

Access[™] 2007

VBA Bible

For Data-Centric Microsoft[®] Office Applications

Helen Feddema



Wiley Publishing, Inc.

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Access™ 2007 VBA Bible: For Data-Centric Microsoft® Office Applications

Published by
Wiley Publishing, Inc.
10475 Crosspoint Boulevard
Indianapolis, IN 46256
www.wiley.com

Copyright © 2007 by Wiley Publishing, Inc., Indianapolis, Indiana

Published by Wiley Publishing, Inc., Indianapolis, Indiana

Published simultaneously in Canada

ISBN: 978-0-470-04702-6

Manufactured in the United States of America

10 9 8 7 6 5 4 3 2 1

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Library of Congress Cataloging-in-Publication Data:

Feddema, Helen Bell.

Access 2007 VBA Bible: For Data-Centric Microsoft Office Applications / Helen Feddema.

p. cm.

Includes index.

ISBN 978-0-470-04702-6 (paper/website)

1. Microsoft Access. 2. Database management. 3. Microsoft Visual Basic for applications. I. Title.

QA76.9.D3F435 2007

005.75'65--dc22

2007007061

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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), *MCSA: 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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Acknowledgments

Many thanks to my technical editor, Mary Hardy, for catching errors and making many valuable suggestions that improved the quality of the book (and sample databases), and to editors Kelly Talbot and Brian Hermann for their suggestions and support.

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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