

Access[™] 2007

VBA Bible

For Data-Centric Microsoft[®] Office Applications

Helen Feddema



Wiley Publishing, Inc.

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About the Author

Helen Feddema is an independent developer specializing in Microsoft Office applications, concentrating on Access, Word, and (since 1996) Outlook. She has written or co-authored many books on Access and other Office applications, including *Inside Microsoft Access* (New Riders, 1992), *Power Forms for Microsoft Access* and *Power Reports for Microsoft Access* (Pinnacle, 1994), *Access How-Tos* (Waite Group Press, 1995), *MCSO: Access 95 Study Guide* (Sybex, 1998), *DAO Object Model: The Definitive Guide* (O'Reilly, January 2000), and *Access 2002 Inside-Out* (Microsoft Press, 2001), which was judged #1 in the Desktop and Office Applications book category at the Waterside 2004 conference. Her most recent book is *Expert One-on-One Microsoft Access Application Development* (Wiley/Wrox, 2003).

She has also contributed chapters to a number of multi-author Office books, including *Special Edition: Using Microsoft Outlook 97* (Que, 1997), *Office Annoyances* (O'Reilly, 1997), *Outlook Annoyances* (O'Reilly, 1998), *Special Edition: Using Microsoft Project 98* (Que, 1997), *Teach Yourself Project* (Sams, 1998), and *Special Edition: Outlook 2000* (Que, 2000). Helen has been a regular contributor to Pinnacle's *Smart Access* and *Office Developer* journals, Informant's *Microsoft Office and VBA Programming* (now *Office Solutions*), and *Woody's Underground Office* newsletter, and she is currently the editor of the *Access Watch* ezine (formerly *Woody's Access Watch*), for which she writes the Access Archon column.

To Kerry and Jean King, good neighbors and good friends

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Contents

About the Author v

Acknowledgments xiii

Introduction xv

Part I: The Office Components and What They Do Best 1

Chapter 1: Storing and Displaying Data in Access 3

 A Brief History of Office Data Exchange3

 Storing Data in Access4

 Displaying Data in Access Forms and Reports5

 Creating Access Form Letters8

 Creating Worksheet-type Reports in Access11

 Plain Datasheet Reports11

 PivotTables19

 PivotCharts22

 Summary25

Chapter 2: Creating Word Documents from Access 27

 Filling Word Documents with Access Data Using the TypeText Method27

 Using Word Templates for Creating Formatted Word Documents.....30

 Bookmarks31

 Document Properties39

 Form Field Documents.....45

 Summary48

Chapter 3: Analyzing Data with Excel 49

 Exporting Access Data to an Unformatted Worksheet.....50

 Using Excel Templates to Create Formatted Worksheets Filled with Access Data52

 Formatting Excel Worksheets in VBA Code62

 Summary69

Chapter 4: Organizing and Communicating with Outlook 71

 Exporting Appointments and Tasks to Outlook72

 Exporting Journal Information to Outlook79

 Creating Emails from an Access Table.....81

 Summary85

Part II: Writing VBA Code to Exchange Data between Office Components **87**

Chapter 5: Working with Access Data 89

- Working with Older Format Databases in Access 200791
- Disambiguating References to Object Model Components91
- The DAO Object Model (Old and New)96
 - New Objects in the Access 2007 DAO Object Model97
 - Hidden Objects in the Access 2007 DAO Object Model98
 - Databases99
 - Recordsets.....99
 - QueryDefs104
 - TableDefs and Fields.....106
- The ADO Object Model110
 - Connection.....110
 - Command.....113
 - Recordset116
 - Record129
 - Stream129
- Converting DAO Code to ADO Code.....129
- Summary131

Chapter 6: Working with Word Documents and Templates 133

- Built-in Word Export in Office 2007135
- Exporting Access Data to Word Using Automation Code138
- The Word Object Model139
 - Creating a New, Blank Word Document140
 - Creating a Word Document Based on a Template141
 - Using a Query to Concatenate Data for Export143
- Choosing a Method for Merging Access Data to Word145
- Working with Word Document Properties146
- Word Bookmarks165
- The TypeText Method170
- Word Mail Merge175
- Summary182

Chapter 7: Working with Excel Worksheets. 183

- Simply Exporting Access Data to Excel.....184
- The Excel Object Model187
- Minimally Formatted Worksheets191
- Tabular Worksheets Formatted from Code195
- Timesheets202
- Summary218

Chapter 8: Working with Outlook Items 219

- Exporting Access Data to Outlook Items220
 - Using the Collect Data Group220
 - Using the Import Group to Import or Link to Outlook Data221
 - Using Sample Databases and Forms230
- The Outlook Object Model234
 - Explorer, Inspector, and other Outlook Objects234
 - Syntax for Referencing Outlook Objects235
 - Referencing Outlook Items in VBA Code240
- Working with Outlook Appointments241
- Working with Outlook Tasks247
- Working with Outlook Contacts.....254
- Summary262

Chapter 9: Working with Files and Folders 263

- Working with Windows Explorer Folders264
 - The Office FileDialog Object.....264
 - The FileSystemObject271
- Backing up Your Database277
- Working with Text Files282
 - Writing Data to Text Files282
 - ADO291
 - FileSystemObject292
 - VB292
 - Reading Data from Text Files292
 - ADO296
 - FSO296
 - VB296
- Working with Attachment Fields297
 - Loading Files into Attachment Fields299
 - Saving Attachments to Files302
- Summary304

Chapter 10: Working with External Data 305

- Working with Text Files Using the TransferText Method.....306
 - Creating an Import or Export Specification.....306
 - Importing and Exporting Text File Data in VBA Code.....312
 - Importing Text Data312
 - Exporting Text Data320
- Working with Legacy Database and Spreadsheet Files324
 - Importing Database Files324
 - Importing Spreadsheet Files328
 - Exporting Database and Spreadsheet Files336

Working with XML and HTML Files	338
Importing HTML and XML Files	338
Exporting HTML and XML Files.....	341
Emailing Exported Text Files	348
Summary	350
Chapter 11: Synchronizing Access and Outlook Contacts	351
Creating a Denormalized Table from a Set of Linked Tables	352
Comparing Outlook and Access Contacts.....	359
Re-creating the Flat-file Tables of Access and Outlook Data	361
Copying Contact Data from Access to Outlook (or Vice Versa)	374
Working with Attachments.....	391
Summary	396
Chapter 12: Going Beyond the Basics.	397
Creating Fancy Word Shipping Labels	397
Creating Excel PivotCharts from Access Queries	415
Emailing Shipping and Reordering Reports	426
Summary	432
Part III: Adding More Functionality to Office	427
Chapter 13: Creating COM Add-ins with Visual Basic 6	435
Creating a COM Add-in Using Visual Basic 6.0	436
Using the COM Add-in Template	436
Creating the LNC Control Renaming COM Add-in.....	440
The SharedCode Module	440
The AccessDesigner Module	442
Creating the DLL	463
Installing a COM Add-in	463
Troubleshooting a COM Add-in	466
Using a COM Add-in	467
Comparing COM Add-ins with Access Add-ins	469
Summary	469
Chapter 14: Creating Access Add-ins	471
The Purpose of Access Add-ins.....	472
Add-in Types	472
Creating a Library Database	473
Menu Add-ins	478
Wizards	479
Property Builders	480
Things You Need to Know When Writing Add-ins	481
Special Requirements for Add-in Code	481
Tips on Add-in Construction	482

The Extras Add-in Code	483
Extras Options	483
basExtras Module	486
Back up Database	489
Back up Back End Database	491
List Query Fields	495
List Table Fields	497
Other Procedures	499
Finalizing the Add-in	502
Troubleshooting Add-ins	503
Interpreting Add-in Error Messages	506
Installing an Add-in	507
Using the Extras 2007 Add-in	510
Extras Options	511
Back up Database	512
Back up Database Back End	512
List Query Fields	513
List Table Fields	514
Summary	514
Chapter 15: Customizing the Ribbon with XML in Access Databases and Add-ins	515
Useful Tools for Creating and Editing XML Code	517
XML Notepad 2007	517
VB 2005 XML Editor	518
Office 2007 Custom UI Editor	518
Customizing the Ribbon in an Access Database	519
Creating the XML Code	522
Adding a New Tab, Group, and Controls to the Ribbon	527
Removing a Tab or Group from the Ribbon	528
VBA Code.....	542
Form Ribbons.....	547
Customizing the Ribbon with an Access Add-in	549
Summary	558
Chapter 16: Customizing the Access Ribbon with a Visual Studio 2005 Shared Add-in.	559
Preparing to Write a Visual Studio Add-in	559
Adding .NET Support to Office	559
Modifying the Connect Class Module Code	573
Adding Functionality to the Shared Add-in	575
Debugging the Add-in	582
Building and Installing the Add-in	583
Using the Add-in	588
Summary	589

Chapter 17: Creating Standalone Scripts with Windows Script Host	591
Tools for Working with Windows Script Host Scripts	591
The Microsoft Script Editor	592
The VBScript Help File	597
Differences between VBA and VBScript Code	599
Useful Scripts	603
Setup Scripts	603
Office Scripts	611
Miscellaneous Scripts	616
Scheduling a Backup Script with the Windows Vista Task Scheduler	619
Summary	626
Chapter 18: Working with SQL Server Data	627
Getting SQL Server 2005	628
Preparing an Access Database for Upsizing to SQL Server	629
Configuring SQL Server 2005 for Data Access	631
Getting through the Firewall.....	640
Windows XP.....	640
Windows Vista	643
Other Security Roadblocks	647
Using the Upsizing Wizard.....	648
Converting Access Tables to SQL Server Tables	649
Creating a Client/Server Application	657
Linking to Data in SQL Server Tables	662
The SQL Server Migration Assistant for Access.....	671
Summary	672
Index	673



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Introduction

Welcome to the *Access 2007 VBA Bible*. Like all books in the Bible series, you can expect to find both hands-on tutorials and real-world practical application information, as well as reference and background information that provides a context for what you are learning. This book is a fairly comprehensive resource on writing VBA code to exchange data among the main Office applications (Access, Word, Excel, and Outlook), using Access as the central application for storing data, and using the other applications for producing attractively formatted documents of various types. By the time you have completed the *Access 2007 VBA Bible*, you will be well-prepared to write VBA Automation code that uses your Access data to produce Word letters, mailing labels and other documents (without the overhead of mail merge), to create Excel worksheets and PivotCharts, and to create Outlook appointments, mail messages, contacts, and journal items, with or without attachments. Additionally, you will be able to synchronize contact data (both ways) between Access and Outlook.

Who Should Read This Book

The book is written for the Access/Office developer or power user who is familiar with working with Office applications (particularly Access) in the interface, and has at least a basic familiarity with writing VBA code, but needs more information on how to write Automation code to work with Word, Excel, and Outlook objects, so as to be able to use each Office application for creating the documents that are its specialty, while storing most of the data in Access databases.

How This Book Is Organized

The book starts out in Part I with a description of the Office components (Access, Word, Excel, and Outlook) and what they do best, as a guide to selecting the appropriate Office component for a specific task.

In Part II, more specific coverage is provided for each Office component, with sample databases that illustrate working with Access data, Word documents and templates, Excel worksheets, and Outlook items. This part also includes a chapter on working with files and folders using the FileSystemObject, and another on synchronizing Access contacts with Outlook contacts. This allows you to maintain your contacts in a set of properly normalized linked tables in Access, while also having the ability to reference and use Outlook contacts, without having to do dual entry or manually update contact information. Finally, the last chapter in the part deals with several advanced topics, working with Word and Excel objects.

Part III covers topics that add more functionality to Office, including the creation of COM add-ins with VB 6, Access add-ins, and Visual Studio 2005 Shared add-ins. It also covers customizing the Office 2007 Ribbon with XML in Access databases and with add-ins of various types. Additionally, there is a chapter on creating standalone scripts with Windows Script Host, and another chapter on using Access as a front end for working with SQL Server data.

Conventions and Features

There are many different organizational and typographical features throughout this book designed to help you get the most of the information.

Whenever the authors want to bring something important to your attention, the information will appear in a Tip, Note, or Caution.

CAUTION

This information is important and is set off in a separate paragraph with a special icon. Cautions provide information about things to watch out for, whether simply inconvenient or potentially hazardous to your data or systems.

TIP

Tips generally are used to provide information that can make your work easier—special shortcuts or methods for doing something easier than the norm.

NOTE

Notes provide additional, ancillary information that is helpful, but somewhat outside of the current presentation of information.

NEW FEATURE

New features introduce components or functionality that are new or improved in the software compared to earlier versions.

What's on the Companion Web Site

On the companion web site you will find sample code. Each chapter has its own subfolder on the web site. You'll in subfolders find all the sample databases and other files (such as Word and Excel templates, or Windows Script Host scripts) that were discussed in each chapter.

Minimum Requirements

To run the sample code in this book, you need a computer capable of running at least Windows XP, and of course you need Office 2007. Because Office 2007 runs fine on Windows XP, you don't need Windows Vista, but Office 2007 works even better on Vista. If you intend to run Vista, you need a Vista-ready computer. If you buy a new computer, look for the "Windows Vista Capable" sticker; however, an older computer may support Vista even if it doesn't have the sticker (though probably not the Aero Glass interface, which requires a high-powered video card).

Where to Go from Here

You should take away from this book the ability to select the Office component that does the best job for the task at hand. You should also take away how to write VBA Automation code to transfer data from Access to documents created with other Office components and format the documents as needed; this will let you create procedures that can be run from form events or toolbar buttons to automate any Office-related tasks you need to do on a regular basis.

My web site (www.helenfeddema.com) has pages with code samples and Access Archon articles, many of which deal with exchanging various types of data among Office applications. Check them out—you may find that the solution you are looking for is already there, ready to download and use.

Part I

The Office Components and What They Do Best

IN THIS PART

Chapter 1
Storing and Displaying Data in
Access

Chapter 2
Creating Word Documents from
Access

Chapter 3
Analyzing Data with Excel

Chapter 4
Organizing and Communicating
with Outlook



Chapter 1

Storing and Displaying Data in Access

Since its earliest days—about 14 years ago—Access has been a relational database program, storing data in tables and using its own queries, forms, and reports to sort, filter, display, and print data. With successive Office versions, moving data among Office components (especially Word, Excel, and Outlook) has become so much easier that it is now often more efficient to use another Office component rather than an Access report for a task such as printing letters or analyzing numeric data.

Additionally, using other Office components to display or print data from Access makes the data stored in Access tables more widely accessible. Many Office users have an edition of Office that doesn't include Access—but they all have Word and Excel, and many also have Outlook, so they can easily work with Word documents, Outlook messages or appointments, and Excel worksheets, filled with data from Access tables.

Whether you plan to present your data as an Access report, PivotChart, or PivotTable; or a Word document or Excel worksheet, the data is stored in Access tables, and entered and edited in Access forms.

A Brief History of Office Data Exchange

As the Windows operating system has progressed from Windows 3.0 to Windows XP and Vista, data transfer techniques have improved, from simple cut and paste using the Windows 3.0 clipboard, to Dynamic Data Exchange (DDE) and Open Database Connectivity (ODBC), to Automation (originally

IN THIS CHAPTER

A brief history of Office data exchange

Storing data in Access

Displaying Access data in forms and reports

Working with rich text in Memo fields

New report interactivity

Using Access as a control center for working with Office documents

called Object Linking and Embedding [OLE], then OLE Automation) and Extensible Markup Language (XML).

In early Windows and Office versions, DDE and ODBC were difficult to use, cranky and unreliable in operation, and ODBC in particular often required elaborate setup. I know — I used both DDE and ODBC, when they were the only connectivity tools available. But I gladly dropped them when OLE became available in Windows 95/Office 95, because it offered a much simpler way to connect Office applications, though at first only in a limited manner.

Before Office 97, there was a distinction between Office components that were OLE servers, which could be manipulated by code running from other applications, and OLE clients, which could work with objects in OLE server applications' object models. Back in the days of Access 1.0 or even 2.0, Access developers had few tools available for connecting to other Office applications such as Word or Excel. Access, for example, was only a client, whereas Word was only a server.

In Office 95 AccessBasic was upgraded to standard Office VBA, and Access became an OLE server (previously it was only an OLE client). By Office 2000, all the major Office applications (Access, Word, Excel, Outlook, and PowerPoint) had been upgraded to support Automation both as clients and servers, so the OLE server/client distinction is no longer significant.

You can write Automation code in any major Office application to connect to any other Office application's data and functionality (and some third-party applications as well).

Storing Data in Access

Access was designed from the start to store data, so (if you have a choice — which is not always the case) it is the place where you should store your data. You may need to use that data to produce Word letters, SharePoint lists, Excel worksheets, or Outlook mail messages, but the data itself should be kept in Access tables, unless there is a very strong reason to store it elsewhere.

CROSS-REF One valid exception is storing data in SQL Server back-end databases, using Access as the front end. SQL Server is usually the choice for huge corporate databases, not small- to medium-sized databases used by individuals or small companies, where Access can easily handle the number of records. See Chapter 18 for more information on this option.

Data entry and editing, too, should be done in Access, for the most part, because you can create Access forms that offer an attractive interface for entering and editing data. You can write VBA code that runs from form and control events for purposes of error handling, and create functions that automate repetitive data-processing operations.

In my earlier book, *Expert One-on-One Microsoft Application Development*, I discussed creating Access applications, with details on using queries, forms, reports, and code. I won't duplicate this information here, but instead in this chapter I concentrate on new or improved features in Access 2007, which enhance the utility of Access forms and reports.

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