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The Complete Reference

Access 2002

Provides a comprehensive review of Access functionality—including thorough coverage of the 2002 upgrade

Explains how to design and build custom Access databases using detailed, step-by-step instructions

CD-ROM contains quick reference section on Access details—plus sample database files that support the book's material

Virginia Andersen

Author, applications analyst, and Microsoft Office User Specialist (MOUS) in Access

Access 2002: The Complete Reference

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Access 2002: The Complete Reference

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About the Author

Virginia Andersen became a writer and consultant after retiring from her defense contracting career. Since then, she has written over 30 books about personal-computer–based applications, including database management, word processing, and spreadsheet analysis. Virginia spent nearly 15 years teaching computer science, mathematics, and systems analysis at the graduate and undergraduate levels at several southern California universities. During her years as a programmer/system analyst, Virginia used computers for many diverse projects, including lunar mapping, reliability engineering, undersea surveillance, weapon system simulation, and naval communications. Virginia is a certified MOUS Expert in Access 97 and 2000.

Acknowledgments

Although revising a book of this size and complexity isn't quite the monster challenge it was to write it in the first place, I owe a lot of gratitude to the talented and highly professional help of the Osborne editorial and production staff. Working with this team has been a most enjoyable experience. I would especially like to express my thanks to Megg Bonar, my acquisitions editor, for her friendly and most helpful guidance throughout. As acquisitions coordinator, Alissa Larson has earned an extra star for the highly professional and efficient escorting of the manuscript through the maze of publication. She and her staff have been a treat to work with.

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I also appreciate the contribution my friend, Brent Heslop, made with his help writing the chapter about data access pages and the Web for the previous edition. Thanks go, too, to the Coronado Police Department for sharing its Access database with me and my readers, as well as to my friends and neighbors who posed good-naturedly for the badge photos you can see in one of the databases. They tell me it's a good thing I'm a writer, not a photographer.

I also owe a big debt of gratitude to my alert literary agent, Matt Wagner of Waterside Productions, for opening this important opportunity.

Finally, my husband Jack and all the cats must get a lot of credit for being so patient with me throughout this long, involved process.

Introduction

This book is a total resource for anyone who wants to learn about Access, and how to create and maintain databases. The primary objective is to provide a solid base you can

employ to become an accomplished information systems professional in the area of relational databases, specifically using Microsoft Access.

A successful database is efficient, quick, accurate, and easy to use. This book shows you how to create just such a database with Access 2002. The clearly written explanations of the database processes present exactly what you need to create an Access object or present information. The step-by-step exercises that follow the explanations further enhance your understanding by illustrating exactly how to complete the process successfully. The many tips, notes, and cautions help steer you to faster and better database management.

This book also meets the requirements for a certified study guide to use in preparing for the Microsoft Office User Specialist (MOUS) Certification examinations. After completing this book, readers should feel confident they have thoroughly reviewed all the skill objectives included in both the Core and Expert levels of the MOUS Access 2002 Certification examination.

Whom Is This Book For?

This book is the ideal resource for anyone currently using Access 2002 or who wants to learn how to use it. In planning this book, I envisioned it in the form of a large triangle—with the base scaled from the beginning user at the left end to advanced user at the right end. This book has enough material to get even the newest user of Access started with relational database management and enough is at the other end to help more advanced users wade into the depths of programming in Access.

The bulk of the material lies between the two extremes under the peak of the triangle and that is of the utmost interest to the readers who fall in between. This book is extremely rich in the art of designing and creating efficient relational databases with all the appropriate queries, forms, reports, and data access pages. Many different approaches are taken with respect to extracting and summarizing information in useful arrangements, including charts. After all, what good is data stored in a database if you can't get it out and turn it into useful and easy to interpret information?

This book is also intended for the users of the other Office applications, such as Word and Excel, who need to know how to interface with Access. With the boundaries between the programs rapidly vanishing, use of Access isn't limited to database managers. All the Office members can now interact with each other smoothly and with little translation.

The Complete Reference, the Ultimate Study Guide

If you aspire to become a Microsoft Office User Specialist in the field of Access 2002, *The Compete Reference* is the only book you need to prepare for the test. The book includes material that covers 100 percent of the skill set activities listed in the Microsoft Access 2002

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Course Objectives. In addition, more than 80 percent of the skill set activities are addressed with step-by-step exercises. Because the actual test is a set of hands-on exercises, this material can be most important.

What's in This Book?

This book is organized so you can progress at your own pace beginning with basic database and Access principles, and followed by increasingly more advanced topics. The book is divided into five major parts, each focusing on a specific aspect of Access database management.

Part I: Getting Started

Part I takes a quick tour of Access 2002 and examines the concept of relational databases. Many tips are included to help you design an efficient database that is easy to maintain and can ensure data integrity. In Part I, the reader creates and relates tables, and then enters data into them. Several methods of validating new data are investigated and means of presenting data for editing are also addressed.

Part II: Retrieving and Presenting Information

Part II is concerned with retrieving information with filters and queries, as well as presenting that information in forms and reports. This important set of chapters includes how to create expressions to extract exactly the information you want. Five chapters are devoted to creating form and report designs, including synchronized data entry forms, creating reports that summarize grouped information, and even printing mailing labels in conjunction with Word 2002. The final chapter in this part describes how to create charts, pivot tables, and pivot charts to include in forms and reports.

Part III: Improving the Workplace

Part III is a little more advanced and discusses customizing the workplace with special toolbars, menus, and dialog boxes for the more interactive applications. Several important means of optimizing Access performance are included in this part. Part III also introduces programming techniques with chapters about using macros, as well as understanding events and when events occur.

Part IV: Exchanging Data with Others

Part IV discusses the important subject of exchanging information with other users of Access and with other applications, including via the Internet. Importing and exporting information in many forms, including text, is an integral part of developing a complete user application. In this part, you also learn how to create data access pages for displaying dynamic Access data on the Internet.

Part V: Application Development

Part V, the final part of the book, introduces Visual Basic and its uses in providing end-user applications. This part also covers using Access in a multiple-user environment and investigates measures to ensure information security. An example is presented that illustrates an end-user application complete with switchboards and dialog boxes tailored for user-interfaces. The final chapter in this part discusses converting databases created with previous versions of Access to Access 2000.

In Every Chapter

Every chapter is constructed to include some basic learning tools, such as the following:

- Complete explanations of all processes involved in the creation and management of effective relational databases.
- Numbered, step-by-step exercises with illustrations and explanations of each step.
- Many tips, notes, and cautions, which add shortcuts for many of the exam-related activities and pinpoint potential pitfalls that can occur.
- A summary at the end of each chapter that reviews the material covered and highlights the more important topics discussed in the chapter.
- A table following the summary that itemizes the specific MOUS skill set activities explored in the chapter. The table also directs you to the section in the chapter that discusses the topic.

Quick Reference

In addition to the chapter material, this book includes a Quick Reference section on the CD that accompanies it. The Quick Reference contains complete lists and descriptions of elements of Access 2002 database design and maintenance. This reference serves as an immediate resource for any details in question. It can save time when you need a specific piece of information by presenting concise lists and tables you can jump directly to without having to browse through the more descriptive chapter material.

What's on the Companion CD?

Appendix B presents a thorough explanation of the contents of the CD that accompanies this book. This appendix explains how to install the Access databases on your computer and how to look up specific information in the Quick Reference.

The CD includes the following:

- The Quick Reference lookup resource.
- The complete Home Tech Repair database.
- A set of tables to use as the basis for creating the Home Tech Repair database.
- The complete Police database.
- A set of tables to use as the basis for creating the Police database.

- Miscellaneous files required by the two databases, such as scanned images and HTML files used by the data access pages.

Conventions Used in This Book

To help make this book more useful and interesting, we included a few conventions and margin art that can attract your attention to important pieces of information. Following are descriptions of these conventions:

Note *This is a note. Notes further define terms used in the text or point you in the direction of more information about the subject under discussion.*

Tip *This is a tip. Tips often provide shortcuts to the process under discussion or offer useful pieces of advice about how to make better use of Access 2000.*

Caution *This is a caution. Cautions warn you to be careful when you're about to make crucial decisions or take risky steps. Access tries hard not to put you in harm's way, but this does happen now and then. I post a caution for you when this does happen.*

This is an example of the margin icons that often accompany a step in the numbered exercises in this book. The margin icons illustrate the toolbar button to click to accomplish the activity under way.

Sidebars

This is a sidebar. Sidebars are set somewhat apart from the normal text and include information related to the current subject, but that doesn't necessarily fit in the flow of information. Rather than interrupt the flow, I set the sidebars aside where you can return later to read this tangential information in detail.

What's New?

This book attempts to show you the completely new look and feel that comes with Access 2002, including expanded Web-based connection to the rest of the world. Closer to home are the many time-saving and user-friendly features that make Access 2002 a total database management system.

New Features in the Office Arena

Many new features are shared by all users of Office XP programs. One of the most important advances toward seamless Web collaboration is the improvement in creating and publishing HTML and other Web documents. Office XP provides many new Web-oriented improvements that provide a pathway for users to cross between current, often obscure, Web technologies and the more user-friendly environment required by today's audience.

Some of the improvements that are more obvious to Access users involve the Office workspace and the Windows desktop. Here are some examples of these improvements:

- The New File side pane appears when you first start Access. This is where you can choose to open an existing file or create a new database.
- The new multiple clipboard side pane enables you to collect and paste up to 24 items. It also displays reviews of the items placed on it.
- The new Ask a Question box on the menu bar is a more convenient way to get help. The Help window is also faster and can be used alongside the Access window.
- A new Search task pane makes finding the elusive database you want to work with easier.

New Features in Access

Some of the new features in Access 2002 apply to database design, others apply to creating database objects or to customizing the workplace itself. Here are some of the more significant improvements covered in this book:

- You can now stack multiple undos and redos for more flexibility while in Design view.
- You can view any table, query, or form in PivotTable or PivotChart view and save a PivotTable or PivotChart as a data access page.
- You can now work on a subform or subreport design live in the main form or report Design view.
- Access 2002 provides many new events, properties, and shortcut keys.
- You can multiselect controls in data access pages design if you have Internet Explorer 5.5 installed.

Banded data access pages can now be made updateable by setting the group level properties.

Got Comments?

During my years spent teaching at the University of Southern California, I discovered, to my dismay, that I often learned as much from my students as I hoped they would learn from me. With this philosophy in mind, I invite you to share with me any new tricks or clever shortcuts you've devised. Please e-mail them to me at **vandersenz@aol.com**. In fact, I would enjoy hearing any other comments, good or bad, you might have about the book or the databases I have developed as examples. Only by tapping fresh minds can I hope to make these books better and better.

I've appreciated the many comments I received about the previous edition of the Complete Reference—some from as far away as South Africa and Japan. I have certainly benefited from the correspondence and I hope I could resolve some of the readers' problems as well.

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