

MICROSOFT
Access97
Complete Concepts
and Techniques



SKILLS
ASSESSMENT
MANAGER



The logo for the Shelly Cashman Series, consisting of three stylized, stacked 'U' shapes.
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Shelly Cashman Pratt

MICROSOFT **Access97**

Complete Concepts and Techniques

Gary B. Shelly
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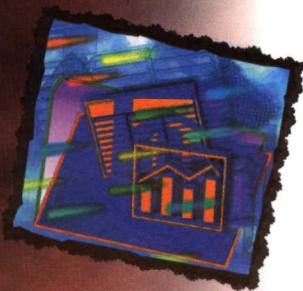
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Preface

The Shelly Cashman Series® offers the finest textbooks in computer education. The Microsoft Office 97 books continue with the innovation, quality, and reliability that you have come to expect from this series. We are proud that both our Office 95 and Office 4.3 books are best-sellers, and we are confident that our Office 97 books will join their predecessors.

With Office 97, Microsoft has raised the stakes by adding a number of new features, especially the power of the Internet. The Shelly Cashman Series team has responded with Office 97 books that present the core application concepts required in any introductory application software course, as well as new features such as the Office 97 Internet tools.

In our Office 97 books, you will find an educationally sound and easy-to-follow pedagogy that combines a step-by-step approach with corresponding screens. Every project and exercise in the books are new and designed to take full advantage of the Office 97 features. The popular Other Ways and More About features have been amended to offer in-depth knowledge of Office 97. The all-new project openers provide a fascinating perspective on the subject covered in the project. The Shelly Cashman Series Office 97 books will make your computer application software class an exciting and dynamic one that your students will remember as one of their better educational experiences.

Objectives of This Textbook

Microsoft Access 97: Complete Concepts and Techniques is intended for a two-unit course that presents Microsoft Access 97. No experience with a computer is assumed, and no mathematics beyond the high school freshman level is required. The objectives of this book are:

- To teach the fundamentals of Microsoft Access 97
- To help students demonstrate their proficiency in Microsoft Access 97 and prepare them to pass the Expert level Microsoft Office User Specialist Exam for Microsoft Access 97
- To foster an appreciation of databases as a useful tool in the workplace
- To give students an in-depth understanding of database design; creating a database; querying a database; maintaining a database; importing an Excel worksheet into an Access database; creating reports and forms; publishing reports to the Web; enhancing forms by using OLE fields, hyperlinks, and subforms; and using macros, VBA, and the Switchboard Manager to create an application system
- To expose students to examples of the computer as a useful tool
- To develop an exercise-oriented approach that allows students to learn by example
- To encourage independent study and help those who are working on their own in a distance education environment

Approved by Microsoft as Courseware for the Microsoft Office User Specialist Program — Expert Level

This book has been approved by Microsoft as courseware for the Microsoft Office User Specialist program. After completing the projects and exercises in this book, the student will be prepared to take the Expert level Microsoft Office User Specialist Exam for Microsoft Access 97. By passing the certification exam for a Microsoft software program students demonstrate their proficiency in that program to employers. This exam is offered at participating test centers, participating corporations, and participating employment agencies. For more information about certification, please visit Microsoft's World Wide Web site at http://microsoft.com/office/train_cert/.

The Shelly Cashman Approach

Features of the Shelly Cashman Series Office 97 books include:

- ▶ **Project Orientation:** Each project in the book uses the unique Shelly Cashman Series screen-by-screen, step-by-step approach.
- ▶ **Screen-by-Screen, Step-by-Step Instructions:** Each of the tasks required to complete a project is identified throughout the development of the project. Then, steps to accomplish the task are specified. The steps are accompanied by screens. Hence, students learn from this book the same as if they were using a computer.
- ▶ **Thoroughly Tested Projects:** The computer screens in the Shelly Cashman Series Office 97 books are captured from the author's computer. The screen is captured immediately after the author performs the step specified in the text. Therefore, every screen in the book is correct because it is produced only after performing a step, resulting in unprecedented quality in a computer textbook.
- ▶ **Multiple Ways to Use the Book:** This book can be used in a variety of ways, including: (a) Lecture and textbook approach — The instructor lectures on the material in the book. Students read and study the material and then apply the knowledge to an application on the computer; (b) Tutorial approach — Students perform each specified step on a computer. At the end of the project, students have solved the problem and are ready to solve comparable student assignments; (c) Other approaches — Many instructors lecture on the material and then require their students to perform each step in the project, reinforcing the material lectured. Students then complete one or more of the In the Lab exercises at the end of the project; and (d) Reference — Each task in a project is clearly identified. Therefore, the material serves as a complete reference.
- ▶ **Other Ways Boxes for Reference:** Microsoft Access 97 provides a variety of ways to carry out a given task. The Other Ways boxes included at the end of most of the step-by-step sequences specify the other ways to execute the task completed in the steps. Together, the steps and the Other Ways box make a comprehensive and convenient reference unit; you no longer have to reference tables at the end of a project or at the end of a book.

Other Ways

1. Click Reports tab, select report, click Print button on toolbar
2. Click Reports tab, select report, on File menu click Print
3. Click Reports tab, select report, press CTRL+P

More About Switchboards

An application system is simply an easy-to-use collection of forms, reports, and/or queries designed to satisfy the needs of some specific user or groups of users, like the users at Pilotech Services. A switchboard system is one type of application system that is very popular in the Windows environment.

- **More About Feature:** The More About Features in the margins provide background information that complements the topics covered, adding interest and depth to the learning process.

Organization of This Textbook

Microsoft Access 97: Complete Concepts and Techniques provides detailed instruction on how to use Access 97. The material is divided into six projects and two integration features as follows:

Project 1 – Creating a Database Using Design and Datasheet Views In Project 1, students are introduced to the concept of a database and shown how to use Access to create a database. Topics include creating a database; creating a table; defining the fields in a table; opening a table; adding records to a table; closing a table; and previewing and printing the contents of a table. Other topics in this project include using a form to view data; using the Report Wizard to create a report; and using Access Help. Students also learn how to design a database to eliminate redundancy.

Project 2 – Querying a Database Using the Select Query Window In Project 2, students learn to use queries to obtain information from the data in their databases. Topics include creating queries, running queries, and printing the results. Specific query topics include displaying only selected fields; using character data in criteria; using wildcards; using numeric data in criteria; using various comparison operators; and creating compound criteria. Other related topics include sorting, joining tables, and restricting records in a join. Students also use computed fields, statistics, and grouping.

Project 3 – Maintaining a Database Using the Design and Update Features of Access In Project 3, students learn the crucial skills involved in maintaining a database. Topics include using Datasheet view and Form view to add new records, to change existing records, and to delete records; and searching for a record. Students learn to change the structure of a table; add additional fields; change characteristics of existing fields; create a variety of validation rules; and specify referential integrity. Students perform mass changes and deletions using queries and create single-field and multiple-field indexes.

Integration Feature – Integrating Excel Worksheet Data into an Access Database In this section, students learn how to create an Access table based on data stored in an Excel worksheet by using the Import Spreadsheet Wizard. Topics include creating a database and converting an Excel worksheet to an Access database.

Project 4 – Reports, Forms, and Publishing Reports on the Web In Project 4, students learn to create custom reports and forms. Topics include creating queries for reports; using the Report Wizard; modifying a report design; saving a report; printing a report; creating a report with grouping and subtotals; removing totals from a report; and changing the characteristics of items on a report. They also learn how to publish the report they have created to the World Wide Web using the Publish to the Web Wizard. Other topics include creating an initial form using the Form Wizard; modifying a form design; moving fields; and adding calculated fields and combo boxes. Students learn how to change a variety of field characteristics such as font styles, formats, and colors.

Project 5 – Enhancing Forms with OLE Fields, Hyperlinks, and Subforms In Project 5, students learn to use date, memo, OLE, and hyperlink fields. Topics include incorporating these fields in the structure of a database; updating the data in these fields and changing the table properties; creating a form that uses a subform to incorporate a one-to-many relationship between tables; manipulating subforms on a main form; incorporating date, memo, OLE, and hyperlink fields in forms; and incorporating various visual effects in forms. Students also learn to use the hyperlink fields to access Web pages and to use date and memo fields in a query.

Project 6 – Creating an Application System Using Macros, VBA, and the Switchboard Manager In Project 6, students learn how to create a switchboard system, a system that allows users to easily access tables, forms, and reports simply by clicking buttons. Topics include creating and running macros; adding command buttons to a form; adding a combo box for finding records to a form; modifying VBA code associated with an object on a form; and creating and using a switchboard system.

Integration Feature 2 – Linking Excel Worksheets to an Access Database In this section, students learn how to link Excel worksheets to an Access database. Topics include creating the Access database, linking the individual worksheets in a workbook to tables in the database, and using the linked worksheets.

End-of-Project Student Activities

A notable strength of the Shelly Cashman Series Office 97 books is the extensive student activities at the end of each project. Well-structured student activities can make the difference between students merely participating in a class and students retaining the information they learn. The activities in the Office 97 books include:

- ▶ **What You Should Know** A listing of the tasks completed within a project together with the pages where the step-by-step, screen-by-screen explanations appear. This section provides a perfect study review for students.
- ▶ **Test Your Knowledge** Four pencil-and-paper activities designed to determine students' understanding of the material in the project. Included are true/false questions, multiple-choice questions, and two short-answer activities.
- ▶ **Use Help** Any user of Access 97 must know how to use Help, including the Office Assistant. Therefore, this book contains two Use Help exercises per project. These exercises alone distinguish the Shelly Cashman Series from any other set of Office 97 instructional materials.
- ▶ **Apply Your Knowledge** This exercise requires students to open and manipulate a file on the Data Disk that accompanies the Office 97 books.
- ▶ **In the Lab** Three in-depth assignments per project require students to apply the knowledge gained in the project to solve problems on a computer.
- ▶ **Cases and Places** Seven unique case studies require students to apply their knowledge to real-world situations.



Instructor's Resource Kit

A comprehensive Instructor's Resource Kit (IRK) accompanies this textbook in the form of a CD-ROM. The CD-ROM includes an electronic Instructor's Manual (called ElecMan) and teaching and testing aids. The CD-ROM (ISBN 0-7895-1334-X) is available through your Course Technology representative or by calling one of the following telephone numbers: Colleges and Universities, 1-800-648-7450; High Schools, 1-800-824-5179; and Career Colleges, 1-800-477-3692. The contents of the CD-ROM are listed below.

- ▶ **ElecMan (*Electronic Instructor's Manual*)** ElecMan is made up of Microsoft Word files. The files include lecture notes, solutions to laboratory assignments, and a large test bank. The files allow you to modify the lecture notes or generate quizzes and exams from the test bank using your own word processor. Where appropriate, solutions to laboratory assignments are embedded as icons in the files. When an icon appears, double-click it; the application will start and the solution will display on the screen. ElecMan includes the following for each project: project objectives; project overview; detailed lesson plans with page number references; teacher notes and activities; answers to the end-of-project exercises; test bank of 110 questions for every project (50 true/false, 25 multiple choice, and 35 fill-in-the-blank) with page number references; and transparency references. The transparencies are available through the Figures on CD-ROM described below.
- ▶ **Figures on CD-ROM** Illustrations for every screen in the textbook are available. Use this ancillary to create a slide show from the illustrations for lecture or to print transparencies for use in lecture with an overhead projector.
- ▶ **Course Test Manager** This cutting-edge Windows-based testing software helps instructors design and administer tests and pretests. The full-featured online program permits students to take tests at the computer where their grades are computed immediately. Automatic statistics collection, student guides customized to the student's performance, and printed tests are only a few of the features.
- ▶ **Lecture Success System** Lecture Success System files are designed for use with the application software package, a personal computer, and a projection device. The files allow you to explain and illustrate the step-by-step, screen-by-screen development of a project in the textbook without entering large amounts of data.
- ▶ **Instructor's Lab Solutions** Solutions and required files for all the In the Lab assignments at the end of each project are available.
- ▶ **Lab Tests/Test Outs** Tests that parallel the In the Lab assignments are supplied for the purpose of testing students in the laboratory on the material covered in the project or testing students out of the course.
- ▶ **Student Files** All the files that are required by students to complete the Apply Your Knowledge and a few of the In the Lab exercises are included.
- ▶ **Interactive Labs** Eighteen hands-on interactive labs that take students from ten to fifteen minutes each to step through help solidify and reinforce mouse and keyboard usage and computer concepts.

Shelly Cashman Online

Shelly Cashman Online is a World Wide Web service available to instructors and students of computer education. Visit Shelly Cashman Online at www.scseries.com. Shelly Cashman Online is divided into four areas:

- ▶ **Series Information** Information on the Shelly Cashman Series products.
- ▶ **The Community** Opportunities to discuss your course and your ideas with instructors in your field and with the Shelly Cashman Series team.
- ▶ **Teaching Resources** Designed for instructors teaching from and using Shelly Cashman Series textbooks and software. This area includes password-protected instructor materials that can be downloaded, course outlines, teaching tips, and much more.
- ▶ **Student Center** Dedicated to students learning about computers with Shelly Cashman Series textbooks and software. This area includes cool links, data from Data Disks that can be downloaded, and much more.

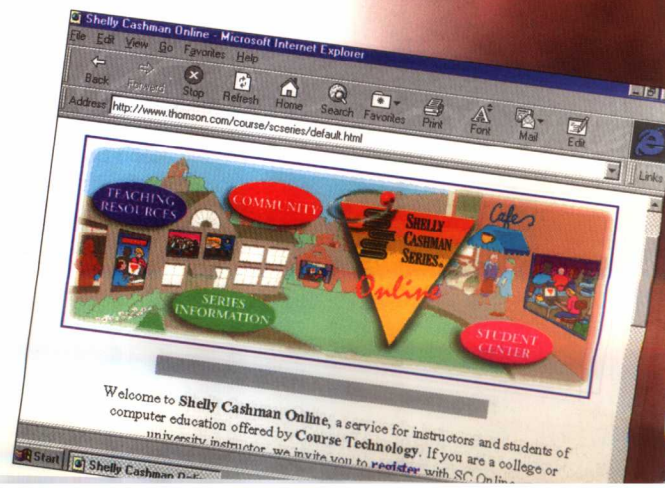
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Gary B. Shelly
Thomas J. Cashman
Philip J. Pratt



Shelly Cashman Series – Traditionally Bound Textbooks

The Shelly Cashman Series presents the following computer subjects in a variety of traditionally bound textbooks as shown in the table below. For more information, see your Course Technology representative or call one of the following telephone numbers: Colleges and Universities, 1-800-648-7450; High Schools, 1-800-824-5179; and Career Colleges, 1-800-477-3692.

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Computers	Discovering Computers: A Link to the Future, World Wide Web Enhanced Discovering Computers: A Link to the Future, World Wide Web Enhanced Brief Edition Using Computers: A Gateway to Information, World Wide Web Edition Using Computers: A Gateway to Information, World Wide Web Brief Edition Exploring Computers: A Record of Discovery 2e with CD-ROM A Record of Discovery for Exploring Computers 2e Study Guide for Discovering Computers: A Link to the Future, World Wide Web Enhanced Study Guide for Using Computers: A Gateway to Information, World Wide Web Edition Brief Introduction to Computers 2e (32-page)
WINDOWS APPLICATIONS	
Integrated Packages	Brief Introduction to Microsoft Office 97 (4 projects) Microsoft Office 97 Essentials (8 projects) Microsoft Office 97: Introductory Concepts and Techniques (15 projects) Microsoft Office 97: Advanced Concepts and Techniques Microsoft Office 95: Introductory Concepts and Techniques (15 projects) Microsoft Office 95: Advanced Concepts and Techniques Microsoft Office 4.3 running under Windows 95: Introductory Concepts and Techniques Microsoft Office for Windows 3.1 Introductory Concepts and Techniques Enhanced Edition Microsoft Office: Introductory Concepts and Techniques Microsoft Office: Advanced Concepts and Techniques Microsoft Works 4* • Microsoft Works 3.0*
Windows	Introduction to Microsoft Windows NT Workstation 4 Microsoft Windows 95: Introductory Concepts and Techniques (96-page) Introduction to Microsoft Windows 95 (224-page) Microsoft Windows 95: Complete Concepts and Techniques Microsoft Windows 3.1 Introductory Concepts and Techniques Microsoft Windows 3.1 Complete Concepts and Techniques
Word Processing	Microsoft Word 97* • Microsoft Word 7* • Microsoft Word 6* • Microsoft Word 2.0 Corel WordPerfect 7 • WordPerfect 6.1* • WordPerfect 6* • WordPerfect 5.2
Spreadsheets	Microsoft Excel 97* • Microsoft Excel 7* • Microsoft Excel 5* • Microsoft Excel 4 Lotus 1-2-3 97* • Lotus 1-2-3 Release 5* • Lotus 1-2-3 Release 4* • Quattro Pro 6
Database Management	Microsoft Access 97* • Microsoft Access 7* • Microsoft Access 2 Paradox 5 • Paradox 4.5 • Paradox 1.0 • Visual dBASE 5/5.5
Presentation Graphics	Microsoft PowerPoint 97* • Microsoft PowerPoint 7* • Microsoft PowerPoint 4*
DOS APPLICATIONS	
Operating Systems	DOS 6 Introductory Concepts and Techniques DOS 6 and Microsoft Windows 3.1 Introductory Concepts and Techniques
Word Processing	WordPerfect 6.1 • WordPerfect 6.0 • WordPerfect 5.1
Spreadsheets	Lotus 1-2-3 Release 4 • Lotus 1-2-3 Release 2.4 • Lotus 1-2-3 Release 2.3
Database Management	dBASE 5 • dBASE IV Version 1.1 • dBASE III PLUS • Paradox 4.5
PROGRAMMING AND NETWORKING	
Programming	Microsoft Visual Basic 5 Microsoft Visual Basic 4 for Windows 95* (available with Student version software) Microsoft Visual Basic 3.0 for Windows* QBasic • QBasic: An Introduction to Programming • Microsoft BASIC Structured COBOL Programming (Micro Focus COBOL also available)
Networking	Novell NetWare for Users
Internet	Business Data Communications: Introductory Concepts and Techniques The Internet: Introductory Concepts and Techniques (UNIX) Netscape Navigator 4: An Introduction Netscape Navigator 3: An Introduction • Netscape Navigator 2 running under Windows 3.1 Netscape Navigator: An Introduction (Version 1.1) Netscape Composer Microsoft Internet Explorer 3: An Introduction
SYSTEMS ANALYSIS	
Systems Analysis	Systems Analysis and Design, Second Edition

*Also available as a Double Diamond Edition, which is a shortened version of the complete book

Shelly Cashman Series – Custom Edition® Program

If you do not find a Shelly Cashman Series traditionally bound textbook to fit your needs, the Shelly Cashman Series unique **Custom Edition** program allows you to choose from a number of options and create a textbook perfectly suited to your course. Features of the **Custom Edition** program are:

- ▶ Textbooks that match the content of your course
- ▶ Windows- and DOS-based materials for the latest versions of personal computer applications software
- ▶ Shelly Cashman Series quality, with the same full-color materials and Shelly Cashman Series pedagogy found in the traditionally bound books
- ▶ Affordable pricing so your students receive the **Custom Edition** at a cost similar to that of traditionally bound books

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COMPUTERS	
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OPERATING SYSTEMS	
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DOS	Introduction to DOS 6 (using DOS prompt) Introduction to DOS 5.0 or earlier (using DOS prompt)
WINDOWS APPLICATIONS	
Integrated Packages Microsoft Office	Microsoft Works 4* Microsoft Works 3.0* Using Microsoft Office 97 (16-page) Using Microsoft Office 95 (16-page) Brief Introduction to Microsoft Office 97 (300-page) Microsoft Office 97 Essentials (576-page) Object Linking and Embedding (OLE) (32-page) Microsoft Outlook 97 • Microsoft Schedule+ 7 Introduction to Integrating Office 97 Applications (48-page) Introduction to Integrating Office 95 Applications (80-page)
Word Processing	Microsoft Word 97* • Microsoft Word 7* • Microsoft Word 6* • Microsoft Word 2.0
Spreadsheets	Corel WordPerfect 7 • WordPerfect 6.1* • WordPerfect 6* • WordPerfect 5.2 Microsoft Excel 97* • Microsoft Excel 7* • Microsoft Excel 5* • Microsoft Excel 4 Lotus 1-2-3 97* • Lotus 1-2-3 Release 5* • Lotus 1-2-3 Release 4* Quattro Pro 6
Database Management Presentation Graphics	Microsoft Access 97* • Microsoft Access 7* • Microsoft Access 2* Paradox 5 • Paradox 4.5 • Paradox 1.0 • Visual dBASE 5/5.5 Microsoft PowerPoint 97* • Microsoft PowerPoint 7* • Microsoft PowerPoint 4*
DOS APPLICATIONS	
Word Processing	WordPerfect 6.1 • WordPerfect 6.0 • WordPerfect 5.1
Spreadsheets	Lotus 1-2-3 Release 4 • Lotus 1-2-3 Release 2.4 • Lotus 1-2-3 Release 2.3 Quattro Pro 3.0 • Quattro with 1-2-3 Menus
Database Management	dBASE 5 • dBASE IV Version 1.1 • dBASE III PLUS Paradox 4.5 • Paradox 3.5
PROGRAMMING AND NETWORKING	
Programming	Microsoft Visual Basic 5 • Microsoft Visual Basic 4 for Windows 95* (available with Student version software) • Microsoft Visual Basic 3.0 for Windows*
Networking Internet	Microsoft BASIC • QBasic Novell NetWare for Users The Internet: Introductory Concepts and Techniques (UNIX) Netscape Navigator 4: An Introduction Netscape Navigator 3: An Introduction Netscape Navigator 2 running under Windows 3.1 Netscape Navigator: An Introduction (Version 1.1) Netscape Composer Microsoft Internet Explorer 3: An Introduction

* Also available as a mini-module

MICROSOFT Access 97

Complete Concepts and Techniques

C O N T E N T S

Microsoft Access 97

A 1.1

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CREATING A DATABASE USING DESIGN AND DATASHEET VIEWS



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INTEGRATING EXCEL
WORKSHEET DATA
INTO AN ACCESS DATABASE



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