contents in a book.

Clicking any category (represented by a book icon) displays that category’s topics (represented by help icons).

If you’re connected to the Internet, Access displays categories, topics, and training available from the Office Online Web site as well as those stored on your computer.

4. In the **Table of Contents**, click a few categories and topics, then click the **Back** and **Forward** buttons to move among the topics you have already viewed.
5. At the right end of the Table of Contents title bar, click the Close button.

6. At the top of the Access Help window, click the Type word to search for box, type Help window, and then press the Enter key.

The Access Help window displays topics related to the words you typed.

7. In the results list, click Print a Help topic.

The selected topic appears in the Access Help window, explaining that you can click the Print button on the toolbar to print any topic.

8. Below the title at the top of the topic, click Show All.

Access displays any hidden auxiliary information available in the topic and changes the Show All button to Hide All. You can display or hide an individual item by clicking it. When you click the Print button, Access will print all displayed information.

CLOSE the Access Help window.
More Information

If your question is about Microsoft Office Access 2007 or another Microsoft software product and you cannot find the answer in the product’s Help system, please search the appropriate product 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/

We Want to Hear from You

At Microsoft Press, your satisfaction is our top priority, and your feedback our most valuable asset. Please tell us what you think of this book at:

http://www.microsoft.com/learning/booksurvey

The survey is short, and we read every one of your comments and ideas. Thanks in advance for your input!

Stay in Touch

Let’s keep the conversation going! We’re on Twitter: http://twitter.com/MicrosoftPress
Quick Reference

1 Exploring Access 2007

To open a table
➔ In the Navigation Pane, expand the Tables category, and then double-click the table you want to open.

To access additional datasheet formatting options
➔ In Datasheet view, on the Home tab, click the Font Dialog Box Launcher.

To hide the Ribbon
➔ Double-click the active tab.

To display the Ribbon when it is hidden
➔ Click any tab.

To unhide the Ribbon
➔ Double-click the active tab.

To enable macros in the current database
1. In the Security Warning area, click Options.
2. In the Microsoft Office Security Options dialog box, select the Enable this content option, and then click OK.

To add the publisher of a digitally signed database to the Trusted Publishers list
1. In the Security Warning area, click Options.
2. In the Microsoft Office Security Options dialog box, select the Trust all documents from this publisher option, and then click OK.

To add the location of this database to the Trusted Locations list
1. In the Microsoft Office Security Options dialog box, click Open the Trust Center.
2. In the page list in the left pane of the Trust Center, click Trusted Locations.
3. On the Trusted Locations page, click Add new location.
4. In the Microsoft Office Trusted Location dialog box, click Browse.
5. In the Browse dialog box, browse to the folder containing the current database, and then click OK.
6. In the Microsoft Office Trusted Location dialog box, select the Subfolders of this location are also trusted check box if you want to do so, and then click OK in each of the open dialog boxes.

To change the way Access handles macros in all databases
1. Click the Microsoft Office Button, and then click Access Options.

2. On the Trust Center page of the Access Options dialog box, click Trust Center Settings.

3. On the Macro Settings page of the Trust Center, select the option for the way you want Access to handle macros:
   - **Disable all macros without notification.** If a database contains macros, Access disables them and doesn’t display the security warning to give you the option of enabling them.
   - **Disable all macros with notification.** Access disables all macros and displays the security warning.
   - **Disable all macros except digitally signed macros.** Access automatically enables digitally signed macros.
   - **Enable all macros.** Access enables all macros.

4. Click OK in the Trust Center and in the Access Options dialog box.

To open an existing database
1. On the Start menu, point to All Programs, click Microsoft Office, and then click Microsoft Office Access 2007.

2. In the Open Recent Database list, click More, navigate to the folder in which the database is stored, and then double-click the database.

To close a database
   ➔ Click the Microsoft Office Button, and then click Close Database.

To view records in a table subdatasheet
   ➔ Click the Expand button at the left end of the record.

To hide records in a subdatasheet
   ➔ Click the Collapse button at the left end of the record.

To close a document window
   ➔ Click the Close Window button at the right end of the document tab.

To move through a table one record at a time
   ➔ On the record navigation bar, click the Next Record button.
To move to a specific record on a datasheet
   ➔ On the record navigation bar, select the current record number, type the number of the record you want, and then press Enter.

To switch from Datasheet View to Design View
   ➔ On the View toolbar, click the Design View button.

To view the properties of a query
   ➔ In the Navigation Pane, right-click the query, and then click Object Properties.

To process (or run) a query
   ➔ In the Navigation Pane, right-click the query name, and then click Open.

To move through records in a form
   ➔ On the record navigation bar, click the Next Record to move forward and the Previous Record button to move backward.

To view a form in Design view when you are currently in Form view
   ➔ On the Home tab, in the Views group, click the View button.

To preview a report
   1. In the Navigation Pane, right-click the report, and then click Print Preview.
   2. Click the report to display a larger view.

To view a table in Print Preview
   ➔ Click the Microsoft Office Button, point to Print, and then click Print Preview.

To change the page orientation of a table before printing
   ➔ On the Print Preview tab, in the Page Layout group, click the Portrait button or the Landscape button.

To close Print Preview
   ➔ On the Print Preview tab, click the Close Print Preview button.

2 Creating a Database

To open a template and save it as a new database
   1. On the Getting Started with Microsoft Office Access page, in the Template Categories list, click a category.
   2. Click the template icon for the template you want to open.
   3. In the File Name box, type a new name for the database, and note the default path.
   4. Click the Create button.
To open a new blank database
2. In the File Name box, type the name for the database.
3. Click the Browse for a location button, browse to the folder where you want to save the database, click OK, and then click Create.

To enter information in a database
➜ Click in an empty cell, type your text, and then press Tab to move to the next cell.

To change a field name
➜ Double-click the field name, and then type the new name.

To change the data type of a field
➜ In Design view, click in the data type cell you want to change, click the arrow that is displayed, and then click the data type you want to use.

To change the size of a field
1. In Design view, click the field name.
2. In the Field Properties area, select the current field size, and then enter the new field size.

To close and save a table or other database object
➜ Click the Close button to close the table, and then click Yes to save changes.

To rename a table or other database object
1. Close the table. In the Navigation Pane, right-click the table, and then click Rename.
2. Type a new name for the table, and then press Enter.

To delete a table or other database object
1. Close the table. In the Navigation Pane, right-click the table, and then click Delete.
2. In the confirmation dialog box that appears, click Yes.

To create a table by using a template
➜ On the Create tab, in the Tables group, click the Table Templates button, and then click the type of template you want to create.

To copy a table structure to a new table
1. Right-click the existing table in the Navigation Pane, and then click Copy.
2. On the Home tab, in the Clipboard group, click the Paste button.
3. In the Paste Table As dialog box, supply a unique name for the table, click Structure Only, and then click OK.
To add a new field name to a table and assign it a data type

1. Click in the first blank **Field** Name cell below the existing field names, type the field name, and then press **Tab**.

2. Click the **Data Type** arrow for the new field, and then click the data type that you want assigned to the field.

To delete a table row while in Design view

→ Right-click in the row you want to delete, and then click **Delete Rows**.

To edit a field name

→ Select the part of the field name you want to edit, and then type the new information.

To change the size of a table column

1. With the table in **Datasheet View**, drag the vertical bar at the right edge of a column header to the left or right until the column is the size you want.

2. To size a column to the minimum width that will display all the text in that field in all records, point to the vertical bar on the right of the column header, and when the pointer changes to a double-headed arrow, double-click.

To change the height of all rows in a table

→ With the table in **Datasheet View**, on the left side of the datasheet, drag the horizontal bar between any two record selectors up or down until the rows are the height you want.

To reset all rows in a table to standard height

1. With the table in **Datasheet View**, on the **Home** tab, in the **Records** group, click **More**, and then click **Row Height** to display the **Row Height** dialog box.

2. In the **Row Height** dialog box, select the **Standard Height** check box or type in the height you want in the **Row Height** box, and then click **OK**.

To hide and unhide columns

1. Click anywhere in the column you want to hide, and in the **Records** group, click **More**. Then click **Hide Columns**.

2. To restore the hidden column, click **More** again, and then click **Unhide Columns** to display the **Unhide Columns** dialog box.

3. In the **Unhide Columns** dialog box, select the check box of the column you want to unhide, and then click **Close**.

To freeze and unfreeze columns

1. Drag through the column header of the column or columns you want to freeze.

2. With the columns selected, click the **More** button, and then click **Freeze**.

3. To restore the columns to their normal condition, click **More**, and then click **Unfreeze**.
3 Populating a Database

To import tables from one Access database into another

1. Open the database that you want to import to.
2. On the External Data tab, in the Import group, click the Access button to open the Get External Data wizard, and then on the Select the source and destination of the data page, click Browse.
3. In the File Open dialog box, navigate to the database you want to use, click it, and then click Open.
4. On the Select the source and destination of the data page, with the Import tables, queries, forms, reports, macros, and modules into the current database option selected, click OK.
5. In the Import Objects dialog box, on the Tables tab, click Select All to select all the tables, or select only the tables you want to import, and then click OK to import any tables you selected.

To migrate a database from an earlier version of Access

1. Open the database, click the Microsoft Office Button, point to the Save As arrow, and then click Access 2007 Database.
2. In the Save As dialog box specify a name and location for the database, and click Save.

To import information from an Excel worksheet into an existing table in an Access database

1. On the External Data tab, in the Import group, click the Excel button.
2. In the Get External Data wizard, on the Select the source and destination of the data page, click Browse.
3. In the File Open dialog box, navigate to the workbook you want to use, and then click Open.
4. On the Select the source and destination of the data page, select the Append a copy of the records to the table option, click the arrow and select the table you want to use in the list, and then click OK.
5. In the Import Spreadsheet wizard, ensure your worksheet or range is selected, and then click Next.
6. If appropriate, select the First Row Contains Column Headings check box, click Next, and then click Finish to import the file.

To import a SharePoint list from a collaboration site

1. Locate the SharePoint site that contains the list you want to import, and make a note of the site address.
2. On the SharePoint site, identify the lists you want to copy to the database, and then decide whether you want the entire list or just a particular view.
3. Review the columns in the source list or view, and identify the database into which you want to import the lists.

4. On the External Data tab, in the Import group, click the SharePoint List button.

5. On the Select the source and destination of the data page, under Specify a SharePoint site, click the address of the site you want to connect to, or type it in the box.

6. Select the Import the source data or Link to the data source option, and click Next. Then, if prompted to do so, enter your site credentials.

7. In the Import column, select the check box of each list you want to import into the database.

8. In the Items to Import column, for each of the selected lists, select the view that you want to import into the database.

9. With the Import display values instead of IDS for fields that look up values stored in another list check box selected, click OK.

10. If you want to save the import parameters for reuse, select the Save Import Steps check box. On the Save Import Steps page, enter a name and description for the specification, and then click Save Import.

To create an e-mail survey form, and then send the e-mail survey

1. Create a database table containing the fields you want to include in your survey. Position the insertion point in the first empty record.

2. On the External Data tab, in the Collect Data group, click the Create E-mail button.

3. Follow the steps in the Collect Data Through E-mail Messages wizard to create the form, add and reorder the fields from the table, change field labels, specify the Outlook folder to which the survey results will be delivered, elect to have Outlook automatically add replies to the original Access database table, and specify the survey recipients.

4. Customize the text of the e-mail message that will be created, and then on the Create the e-mail message page, click Create. Make any changes you want to the message, address it to the survey recipients, and then send it.

To import information from a comma-delimited text file

1. On the External Data tab, in the Import group, click the Text File button.

2. In the Get External Data wizard, on the Select the source and destination of the data page, click the Browse button, navigate to the location of the text file, click the file, and then click Open.

3. Select the Append a copy of the records to the table option, and in the list, click the text file you want to use. Then click OK.

4. In the Import Text wizard, click Next.

5. Select or clear the check boxes you want, click Next, and click Finish to import the text file into the table. Then on the Save Import Steps page, click Close.
To import information from an XML file
1. On the External Data tab, in the Import group, click the XML File button.
2. On the Select the source and destination of the data page of the Get External Data wizard, click the Browse button, and in the File Open dialog box, navigate to the location of the file, click the one you want to use, and then click Open.
3. On the Select the source and destination of the data page, click OK.
4. In the Import XML dialog box, select the Structure and Data import option, and click OK. Then on the Save Import Steps page, click Close.

To import information from an HTML file into an existing table
1. On the External Data tab, in the Import group, click the More button, and then in the list, click HTML Document.
2. On the Select the source and destination of the data page of the Get External Data wizard, click the Browse button, navigate to the file you want to use, click the file, and then click Open.
3. Select the Append a copy of the records to the table option, click the file in the list that you want to use, and then click OK.
4. In the Import HTML wizard, select the First Row Contains Column Headings check box, and then click Finish.
5. On the Save Import Steps page, click Close.

To import information from an Outlook folder into a new table in an Access database
1. On the External Data tab, in the Import group, in the More list, click Outlook Folder.
2. In the Get External Data wizard, with the Import the source data into a new table in the current database option selected, click OK.
3. Expand your primary mailbox folder, click the folder you want to import, and then click Next.
4. On the Field Options page, click on fields you don’t want to import, select the Do not import field (Skip) check box, and then click Next.
5. On the Primary Key page, decide whether you want to create your own key, let Access create the key, or have no key, and click Next. Then click Finish to import the contents of the folder. On the Save Import Steps page, click Close.

To import information from a dBASE file into an existing table in an Access database
1. On the External Data tab, in the Import group, in the More list, click dBase File.
2. On the Select the source and destination of the data page of the Get External Data wizard, navigate to the file you want to use, click the file, and then click Open.
3. Select the **Import the source data into a new table in the current database** option, and then click **OK**. On the **Save Import Steps** page, click **Close**.

**To save an import operation for reuse**

➜ Select the **Save Import Steps** check box, and then click **Save Import**.

**To run a saved import operation**

➜ Click the **Saved Imports** button in the **Import** group on the **External Data** tab, click the import you want to run, and then click **Run**.

4. **Sharing and Reusing Information**

**To export a table from one Access database to another**

1. In the **Navigation Pane**, under **Tables**, select the table you would like to export.
2. On the **External Data** tab, in the **Export** group, click the **More** button, and then in the list, click **Access Database**.
3. In the **Export – Access Database** wizard, click the **Browse** button. In the **File Save** dialog box, navigate to the folder you want to export to, click it, and then click **Save**.
4. In the **Export – Access Database** wizard, click **OK**. In the **Export** dialog box, select the options you want, and then click **OK**.
5. In the **Export** dialog box, with the name of the exported table showing in the **Export to** box, and **Definition and Data** selected under **Export Tables**, click **OK**.
6. On the **Save Export Steps** page, click **Close**.

**To export a table from a database to an Excel workbook**

1. Open the table in Datasheet view. Then on the **External Data** tab, in the **Export** group, click the **Export to Excel spreadsheet** button.
2. In the **Export – Excel Spreadsheet** wizard, click the **Browse** button. Then in the **File Save** dialog box, navigate to the folder you want to save the table in, and click **Save**.
3. In the **Export – Excel Spreadsheet** wizard, select the **Export data with formatting and layout** check box. Then select the **Open the destination file after the export operation is complete** check box.
4. With **Excel Workbook** selected in the **File format** list, click **OK**. On the **Save Export Steps** page, click **Close**.

**To export the contents of a table to a SharePoint site**

1. In the **Navigation Pane**, select (but don’t open) the object you want to export.
2. On the **External Data** tab, in the **Export** group, click the **SharePoint List** button.
3. In the **Export – SharePoint Site** wizard, specify the SharePoint site where you want to create the list, change the list name and type a description if you want, and then click **OK**. Enter your SharePoint site credentials if prompted to do so.
To export a form from a database to an RTF document in Word
   1. In the Navigation Pane, under Forms, double-click the form you want to export.
   2. On the External Data tab, in the Export group, click the Word button.
   3. In the Export – RTF File wizard, click Browse. In the File Save dialog box, navigate to the folder you want to save the form in, and then click Save.
   4. In the Export – RTF File wizard, select the Open the destination file after the export operation is complete check box, and then click OK.

To export a table to a text file with formatting
   1. Open the table in Datasheet view. Then on the External Data tab, in the Export group, click the Text File button.
   2. In the Export – Text File wizard, click Browse. In the File Save dialog box, navigate to the folder in which you want to save the file, and then click Save.
   3. In the Export – Text File wizard, select the Export data with formatting and layout check box. Then select the Open the destination file after the export operation is complete check box, and click OK.
   4. In the Encode As dialog box, select the options you want, and then click OK.

To export a table from a database to an XML file
   1. On the External Data tab, in the Export group, click the More button, and then in the list, click XML File.
   2. In the Export – XML File wizard, click Browse, and in the File Save dialog box, navigate to the folder you want to store the file in, and click Save.
   3. In the Export – XML File wizard, click OK.
   4. In the Export XML dialog box, with the Data (XML) and Schema of the data (XSD) check boxes selected, click OK. Then in the Export – XML File wizard, click Close.

To export a report from a database to an HTML file
   1. In the Navigation Pane, double-click the report you want to export.
   2. On the External Data tab, in the Export group, click the More button, and then click HTML Document.
   3. In the Export – HTML File wizard, click Browse. Then in the File Save dialog box, navigate to the folder you want to save the report in, and click Save.
   4. In the Export – HTML File wizard, select the Open the destination file after the export operation is complete check box, and then click OK.
   5. In the HTML Output Options dialog box, select the encoding format options you want, and then click OK to export the file.
To copy and paste records between an Access database table and other Office programs

1. Select the records you want to copy by pointing to the row selector of the first record you want to select, holding down the primary mouse button, and dragging to the last record you want to select.

2. On the Home tab, in the Clipboard group, click the Copy button.

3. Start the Office program you want to copy to, and click where you want to paste the records. Then on the Home tab, in the Clipboard group, click the Paste button.

5 Simplifying Data Entry by Using Forms

To create a form based on a table by using the Form tool

1. Open the table on which you want to base the form.

2. On the Create tab, in the Forms group, click the Form button.

To move labels on a form

➜ Select the labels to be moved by dragging through them, drag them to a blank section of the form, and then release the selection.

To change the font and font size of a label on a form

1. Open the form in Design View, and click the label (not its text box) you want to change.

2. On the Design contextual tab, in the Font group, click the Font arrow, and then in the list, click the font you want to use.

3. With the label still selected, click the Font Size arrow, and then in the list, click the size you want.

To edit form control properties by using the Property Sheet pane

1. Open the form in Design view, and if the Property Sheet pane is not visible, right-click the desired control, and then click Properties.

2. In the Property Sheet pane, click the property you want to change, and either type the new value, or click the down arrow and select the value you want. Repeat for all properties that you want to change.

To edit multiple form control properties at once

1. Click anywhere in the Detail section of the form, and then drag diagonally to draw a rectangle through some portion of all the controls to select them.

2. In the Property Sheet pane, click the property you want to change, click the arrow that appears, and then click the option you want. Repeat for all properties that you want to change.
To set the background properties of all controls on a form

1. Select all the controls on the form. Then on the Format tab of the Property Sheet pane, click Back Style, and set it to the option you want.
2. Click Back Color, and then click the ellipsis button.
3. In the Color Builder, click the square of the color you want.
4. Set the Special Effect property to the option you want, and the Border Color property to the color you want.

To edit the caption of a form control

→ Click the label whose caption you want to change. Then in the Property Sheet pane, click the Caption property, change the text to what you want, and press Enter.

To change the layout of controls on a form

→ Drag through all the controls on the form to select them. Then on the Arrange tab, in the Control Layout group, click the Remove button.

To delete a form control label

→ Click the label you want to delete, and then press the Del key.

To select specific control labels on a form

→ Hold down the Shift key as you click each control or drag through just the labels you want to select.

To align form controls

→ Select the labels (but not their corresponding text boxes), and then in the Property Sheet pane, set the Text Align property to the alignment you want.

To size form control labels to fit their contents

→ Select the labels to be sized, and then on the Arrange contextual tab, in the Size group, click the Size To Fit button.

To insert space between form control labels and text boxes

→ Select all the text boxes (but not their corresponding labels). Then in the Property Sheet pane, click the Left property, and then change the setting to the amount of space you want.

To bind selected controls together

→ On the Arrange tab, in the Control Layout group, click the Group button.

To save the design of a form

→ On the Quick Access Toolbar, click the Save button.
To expand the Detail area of a form

➜ Point to the right edge of the form Detail grid, and when the pointer changes to a double-headed arrow, drag the edge of the background to the right.

To move a label or text box control on a form

➜ Click a label or text box, move the pointer over its border, and when the pointer changes to a four-way arrow, drag it to a new location.

To create an AutoFormat form template

1. On the Arrange contextual tab, in the AutoFormat group, click the AutoFormat button.
2. At the bottom of the AutoFormat gallery, click AutoFormat Wizard.
3. In the AutoFormat dialog box, click the Customize button.
4. In the Customize AutoFormat dialog box, click Create a new AutoFormat based on the Form option, and then click OK.
5. In the New Style Name dialog box, type a name for the new style, and then click OK.
6. Click OK to close the AutoFormat wizard. Then click the Save button, and close the form.

To add a graphic to a form control

1. In the Navigation Pane, under Forms, right-click the form you want to use, and then click Design View.
2. On the Design contextual tab, in the Controls group, click the Image button, and then click the area where you want to place the image, drag diagonally to draw a rectangle, and release the mouse button.
3. In the Insert Picture dialog box, navigate to the folder where the graphic you want to use is located, and then double-click the graphic.

To add a caption below a picture

1. In the Controls group, click the Label button, and then drag diagonally to draw a rectangle where you want it to appear.
2. In the active label control, type the caption text, and then press Enter.

To size a label control to fit the text

➜ Click the label control, and then on the Arrange tab, in the Size group, click the Size to Fit button.

To add a combo box control without using a wizard

1. On the Design tab, in the Controls group, look at the Use Control Wizards button. If the button is active (orange), click it to deactivate it.
2. In the Controls group, click the Combo Box button, and then drag diagonally in the form to draw a rectangle where you want the combo box to appear.
To dynamically size a selected form control to fit the window

1. On the **Arrange** tab, in the **Size** group, click the **Anchoring** tool.
2. In the **Anchoring** gallery, click **Stretch Across Top**.

To copy the formatting of one control to another

→ Click the box whose formatting you want to copy, and in the **Font** group, click the **Format Painter** button. Then click the box to which you want to apply the formatting.

To add conditional formatting to a selected control

1. On the **Design** tab, in the **Font** group, click the **Conditional** button.
2. In the **Conditional Formatting** dialog box, select the criteria and the formatting you want to apply when the associated content meets the criteria.

To remove the record selector and scroll bar controls from a form

1. In Design view, click the **Form** selector (the box at the junction of the horizontal and vertical rulers), and then press $ to display the **Property Sheet** pane for the entire form (if the sheet is not already displayed).
2. On the **Format** tab, change **Record Selectors** to **No**, and **Scroll Bars** to **Neither**.

To create a form based on the fields in a table by using the Form wizard

1. In the **Navigation Pane**, under **Tables**, click the table in which you want to create the AutoForm.
2. On the **Create** tab, in the **Forms** group, click the **More Forms** button, and then in the list, click **Form Wizard**.
3. With the open table selected in the **Tables/Queries** list, click the **Move All** button to move all the table fields to the **Selected Fields** list, and then click **Next**.
4. On the second page of the wizard, choose the layout of the fields in the new form. On the third page, select a style option.
5. On the fourth page, with the **Open the form to view or enter information** option selected, click **Finish**.

To create a form and subform simultaneously

1. On the **Create** tab, in the **Forms** group, click the **More Forms** button, and then click **Form Wizard**.
2. On the first page of the **Form** wizard, in the **Tables/Queries** list, click the table on which you want to base the form. Then click the **Move All** button to include all the table fields in the new form.
3. To create the subform, display the **Tables/Queries** list, and then click the table on which you want to base the subform.
4. In the **Available Fields** list, double-click the fields you want to include in the subform to move them to the **Selected fields** list, and then click **Next**.
5. With your primary table and **Form with subform(s)** selected, click **Next**.
6. With **Datasheet** selected, click **Next**.
7. On the last page of the wizard, select a style, and then click **Finish**.

**To add a subform to a form**

1. Open the form in Design view. Then on the **Design** tab, in the **Controls** group, make sure the **Use Control Wizards** button is active (orange).
2. In the **Controls** group, click the **Subform/Subreport** button, and then drag diagonally to draw a rectangle in a section where you want to put the subform.
3. On the **Subform** wizard’s first page, with the **Use existing Tables and Queries** option selected, click **Next**.
4. In the **Tables/Queries** list, click the type of item you want to use.
5. Add fields to the **Selected Fields** list by double-clicking each field. Then click **Next**, select the options you want, and click **Finish**.

**6  Locating Specific Information**

**To sort information in one column**

- Click the arrow at the right side of the column header for the column you want to sort, and then click the direction you want to sort the information.
- Click the header of the column you want to sort, and then on the **Home** tab, in the **Sort and Filter** group, click the **Ascending** or **Descending** button.

**To sort information in multiple columns**

- Select the adjacent columns you want to sort, right-click the column header area of your selection, and then click how you want to sort the columns.

**To move a field**

- Click the column head you want to move, and then drag it to the position you want.

**To filter records by a single criterion**

1. In the field, click any instance of the record you want to filter by.
2. On the **Home** tab, in the **Sort & Filter** group, click the **Selection** button, and then in the list, click **Equals “[the term you want to filter on]”**.

**To remove a filter**

- In the **Sort & Filter** group, click the **Toggle Filter** button.

**To filter records with a text filter**

1. Click the column header arrow, point to **Text Filters**, and then click the criterion you want to filter by.
2. In the Custom Filter dialog box, in the **ItemText begins with** box, type the first few letters of the text you want to filter by. Then click **OK**.
To filter records with a “does not equal” filter

➜ In the column, right-click any instance of the criterion you don’t want to filter, and then click Does Not Equal “[the item you don’t want to filter]”.

To use the Filter By Form command

1. In the Navigation Pane, under Forms, double-click the form you want to search.
2. On the Home tab, in the Sort & Filter group, click the Advanced button, and then in the list, click Filter By Form.
3. Click the box you want to search in, type the search criterion, and then press Enter.
4. In the Sort and Filter group, click the Toggle Filter button.

To use the Advanced Filter/Sort command to sort tables

1. On the Home tab, in the Sort & Filter group, click the Advanced Filter Options button, and then in the list, click Advanced Filter/Sort.
2. In the field list, double-click a field to copy it to the first cell in the first column of the design grid.
3. In the Criteria cell under the field you just copied, type the search criterion, and then press Enter.
4. Repeat Steps 2 and 3 for any other fields you want to filter on.
5. In the Sort & Filter group, click the Toggle Filter button to view the records that match the criteria.

To create a query in Design view

1. On the Create tab, in the Other group, click the Query Design button.
2. In the Show Table dialog box, on the Tables tab, double-click any tables you want to add to the query window. Then close the dialog box.
3. Drag the fields to be used in the query from the field lists to consecutive columns in the design grid.
4. On the Design contextual tab, in the Results group, click the Run button to run the query and display the results in Datasheet view.

To save a filter as a query:

1. On the Home tab, in the Sort & Filter group, click the Advanced button and then click Save As Query.
2. In the Save As Query dialog box, give the query and appropriate name, and then click OK.

To add data to a query in Design view

- To add a field from an existing table, double-click it.
- To add a field from another table, drag the table from the Navigation Pane into the upper section of the design window, and then double-click the field you want to add.
To remove data from a query in Design view

- To delete a field from a query, select the field in the lower section of the design window, and then press the **Delete** key.
- To delete a table from a query, right-click the table in the upper section of the design window, and then click **Remove Table**.

To add a Totals row to a query in Datasheet view

- On the **Home** tab, in the **Records** group, click the **Totals** button. Then click in each cell of the **Totals** row that appears at the end of the table, and select the summary data you want to appear in that cell.

7 Keeping Your Information Accurate

To set the data type for a field in Design view

1. Click the **Data Type** cell next to the desired field.
2. Click the **Data Type** arrow, and then in the list, click the data type you want.

To view the properties of a field

- With the table in Design view, click the field name to display its properties in the **Field Properties** area.

To set the Field Size property for text, number, and autonumber fields

- With the table in Design view, click any cell in a field, and then in the **Field Properties** area, change the **Field Size** property to what you want.

To use the Input Mask wizard in Design view

1. Select a field, and then click **Input Mask** in the **Field Properties** area.
2. Click the ellipsis button to the right of the cell to start the **Input Mask** wizard. (Click **Yes** if Access prompts you to install this feature.)
3. Select an available mask in the **Input Mask** list, and then click **Next**.
4. In the **Input Mask** and **Placeholder character** boxes, make any changes you want, and then click **Next**.
5. Choose whether to store the data with the symbols, and then click **Finish**.
6. Press **Enter** to accept the mask. Then save your changes.

To set a field validation rule in Design view

1. Select a field, and then click in the **Validation Rule** box in the **Field Properties** area.
2. Type an expression in the **Validation Rule** box, or click the ellipsis button to use the **Expression Builder**.
3. Press **Enter**. Then save the table.

To test the validation rules in a table in Design view

- Right-click the table’s title bar, and click **Test Validation Rules**.
To select an entire field

➜ Move the pointer to the left end of a field, and when the pointer changes to a thick cross, click the field.

To set a table validation rule

1. Right-click in the table window, and then click Properties.
2. Click in the Validation Rule box, type the information for the rule, press Enter, and then save the table.

To create a lookup list with the Lookup wizard

1. Set the data type of a field to Lookup Wizard.
2. Select the options you want, and then click Next.
3. Continue selecting the options you want, clicking Next when you are done with each page. When you are done filling out the wizard, click Finish.
4. On the Quick Access Toolbar, click the Save button.

To restrict what can be entered in a lookup list

1. In Design view, in the Field Properties area, click the Lookup tab.
2. Change Limit To List to Yes.
3. Change Allow Value List Edits to No.
4. Save the table.

To create a multi-column lookup list

1. Add a new field, name it, and then set the data type to Lookup Wizard.
2. Select the values option you want, and then click Next.
3. Type the number of columns you want, and then enter the data you want in each column.
4. Click Next, and then click Finish.
5. Save your changes.

To prevent a column from being displayed in a multi-column lookup list

➜ In Design view, on the Lookup tab, in the Column Widths box, change the width for the column you don’t want displayed to 0. Then save your changes.

To filter selections in a multi-column lookup list

1. Right-click any cell in a column you want to filter, point to Text Filters, and then click the filter option you want.
2. In the Custom Filter box, type criterion you want to filter for, and then press Enter.

To create a select query

1. You must first create a select query. On the Create tab, in the Other group, click the Query Design button.
2. In the **New Query** dialog box, with **Simple Query Wizard** selected, click **OK**.

3. In the **Tables/Queries** list, click the option you want. Then in the **Available Fields** list, double-click the fields you want to move to the **Selected Fields** list.

4. In the **Simple Query Wizard** dialog box, click **Finish** to create the select query.

**To create an update query**

1. First, create a select query that selects the records you want to update.

2. Open the select query in Design view. Then on the **Design** contextual tab, in the **Query Type** group, click the **Update** button.

3. In the design grid, type the expression for your update.

**To create an action query**

1. First, create a select query that selects the records you want to manipulate.

2. Open the select query in Design view. Then on the **Design** contextual tab, in the **Query Type** group, click the **Make Table, Append, Update, or Delete** button.

3. Provide the information requested for the specified query type.

**To create a delete query**

1. First, create a select query that selects the records you want to delete.

2. Open the select query in Design view. Then on the Design contextual tab, in the **Query Type** group, click the **Delete** button to convert this select query to a delete query.

3. In the design grid, set the delete criteria.

**To back up a database**

1. Click the **Microsoft Office Button**, point to **Manage**, and then click **Back Up Database**.

2. In the **Save As** dialog box, navigate to the folder in which you want to store the backup, and then click **Save**.

**To compact a database**

- Click the **Microsoft Office Button**, point to **Manage**, and then click **Compact and Repair Database**. Acknowledge the safety warning if prompted to do so.

**To analyze the performance of a database**

1. On the **Database Tools** tab, in the **Analyze** group, click the **Analyze Performance** button.

2. In the **Performance Analyzer** dialog box, on the **All Object Types** tab, click **Select All**, and then click **OK**.

3. Click each result in the **Analysis Results** box to display more information about that result in the **Analysis Notes** area.
8 Working with Reports

To create a report by using the Report wizard

1. On the Create tab, in the Reports group, click the Report Wizard button.
2. On the field selection page, click the Tables/Queries arrow, and then in the list, click the table or query that you want to base your report on.
3. In the Available Fields list, double-click the fields you want to move to the Selected Fields list.
4. To select fields from additional tables or queries, repeat Steps 2 and 3.
5. On the field selection page, click Next.
6. On the grouping page, select how you want to view your data, and then click Next.
7. On the grouping levels page, add up to four grouping levels by double-clicking field names to move them to the top of the preview pane. Then click the Grouping Options button.
8. In the Grouping Intervals dialog box, click the Grouping intervals arrow next to each grouping level and select the desired interval, click OK, and then click Next.
9. On the sort order page, click the arrow to the right of the first box, and select a field to sort on; repeat for each field you want to sort on, and then click Next.
10. On the layout page, select the options you want, and then click Next.
11. On the style selection page, click the style you want, and then click Next.
12. In the title box, type a title for the report, and then with the Preview the report option selected, click Finish.

To preview a print version of a report

→ In the Navigation Pane, right-click the desired report, and then click Print Preview.

To adjust the height of a report section

1. In the Navigation Pane, right-click the desired report, and then click Design View.
2. Point to the top edge of a section selector.
3. When the pointer changes to a two-headed vertical arrow, drag the selector in the direction you want.

To insert the current date in a report

1. In Design view, on the Design contextual tab, in the Controls group, click the Date & Time button.
2. In the **Date And Time** dialog box, select a date format option, and clear the **Include Time** check box if you want to include only the date. Then click **OK**.

**To reposition a text box in a report**

→ In Design view, select the text box, then drag it to the desired location.

**To align text in a report**

→ In Design view, select the text box, and in the **Font** group, click one of the alignment buttons.

**To delete a text box from a report**

→ In Design view, click the text box to select it, and then press `Del`.

**To move controls as a group**

1. In Design view, drag diagonally to draw a rectangle through some portion of all the labels and the text boxes you want to move.
2. Drag the selected controls to where you want them.

**To change the page width of a report**

1. In Design view, click the Report Selector. Then press `F4` to display the **Property Sheet** pane.
2. On the **Format** tab, change the **Width** setting.

**To group and sort data in a report**

1. Switch to Design view.
2. On the **Design** tab, in the **Grouping & Totals** group, click the **Group & Sort** button.
3. In the **Group, Sort, and Total** pane, in the **Group on** bar, click **More** to see additional options, and then choose the ones you want.
4. Click the **Group & Sort** button to close the **Group, Sort, and Total** pane.

**To insert a horizontal line in a report**

1. In Design view, in the **Controls** group, click the **Line** button.
2. Click the location where you want the horizontal line to appear.
3. Press `F4` to display the **Property Sheet** pane. Then set the **Left**, **Width**, and **Border Color** properties as desired.

**To align the columns of a report**

1. In Design view, select the label and text box for the column you want to align.
2. Press `F4` to display the **Property Sheet** pane. Then set the **Left** and **Width** properties to precisely align the column on the page.
3. Repeat Step 2 for each column you want to align.
To change the Design view grid for a report

1. In Design view, click the Report selector, and then press $P$ to open the Property Sheet pane.
2. On the Format tab, change the Grid X and Grid Y properties to the number of dots per inch that you want to show on the grid.

To set the height of a section in a report

➔ Click the section, and on the Format tab in the Property Sheet pane, set the Height property to the measurements you want.

To save a new report

1. On the Quick Access Toolbar, click the Save button.
2. In the Save As dialog box, type a name for the new report in the Report Name box, and then click OK.

To insert a title in a report

➔ Open the report in Design view. Then on the Design contextual tab, in the Controls group, click the Title button.

To insert a page number in a report

1. Open the report in Design view. Then in the Controls group, click the Insert Page Number button.
2. In the Page Numbers dialog box, select the desired format, position, and alignment options. Then click OK.

To insert a subreport in a report

1. Open the main report in Design view. Then double-click the Report Selector to display the Property Sheet pane.
2. On the Data tab, click the Record Source arrow, and select the table or query on which the subreport will be based.
3. On the Design contextual tab, in the Controls group, click the Subform/Subreport button, and then click a point on the main report.
4. In the Subreport wizard, with the Use existing Tables and Queries option selected, click Next.
5. In the Tables/Queries list, click the query you want to use.
6. In the Available Fields list, double-click the fields you want to use to move them to the Selected Fields list, and then click Next.
7. Select the appropriate options to define the fields you want to include in the subform.
8. Click Next, and then click Finish.
To view a report in Print Preview mode
- If the report is not open, right-click it in the Navigation Pane, and then click Print Preview.
- If the report is open, on the Home tab, in the Views group, click the View arrow, and then click Print Preview, or click the Print Preview button on the View toolbar.

To view a report in Layout View mode
- If the report is not open, right-click it in the Navigation Pane, then click Layout View.
- If the report is open, on the Home tab, in the Views group, click the View arrow, and then click Layout View, or click the Layout View button on the View toolbar.

To print a report
1. Either open the report or select it in the Navigation Pane.
2. Click the Microsoft Office Button, and then click Print.
3. In the Print dialog box, set the properties you want, and then click OK.

9 Making Your Database Easy to Use

To create a switchboard
1. On the Database Tools tab, in the Database Tools group, click the Switchboard Manager button, and then click Yes if Access asks whether you want to create a switchboard.
2. With Main Switchboard (Default) selected in the Switchboard Pages list, click Edit.
3. In the Switchboard Name box, replace Main Switchboard with a name for your switchboard. Then click Close.

To add a new page to a switchboard
1. On the Database Tools tab, in the Database Tools group, click the Switchboard Manager button.
2. In the Switchboard Manager window, select the type of switchboard you want, and then click New.
3. Replace the default new switchboard page name with the name you want, and then click OK.

To create a button on a switchboard page
1. On the Database Tools tab, in the Database Tools group, click the Switchboard Manager button.
2. With the switchboard selected in the Switchboard Pages list, click Edit.
3. In the Edit Switchboard Page window, click New.
4. In the **Edit Switchboard Item** dialog box, in the **Text** box, type a name for the button label.

5. If you want to change the command assigned to the button, click the **Command** arrow, and then click your selection in the list.

6. If there is a box below the **Command** box, click the arrow next to it, and in the list, select the appropriate option. Then click **OK**.

7. In the **Edit Switchboard Item** dialog box, click **OK**.

**To create a custom category**

1. Right-click the category header at the top of the **Navigation Pane**, and then click **Navigation Options**.

2. In the **Grouping Options** area of the **Navigation Options** dialog box, click the **Add Item** button.

3. Replace the default name of the new category with the name you want, and then press **Enter**.

4. Click the **Add Group** button, and then in the **Groups** list, replace **Custom Group 1** with the new group name.

5. In the **Navigation Options** dialog box, click **OK**.

**To add shortcuts to a category**

1. Click the category header at the top of the **Navigation Pane**, and then click the custom category that you want to add shortcuts to.

2. In the **Unassigned Objects** group, click the object you want to add to a custom group, and drag the object on top of the desired group header to add a shortcut to the group; or right-click the desired object, point to **Add to group**, and click the group you want to add the shortcut to.

**To add any command to the Quick Access Toolbar**

1. At the right end of the **Quick Access Toolbar**, click the **Customize Quick Access Toolbar** button.

2. Near the bottom of the **Customize Quick Access Toolbar** menu, click **More Commands**.

3. In the **Access Options** window, click the **Choose commands from** arrow, and in the list, click the area from which you want to add a command.

4. In the available commands list, locate and click the command you want to add to the Quick Access Toolbar. Then between the two command lists, click **Add**.

5. At the bottom of the **Customize** page, click **OK**.
To reposition commands on the Quick Access Toolbar
1. On the Customize page of the Access Options window, click the command you want to move, and then click the Move Up or the Move Down button until the command is in the position you want.
2. At the bottom of the Customize page, click OK.

To add a command from the Ribbon to the Quick Access Toolbar
➜ Right-click the command on the Ribbon, and then click Add to Quick Access Toolbar.

To remove a command from the Quick Access Toolbar
1. At the right end of the Quick Access Toolbar, click the Customize Quick Access Toolbar button.
2. Near the bottom of the Customize Quick Access Toolbar menu, click More Commands.
3. In the toolbar commands list, click the command you want to remove. Then between the two command lists, click Remove.
4. At the bottom of the Customize page, click OK.

10 Securing and Sharing Information

To assign a password to a database
2. Click the Microsoft Office Button, and then on the menu, click Open.
3. In the Open dialog box, navigate to the folder where the database is located, and click the database to select it. Then click the Open arrow, and in the list, click Open Exclusive.
4. On the Database Tools tab, in the Database Tools group, click the Encrypt with Password button.
5. In the Password box of the Set Database Password dialog box, type a password, and then press the Tab key.
6. In the Verify box, type the same password you typed in the Password box. Then click OK.

To test a database password
1. Open the database.
2. In the Enter database password box of the Password Required dialog box, type an incorrect password, and then click OK.
3. In the **Microsoft Office Access** message box warning you that the password you entered is not valid, click **OK**.

4. In the **Password Required** dialog box, type the correct password, and then click **OK**.

**To remove a password from a database**

2. Click the **Microsoft Office Button**, and then on the menu, click **Open**.
3. In the **Open** dialog box, navigate to the folder where the database is located, and click the database to select it. Then click the **Open** arrow, and in the list, click **Open Exclusive**.
4. On the **Database Tools** tab, in the **Database Tools** group, click the **Decrypt Database** button.
5. In the **Password** box of the **Unset Database Password** dialog box, type the current password, and then click **OK**.

**To secure VBA code in a database by using a password**

1. Open a database, and on the **Database Tools** tab, in the **Macro** group, click the **Visual Basic** button.
2. On the **Tools** menu of the Visual Basic Editor, click **Base Properties**.
3. On the **Protection** tab of the **Project Properties** dialog box, select the **Lock project for viewing** check box.
4. In the **Password** box, type a password, and then press the **Tab** key.
5. In the **Confirm Password** box, type the same password you entered in the **Password** box, and then click **OK**.
6. Close the Visual Basic Editor, and then close the database.

**To test a VBA-securing password**

1. Open the database.
2. On the **Database Tools** tab, in the **Macro** group, click the **Visual Basic** button (or press **Alt + F11**).
3. Click the **Expand** button to the left of the database project.
4. In the **Password** dialog box, type the password for the database, and then click **OK**.
To remove the security from the VBA code in a database
1. On the Visual Basic Editor Tools menu, click Base Properties.
2. On the Protection tab, clear the Lock project for viewing check box, and delete the asterisks from the two password boxes. Then click OK.

To secure a database by saving it as a distributable ACCDE file
1. Open a database, and on the Database Tools tab, in the Database Tools group, click the Make ACCDE button.
2. In the Save As dialog box, navigate to the folder you want to save the file in, and then click Save.

To split a database:
1. Make a copy of the database on your computer, and then open it.
2. On the Database Tools tab, in the Move Data group, click the Access Database button.
3. In the Database Splitter wizard, click Split Database.
4. In the Create Back-end Database dialog box, specify a name and storage location for the back-end database, click Split, and then click OK in the message box telling you that the split was successful.
Chapter at a Glance

Work in Access 2007, page 2

Explore tables, page 14

Explore forms, page 23
In this chapter, you will learn to:

✔ Understand database concepts.
✔ Open an existing database.
✔ Explore tables, queries, forms, reports, and other Access objects.
✔ Preview and print Access objects.

Microsoft Office Access 2007 is part of the 2007 Microsoft Office system, so the basic interface objects—such as the Office menu, the Quick Access Toolbar, the Ribbon, and dialog boxes—will be familiar if you have used other Office 2007 products. However, Access has more dimensions than most of those other products or programs, so it might seem more complex until you become familiar with it.

If you are upgrading from an earlier version of Access, then you should review “Introducing Access 2007” in the front of this book to learn about differences between earlier versions and Access 2007.

In this chapter, you will learn to work in the Access program window and learn about the concepts and structure of data storage in Access, including types of databases, types of Access objects, and relationships between objects. You will experiment with a complete working database, learning about interesting features of Access as well as functionality that you will explore in more depth in later chapters.

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.
Troubleshooting  Graphics and operating system–related instructions in this book reflect the Windows Vista user interface. If your computer is running Windows XP and you experience trouble following the instructions as written, please refer to the “Information for Readers Running Windows XP” section at the beginning of this book.

Working in Access 2007

When you create or open a database, it opens in a database window. The new Access database window interface is designed to more closely reflect the way people generally work with a database or database object.

The interface includes the following elements:

- Commands related to managing databases (such as creating, saving, printing, backing up, and publishing) are available from the menu that appears when you click the Microsoft Office Button in the upper-left corner of the program window. This menu, which we refer to throughout this book as the Office menu, takes the place of the File menu that appeared in previous versions of Access.

- Some commands are represented by buttons on the Quick Access Toolbar to the right of the Microsoft Office Button. By default, the database window Quick Access Toolbar displays the Save, Undo, and Redo buttons. You can add commands to the
Quick Access Toolbar so that they are available regardless of which tab or object is currently active in the database window.

See Also For information about customizing the Quick Access Toolbar commands and location, see “Making Favorite Access Commands Quickly Available” in Chapter 9, “Making Your Database Easy to Use.”

- The title bar displays the name of the active database object (if it is maximized). At the right end of the title bar are the three familiar buttons that have the same function in all Windows programs. You can temporarily hide the Access window by clicking the Minimize button, adjust the size of the window by clicking the Restore Down/Maximize button, and close the active window or exit Access by clicking the Close button.

- Below the title bar is the Ribbon, a new feature in many of the programs in the Office system. Commands are presented on the Ribbon rather than on the more-traditional menus or toolbars so that you can work most efficiently within the window. The Ribbon is organized into task-specific tabs, which are further divided into feature-specific or task-specific groups of commands.

- The buttons in each group change size depending on the width of the program window. They might be large, small, or wide, and might be labeled with the button name, icon, or both. Pointing to any button displays the button name in a ScreenTip that sometimes also describes the button’s function.

  Some buttons have arrows, but not all arrows function the same way. If you point to a button that has an arrow is incorporated into the button body, clicking the button will display a list of options for you to choose from. If the arrow is separate from the button body, clicking the arrow will display a list of options and clicking the button will perform the currently selected action.

- Related but less common commands are not represented in a group as buttons. Instead they are available from a dialog box, which you can display by clicking the Dialog Box Launcher at the right end of the group title bar.

- The Microsoft Office Access Help button appears at the right end of the Ribbon.

- The Navigation Pane displays filtered lists of database objects. You can change the objects included in the list by clicking the list header and then clicking the category or group of objects you want to display.

The goal of the redesigned environment is to make working within an item window more intuitive. Commands for tasks you perform often are no longer hidden on menus and in dialog boxes, and features that you might not have discovered before are now plainly visible.
By default, Access 2007 displays database objects as *tabbed documents* in the document window. If you prefer to display each object in a separate window rather than on a separate tab, you can do so by clicking Access Options on the Office menu, and then on the Current Database page, selecting the Overlapping Windows option.

When displaying Tabbed Documents, a Close button for the active database object appears to the right of the document tabs. When displaying Overlapping Windows, in a maximized database object window, the Minimize, Maximize/Restore Down, and Close buttons for the object window appear on the right end of the Ribbon, and the Access icon appears to the left of the Home tab. Clicking the Access icon opens the control menu, displaying a list of commands related to managing the active object window: Restore, Move, Size, Minimize, Maximize, and Close. When not maximized, clicking the object icon at the left end of the object window title bar displays the control menu.

In this exercise, you will take a tour of the command structure in an Access 2007 database window.

**USE** the *Working* database. This practice file is located in the *Documents*\Microsoft Press\Access2007SBS\Exploring folder.

1. On the **Start** menu, click **Documents**. Then in your *Documents* folder, browse to the *Microsoft Press\Access2007SBS\Exploring* subfolder, and double-click the *Working* database.

   The database opens, with the Navigation Pane displaying the All Access Objects list. In the database window, the Ribbon includes four tabs:

   - Home
   - Create
   - External Data
   - Database Tools

   **Tip** Depending on what programs are installed on your computer, tabs and groups other than those described here might also appear on the Ribbon.
The Home tab is active by default. Because no database object is currently open, only a few buttons on the Home tab are available.

2. In the upper-left corner of the database window, click the **Microsoft Office Button**.

The Office menu opens.

You can create a database, but not a database object, from this menu. We'll talk about the commands available from the Office menu in other chapters of this book.

3. Click away from the Office menu to close it.

4. In the **Navigation Pane**, under **Tables**, double-click **Categories**.

The Categories table opens, an associated Table Tools contextual tab (Datasheet) appears, and more of the Home tab becomes active.
Buttons representing commands related to working with database content are organized on this tab in seven groups:

- Views
- Clipboard
- Font
- Rich Text
- Records
- Sort & Filter
- Find

Only the buttons for the commands that can be performed on the currently selected database object are active.

**Important** Depending on your screen resolution and the size of the database window, you might see more or fewer buttons in each of the groups, the buttons you see might be represented by larger or smaller icons than those shown, or the group might be represented by a button that you click to display the group’s commands. Experiment with the size of the database window to understand the effect on the appearance of the tabs.
5. On the **Home** tab, click the **Font** Dialog Box Launcher. The Datasheet Formatting dialog box opens.

![Dialog Box Launcher](image)

The Datasheet Formatting dialog box opens. You can access certain settings not available from the Font group, such as Cell Effect and Border Styles, from this dialog box.

6. In the **Datasheet Formatting** dialog box, click **Cancel**.

7. Click the **Create** tab.

![Create Tab](image)

Buttons representing commands related to creating database objects are organized on this tab in four groups:

- **Tables**
- **Forms**
- **Reports**
- **Other**

8. Double-click the **Create** tab.

Double-clicking the active tab hides the Ribbon and provides more space for the active database object.
9. Click the **External Data** tab. 

The Ribbon reappears, with the External Data tab active.

Buttons representing commands related to moving information between a database and other sources are organized on this tab in four groups:

- Import
- Export
- Collect Data
- SharePoint Lists

10. Click anywhere in the open table.

The Ribbon hides again. When you hide the Ribbon, it remains hidden except when active, until you again double-click a tab.

11. Double-click the **Database Tools** tab to display the tab and redisplay the Ribbon.
Buttons representing commands related to managing, analyzing, and protecting information are organized on this tab in five groups:

- Macro
- Show/Hide
- Analyze
- Move Data
- Database Tools

Understanding Database Concepts

Simple *database programs*, such as the Database component of Microsoft Works, can store information in only one table. These simple databases are often called flat file databases, or just *flat databases*. More complex database programs, such as Access, can store information in multiple related tables, thereby creating what are referred to as *relational databases*. If the information in a relational database is organized correctly, you can treat these multiple tables as a single storage area and pull information electronically from different tables in whatever order meets your needs.

A table is just one of the types of *objects* that you can work with in Access. Other object types include queries, forms, reports, pages, macros, and modules.

Of all these object types, only one—the table—is used to store information. The rest are used to manage, manipulate, analyze, retrieve, display, or publish information stored in a table—in other words, to make the information as accessible and therefore as useful as possible.

**Tip** Access 2007 introduces a new file storage format that uses the *.accdb* extension. You can open old Access databases (with an *.mdb* extension) in Access 2007 and save them in the new format, but after they’re converted, you will not be able to open them with a previous version of Access.

The new format supports many new features. For more information about this format, search Access Help for *accdb*.

Over the years, Microsoft has put a lot of effort into making Access not only one of the most powerful consumer database programs available, but also one of the easiest to learn and use. Because Access is part of the Microsoft Office system, you can use many
of the techniques you know from using other Office programs, such as Microsoft Office Word and Microsoft Office Excel, when using Access. For example, you can use familiar commands, buttons, and keyboard shortcuts to open and edit the information in Access tables. And because Access is integrated with other members of the suite, you can easily share information between Access and Word, Excel, or other programs.

In its most basic form, a database is the electronic equivalent of an organized list of information. Typically, this information has a common subject or purpose, such as the list of employees shown here:

<table>
<thead>
<tr>
<th>ID</th>
<th>Last name</th>
<th>First name</th>
<th>Title</th>
<th>Hire date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Anderson</td>
<td>Nancy</td>
<td>Sales Rep</td>
<td>May 1, 2003</td>
</tr>
<tr>
<td>2</td>
<td>Carpenter</td>
<td>Chase</td>
<td>Sales Manager</td>
<td>Aug 14, 2001</td>
</tr>
<tr>
<td>3</td>
<td>Emanuel</td>
<td>Michael</td>
<td>Sales Rep</td>
<td>Apr 1, 1999</td>
</tr>
<tr>
<td>4</td>
<td>Furse</td>
<td>Karen</td>
<td>Buyer</td>
<td>May 3, 2004</td>
</tr>
</tbody>
</table>

This list is arranged in a table of columns and rows. Each column represents a field—a specific type of information about an employee: last name, first name, hire date, and so on. Each row represents a record—all the information about a specific employee.

If a database did nothing more than store information in a table, it would be no more useful than a paper list. But because the database stores information in an electronic format, you can manipulate the information in powerful ways to extend its utility.

For example, if you want to locate a person or a business in your city, you can do so because the information in the telephone book is organized in an understandable manner. If you want to get in touch with someone a little further away, you can go to the public library and use its collection of phone books, which probably includes one for each major city in the country. However, if you want to find the phone numbers of all the people in the country with your last name, or if you want to find the phone number of your grandmother’s neighbor, these phone books won’t do you much good because they aren’t organized in a way that makes that information easy to find.

When the information published in a phone book is stored in a database, it takes up far less space, it costs less to reproduce and distribute, and, if the database is designed correctly, the information can be retrieved in many ways. The real power of a database isn’t in its ability to store information; it is in your ability to quickly retrieve exactly the information you want from the database.

Because you can use standard Web programming code to easily manipulate the information in an Access 2007 database, you can create Web sites based on the information in your database or share that information with visitors to your site.
Opening an Existing Database

Throughout this book, you will be working with databases that contain information about the employees, products, suppliers, and customers of a fictional company. As you complete the exercises in this book, you will develop an assortment of queries, forms, reports, data access pages, macros, and modules that can be used to enter, edit, and manipulate the information in many ways.

When you start Access without opening a database, you see the Getting Started With Microsoft Office Access window. You can return to this window at any time by clicking the Microsoft Office Button and then clicking New.

From this window you can open a blank database, create a new database from one of the many templates supplied with Access, from a template you download from the Microsoft Office Online Web site, or from a custom template saved on your computer or on a network share. You can also open a database you worked in recently, or navigate to any database on your computer and open it.

From the section at the bottom of the Getting Started window, you can link to the Microsoft Office Online Web site, where you can find information about all aspects of Office and download useful tools.
Enabling Macros and Other Database Content

Some databases, such as those provided for your use in this book, contain Microsoft Visual Basic for Applications (VBA) macros that can run code on your computer. In most cases, the code is there to perform a database-related task, but hackers can also use macros to spread a virus to your computer.

When you open a database containing one or more macros, if the database is not stored in a Trusted Location or signed by a Trusted Publisher, Access displays a security warning just below the Ribbon.

While the security warning is displayed, the macros in the database are disabled. You can enable macros in three ways:

- By enabling the macros in the database for use in the current database session.
- By adding the database publisher to a list of Trusted Publishers. Access will automatically enable macro content in any database signed by that publisher.
- By placing the database in a Trusted Location. Access will automatically enable macro content in any database saved in that location. The Trusted Locations you specify within Access are not also trusted by other Office programs.

To enable macros for the current database session only:

1. In the Security Warning area, click Options.
2. In the Microsoft Office Security Options dialog box, click Enable this content, and then click OK.

To add the publisher of a digitally signed database to the Trusted Publishers list:

1. In the Security Warning area, click Options.
2. In the Microsoft Office Security Options dialog box, click Trust all documents from this publisher, and then click OK.

To add the location of this database to the Trusted Locations list:

1. In the Microsoft Office Security Options dialog box, click Open the Trust Center.
2. In the page list in the left pane of the Trust Center, click Trusted Locations.
3. On the Trusted Locations page, click Add new location.
4. In the **Microsoft Office Trusted Location** dialog box, click **Browse**.

5. In the **Browse** dialog box, browse to the folder containing the current database, and then click **OK**.

6. In the **Microsoft Office Trusted Location** dialog box, select the **Subfolders of this location are also trusted** check box if you want to do so, and then click **OK** in each of the open dialog boxes.

If you prefer, you can change the way Access handles macros in all databases:

1. Click the **Microsoft Office Button**, and then click **Access Options**.

2. On the **Trust Center** page of the **Access Options** dialog box, click **Trust Center Settings**.

3. On the **Macro Settings** page of the **Trust Center**, select the option for the way you want Access to handle macros:

   - **Disable all macros without notification**. If a database contains macros, Access disables them and doesn’t display the security warning to give you the option of enabling them.

   - **Disable all macros with notification**. Access disables all macros and displays the security warning.

   - **Disable all macros except digitally signed macros**. Access automatically enables digitally signed macros.

   - **Enable all macros**. Access enables all macros.

4. Click **OK** in the **Trust Center** and in the **Access Options** dialog box.

In this exercise, you will open a database, explore some of the objects it contains, and then close the database.

**USE** the **Opening** database. This practice file is located in the **Documents\Microsoft Press\Access2007SBS\Exploring** folder.

**BE SURE TO** start your computer, but don’t start Access before starting this exercise.

1. On the **Start** menu, point to **All Programs**, click **Microsoft Office**, and then click **Microsoft Office Access 2007**.
   The Getting Started With Microsoft Office Access window opens.

2. In the **Open Recent Database** list, click **More**.
3. In the Open dialog box, navigate to your Documents\Microsoft Press\Access2007SBS\Exploring folder, and then double-click the Opening database. The database window opens.

**Troubleshooting** If this is the first time you’ve run Access, you might see a security warning below the Ribbon. Just ignore this warning for the moment, but be sure to read the sidebar “Enabling Macros and Other Database Content” to learn about Access security options.

The Navigation Pane on the left side of the program window lists the Access database objects. You can use the Navigation Pane to group and filter these objects in various ways. You can display only one type of object (for example, all tables) by clicking the list title bar and then the category or group of objects you want to display.

If the Navigation Pane is in your way, you can click the Shutter Bar Open/Close button in its upper-right corner, or press F11, to minimize it. To redisplay the Navigation Pane, click the Shutter Bar Open/Close button or press F11.

**Tip** For more information about the Navigation Pane, search Access Help for navigation pane and read the topic Guide to the Navigation Pane.

4. Click the Microsoft Office Button, and then click Close Database. When you close a database in this way, you return to the Getting Started window.

**Tip** You can close Access entirely by clicking the Close button in the upper-right corner of the window, or by clicking the Microsoft Office Button and then clicking Exit Access.

**Exploring Tables**

Tables are the core database objects. Their purpose is to store information. The purpose of every other database object is to interact in some manner with one or more tables. An Access database can contain thousands of tables, and the number of records each table can contain is limited more by the space available on your hard disk than by anything else.

**Tip** For detailed information about Access specifications, such as the maximum size of a database or the maximum number of records in a table, search Access Help for “Access 2007 specifications” (including the quotes).
Every Access object has two or more views. For tables, the two most common views are Datasheet view, in which you can see and modify the table’s data, and Design view, in which you can see and modify the table’s structure. To open a table in Datasheet view, either double-click its name in the Navigation Pane, or right-click its name and then click Open. To open a table in Design view, right-click its name and then click Design View. After an object is open, you can switch between views by clicking one of the View icons in the lower-right corner of the program window, or by clicking the View arrow in the Views group on the Home tab, and then selecting a view from the list. If you simply click the View button Access switches between views in a manner that at times seems logical. If the current view is not Design view, it switches to Design view. If you click it again, the table switches to Datasheet view. When other database objects are active, clicking the View switches between views in a similar manner.

When you view a table in Datasheet view, you see the table’s data in columns (fields) and rows (records).

<table>
<thead>
<tr>
<th>CustomerID</th>
<th>First Name</th>
<th>Last Name</th>
<th>Address</th>
<th>City</th>
<th>Region</th>
<th>PostalCode</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACME</td>
<td>Pilar</td>
<td>Adkins</td>
<td>880 Backyard St.</td>
<td>Bellevue</td>
<td>WA</td>
<td>88004</td>
<td>USA</td>
</tr>
<tr>
<td>ADATE</td>
<td>Terry</td>
<td>Adams</td>
<td>1932 52nd Ave</td>
<td>Vancouver</td>
<td>BC</td>
<td>V4T 1Y9</td>
<td>Canada</td>
</tr>
<tr>
<td>ALUMI</td>
<td>Michael</td>
<td>Allen</td>
<td>130 17th St.</td>
<td>Vancouver</td>
<td>BC</td>
<td>V4T 1Y9</td>
<td>Canada</td>
</tr>
<tr>
<td>ASCHI</td>
<td>Chris</td>
<td>Ashton</td>
<td>65 Cedar Way</td>
<td>Redmond</td>
<td>WA</td>
<td>88052</td>
<td>USA</td>
</tr>
<tr>
<td>BANNA</td>
<td>Martin</td>
<td>Bankov</td>
<td>76 Riverside Dr.</td>
<td>Woodinville</td>
<td>WA</td>
<td>88072</td>
<td>USA</td>
</tr>
<tr>
<td>BENPA</td>
<td>Paula</td>
<td>Bento</td>
<td>2787 Cypress Pk.</td>
<td>Oak Harbor</td>
<td>WA</td>
<td>88277</td>
<td>USA</td>
</tr>
<tr>
<td>BERKO</td>
<td>Jo</td>
<td>Benny</td>
<td>407 Sunny Way PO Box 69</td>
<td>Kentland</td>
<td>WA</td>
<td>88033</td>
<td>USA</td>
</tr>
<tr>
<td>BMKA</td>
<td>Karen</td>
<td>Barger</td>
<td>50 Grizzly Peak</td>
<td>Yakima</td>
<td>WA</td>
<td>88902</td>
<td>USA</td>
</tr>
<tr>
<td>BOSIA</td>
<td>Randall</td>
<td>Boeseman</td>
<td>311 37th PL</td>
<td>Butte</td>
<td>MT</td>
<td>59707</td>
<td>USA</td>
</tr>
<tr>
<td>BRETE</td>
<td>Ted</td>
<td>Brenner</td>
<td>666 Ford Land</td>
<td>Bozeman</td>
<td>OR</td>
<td>87005</td>
<td>USA</td>
</tr>
<tr>
<td>BROKE</td>
<td>Kevin F.</td>
<td>Bronne</td>
<td>666 Ford Land</td>
<td>Beaverton</td>
<td>OR</td>
<td>87005</td>
<td>USA</td>
</tr>
<tr>
<td>CAMDA</td>
<td>David</td>
<td>Campbell</td>
<td>22 Market St.</td>
<td>Seattle</td>
<td>WA</td>
<td>88121</td>
<td>USA</td>
</tr>
<tr>
<td>CANCH</td>
<td>Chris</td>
<td>Cannon</td>
<td>69 W. 11th Ave</td>
<td>San Francisco</td>
<td>CA</td>
<td>84112</td>
<td>USA</td>
</tr>
<tr>
<td>CHANE</td>
<td>Neil</td>
<td>Chamney</td>
<td>184 10th Ave</td>
<td>Palo Alto</td>
<td>CA</td>
<td>84300</td>
<td>USA</td>
</tr>
<tr>
<td>CLAVIO</td>
<td>Molly</td>
<td>Clark</td>
<td>18 10th Ave</td>
<td>Sidney</td>
<td>BC</td>
<td>V7L 1L8</td>
<td>Canada</td>
</tr>
<tr>
<td>COLPA</td>
<td>Paul</td>
<td>Coleman</td>
<td>780 Western Ave</td>
<td>Sidney</td>
<td>BC</td>
<td>V7L 1A6</td>
<td>Canada</td>
</tr>
<tr>
<td>CORCE</td>
<td>Cecilia</td>
<td>Comejo</td>
<td>778 Ancient Rd.</td>
<td>Seattle</td>
<td>WA</td>
<td>88119</td>
<td>USA</td>
</tr>
<tr>
<td>COXBR</td>
<td>Brian</td>
<td>Cox</td>
<td>14 5th E. Br.</td>
<td>Bellevue</td>
<td>WA</td>
<td>88007</td>
<td>USA</td>
</tr>
<tr>
<td>CULSC</td>
<td>Scott</td>
<td>Culp</td>
<td>14 5th E. University</td>
<td>Seattle</td>
<td>WA</td>
<td>88115</td>
<td>USA</td>
</tr>
<tr>
<td>DANMI</td>
<td>Mike</td>
<td>Danseglio</td>
<td>55 Newton</td>
<td>Seattle</td>
<td>WA</td>
<td>88102</td>
<td>USA</td>
</tr>
<tr>
<td>DANNY</td>
<td>Ryan</td>
<td>Danner</td>
<td>55 Neptune Ct.</td>
<td>Langley</td>
<td>WA</td>
<td>88200</td>
<td>USA</td>
</tr>
<tr>
<td>DOPPA</td>
<td>Patricia</td>
<td>Doyle</td>
<td>1000 Hillcrest</td>
<td>Carmel Valley</td>
<td>CA</td>
<td>89294</td>
<td>USA</td>
</tr>
<tr>
<td>ERIKA</td>
<td>Gail A.</td>
<td>Erickson</td>
<td>808 W. Capital</td>
<td>Tacoma</td>
<td>WA</td>
<td>87605</td>
<td>USA</td>
</tr>
<tr>
<td>ESTMO</td>
<td>Modesto</td>
<td>Estrada</td>
<td>311 Lincoln Ave.</td>
<td>Bums</td>
<td>OR</td>
<td>87710</td>
<td>USA</td>
</tr>
<tr>
<td>FENHA</td>
<td>Hangying</td>
<td>Feng</td>
<td>601 Roundup Ave.</td>
<td>Victoria</td>
<td>BC</td>
<td>V8C 3C1</td>
<td>Canada</td>
</tr>
<tr>
<td>FENG</td>
<td>Hangying</td>
<td>Feng</td>
<td>601 Roundup Ave.</td>
<td>Victoria</td>
<td>BC</td>
<td>V8C 3C1</td>
<td>Canada</td>
</tr>
<tr>
<td>FENGU</td>
<td>Hangying</td>
<td>Feng</td>
<td>601 Roundup Ave.</td>
<td>Victoria</td>
<td>BC</td>
<td>V8C 3C1</td>
<td>Canada</td>
</tr>
</tbody>
</table>

If two tables have one or more fields in common, you can embed the datasheet from one table in another. By using an embedded datasheet, called a subdatasheet, you can see the information in more than one table at the same time. For example, you might want to embed an Orders datasheet in a Customers table so that you can see the orders each customer has placed.

In this exercise, you will open existing database tables and explore the table structures in different views.
Tip In this database, the Navigation Pane filter has been set to display all Access objects, but the Queries, Forms, and Reports object groups are collapsed. You can collapse and expand groups to display only the ones you want, or you can filter the database objects by clicking the list header, and then clicking the option you want under Filter By Group.

1. Click the Microsoft Office Button, and then click Open.

2. In the Open dialog box, browse to the Documents\Microsoft Press\Access2007SBS\Exploring folder, and double-click the Tables database.

   The database opens.

3. In the Navigation Pane, double-click Categories.

   The Categories table opens in Datasheet view.

   This table contains a list of product categories and fields such as Category ID, Category Name, and Description.
Tip You can open any database object by right-clicking it in the Navigation Pane and then clicking the view you want to open it in. Clicking Open opens the object in its default Datasheet.

Tip You can resize a table column by dragging the vertical bar in the header that separates it from the column to its right. You can set the width of a column to the width of its widest entry by double-clicking the vertical bar.

4. Maximize the table window if it isn’t already maximized. Then in the datasheet, click the Expand button at the left end of the record for the Bulbs category.

The Bulbs category expands to reveal an embedded subdatasheet. Access displays the category records from the Categories table and product records from the Products table simultaneously.

5. Click the Collapse button to the left of the Bulbs category to hide the subdatasheet.

6. Click the Close Window button in the upper-right corner of the table, to the right of its tab (not the Close button in the upper-right corner of the program window) to close the Categories table. If Access prompts you to save changes to the table layout, click Yes.

7. In the Navigation Pane, double-click the Orders table to open it in Datasheet view.
The record navigation bar at the bottom of the window indicates that this table contains 87 records, and that the active record is number 1 of 87.

8. Move through the table one record at a time by clicking the **Next Record** button several times.

The selection moves down the OrderID field, because that field contains the insertion point.

**Tip** You can move the selection one record at a time by pressing the Up Arrow or Down Arrow key, one screen at a time by pressing the Page Up or Page Down key, or to the first or last field in the table by pressing Ctrl+Home or Ctrl+End.

9. Move directly to record 40 by selecting the current record number in the record navigation bar, typing **40**, and then pressing **Enter**.

10. In the **Navigation Pane**, double-click the **Products** table to open it in Datasheet view.

Notice that the table contains 189 records.
11. On the View toolbar, click the Design View button.

Datasheet view displayed the data stored in the table, whereas Design view displays the underlying table structure.

CLOSE the Products and Orders tables without saving your changes, and then close the Tables database to return to the Getting Started window.
Exploring Queries

You can locate specific information stored in a table, or in multiple tables, by creating a query specifying the parameters of the information you want to find. For example, you might want to locate all your out-of-state customers who have purchased gloves within the last three months. You could find this information by sorting, filtering, and cross-referencing table data, but that would be a difficult and time-consuming task. It is far simpler to create a query that returns all records in the Customers table with billing addresses not in your state, whose customer IDs map to records that appear in the Transactions table within the past quarter and include item IDs that map to records in the Inventory table that are classified as gloves. That might sound complicated, but the process of creating a query to return the results described in this example is quite simple.

Running a query (also called querying the database) displays a datasheet containing the records that fit your search criteria. You can use the query results as the basis for further analysis, create other Access objects (such as reports) from the results, or export the results to another format, such as an Excel spreadsheet or a Microsoft SharePoint list.

If you will want to locate records matching the search criteria at any time in the future, you can save the query, and run it again from the Queries section of the Navigation Pane. Each time you run a query, Access evaluates the records in the specified table (or tables) and displays the current subset of records that match the criteria you have defined.

Don’t worry if this all sounds a bit complicated at the moment. When you approach queries logically, they soon begin to make perfect sense. You can easily create queries by using the Query wizard that is available to help you structure the query, and if you create a query that you are likely to run more than once, you can save it. It then becomes part of the database and is displayed when you click Queries in the Navigation Pane.

See Also For more information about queries, see Chapter 6, “Locating Specific Information.”

In this exercise, you will explore two existing queries.

USE the Queries database. This practice file is located in the Documents\Microsoft Press\Access2007SBS\Exploring folder.
OPEN the Queries database.

1. In the Navigation Pane, click Queries.
   The database window displays all the queries that have been saved as part of this database.
2. Right-click the **Current Product List** query, and then click **Object Properties**. Access displays the properties of the Current Product List query, including a description of its purpose. The icon shown on the General tab matches the icon shown for this query in the Navigation Pane, and is an indication of the query's type. The query type is also specified in the Properties dialog box: this is a Select Query.

3. In the **Properties** dialog box, click **Cancel**.

4. Right-click the **Products by Category** query, and then click **Open**. Access processes the query (commonly referred to as *running the query*) and produces a datasheet displaying the results.
The record navigation bar indicates that 171 records are displayed; the database actually contains 189 records. To find out why 18 of the records are missing, you need to look at this query in Design view.

5. On the View toolbar, click the Design View button.

Access displays the query in Design view.

Two boxes in the top part of the query window list the fields in the tables this query is designed to work with. The query is formed in the design grid at the bottom of the query window. Each column of the grid can refer to one field from one of the tables above. Notice that <> Yes (not equal to Yes) has been entered in the Criteria row for the Discontinued field. This query finds all the records that don’t have a value of Yes in that field (in other words, all the records that have not been discontinued).

6. As an experiment, in the Criteria row of the Discontinued field, replace <> with =, and then on the Design contextual tab, in the Results group, click the Run button.

Tip  You can also run a query by switching to Datasheet view.

This time, the query finds all the records that have been discontinued.
The 18 discontinued products account for the difference between the number of records in the Products table and the number of records displayed by the original query.

<table>
<thead>
<tr>
<th>Category Name</th>
<th>Product Name</th>
<th>Quantity Per Unit</th>
<th>Units in Stock</th>
<th>Discontinued</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonsai supplies</td>
<td>Bonsai mixed garden</td>
<td>1 ea.</td>
<td>0</td>
<td>✔</td>
</tr>
<tr>
<td>Bonsai supplies</td>
<td>Bonsai scissors</td>
<td>1 ea.</td>
<td>0</td>
<td>✔</td>
</tr>
<tr>
<td>Fertilizers</td>
<td>Guano</td>
<td>5 lb. bag</td>
<td>0</td>
<td>✔</td>
</tr>
<tr>
<td>Fertilizers</td>
<td>Muriate of potash</td>
<td>10 lb. bag</td>
<td>0</td>
<td>✔</td>
</tr>
<tr>
<td>Grasses</td>
<td>Decorator moss</td>
<td>1 tray</td>
<td>0</td>
<td>✔</td>
</tr>
<tr>
<td>Shrubs/hedges</td>
<td>Hedge shears 10&quot;</td>
<td>1 ea.</td>
<td>0</td>
<td>✔</td>
</tr>
<tr>
<td>Soils/sand</td>
<td>Buckwheat hulls</td>
<td>5 lb bag</td>
<td>0</td>
<td>✔</td>
</tr>
<tr>
<td>Soils/sand</td>
<td>Oyster shells</td>
<td>5 lb bag</td>
<td>0</td>
<td>✔</td>
</tr>
<tr>
<td>Soils/sand</td>
<td>Peanut hull meal</td>
<td>5 lb bag</td>
<td>0</td>
<td>✔</td>
</tr>
<tr>
<td>Soils/sand</td>
<td>Terrarium soil</td>
<td>5 lb bag</td>
<td>0</td>
<td>✔</td>
</tr>
<tr>
<td>Tools</td>
<td>Manure fork</td>
<td>1 ea.</td>
<td>0</td>
<td>✔</td>
</tr>
<tr>
<td>Tools</td>
<td>Optional grass catcher</td>
<td>1 ea.</td>
<td>0</td>
<td>✔</td>
</tr>
<tr>
<td>Tools</td>
<td>Posthole digger</td>
<td>1 ea.</td>
<td>0</td>
<td>✔</td>
</tr>
<tr>
<td>Tools</td>
<td>Push reel lawn mower</td>
<td>1 ea.</td>
<td>0</td>
<td>✔</td>
</tr>
<tr>
<td>Tools</td>
<td>Revolving sprinkler</td>
<td>1 ea.</td>
<td>0</td>
<td>✔</td>
</tr>
<tr>
<td>Tools</td>
<td>Root waterer</td>
<td>1 ea.</td>
<td>0</td>
<td>✔</td>
</tr>
<tr>
<td>Tools</td>
<td>Shade fencing 6'</td>
<td>50' roll</td>
<td>0</td>
<td>✔</td>
</tr>
<tr>
<td>Tools</td>
<td>Sharpening kit</td>
<td>1 ea.</td>
<td>0</td>
<td>✔</td>
</tr>
</tbody>
</table>

**CLOSE** the Products By Category query without saving your changes, and then close the Queries database.

## Exploring Forms

Access tables are dense lists of raw information. It will probably be quite simple for you to work directly with tables in a database you create for your own use, but might be overwhelming for people who don't know much about databases. To make it easier to enter, retrieve, display, and print information, you can design **forms** through which people can interact with your database.

A form is essentially a window containing **controls** that either display information to people or accept information that people enter. Access provides a collection of standard Windows controls, such as labels, text boxes, option buttons, and check boxes. With a little ingenuity, you can create forms that look and work much like the dialog boxes in all Windows applications.
A form acts as a friendly interface for a table. Through a form, you can display and edit the records of the underlying table, or create new records. As with tables and queries, you can display forms in several views. The three most common views are:

- **Form view**, in which you enter data
- **Datasheet view**, which looks essentially like a table
- **Design view**, in which you work with the elements of the form to refine the way it looks and works

Most forms link to only one table, but if you want to link to multiple tables from one form, you can embed other forms (subforms) within a form (then referred to as the **main form**). The form shown above in Design view includes *label controls* containing text that appears in the form in Form view, and *text box controls* that will contain data from the underlying table. Although you can create a form from scratch in Design view, you will probably use this view most often to refine forms you create by using a wizard.

In this exercise, you will explore forms, subforms, and the available form controls.

---

**USE** the *Forms* database. This practice file is located in the `Documents\Microsoft Press\Access2007SBS\Exploring` folder.

**OPEN** the *Forms* database.

1. **In the Navigation Pane**, under *Forms*, double-click *Orders*.

The *Orders* form opens. This form consists of a main form and a subform. The main form displays information from the Orders table. The subform, which looks like a datasheet in the middle of the main form, displays the information from the Order Details table for the current record.
2. In the form window, on the record navigation bar, click the **Next Record** button a few times to display the next few records.

Notice that the subform changes with each click to display the items purchased on that order.

3. Click the **Bill To** arrow to display a list of all customers who have placed orders.

![Image of the Orders form](image)

This is an example of a list box control.

4. In the **Navigation Pane**, under **Forms**, double-click **Products**.

   The Products form opens in Form view.

![Image of the Products form](image)
The purpose of this form is to edit or create product records.

5. On the Home tab, in the Views group, click the View arrow, and then in the list, click Design View.

This is the view in which you can add controls to a form.

6. Note that two Form Design Tools contextual tabs, Design and Arrange, were added to the Ribbon when you switched to Design view. Switch to Form view and then back to Design view to see this happen.

Contextual tabs are available only when you are working on an object that needs the tools on it.

7. On the Design contextual tab, point to each of the buttons in the center section of the Controls group to display the name of the control in a ScreenTip. You can use these controls to assemble custom forms for your database.

CLOSE the Orders and Products forms without saving your changes, and then close the Forms database.
Exploring Reports

You can display the information recorded in your tables in nicely formatted, easily accessible reports, either on your computer screen or on paper. A report can include items of information selected from multiple tables and queries, values calculated from information in the database, and formatting elements such as headers, footers, titles, and headings.

You can look at reports in four views:

- **Design View**, in which you can manipulate the design of a report in the same way that you manipulate a form.
- **Report View**, where you can scroll through the information in the report without the page breaks inserted when it is printed.
- **Print Preview**, in which you see your report exactly as it will look when printed.
- **Layout View**, which displays the data in the report (similar to Print Preview) but enables you to edit the layout.

In this exercise, you will preview a report as it will appear when printed.

**Tip** To change the level of detail displayed in ScreenTips, click Access Options on the Office menu. The ScreenTip Style list at the top of the Popular page displays the detail options: Show feature descriptions in ScreenTips, Don’t show feature descriptions in ScreenTips, and Don’t show ScreenTips.

**USE** the Reports database. This practice file is located in the Documents\Microsoft Press\Access2007SBS\Exploring folder.

**OPEN** the Reports database.

1. In the **Navigation Pane**, under **Reports**, right-click **Customer Labels**, and then click **Print Preview**.
   The Customer Labels report opens.

2. Click the preview document to display a larger view of it.
Tip  If the report is too small to read in Print Preview, you can adjust the zoom level by clicking the Zoom In button or dragging the Zoom slider that appears in the lower-right corner of the Print Preview window.

This report prints customer names and addresses in a mailing label format. You are looking at it in a view that is much like Print Preview in other Office programs.

Tip  Access provides a wizard that can help you create a mailing label report. You can also use the Customers table as a source document for the Word 2007 mail merge tool to create labels like these.

3. In the Navigation Pane, right-click the Sales by Category report, and then click Print Preview.

4. Scroll through a few pages of the multi-page report by clicking the navigation buttons at the bottom of the window.
5. On the View toolbar, click the Design View button.

Access displays the report in Design view. In this view, the report looks similar to a form. The techniques you use to create forms can also be used to create reports.

CLOSE the Customer Labels report and the Sales By Category report without saving your changes, and then close the Reports database.
Exploring Other Access Objects

Tables, queries, forms, and reports are the objects you will use most frequently in Access. You can use them to create powerful and useful databases. However, you can also use macros and modules to substantially extend the capabilities of Access.

**Tip** Previous versions of Access included Data Access Pages. Access 2007 doesn’t include these objects. If you are familiar with Data Access Pages and need something like this, you can deploy your database to a collaboration site built with Microsoft SharePoint products and technologies, and use the tools provided there.

**Macros**

A *macro* is a simple program that performs multiple actions. You can use a macro to have Access respond to an event such as the click of a button, the opening of a form, or the updating of a record. Macros can be particularly useful when you expect that other people who are less experienced with Access than you will work in your database. For example, you can make routine database actions, such as opening and closing forms or printing reports, available as command buttons on switchboards. And by grouping together an assortment of menu commands and having users carry them out with the click of a button, you can ensure that everyone does things the same way.

**Modules**

More powerful than macros, *modules* are Microsoft Visual Basic for Applications (VBA) programs. VBA is a high-level programming language developed by Microsoft for the purpose of creating Windows programs. A common set of VBA instructions can be used with all programs in the Microsoft Office system, and each program has its own set as well. Whereas macros can automate four to five dozen actions, VBA includes hundreds of commands and can be extended indefinitely with third-party add-ins. You could use VBA to carry out tasks that are too complex to be handled with macros, such as opening an Excel spreadsheet and retrieving specific information.

**Tip** The Microsoft 2007 Office system installation CD and the online resources include a variety of sample databases that illustrate many of the principles of creating and using a database. You can use these to learn more about Access features, or as templates for your own databases.

One of these, the *Northwind 2007* database, is used as an example in many topics in the Access Help system, so it is a particularly good database for you to explore. You’ll find a link to this database in the Sample category in the Getting Started window.
Previewing and Printing Access Objects

Because Access is a Windows application, it interacts with your printer through standard Windows dialog boxes and drivers. This means that any printer that you can use from other programs can be used from Access, and any special features of that printer, such as color printing or duplex printing, are available in Access.

As you have seen in this chapter, you can use different Access objects—tables, forms, reports, and so on—to display the information stored in your database. Within each object there are several views available: Design view, Datasheet view, and so on. You can choose the view you want by selecting it from the View group on the Home tab (the views available will depend on the object that is active) or by clicking the buttons on the View toolbar at the right end of the status bar at the bottom of the window.

The print-related commands are available from the Microsoft Office Button or on the Ribbon when their use would be appropriate, which is determined by the object displayed and the current view of that object.

In this exercise, you will preview and print a table and a form.

USE the Print database. This practice file is located in the Documents\Microsoft Press\Access2007SBS\Exploring folder.

OPEN the Print database.

1. In the Navigation Pane, expand the Tables list, and then double-click the Employees table to open it in Datasheet view.

<table>
<thead>
<tr>
<th>EmployeeID</th>
<th>FirstName</th>
<th>LastName</th>
<th>Title</th>
<th>Address</th>
<th>City</th>
<th>State</th>
<th>PostalCode</th>
<th>HomePhone</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Karen</td>
<td>Berg</td>
<td>Owner</td>
<td>705 - 20th Ave</td>
<td>Seattle</td>
<td>WA</td>
<td>881102</td>
<td>(206) 555-0</td>
</tr>
<tr>
<td>2</td>
<td>Kim</td>
<td>Akers</td>
<td>Head Buyer</td>
<td>890 NE 87th Dr</td>
<td>Seattle</td>
<td>WA</td>
<td>88125</td>
<td>(206) 555-0</td>
</tr>
<tr>
<td>3</td>
<td>David J.</td>
<td>Osborn</td>
<td>Assistant</td>
<td>789 Moss Bay B</td>
<td>Kirkland</td>
<td>WA</td>
<td>88033</td>
<td>(425) 555-0</td>
</tr>
<tr>
<td>4</td>
<td>Chase</td>
<td>Carpenter</td>
<td>Sales Manager</td>
<td>123 Leary Wy</td>
<td>Seattle</td>
<td>WA</td>
<td>88117</td>
<td>(206) 555-0</td>
</tr>
<tr>
<td>5</td>
<td>Kirk</td>
<td>DeGrasse</td>
<td>Gardener</td>
<td>432 Pike St.</td>
<td>Seattle</td>
<td>WA</td>
<td>88119</td>
<td>(206) 555-0</td>
</tr>
<tr>
<td>6</td>
<td>Nancy</td>
<td>Anderson</td>
<td>Sales</td>
<td>567 - 20th Ave</td>
<td>Seattle</td>
<td>WA</td>
<td>88102</td>
<td>(206) 555-0</td>
</tr>
<tr>
<td>7</td>
<td>Michael</td>
<td>Emanuel</td>
<td>Sales</td>
<td>4321 Old Redmond</td>
<td>Seattle</td>
<td>WA</td>
<td>88052</td>
<td>(425) 555-0</td>
</tr>
<tr>
<td>8</td>
<td>Karen</td>
<td>Furse</td>
<td>Buyer</td>
<td>4567 - 11th Ave</td>
<td>Seattle</td>
<td>WA</td>
<td>88133</td>
<td>(206) 555-0</td>
</tr>
<tr>
<td>9</td>
<td>Sandeep</td>
<td>Katyal</td>
<td>Gardener</td>
<td>876 E. Prospect</td>
<td>Seattle</td>
<td>WA</td>
<td>88103</td>
<td>(206) 555-0</td>
</tr>
</tbody>
</table>

This table contains information about nine employees. You can see that there are more fields than will fit on the screen.
2. To display the first page of the datasheet printout, click the **Microsoft Office Button**, point to **Print**, and then click **Print Preview**.

3. Click the preview document once to zoom in, so the table content is legible.

4. At the bottom of the **Print Preview** window, click the **Next Page** button.

   This datasheet will print as three short pages if you print it with the current settings. Notice that the information on the second and third pages is a continuation of the table started on the first page.

5. On the **Print Preview** tab, in the **Page Layout** group, click the **Landscape** button.

   In Landscape orientation, the datasheet fits onto two pages.
6. In the Print group, click the Print button.

The Print dialog box opens. You can select the printer and set print options (such as the range of pages, specific records, or number of copies to be printed) from this dialog box.

Tip If you just want to send this datasheet to your default printer, click the Microsoft Office Button, point to Print, and then click Quick Print.

7. Close the Print dialog box and then in the Close Preview group, click the Close Print Preview button.

8. In the Navigation Pane, under Forms, double-click Employees.

The Employees form opens in Form view.

The information for each employee appears on its own page. Notice that there are two tabs at the top of the page, one for company information and one for personal information.

9. Click the Personal Info tab to see the information that is listed there, and then return to the Company Info tab.
10. Click the **Microsoft Office Button**, point to **Print**, and then click **Print Preview** to preview the printout.

Notice that the preview shows information from only the active form tab. If you want to print information that appears on a different tab, you first need to select that tab.

11. On the **View** toolbar, click the **Form View** button to return to that view.

**See Also** You use essentially the same methods to print information displayed in different Access objects. For more information, see “Previewing and Printing a Report” in Chapter 8, “Working with Reports.”

CLOSE the Employees table and the Employees form without saving your changes, and then close the *Print* database.
Key Points

- Access is part of the Microsoft Office system, so the basic interface objects—menus, toolbars, dialog boxes—work much the same as other Office products or other Windows applications.

- A database is the computer equivalent of an organized list of information. The power of a database is in your ability to organize and quickly retrieve precise information from it, and then to manipulate, share, and distribute or use this information in various ways. In Access, data is organized in tables comprised of columns and rows, called fields and records. Access is a relational database, so you can treat the multiple tables in one database as a single storage area and easily pull information from different tables in whatever order and format that suits you.

- The types of objects you can work with in Access include tables, queries, forms, reports, macros, and modules. Tables are the core database objects and the purpose of every other database object is to interact with one or more tables.

- Every Access object has two or more views. For example, you view data in a table in Datasheet view and define how the data is displayed in Design view.

- One way to locate information in an Access database is to create and run a query. You use queries to find information so that you can view, change, or analyze it in various ways. You can view queries in Datasheet view or Design view. You can use the results of a query as the basis for other Access objects, such as a form or report.

- Forms make it easy for users to enter, retrieve, display and print information stored in tables. A form is essentially a window in which you can place controls that either give users information or accept information they enter. Forms can be viewed in Form view, Datasheet view, or Design view.

- Reports display information from your tables in a nicely formatted, easily accessible way, either on your computer screen or on paper. A report can include items of information from multiple tables and queries, values calculated from information in the database, and formatting elements such as headers, footers, titles, and headings. Reports can be viewed in Design view, Print Preview, and Layout Preview.

- Macros and modules substantially extend the capabilities of Access. Macros can be used to make routine database actions available as command buttons in forms, which help less experienced users work in your database. Modules are VBA programs. Whereas macros can automate many actions, VBA can be used to carry out tasks that are too complex to be handled with macros.
Chapter at a Glance

Assign a password to a database, page 274

Prevent changes to database code, page 277

Private Sub LastName_AfterUpdate()
  'Create variables to hold first and last name
  'and customer ID
  Dim iName As String
  Dim iName As String
  Dim cID As String

  'Assign the text in the LastName text box to
  'the iName variable.
  iName = Forms!customers!LastName.Text

  'You must set the focus to a text box before
  'you can read its contents.
  Forms!customers!FirstName.SetFocus
  fName = Forms!customers!FirstName.Text

  'Combine portions of the last and first names
  'to create the customer ID.
  cID = UCase(Left(iName, 3) & Left(iName, 2))

  'Don’t store the ID unless it is 5 characters long.
Securing and Sharing Information

In this chapter, you will learn to:

✔ Assign a password to a database.
✔ Prevent changes to database code.
✔ Secure a database for distribution.

The need for **database security** is an unfortunate fact of life. As with your house, car, office, or briefcase, the level of security required for your database depends on the value of what you have and whether you are trying to protect it from curious eyes, accidental damage, malicious destruction, or theft.

The security of a company’s business information can be critical to its survival. For example, you might not be too concerned if a person gained unauthorized access to your products list, but you would be very concerned if a competitor managed to see—or worse, steal—your customer list. And it would be a disaster if someone destroyed your critical order information.

Your goal as a database developer is to provide adequate protection without imposing unnecessary restrictions on the people who should have access to your database. The type of security required to protect a database depends to a large extent on how many people are using it and where it is stored. If your database will never be opened by more than one person at a time, you don’t have to worry about the potential for corruption caused by several people trying to update the same information at the same time. If your database is sold outside of your organization as part of an application, you will want to take steps to prevent it from being misused in any way.

**Tip** In previous versions of Access you could set up *workgroups* and assign *permissions* to restrict the information available to members of each group and the actions they can perform. Access 2007 doesn’t offer this feature.
Another way to protect a database is by securing the distribution channel; for example, by making it available from a password-protected Web site.

In this chapter, you will explore ways to protect data from accidental or intentional corruption, and ways to make it difficult for unauthorized people to gain access to private information. Then you will learn about ways of sharing databases among team members and backing up a shared database.

**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.

**Troubleshooting** Graphics and operating system–related instructions in this book reflect the Windows Vista user interface. If your computer is running Windows XP and you experience trouble following the instructions as written, please refer to the “Information for Readers Running Windows XP” section at the beginning of this book.

### Assigning a Password to a Database

You can prevent unauthorized users from opening a database by assigning it a *password*. Access will prompt anyone attempting to open the database to enter the password. The database will open only if the correct password is entered.

### Creating a Secure Password

You can use any word or phrase as a password, but to create a *secure password*, keep the following in mind:

- Passwords are case-sensitive.
- You can include letters, accented characters, numbers, spaces, and most punctuation.

A good password includes uppercase letters, lowercase letters, and symbols or numbers, and isn’t a word found in a dictionary. For more information about strong passwords, visit

www.microsoft.com/athome/security/privacy/password.mspx
A secondary benefit of assigning a password is that your database will automatically be encrypted each time you close it, and decrypted when you open it and provide the correct password.

**Tip** In previous versions of Access, encrypting and decrypting a database was a separate function from assigning a password to it. If you open a database created in Access 2002 or Access 2003 from Access 2007, you will still have the option of encoding or decoding it, which is what the process was called in those versions.

It is easy to assign a database password, and certainly better than providing no protection at all, in that it keeps most honest people out of the database. However, many inexpensive password recovery utilities are available, theoretically to help people recover a lost password. Anyone can buy one of these utilities and "recover" the password to your database. Also, because the same password works for all users (and nothing prevents one person from giving the password to many other people), simple password protection is most appropriate for a single-user database.

To assign a password to or remove a password from a database, you must first open the database for **exclusive use**, meaning that no one else can have the database open. This will not be a problem for the database used in the following exercise, but if you want to set or remove a password for a real database that is located on a network share, you will need to make sure nobody else is using it.

**Database Encrypting**

A database created in Microsoft Office Access 2007 is a **binary file**; if you open it in a word processor or a text editor, its content is mostly unreadable. However, if you look closely enough at the file, you can discover quite a bit of information. It is unlikely that enough information will be exposed to allow someone to steal anything valuable. But if you are concerned that someone might scan your database file with a utility that looks for key words that will lead them to restricted information, you can **encrypt** the file to make it really unreadable.

In previous versions of Access, the process of encoding (encrypting) a database and assigning a password were separate. In Access 2007, they have been combined as one command.

Encrypting a file prevents people who don't have a copy of Access from being able to read and perhaps make sense of the data in your file.
In this exercise, you will assign a password to a database.

**USE** the `Password` database. This practice file is located in the `Documents\Microsoft Press\Access2007SBS\Securing` folder.

**BE SURE TO** start Access before beginning this exercise, but don’t open the `Password` database yet.

1. **Click the Microsoft Office Button**, and then on the menu, click **Open**.

2. **In the Open dialog box**, navigate to the `Documents\Microsoft Press\Access2007SBS\Reports` folder, and click (don’t double-click) the `Password` database. Then click the **Open arrow**, and in the list, click **Open Exclusive**.

Access opens the database for your exclusive use—no one else can open the database until you close it.

3. **On the Database Tools tab**, in the **Database Tools** group, click the **Encrypt with Password** button.

   The Set Database Password dialog box opens.

   **Tip** Access 2007 includes many database-management tools. Familiarize yourself with the commands available from the Database Tools tab. From this tab you can, for example, display an object’s dependencies, document the entire database, and update the linked tables.

4. **In the Password box**, type **2007!SbS**, and then press the **Tab** key.

   Access disguises the characters of the password as asterisks as you type them, to protect against other people seeing your password.
5. In the Verify box, type 2007!SbS. Then click OK.

6. Close and reopen the database.

   The Password Required dialog box opens.

   ![Password Required dialog box]

7. In the Enter database password box, type 2007_SBS, and then click OK.

   Access warns you that the password is not valid.

8. In the Microsoft Office Access message box warning you that the password you entered is not valid, click OK.

9. In the Password Required dialog box, type the correct password (2007!SbS), and then click OK.

   The database opens.

**CLOSE** the Password database.

**Tip** To remove a password from a database, open the database exclusively, entering the password when prompted to do so. On the Database Tools tab, in the Database Tools group, click the Decrypt Database button. Enter the password, and then click OK. Access removes the password, allowing anyone to open the database.

---

### Preventing Changes to Database Code

If you have added Microsoft Visual Basic for Applications (VBA) procedures to a database, you certainly don’t want users who aren’t qualified or authorized to make changes to your code. You can prevent unauthorized access in two ways: by protecting your VBA code with a password, or by saving the database as a Microsoft Database Executable (ACCDE) file. If you set a password for the code, it remains available for editing by anyone who knows the password. If you save the database as an ACCDE file, people using the database application can run your code, but they can’t view or edit it.

**See Also** For information about saving a database as an executable file, see “Securing a Database for Distribution” later in this chapter.
In this exercise, you will secure the VBA code in a database by assigning a password to it.

USE the Prevent database. This practice file is located in the Documents\Microsoft Press\Access2007SBS\Securing folder.

BE SURE TO start Access before beginning this exercise.

OPEN the Prevent database.

1. On the Database Tools tab, in the Macro group, click the Visual Basic button. The Visual Basic Editor starts.


3. On the Protection tab, select the Lock project for viewing check box.

4. In the Password box, type 2007!VbA, and then press the Tab key.
Access disguises the characters of the password as asterisks as you type them, to protect against other people seeing your password.

**Tip** The Lock and Password settings operate independently. Selecting the Lock Project For Viewing check box requires the user to enter the password to view the project. If a password has been set and the Lock Project For Viewing check box is not selected, the user can view the project code but has to enter the password to open the Project Properties dialog box.

5. In the **Confirm Password** box, type *2007!VbA*, and then click **OK**.
   The password is set, but you won’t have to enter it again until the next time you open the database and attempt to edit the VBA code.

6. Close the Visual Basic Editor, and then close the database.

7. Reopen the database, and then on the **Database Tools** tab, in the **Macro** group, click the **Visual Basic** button (or press **Alt+F11**).
   The Visual Basic Editor opens, displaying only the name of the project, and not the Code window.
8. Click the **Expand** button to the left of the *Prevent* database project.
   The Password dialog box opens.

9. In the **Password** dialog box, type *2007!VbA*, and then click **OK**.
   The project expands to display its components.

   **Tip** You need to enter the password only once per database session. In other words, you won’t have to enter it again unless you close and reopen the database.

**CLOSE** the *Prevent* database.

   **Tip** To remove the password, on the Visual Basic Editor Tools menu, click Base Properties. On the Protection tab, clear the Lock Project For Viewing check box, delete the asterisks from the two password boxes, and then click OK.
Securing a Database for Distribution

When a database is used locally, on a local area network (LAN), or on a wide area network (WAN), you have considerable control over who has access to it. But if you send the database out into the world, on its own or as part of a larger application, you lose that control. There is no way you can know who is using the database or what tools they might have available to hack into it. If this is of concern to you, consider distributing your database as an Access Database Executable (ACCDE) file.

**Tip** In previous versions of Access this was called a Microsoft Database Executable (MDE) file. The functionality and creation process are the same. If you open an older (Access 2002 or Access 2003) MDB file in Access 2007, a Make MDE command appears in the Database Tools group on the Database Tools tab in place of the Make ACCDE command that appears when you’re working in an Access 2007 database.

Suppose you want to make a database available for use by several organizations in the area, but the organizations don’t want their members to be able to change the database objects and perhaps “break” things. Saving a database as an ACCDE file compiles all modules, removes all editable source code, and compacts the destination database. Users of the ACCDE file can view forms and reports, update information, and run queries, macros, and VBA code. They cannot do the following:

- View, edit, or create forms, reports, or modules in Design view.
- Add, delete, or change references to other objects or databases.
- Modify VBA code.
- Import or export forms, reports, or modules.

Access can save a database as an ACCDE file only if it is in Access 2007 format. Access 2002 and Access 2003 databases can be saved as MDE files.

You can’t convert a database from ACCDE format to the source ACCDB format, so after saving a database as an ACCDE file, retain the original ACCDB file in a safe place. If you need to make changes to forms, reports, or VBA code, you will have to make them in the original database and then save it as an ACCDE again.
### Splitting a Database for Distribution

To help database performance and reliability in a shared implementation, such as when multiple people will access a database over a network at the same time, you can split the database into two parts: A back-end database containing the tables and a front-end database containing the forms, queries, and reports. To split a database:

1. Make a copy of the database on your computer, and then open it.
2. On the **Database Tools** tab, in the **Move Data** group, click the **Access Database** button. Then in the Database Splitter wizard, click **Split Database**.
3. In the **Create Back-end Database** dialog box, specify a name and storage location for the back-end database, click **Split**, and then click **OK** in the message box telling you that the split was successful.

Distribute the front-end file (the one you started with) to the database users. It will automatically connect to the back-end file (stored in the location you specified in step 3).

In this exercise, you will secure a database by saving it as a distributable ACCDE file.

**USE** the Distribute database. This practice file is located in the `Documents\Microsoft Press\Access2007SBS\Securing` folder.

**OPEN** the Distribute database.

1. On the **Database Tools** tab, in the **Database Tools** group, click the **Make ACCDE** button.
2. In the **Save As** dialog box, navigate to the `Documents\Microsoft Press\Access2007SBS\Securing` folder, and then click **Save**.
   The process takes only a moment; no message alerts you when it is completed.
3. Click the **Microsoft Office Button**, and then click **Open**.
4. In the **Open** dialog box, navigate to the **Securing** folder.
   Access has created a database executable file named `Distribute.accde`. The file icon displays a blue lock over the standard Access icon.

**Tip** The `Distribute.laccdb` file indicates that your database is locked, because it is currently open. When you close the database, the `.laccdb` file will disappear.
5. Double-click the *Distribute* database executable file, and if the Microsoft Office Access Security Notice message box appears, click Open.

6. In the Navigation Pane, right-click one object of each type (table, query, and so on), and note whether the Design View button on the shortcut menu is active.

   The Design View button is available for tables, queries, and macros, but unavailable for all other object types. This prevents you or another user from making any design changes to forms or reports, or changing any VBA code associated with the database.

   **Important** When creating an ACCDE file from a database with multiple users, first make sure that all other users close the database. You will know that someone else has the database open if you locate it in Windows Explorer and see a file of the same name, with an `.laccdb` (locked Access database) extension. If you open the database anyway, when you attempt to create the accde file you will be warned that the database is already opened by someone else (the username and machine name are provided) and told to try again later.

**Collaborating Through SharePoint**

If your organization has a Microsoft Office SharePoint Server 2007 collaboration site, you can manage data collection and distribution through that site, by making your Access database available online, in one of these ways:

- Migrate a database to a collaboration site. The Move To SharePoint Site wizard creates SharePoint lists linked to your database. The linked data can be accessed and managed from the collaboration site or from Access.

- Publish a database to a collaboration site. You can publish your database to a SharePoint library, and provide forms, queries, and reports through which other people can update or extract information.

After you make the database available to collaboration site users, they can work with the information as they would with any other SharePoint list content—online or offline—but they can also view the content as it would appear in Access, without first starting the program.

One benefit of sharing a database in this way is that permissions are regulated by SharePoint rather than set for the individual database. Another is that you can track changes made to the data by site users and recover previous versions of information, thus safeguarding against lost data in a way that you can’t with Access alone.

Conversely, you can create a database from existing SharePoint lists, and integrate workflow processes with a database.
Key Points

- Your goal as a database developer is to adequately protect your database and the information it contains, without imposing unnecessary restrictions on the people who use it. The type of security required to protect a database depends on how many people are using it and where it is stored.

- You can encrypt a database, which does not prevent it from being opened and viewed in Access, but does keep people who don’t have a copy of Access from reading or making sense of the data.

- You can assign a password to your database to prevent unauthorized users from opening it. The database is automatically encrypted when you assign it a password.

- If your database contains VBA procedures, you can protect your VBA code by assigning it a password, or by saving the database as an Access Database Executable (ACCDE) file. If you set a password for the code, it remains available for editing by anyone who knows the password. If you save the database as an ACCDE file, people using the file can run your code, but they can’t view or edit it.

- Other members of your organization can input and extract data through a SharePoint collaboration site. By making database information available through SharePoint, you can regulate permissions, track changes, and manage versioning in ways that you can’t within Access.
Access Options window, 269
action queries. See also append queries; crosstab queries; delete queries; make-table queries; queries; select queries; update queries
converting select queries to, 204
creating, lvii, 204
defined, 179, 285
types of, 161
actions
basic, 124
defined, 286
for objects, displaying list of, 125
Add Existing Fields button, 234
Add Group button, 260
add-ins for exporting to PDF/XPS files, 89
Add Item button, 260
address books (Outlook), importing from, 74
Advanced Filter Options button, 154, 157
Advanced Filter/Sort command, liv
aggregate functions, 174, 285
Align Left button, 230
Align Text Left button, 230
aligning
form controls, 1, 113
report columns, lix
report text, lix, 230
Allow Zero Length field property, 180
Analyze Table wizard, 211
analyzing performance, 211, 213
And operator, 152
append queries, 161, 285. See also action queries; crosstab queries; delete queries; make-table queries; queries; select queries; update queries
applications, database
defined, 285
macros in, 40
specialized commands in, 40
templates for (see templates) when appropriate, 37
Apply Filter button, liv
arithmetic operators, 285
+ (add), 152
& (concatenate), 152
/ (divide), 152
arithmetic operators (continued)
  * (multiply), 152
  - (subtract), 152
arrows, button, 3
Attachment data type, 46
AutoFormat dialog box, 117
AutoFormat gallery, 117
AutoFormats
  creating, li
  creating from forms, 118
  form, 117
AutoForms, 129
automated functions. See macros
AutoNumber data type
  defined, 45
  Long Integer setting for, 184
autonumber fields, lv
Avg function, 174–75

B
backing up databases, lvii, 210–11
backward compatibility, 57
BE SURE TO paragraphs, xxiv
binary files, 275, 285
binding controls together, l, 109
blank databases, 42
blank fields, 180
Boolean data type
  defined, 181, 208
  formatting display of, 184
  toggling between yes and no, 183
bound controls, l, 285
Browse For A Location button, 42
Build button, 170
built-in functions, 167
buttons, general, 267
  arrows on, 3
  gray, 6
  inactive, 6
  margin icons for, xxiv
  name bar, 3, 290
  option, 288
  ScreenTips, displaying, xxxiii
  size and shape of, 6
  switchboard, lxii
buttons, Quick Access Toolbar
  adding, 268
  moving, 270
  removing, 271
buttons, specific
  Access (Import group), 55
  Add Existing Fields, 234
  Add Group, 260
  Add Item, 260
  Advanced Filter Options, 154, 157
  Align Left, 230
  Align Text Left, 230
  Apply Filter, liv
  Browse For A Location, 42
  Build, 170
  Center, 238
  Close, 3, 33
  Close Print Preview, 248
  Close Switchboard, 255
  Combo Box, 122
  Control Wizards, 134
  Copy, 99
  Create E-mail, 64
  Database Documenter, 214
  Datasheet View, 182
  Date & Time, 230, 237
  Delete, 208
  Descending, 146–47
  Design View, 44, 185, 229
  Encrypt With Password, 276
  Excel (Import group), 58
  Export To Excel Spreadsheet, 83
  Export To RTF File, 88
  Export To Text File, 90
  Export To Word, 88
  Filter By Form, 155
  First Record, 139
  Form, 129
  Form View, 34
  Format Painter, 122
  Group & Sort, 231–32
  Image, 120
  Insert Page Number, 239
  Label, 121, 238
  Landscape, 32
  Line, 232
  Make ACCDE, 282
  Microsoft Office, 2, 5, 11, 32, 57, 288
  Microsoft Office Access Help, xxxiii–xxxiv
  Minimize, 3
  More, 72, 93
  More Forms, 132
  Move All, 132, 171
  Move Up, 270
  Multiply, 168
C

calculating with queries, 174
calculations
  comparison operators, 152
  creating, 166, 170, 191–92
  defined, 286
  functions, entering, 167
  logical operators in, 152
  multiplying, 168
  re-labeling, 169
captions in form controls, 112
categories, custom, 259
  creating, lxii, 260
  default groups in, 260
  groups in (see custom groups)
  shortcuts, adding, lxii
  plus signs next to (see subdatasheets)
CD companion to book
  how to use, xxiii
  practice files on, xxv
  resources available on, xxvii
bytes, restricting number fields to, 185

Center button, 238
centering report text, 238
chapter thumb tabs, how to use, xxiii
Choose Builder dialog box, 126
Close button, 3, 33
CLOSE paragraphs, xxiv
Close Print Preview button, 248
Close Switchboard button, 255
closing
  Access, 14
databases, xl
document windows, xl
  Print Preview, xli, 33, 248
tables, xlii
code, protecting, 277
coding with VBA, 128
collapsing subdatasheets, 17
Collect Data Through E-mail Messages wizard, 64
collecting data through e-mail, 64
Color gallery, 111
colors, 111
columns, table
  adding, 48
data types, changing, 46
  defined, 10
  freezing in place, xliii, 51
  hiding, xlii, 50
  locking into position, 51
  moving, liii
  names, editing, 47
  names, spaces in, 45
  as primary keys, 45
  renaming, 44
  resizing, xlii, 17, 48, 197
  restoring after hiding, 50
  selecting adjacent, 50
  setting width to widest entry, 17
  size, setting, 46
  sorting together, 147
  unhiding, 50
  unique identifiers, 45
Combo Box button, 122
dcombo boxes, 195
  adding to forms, li
  defined, 285
  inserting, 122
dcomma-delimited text files
defined, 285
importing, 66
importing from, xlv
command buttons defined, 285
in switchboards, inserting, 255
in switchboards, On Click property for, 258
command lists, 3
commands accessing via the Quick Access Toolbar (see Quick Access Toolbar) defined, 267
displaying list of, 269
commands, Quick Access Toolbar adding, 268
moving, 270
removing, 271
Compact And Repair Database utility, 211–12
compact databases, lvii
companion CD how to use, xxiii
practice files on, xxv
resources available on, xxvii
comparison operators, 285
= (equal to), 152
> (greater than), 152
>= (greater than or equal to), 152
< (less than), 152
<= (less than or equal to), 152
Like, 152
<> (not equal to), 152
conditional formatting, adding to controls, lii, 119
connection speed required for Office 2007, xxix
constants, 152, 285
contacts (Outlook), importing, 75
control captions adding, li
defined, 112
editing, l
control labels, 24
changing, l
deleting, l
inserting, 121
selecting, l
sizing, l, li
control menu, 4
control properties defined, 108, 152, 285
displaying, 110
editing, xlix
setting, l, 244
control source, 108, 285
options, displaying with Expression Builder, 122
Control Wizards button, 134
controls aligning, l, 113
background properties, l
background style, 111
binding, l, 109
changing grouped, 109
color, 111
combo boxes (see combo boxes)
conditional formatting, adding to, lii, 119
defined, 23, 103, 285, 287
deleting, 113
deselecting, 112
font, 109
formatting, xlix, lii
formatting of, copying, 122
graphics, adding, li
grouping, l, 109
label, 24, 103, 121
layout, changing, l
Logo, 120
margins, 114
modifying simultaneously, 233
moving, xlix, li
positioning precisely, 117
Property sheet, opening, 121
record selector, deleting, lii
scroll bars, deleting, lii
selecting, 110
selecting all, 111
selecting multiple, 111
shadow effect, 112
Size Mode property, 121
sizing, li, lii
sizing to fit, li, lii, 113, 121
space between, inserting, l
standard, 23
text box, 24, 103, 290
theme, 118
types of, 119
unbound, 122, 290
unbound, inserting, 244
undeleting, 243
wizards, adding without, 122
Convert Database Into dialog box, 57
converting databases from previous versions, 57
Copy button, 99
copying data, to other programs, 97
formatting, 122
records, 98
SharePoint lists, 60'
table structure to new table, xlii, 42
tables, 202
Count function, 174, 175
Create E-mail button, 64
Create New dialog box, 254
Create tab, 7
cropping in forms, avoiding, 121
crosstab queries, 160, 285. See also action queries;
append queries; delete queries; make-table
queries; queries; select queries; update queries
Currency data type, 183
custom categories, 259
creating, lxii, 260
default groups in, 260
groups in (see custom groups)
plus signs next to (see subdatasheets)
shortcuts, adding, lxii
Custom Filter dialog box, 150
custom groups
default, 260
defined, 259, 285
hiding, 261
shortcuts to objects, adding, 261
viewing, 261
custom menus, 264
custom toolbars, 264
Customize AutoFormat dialog box, 117
customizing
forms, 131
Quick Access Toolbar, 268

data
entering in tables, 44
entering via list (see lookup lists)
exporting (see exporting)
importing (see importing)
 restructuring, 48
summarizing by adding Totals row, lv, 174
data access pages, 30
data formatting in fields. See masks
data source, 122. See also forms
data types, 180
Attachment, 46
AutoNumber, 45, 184
Boolean, 208 (see Yes/No data type)
changing, 46, 181
Currency, 183
Date/Time, setting, 183
field size, restricting, 184
for number fields, changing, 185
Number, setting, 181
setting, lv
Text, as default, 181
Yes/No (see Yes/No data type)
for ZIP codes, 46
database applications
defined, 285
macros in, 40
specialized commands in, 40
templates for (see templates)
when appropriate, 37
Database Documenter button, 214
Database Documenter utility, 211
database objects. See also specific object types
defined, 124, 288
deleting, xlii
displaying all instances of, 14
events recognized by, 124
export formats available for, viewing, 80
exporting, 79
importing (see importing)
renaming, xlii
shortcuts, creating with custom groups (see
custom groups)
uses for, 9
views (see views)
database programs, 286. See also databases
database properties, 42, 180, 212
Database Properties dialog box, 212
database records, attaching files to, 46
database security, 273. See also passwords
defined, 286
designing, 273
warnings, 12
Database Tools tab, 8
database window, 14
defined, 286
key combination for displaying, 265
tabs in, 4
databases
as Access Database Executable (ACCDE) files, 281
applications as (see database applications)
backing up, lvii, 210–11
blank, 42
closing, xl
Databases (continued)

code, protecting, 277
compacting, lvii, 211–12
complexity of, 9
content, complying with normalization rules, 41
controlling features available in, 262
creating, from templates, 40
creating, manually, 41–42
default folder, 38
documenting, lviii, 214
earlier versions, migrating, xlv
elements in (see database objects)
encoding/decoding, 275
encrypting, 275
entering data in, xlii
file extensions, 40
folder for storing, 38
formatting, xxxix
forms (see forms)
importing, 55
importing information to (see importing)
linking data in, 60
locking, 277
migrating from previous versions, 57
multiple, opening, 82
naming, 40
navigation pages (see forms)
non-Access, importing from, 76
objects (see database objects)
opening, xl, xlii, 13
opening for exclusive use, 275–76
opening multiple, 82
overview of, 10
password-protecting (see passwords)
performance, analyzing, lvii
populating, 37
restricting availability in, 262
saving, 42
saving as ACCDE files, lxv
saving in previous formats, 57
splitting for distribution, lxv, 282
startup options (see startup options)
structure, creating with templates, 38 (see also
templates)
tables (see tables)
templates for (see templates)
title, changing, 263
Trusted Locations list, adding to, xxxix
user-created dialog boxes in (see forms)

Datasheet view

defined, 286
layout of, 15
moving directly to row in, 18
opening tables in, 15, 48
running queries in, 22
Datasheet View button, 182
datasheets
columns (see columns, table)
displaying, in Print Preview, 32
embedding in other tables (see subdatasheets)
navigating, xli
Date & Time button, 230, 237
date and time
default year, 183
in reports, inserting, lviii, 230, 237
regional settings, changing, 183
Date And Time dialog box, 230, 237
Date/Time data type, 183
date filters, 151
dBASE files
importing to, 76
importing from, xlvi
decoding databases, 275
Default Database Path dialog box, 38
default template location, 39
Delete button, 208
delete queries, 161. See also action queries;
append queries; crosstab queries;
make-table queries; queries; select
queries; update queries
converting select queries into, 208
creating, lvii, 206
defined, 286
preventing accidental use of, 210
relationships and, 209
testing, 208
deleting
adjacent records, 47
database objects, xlii
fields from queries, lv, 164
form control labels, I
form controls, 113
form layouts, 112
primary keys, 45
with queries (see delete queries)
Quick Access Toolbar commands, lxiii
record selector control, from forms, lli
records, precautions for, 206
scroll bar controls from forms, lli
table rows, xliii, 47
tables, xlii, 43
text boxes, from reports, lix
delimited text files, 65
defined, 286
exporting data as, 92
importing, 66
delimiters, 286
Descending button, 146–47
deselecting
defined, 286
form controls, 112
design grid
columns, widening, 169
connecting lines in, 162
defined, 286
fields, adding, liv, 164
fields, copying all to, 165
fields, hiding in results datasheet, 162
filtering with, 156
related tables in, 162
Design view
displaying queries in, 22
forms, opening in, xli, 108
layout of, 45
opening tables in, 15
switching to, 44
Design View button, 44, 185, 229
dialog boxes
AutoFormat, 117
Choose Builder, 126
Convert Database Into, 57
Create New, 254
creating, in databases (see forms)
Custom Filter, 150
Customize AutoFormat, 117
Database Properties, 212
Date And Time, 230, 237
Default Database Path, 38
Documenter, 214
Edit List Items, 197
Edit Switchboard Item, 255
Encode As, 91
Export, 81
Export XML, 94
Expression Builder, 166
File Open, 55, 58, 66, 72, 76
Grouping Intervals, 224
help for, accessing, xxxiv
HTML Output Options, 96
Icon Browser, 263
Import Objects, 56
Import Specification, 67
Import XML, 70
Navigation Options, 260
New Query, 170
New Style Name, 118
Page Numbers, 239
Password, 280
Password Required, 277
Performance Analyzer, 213
Print, 248
Print Table Definition, 215
Project Properties, 278
Row Height, 50
Save As, 45, 47
Save Export Steps, 82
Set Database Password, 276
Show Table, 163, 175, 206
Summary Options, 225
Theme Settings, 118
Unhide Columns, 50
user-created in databases (see forms)
in Windows XP, navigating, xvii
Dialog Box Launcher, 3, 7, 286
digital signatures, 286
disabling form fields, 131
displaying reports, 27. See also reports
divider lines, 232
docking, 286
Documenter dialog box, 214
documenting databases, lviii, 214
Documents folder
as default database location, 38
in Windows XP, xv
Does Not Equal filters, liii
downloading templates, 39
drop-down lists
allowing users to add items to (see combo boxes)
creating, lv, 195
filtering selections in, lvi
hiding columns in, lvi
limiting to preset items, 198
multi-column, creating, lvi, 198
restricting entries to, lvi
selecting options in, 197
values in, cycling through, 200
duplicate queries, 160, 286
Edit List Items dialog box, 197
Edit Switchboard Item dialog box, 255

editing
  column names, 47
  form captions, 112
  reports, 227
  source of form data, 122
  switchboards, 255

e-mail forms, xlv, 64. See also forms
embedded macros, 30. See also modules
  in database applications, 40
  enabling, xxxix
  export formats available for, 79
  settings, changing, xl
  storage of, 40
  trusted nature of, 40
  viewing, 256
embedding datasheets in other tables. See
  subdatasheets
empty strings, 180, 286
Encode As dialog box, 91
Encrypt With Password button, 276
encrypting databases, 275, 286

ending. See closing

entering data
  via list (see lookup lists)
  in tables, 44

environment, 2

events
  basic, 124
  defined, 286
  firing, 287
  for objects, displaying list of, 124–25

Excel
  exporting to, xlvii, 82
  importing from, xliv, 57–58
  pasting data into, 97

Excel button (Import group), 58
exclusive use, 286
exercises in book, system requirements, xxix

exiting. See closing

expanding
  Help topics, xxxvi
  subdatasheets, 17

Export dialog box, 81
Export Text wizard, 91

Export To Excel Spreadsheet button, 83
Export To RTF File button, 88
Export To Text File button, 90
Export To Word button, 88
Export XML dialog box, 94

exporting data
  defined, 286–87
  to Excel, 82
  to PDF/XPS files, 89
  reminder for, setting, 86
  as RTF (Rich Text Format), 87
  saving as Outlook task, 86
  saving steps for, 86
  to SharePoint, 84
  as text, with formatting, 90
  as text file, delimited, 92
  to text files, 90
  to Word, 87
  to XML files, 93

exporting forms, xlvii
exporting objects, 79

exporting tables, xlvii, 81
  to Excel workbooks, xlvii
  to formatted text files, xlviii
  to HTML files, xlviii
  to SharePoint sites, xlvii
  to XML files, xlviii

Expression Builder, 170, 191, 287
  control source options, displaying in, 122
Expression Builder dialog box, 166

expressions
  arithmetic operators, 152, 285
  comparison operators, 152, 285
  creating, 166, 170, 191–92
  defined, 286
  functions, entering, 167
  inserting for reports, 245
  logical operators, 152
  multiplying, 168
  re-labeling, 169

Extensible Markup Language (XML) files
  defined, 287
  exporting data to, 93
  exporting tables to, xlviii
  importing from, xlvi, 69
  schema, 69, 289
  tags in, 68
  transforms, applying, 70
field properties, liv, 180
fields
  adding, xliii
  adding, by typing in first row, 43
  adding, to queries, liv, 164
  data format, specifying (see masks)
  data in, specifying precisely (see validation rules)
  data types (see data types)
  default, in new tables, 43
  defined, 287
  empty strings, 180
  form, 131
  formatting of data, specifying (see masks)
  joins in, 164
  moving all to queries, 207
  multivalued, 42
  number, rounding in, 186
  number, settings for, 184
  properties in. See field properties
  renaming, xliii
  resizing, xliii
  selecting, lvi, 193
  size, changing, 185
  size, restricting, 184
  table (see columns, table)
  tables, linking to, 196
  validation rules (see validation rules)
  values in, storing multiple
file formats, 9, 40
File menu. See Office menu
file names, 40
File Open dialog box, 55, 58, 66, 72, 76
files, HTML, 71
  attaching to database records, 46
  exporting tables to, xlvii
  importing from, xlii
  importing to, 72
  parsing, 72
  structure tags, viewing, 95
files, XML
  defined, 287
  exporting data to, 93
  exporting tables to, xlviii
  importing from, xlii, 69
  schema, 69
tags in, 68
  transforms, applying, 70
Filter By Form button, 155
filtering, 143
  commands, location of, 149
  by date, 151
  defined, 287
  with design grid, 156
  drop-down lists, selections in, lvi
  by forms, liv, 153
  lookup lists, selections in, lvi
  on multiple criteria, 148, 156
  multiple fields, liv, 151
  Navigation Pane, 16
  results, displaying in forms/reports, 151
  vs. sorting or queries, 162
  syntax, 155
  tables, 148
filters
  date, 151
  Does Not Equal, liii
  Navigation Pane, changing, 16
  removing, liii, 150
  results, displaying in forms, 151
  results, displaying in reports, 151
  saving as queries, liv, 148
  text, liii
finding. See also filtering
  templates, 39
  text, 202
fine-tuning form control placement, 117
firing events, 287
First Record button, 139
fixed-width text files
  defined, 287
  ease of importing, 65
flat databases, 9, 287
folders
  adding to trusted locations, 12
  default, for saving database files, 38
fonts
  in forms, 109
  in reports, 237
Form button, 129
form control captions
  adding, li
  defined, 112
  editing, l
form control labels, 24
  changing, l
  deleting, l
  inserting, 121
  selecting, l
  sizing, l, li, lii
form control menu, 4
form control properties
  defined, 108, 152, 285
  displaying, 110
  editing, xlix
  setting, l, 244
form control source, 108, 285
form controls. See also label controls; text box controls
  aligning, l, 113
  background properties, l
  background style, 111
  color, 111
  combo boxes (see combo boxes)
  defined, 23, 103, 285, 287
  deleting, 113
  deselecting, 112
  font, 110
  formatting, xlix, lii
  formatting of, copying, 122
  graphics, adding, li
  layout, changing, l
  Logo, 120
  margins, 114
  modifying simultaneously, 233
  moving, xlix, li
  positioning precisely, 117
  Property sheet, opening, 121
  record selector, deleting, lii
  scroll bars, deleting, lii
  selecting, 110
  selecting all, 111
  selecting multiple, 111
  shadow effect, 112
  Size Mode property, 121
  sizing, lii
  sizing to fit, lii, 113, 121
  space between, inserting, l
  standard, 23
  theme, 118
  types of, 119
  unbound, 122, 290
  unbound, inserting, 244
  undeleting, 243
  wizards, adding without, 122
form properties
  displaying, 110
  editing multiple, xlix
  inheritance of, 108
Form view, 24, 108
Form View button, 34
Format Painter button, 122
formatting
  copying, 122
  databases, xxxix
forms. See also AutoForms
  AutoFormats, 117
  AutoFormats, creating, li
  AutoFormats, creating from existing forms, 118
  binding of, 108
  captions, editing, 112
  columns, sizing to fit, 138
  control properties, xlix
  control source, 108, 285
  controls (see form controls)
  creating, xlix, lii, 105–106, 129
  creation of, 104
  customizing, 131
  data source, editing, 122
  defined, 103, 287
  design, saving, l
  Design view, xli, 108
  Detail area, expanding, li
  displaying, 123
  displaying by default, 263
  elements, resizing, 115
  in e-mail messages, xlv, 64
  export formats available for, 79
  exporting to RTF documents, xlviii
  exporting to Word, 87
  fields in, 108
  fields in, hiding, 131
  filter results, displaying in, 151
  filtering by, 153
  fonts in, 109
  Form view, 108
  label controls, 24
  labels, xlix
  layouts, deleting, 112
  layouts, pointer shape and, 114
  logos, inserting, 120
  navigating, xli
  for navigation only (see switchboards)
  nested (see subforms)
  overview of, 23
pictures, resizing to avoid cropping, 121
PivotTable, 156
pointer shape and, 114
Property sheet, undocking, 110
record selectors, hiding, 124
record source, 108
vs. reports, 220
scroll bars, hiding, 131
sections in, resizing, 119
sections of, 115
Stacked layout, 108
styles for, 117–18
subforms (see subforms)
switchboards (see switchboards)
views for, 24, 108 (see also Datasheet view;
Design view; Form view)
wizards, creating with, 132
formulas
comparison operators, 152
creating, 166, 170, 191–92
defined, 286
functions, entering, 167
logical operators in, 152
multiplying, 168
re-labeling, 169
freezing columns, xliii, 51
functions, 152
aggregate, 174, 285
automated (see macros) 
Avg, 175
built-in, 167
calculation, entering, 167
Count, 174, 175
defined, 287
expressions, entering, 167
formulas, entering, 167
Max, 174
Min, 174
StDey, 174
Sum, 176, 176, 245
Var, 174

G

galleries
AutoFormat, 117
Color, 111
Get External Data wizard, 55, 66, 69, 72

Getting Started With Microsoft Office Access
task pane, 11
glossary terms, formatting of, xxiv
graphics on form controls, li
gray buttons, 6
Group & Sort button, 231–32
grouping
controls, 1, 109
report data, lix
report information, 224, 232
Grouping Intervals dialog box, 224
grouping levels, 287
groups, 287

H

hard disk requirements for Office 2007, xxviii
headers and footers, 235
height, table row, 49
Help
categories, displaying, xxxv
for dialog boxes, accessing, xxxiv
displaying, xxxiii, 14
on the Internet, xxxvii
ScreenTips and, xxxiii, 289
searching, xxxvi
Table Of Contents, xxxv
topics, displaying, xxxiv
topics, expanding, xxxvi
topics, printing, xxxvi
help
with book/companion CD, xxxiii
with Word (see Help)
hiding
columns, xliii
custom groups, 261
form fields, 131
Navigation Pane, 14
record selectors in forms, 124, 131
Ribbon, xxxix
scroll bars in forms, 131
subdatasheets, 17
table columns, 50
Home tab, 5
horizontal lines, lix, 232
HTML files, 71
defined, 287
exporting tables to, xlviii
HTML files (continued)
importing from, xlvi
importing to, 72
parsing, 72
structure tags, viewing, 95
HTML Output Options dialog box, 96
HTML tags, 71, 287, 290

Icon Browser dialog box, 263
ID field, 43
Image button, 120
Import Exchange/Outlook wizard, 74–75
Import HTML wizard, 72
Import Objects dialog box, 56
import operations, saving and running, xlvi, 56
Import Specification dialog box, 67
Import Spreadsheet wizard, 58
Import Text wizard, 66
Import XML dialog box, 70
Important paragraphs, xxiv
ImportError tables, 59
importing, 53–54. See also linking to data
address books, from Outlook, 74
from comma-delimited text files, xlvi
contacts, from Outlook, 75
databases, 55
data with Table Analyzer Wizard, 57
dBASE files, 76
from dBASE files, xlvi
errors when, 59
Excel worksheets, 57–58
from Excel worksheets, xlvi
HTML files, 72
from HTML files, xlvi
non-Access databases, 76
Outlook folders, 74
from Outlook folders, xlvi
queries, 54
query results, 55
saving steps for, 56, 75
SharePoint lists, xlvi, 60–62
skipping fields when, 75
tables, xlvi, 54–55
text files, 65–66
XML files, 70
from XML files, xlvi, 69
inactive buttons, 6
inner joins, 164
input masks. See also InputMask property
characters in, 186
creating, 188
defined, 288
optional vs. required characters in, 189
for phone numbers, creating, 188
placeholder text in, 190
restricting entry length with, 191
working with, 190
Input Mask wizard, lv, 188
InputMask property, 186. See also input masks
Insert Page Number button, 239
inserting
combo box controls, 122
label controls, 121
installing practice files, xxix
interface elements in exercises, formatting
of, xxiv
intranet, 287

joins, inner/outer, 164

key combinations, 264

Label button, 121, 238
label controls, 24, 103, 121
labeling expressions, 169
labels, form. See controls, form
LAN (local area network), 287
Landscape button, 32
landscape orientation, switching to, 32
layout, saving changes to, 42
Layout view
defined, 248
viewing reports in, lii
Like operator, 152
Line button, 232
lines in reports, lix, 232
linking to data. See also importing
defined, 60, 287
with universal naming convention (UNC)
paths, 60
lists, lookup
allowing users to add items to (see combo boxes)
creating, lv, 195
filtering selections in, lvi
hiding columns in, lvi
limiting to preset items, 198
multi-column, creating, lvi, 198
restricting entries to, lvi
selecting options in, 197
values in, cycling through, 200
lists, SharePoint, xliv, 60, 62
local area network (LAN), 287
locking
databases, 277
table columns, 51
logical operators, 152
And, 152
Like, 152
Not, 152
Or, 152
Logo control, 120
lookup lists
allowing users to add items to (see combo boxes)
creating, lv, 195
filtering selections in, lvi
hiding columns in, lvi
limiting to preset items, 198
multi-column, creating, lvi, 198
restricting entries to, lvi
selecting options in, 197
values in, cycling through, 200
lists, SharePoint, xliv, 60, 62
local area network (LAN), 287
locking
databases, 277
table columns, 51
logical operators, 152
And, 152
Like, 152
Not, 152
Or, 152
Logo control, 120
lookup lists
allowing users to add items to (see combo boxes)
creating, lv, 195
filtering selections in, lvi
hiding columns in, lvi
limiting to preset items, 198
multi-column, creating, lvi, 198
restricting entries to, lvi
selecting options in, 197
values in, cycling through, 200
Lists, SharePoint, xliv, 60, 62
local area network (LAN), 287
locking
databases, 277
table columns, 51
logical operators, 152
And, 152
Like, 152
Not, 152
Or, 152
Logo control, 120
lookup lists
allowing users to add items to (see combo boxes)
creating, lv, 195
filtering selections in, lvi
hiding columns in, lvi
limiting to preset items, 198
multi-column, creating, lvi, 198
restricting entries to, lvi
selecting options in, 197
values in, cycling through, 200
lookup lists
allowing users to add items to (see combo boxes)
creating, lv, 195
filtering selections in, lvi
hiding columns in, lvi
limiting to preset items, 198
multi-column, creating, lvi, 198
restricting entries to, lvi
selecting options in, 197
values in, cycling through, 200
Lookup wizard
adding, 198
defined, 287
starting, 195
Macros, 30. See also modules
in database applications, 40
defined, 287
embedded (see embedded macros)
enabling, xxxix
export formats available for, 79
settings, changing, xl
storage of, 40
Switchboard.closeSB, 256
Trust Center settings, changing, xl
trusted nature of, 40
viewing, 256
mailing label reports, 28
main form, 287
main reports, 233, 288
Make ACCDE button, 282
make-table queries, 161, 288. See also action
queries; append queries; crosstab queries;
delete queries; queries; select queries;
update queries
many-to-many relationships, 288
mapped network drives, 288
margins
in form controls, 114
in reports, changing, 232
masks. See also InputMask property
characters in, 186
creating, 188
defined, 288
optional vs. required characters in, 189
for phone numbers, creating, 188
placeholder text in, 190
restricting entry length with, 191
working with, 190
Max function, 174
MDE (Microsoft Database Executable) files. See
ACCDE (Access Database Executable) files
memory requirement for Office 2007, xxviii
menus, preventing changes to, 264
Microsoft Knowledge Base, xxxvii
Microsoft Office Access
closing, 14
Help button, xxxiii–xxxiv
integration with other Office programs, 10
objects. See Access objects
portability of skills, 9
size restrictions, viewing, 14
specifications, viewing, 14
starting, 13
starting, on Windows XP, xvi
versions of, outdated, updating databases
from, 57
Microsoft Office Access objects. See also
specific object types
defined, 124, 288
displaying all instances of, 14
Microsoft Office Access objects (continued)
events recognized by, 124
export formats available for, viewing, 80
exporting, 79
importing (see importing)
shortcuts, creating with custom groups (see
custom groups)
uses for, 9
views (see views)
Microsoft Office Access Help button,
xxxiii–xxxiv
Microsoft Office Button, 2, 5, 11, 32, 57, 288
Microsoft Office Diagnostics utility, 211
Microsoft Office Excel
exporting to, xlvii, 82
importing from, xlv, 57–58
pasting data into, 97
Microsoft Office Online, 11
Microsoft Office Outlook
contacts, importing, 75
folders, importing from, xlv, 74
tasks, saving export operations as, 86
Microsoft Office SharePoint Server
exporting data to, 84
import details, saving as a specification, 61
lists, importing, xlv, 60, 62
sites, exporting to, xlvii
valid site addresses, 61
Microsoft Office Word
exporting data to, 87
pasting data into, 97
Microsoft Press Knowledge Base, xxxiii
Microsoft Product Support Services, xxxvii
Microsoft Visual Basic for Applications
(VBA), 30. See also modules
comments in code, 128
password protecting code, lxiv
removing passwords from, lxv
returning to Access from, 128
migrating databases from previous versions,
xlv, 57
Min function, 174
Minimize button, 3
minimizing Navigation Pane, 14
modules, 30. See also macros
defined, 288
export formats available for, 79
monitor requirement for Office 2007, xxviii
More button, 72, 93
More Forms button, 132
Move All button, 132, 171
Move Up button, 270
multiplication operator, 168
Multiply button, 168
multivalued fields, 42
My Documents folder. See Documents folder

N
name bar
buttons on, 3
defined, 290
named ranges, 288
naming
databases, 40
expressions, 169
reports, 226
switchboards, 254
table columns, 44
table columns, with spaces, 45
navigating
datasheets, xli
forms, xli
in Print Preview, 248
subforms, 139
Table Of Contents in Help window, xxxv
Tables, xl, 18, 43
Navigation Options dialog box, 260
Navigation Pane
filter, changing, 16
groups, collapsing/expanding, 16
hiding, 14
minimizing, 14
moving, 14
view, changing, 16
nested forms
adding, lii
creating, lii, 134
defined, 289
exporting to Excel, 82
navigating, 139
related fields in, 135
selecting, 137
New Query dialog box, 170
New Record button, 128
New Style Name dialog box, 118
Next Record button, 18, 139
normalization rules, complying with, 41
Not operator, 152
null fields, 180
Number data type, 181  
number fields  
   bytes, specifying as entry, 185  
data types, changing, 185 (see also data types)  
Field Size property, setting, lv  
rounding in, 186  
settings for, 184  
numbered steps, formatting conventions used in, xxiv  
numbers, sorting, 145  

O  
objects. See also specific object types  
   defined, 124, 288  
displaying all instances of, 14  
events recognized by, 124  
export formats available for, viewing, 80  
exporting, 79  
importing (see importing)  
shortcuts, creating with custom groups (see custom groups)  
uses for, 9  
views (see views)  
Office 2007, xxviii  
Office menu, 2, 5  
Office Online Web site, xxxv  
On Click property, 258  
one-to-many relationships, 288  
one-to-one relationships, 288  
OnTheCD icon, xxiv  
OPEN paragraphs, xxiv  
opening  
   Access, 13  
databases, xl, xlii, 13  
databases, exclusively, 275–76  
databases, multiple, 82  
forms, in Design view, 108  
Help, 14  
switchboards, 257  
tables, xxxix  
tables, in Datasheet view, 15, 48  
tables, in Design view, 15  
templates, xli  
operating system required for Office 2007, xxix  
operators. See also expressions  
arithmetic, 152, 285  
comparison, 152, 285  
logical, 152  
option buttons, 288  
Or operator, 152  
orientation, changing, xli, 32  
outer joins, 164  
Outlook  
   contacts, importing, 75  
folders, importing from, xlv, 74  
tasks, saving export operations as, 86  
overlapping windows, 4  

P  
page numbers in reports, lx. See also reports  
Page Numbers dialog box, 239  
page orientation, xli, 32  
painting formatting, 122  
parameter queries, 160, 288  
parsing  
   defined, 288  
   HTML files, 72  
Password dialog box, 280  
Password Required dialog box, 277  
passwords, 274  
   assigning, lxiii, 276  
   defined, 288  
   encoding and, 275  
   for VBA code, lxiv  
   for VBA code, removing, lxv  
   for VBA code, testing, lxv  
   recovering, ease of, 275  
   removing, lxiv, 277, 280  
   secure, creating, 274  
   testing, lxiv  
   when to use, 275  
Paste button, 99–100  
Paste Errors table, 98  
pasting data from other programs, 97  
PDFs, 89  
Performance Analyzer dialog box, 213  
Performance Analyzer utility, 211  
permissions, 288  
phone numbers, input masks for, 188  
pictures in forms, 121  
PivotTable forms, 156  
plain text files  
   comma-delimited, importing from, xlv  
   delimited, 65  
   delimited, exporting as, 92  
   exporting as, 90
plain text files (continued)
exporting as, with formatting, 90
file extensions for, 66
fixed-width, 65
formatted, exporting tables to, xlvi
importing, 66
importing, enclosing fields in quotation marks, 65

populating databases, 37, 288
Portable Document Format (PDF) files, 89
practice files, xxv
installing, xxix
in Windows XP, location of, xv
previewing. See also Print Preview
reports, xli, lviii, lxi, 227
subreports, 246
tables, xli
primary keys, 45, 288
Print button, 33
Print dialog box, 248
Print Preview, 247. See also previewing
adjusting magnification in, 28
closing, xli, 33, 248
displaying datasheets in, 32
displaying reports in, 27
navigating in, 248
zooming in, 28, 248
Print Table Definition dialog box, 215
printing, 31
changing page orientation when, 32
Help topics, xxxvi
reports, lxi, 248
processor requirement for Office 2007, xxviii
program interface elements in exercises, formatting of, xxiv
Project Properties dialog box, 278
properties, 288
Field Size, setting, lv
InputMask, 186
On Click, 258
Size Mode, 121
properties, field, liv
Allow Zero Length, 180
Required, 180
properties, form, 121
database, setting, 212
displaying, 110
editing multiple, xlix
inheritance of, 108
Property Update Options button, 190
protecting databases. See passwords; security publisher, 288
queries, 160. See also action queries; append queries; crosstab queries; delete queries; make-table queries; select queries; update queries
aggregate functions, 174
append, 161, 285
calculating with, 174
creating, lvi, 203
creating, with Query wizard, 170
crosstab, 160, 285
defined, 288
design grid (see design grid)
displaying, 20
displaying in Design view, 22
duplicate, 160
export formats available for, 79
fields, adding, liv, 164
fields, copying all to, 165
vs. filtering or sorting, 162
importing, 54
joins and, 164
make-table, 161, 288
parameter, 160
properties, displaying, 21
properties, viewing, xli
results, hiding fields in, 173
running, xli, liv, 165, 176, 204
saving, 20, 169
saving filters as, liv, 148
table fields, moving all to, 207
tables, adding to, liv, 163, 164
type, displaying, 21
unmatched, 160
queries, action
converting select queries to, 204
creating, lvii, 204
defined, 179, 285
types of, 161
queries, delete, 161
converting select queries into, 208
creating, lvii, 206
defined, 286
preventing accidental use of, 210
relationships and, 209
testing, 208
queries, select, 160
converting into delete queries, 208
converting into action queries, 204
defined, 289
running, 205
View button in, 205

queries, update, 161, 202
creating, lvi, 203
defined, 290
View button in, 205

Query Design button, 163, 175, 206
query results, importing, 55
Query wizard, 170–71
Query Wizard button, 203
Quick Access Toolbar, 2, 267
  commands, 2
  commands, adding, lxii, 268
  commands, deleting, lxiii, 271
  commands, repositioning, lxiii, 270
customizing, 268
defined, 289
  Ribbon commands, adding to, lxiii
Quick Launch bar. See Quick Access Toolbar
Quick Reference, how to use, xxiii
quitting. See closing
quotation marks, importing text files with, 65

R

RAM requirement for Office 2007, xxviii
record selectors
defined, 289
hiding, 124, 131
record source, 289

records
  adjacent, working with, 47
copying, 98
database, attaching files to, 46
defined, 289
deleting, precautions for, 206
deleting, with delete queries (see delete queries)
  first, bug when adding, 43
ID values incrementing in first record, 43
  primary keys, 45
  sorting, from smallest to largest, lii
  sorting, from within a form, 147
  sorting, in alphabetical order, lii, 146
  sorting, in descending order, 146
  sorting, on multiple fields, 147
unique identifiers, 45
unsaved, 43

definitions, 289
running, 205
View button in, 205

queries, update, 161, 202
creating, lvi, 203
defined, 290
View button in, 205

Query Design button, 163, 175, 206
query results, importing, 55
Query wizard, 170–71
Query Wizard button, 203
Quick Access Toolbar, 2, 267
  commands, 2
  commands, adding, lxii, 268
  commands, deleting, lxiii, 271
  commands, repositioning, lxiii, 270
customizing, 268
defined, 289
  Ribbon commands, adding to, lxiii
Quick Launch bar. See Quick Access Toolbar
Quick Reference, how to use, xxiii
quitting. See closing
quotation marks, importing text files with, 65

R

RAM requirement for Office 2007, xxviii
record selectors
defined, 289
hiding, 124, 131
record source, 289

records
  adjacent, working with, 47
copying, 98
database, attaching files to, 46
defined, 289
deleting, precautions for, 206
deleting, with delete queries (see delete queries)
  first, bug when adding, 43
ID values incrementing in first record, 43
  primary keys, 45
  sorting, from smallest to largest, lii
  sorting, from within a form, 147
  sorting, in alphabetical order, lii, 146
  sorting, in descending order, 146
  sorting, on multiple fields, 147
unique identifiers, 45
unsaved, 43
reports (continued)
filter results, displaying in, 151
font properties, setting, 237
formatting, 229
vs. forms, 220
gridlines, displaying, 235
grouping and sorting data in, lx
grouping information in, 221, 224, 232
groups, adding, 235
headers and footers, 235
horizontal lines, inserting, lx
layout, selecting, 226
in Layout View, lx
lines, inserting, 232
in mailing label format, creating, 28
main, 233, 288
margins, changing, 232
naming, 226
overview of, 27
page numbers, inserting, lx
previewing, xli, lviii, lx
printing, lx
rulers, toggling on and off, 229
saving, lx
sections, changing height of, lviii, lx
selecting, 230
sorting, 225
subreports (see subreports)
tables in, multiple, 223
templates for, 233, 288
text boxes in, lx
text in, aligning, 230
titles, inserting, lx, 237
unbound controls, inserting, 122, 244, 290
views for, 27
width, changing, lx
zooming in, 228
Request A Delivery Receipt command, 270
Required field property, 180
resizing
columns, 197
form sections, 119
rows, to standard height, 50
table columns, 17, 48
table rows, 49
Restore Down/Maximize button, 3
restoring table columns after hiding, 50
restricting data. See masks; validation rules
results, 289
Ribbons, 3
commands, adding to Quick Access Toolbar, lxiii
Create tab, 7
Database Tools tab, 8
defined, 289
displaying, xxxix
External Data tab, 8
groups, 6
hiding, xxxix, 7
Home tab, 5
Rich Text Format (RTF) documents
exporting data as, 87
exporting forms to, xlviii
right-aligning form controls, 113
rounding in number fields, 186
routine actions, automating. See macros
Row Height dialog box, 50
rows, table, 10
default height, setting to, 50
deleting, xliii, 47
height, setting to standard, 50
increasing height, 49
navigating, 18
plus signs next to (see subdatasheets)
resizing all, xliii
setting to standard height, xliii
RTF (Rich Text Format) documents
exporting data as, 87
exporting forms to, xlviii
rulers, toggling on and off, 229
rules, 191
creating, lvi, 192
defined, 290
Expression Builder, creating with, 170, 191, 287
testing, lv, 193
text for, entering, 192
Run button, 22, 165, 174, 176, 204–05, 209
running heads, how to use, xxiii
running
queries, xli, liv, 22, 165, 176, 204–05
saved import operations, xlvii, 56

S
Save As dialog box, 45, 47
Save button, 48, 182, 236
Save Export Steps dialog box, 82
saving
blank databases, automatically, 42
database files, 38
databases, 42
strong passwords. See also passwords
creating, 274
defined, 289
structuring databases with templates, 38. See also templates
styles for forms, 117–18
subdatasheets, 15
collapsing, 17
defined, 289
exporting to Excel, 82
hiding, 17
records in, hiding, xl
records in, viewing, xl
Subform/Subreport button, 134, 241
subforms
adding, lii
creating, lii, 134
defined, 289
exporting to Excel, 82
navigating, 139
related fields in, 135
selecting, 137
subqueries, 162
SubReport wizard, 241
subreports, 239
borders, making transparent, 246
creating, 241
defined, 289
dragging to insert, 240
inserting, lx
previewing, 246
selecting, 241
Sum function, 174, 176, 245
summarizing data, by adding Totals row, lv, 174
summarizing information. See reports
Summary Options button, 225
Summary Options dialog box, 225
Switchboard Manager button, 253
Switchboard.closeSB macro, 256
switchboards, 104
buttons, creating, lxii, 255
buttons, On Click property for, 258
code behind, 253
commands, adding to, 255
creating, lx, 252
creating, with Switchboard Manager, 253
defined, 289
editing, 255
naming, 254
opening, 257
pages, adding, lii
switching views, xli, 15, 19
syntax, 155, 290
system requirements for Office 2007, xxviii
tabbed documents, 4, 290
Table Analyzer Wizard, importing data with, 57
table columns
adding, 48
data types, changing, 46
defined, 10
freezing in place, xliii, 51
hiding, xliii, 50
locking into position, 51
moving, liii
names, editing, 47
names, spaces in, 45
as primary keys, 45
renaming, 44
resizing, xliii, 17, 48, 197
restoring after hiding, 50
selecting adjacent, 50
setting width to widest entry, 17
size, setting, 46
sorting together, 147
unhiding, 50
unique identifiers, 45
table of contents, how to use, xxiii
Table Of Contents in Help window, xxxv
table rows, 10
default height, setting to, 50
deleting, xliii, 47
height, setting to standard, 50
increasing height, 49
navigating, 18
plus signs next to (see subdatasheets)
resizing all, xliii
setting to standard height, xliii
tables
arrow icons next to, 60
closing, xlii
columns in (see columns, table)
copying, 202
copying information between other Office programs, xlix

copying structure of to new, xlii, 42

as core database objects, 14

creating, manually, 41–42

creating, with queries, 161, 288

creating, with templates, xlii, 46

default names of, 42

defined, 290

deleting, xlii, 43

deleting from queries, lv, 164

display options (see views)

displaying information from (see reports)

embedding datasheets from other tables in (see subdatasheets)

Excel icons next to, 60

export formats available for, 79

exporting, xlvii, 81

exporting to Excel workbooks, xlvii

exporting to formatted text files, xlviii

exporting to HTML files, xlviii

exporting to SharePoint sites, xlvii

exporting to XML files, xlviii

fields, linking to, 196

fields in (see columns, table)

filtering, 148

importing, xliv, 54

importing selected fields, 55

navigating, xl, 18, 43

Navigation bar, 18

number of records in, viewing, 18

as object types, 9

opening, xxxix

opening, in Datasheet view, 15, 48

opening, in Design view, 15

orientation when printing, changing, xli

previewing, xli

records in. See rows, table

renaming, xlii, 43

reorganizing, 48

reports on. See reports

rows in (see rows, table)

saving, xlii

saving with new name, 45

sorting, 144

summarizing data of, by adding Totals row, lv, 174

templates for (see templates)

validation rules (see validation rules)

viewing information from multiple (see subdatasheets)

views (see views)
tabs, 3, 267. See also Ribbon

Create, 7

Database Tools, 8

in database window, 4

defined, 290

External Data, 8

Home, 5

tags, HTML, 71, 287, 290. See also HTML files

templates, 37–38

benefits of, 38

creating databases from, 40

creating tables from, xlii, 46

default save location, 39

defined, 290

downloading, 39

finding, 39

opening, xli

viewing descriptions of, 39

testing, 281

delete queries, 208

validation rules, 193


text

in reports, aligning, lix

sorting, 145

Text Box button, 244

text box controls, 24, 103, 290

text boxes in reports, lix

text fields, lv

Text File button, 66

text files

comma-delimited, importing from, xlv

delimited, 65

delimited, exporting as, 92

exporting as, 90

exporting as, with formatting, 90

file extensions for, 66

fixed-width, 65

formatted, exporting tables to, xlviii

importing, 66

importing, enclosing fields in quotation marks, 65

Theme Settings dialog box, 118

themes for form controls, 118

thumb tabs in book, how to use, xxiii

Tip paragraphs, xxiv

title bar

buttons on, 3

defined, 290

Title button, 237

titles in reports, 237

To Fit button, 113, 121

Toggle Filter button, 149, 150, 153, 155, 158, 202
toolbars
preventing changes to, 264
primary (see Ribbon)
Quick Access (see Quick Access Toolbar)
Totals button, 175
Totals row, adding, lv, 174
transaction records, 290
transferring data into a database. See importing transforms
applying to XML files, 70
defined, 290
triples on buttons, 3
Trust Center macro settings, changing, xlix
Trusted Locations list, adding to, xxxix, 12
Trusted Publishers list, adding to, xxxix
2007 Microsoft Office system, xxviii

U
unbound controls
defined, 122, 290
inserting, 244
UNC (universal naming convention) paths
defined, 290
linking to data with, 60
undocking, 290
Unhide Columns dialog box, 50
unhiding table columns, 50
universal naming convention (UNC) paths
defined, 290
linking to data with, 60
unmatched queries, 160, 290
Unsaved Record icon, 43
Update button, 205
update queries, 161, 202. See also action queries; append queries; crosstab queries;
delete queries; make-table queries; queries;
select queries
creating, lvi, 203
defined, 290
View button in, 205
updating databases from previous versions, 57
Use Access Special keys check box, 264
Use Control Wizards button, 122
USE paragraphs, xxiv
user environment, 2
user input in exercises, formatting of, xxiv

V
validation rules
creating, lvi, 192
defined, 290
Expression Builder, creating with, 170, 191, 287
testing, lv, 193
text for, entering, 192
values, storing multiple in a field, 42
Var function, 174
VBA (Microsoft Visual Basic for Applications), 30.

See also modules
comments in code, 128
password protecting code, lxiv
removing passwords from, lxv
returning to Access from, 128
VBA Project Explorer pane, 127
versions of Access, outdated, updating databases from, 57
View button, 15, 47, 123, 137, 247, 205
View toolbar, 44
views, 15. See also Datasheet view; Design view
changing, 15
current, displaying, 247
defined, 290
displaying list of, 247
Layout View, 248
Overlapping Windows, 4
selecting, 31
switching, xli, 15, 19, 44
Tabbed Documents, 4
Visual Basic Editor
passwords, removing, 280
starting, 278

W
Web (HTML) files, 71
defined, 287
exporting tables to, xlviii
importing from, xlvi
importing to, 72
parsing, 72
structure tags, viewing, 95
width, column, 17
wildcard characters, 148, 290
window elements. See Ribbon
Windows XP
  dialog boxes in, navigating, xvii
  Documents folder in, xv
  practice files, location of, xv
  starting Access on, xvi
wizards
  adding controls without, 122
  Analyze Table, 211
  Collect Data Through E-mail Messages, 64
  creating forms with, 132
  Export Text, 91
  Get External Data, 55, 66, 69, 72
  Import Exchange/Outlook, 74–75
  Import HTML, 72
  Import Spreadsheet, 58
  Import Text, 66
  Input Mask, lv, 188
  Lookup, 195, 198, 287
  Query, 170–71
  Report, lviii, 221-22
  SubReport, 241
  turning off, for form controls, 122
Word
  exporting data to, 87
  pasting data into, 97
workgroups, 290
worksheets, Excel
  defined, 290
  exporting to, xlvii, 82
  importing from, xlv, 57–58
  pasting data into, 97
X
XML File button, 69
XML files
  defined, 287
  exporting data to, 93
  exporting tables to, xlviii
  importing from, xlv, 69
  schema, 69
  tags in, 68
  transforms, applying, 70
XML Paper Specification files, 89
XML schemes, 289
XP
  dialog boxes in, navigating, xvii
  practice files, location of, xv
XPS (XML Paper Specification) files, 89
Y
Yes/No data type
  defined, 181, 208
  formatting display of, 184
  toggling between yes and no, 183
Z
ZIP codes, data type for, 46
zooming
  in Print Preview, 28, 248
  in reports, 228