

Beginning Access 2002 VBA

Robert Smith
Dave Sussman
Ian Blackburn
John Colby
Mark Horner
Martin Reid
Paul Turley
Helmut Watson



What you need to use this Book

Apart from a bit of time and dedication to learn, you'll need access to a PC running Windows 2000 or Windows XP and a copy of Access 2002.

For one of the later chapters, you'll need Office XP and Internet Information Services (which comes with Windows 2000 Professional or Windows XP Professional).

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Known as Woof! to his friends (or anyone else who buys him a beer), he is a keen cyclist and a finalist in the 2000 British Marbles-on-Sand championships. Most people think he's a bit odd until they meet him – then they're sure!

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Introduction

Microsoft's Access development community has grown to 600,000 members or thereabouts, and they form an important part of the several million developers that develop Microsoft Office solutions. Access plays key roles in the Microsoft Office suite by allowing us to rapidly develop applications that store, query, exchange, and report information.

Access 2002 is used typically in the following scenarios:

- ❑ Small-scale functional applications (Fixed Asset Register, for example)
- ❑ Knowledge Management systems
- ❑ Decision support applications
- ❑ Supporting client-server and Internet applications, perhaps as a front-end to SQL Server databases (via Access Data Projects)
- ❑ Exchanging data in popular data formats (for example, XML)

From this list, you can see that the types of programming opportunities available to you are broad and varied. As you gain experience, you may be developing the schema of a database, exporting data in XML, developing a suite of reports to be published on the Internet, or using Access to seamlessly front a large SQL Server database. This book will give you the skill set to begin all these types of jobs.

The Structure of this Book

We had a quandary while planning this book because we were initially unsure as to which direction we should take. Since the first edition of this book, for Access 95, the functionality and versatility of Access has grown significantly, as has the underlying power of **Visual Basic for Applications (VBA)**. So – should we stick with the older features of Access in this 2002 edition, or radically change the structure to implement new features?

We decided to keep in focus the fact that this is a VBA book, and the fundamentals of VBA itself haven't changed greatly. Consequently, in this fourth edition of the book, we have carefully selected the aspects of Access 2002 that are relevant to beginning VBA development, and merged them with a reworking of our core content that is based upon feedback from industry sources, reviewers, and readers.

In other words, we are not going to cover every new feature of Access 2002 in this book and, while our coverage of VBA techniques will be very comprehensive, we are not going to mention every single method. Our goal is to teach you VBA programming from scratch and, for that reason, we're not interested in including anything that would complicate this task unnecessarily.

The decision that caused us the most difficulty concerned which data access method we should use. Access 2002 comes with ADO, although DAO is still available for use. Should we switch to ADO, or stick with the older, simpler DAO technology? You might think that the obvious solution would be to use the newest, but this is not necessarily the case because of the different ways that Access 2002 can be used.

Access is used in two main ways:

- ❑ As a standalone database. This is the most common usage and programming Access 2002 with VBA in this scenario remains largely unchanged. The new data-access method, ADO, can be used here but DAO still gives better performance.
- ❑ As the front-end to a client-server database. Although this was possible in previous versions of Access, it's been taken a step further with Access 2002 to provide a better client-server environment. Only ADO works in this situation.

We'll examine the performance benefits of working with DAO in the standalone situation in later chapters but, for now, it's worth pointing out that, although DAO is a much older technology, its performance benefits and simplicity mean that it is still in very widespread use.

There are other good reasons for continuing to teach DAO in this book, though. DAO and the standalone scenario are *much* simpler to teach. The client-server scenario, where Access is, in effect, used as a front-end (or user interface) to a back-end database server (like SQL Server), introduces a range of architectural issues and the need to be able to use the back-end database effectively. This kind of material requires a steep learning curve and is a big enough topic for several books in itself!

In the 2000 edition, we stayed with DAO for the bulk of the development examples throughout the book, although we looked at ADO briefly and included an ADO appendix. In this 2002 edition, as a consequence of DAO aging further, we have decided that it is important to give a full introduction to the client-server scenario and ADO but, because DAO is quicker to learn and remains effective, we have retained our use of DAO through the majority of the book. This balanced coverage of the two data access techniques should prepare you effectively for Access development as it is in the real world today, and for any future decay in the use of DAO.

How is Access Changing?

The key changes that Access 2002 brings to developers involve better integration with SQL Server, assisting Access's use in client-server situations, and enhanced XML support, which makes it easier to publish data to the Web and exchange it with other organizations. We'll look at these types of new functionality later in the book. However, it's worth remembering that, while we can use the powerful new leading-edge technologies, we can also choose to ignore them. Access continues to be widely employed as a humble repository of names and addresses on a standalone PC. This versatility is part of the reason for Access's success.

While Microsoft will probably wish to enhance Access's role in client-server architectures in the future, it will undoubtedly continue to protect its capabilities in the standalone situation, and it will be interesting to see how VBA fares alongside the new Microsoft .NET software development technologies and the Visual Basic .NET language in particular.

Who is this Book For?

There are two types of user in particular that will benefit from this book:

- ❑ You have some experience of Access, but have not begun to learn VBA. You have spent a bit of time familiarizing yourself with the different Access objects – tables, forms, queries, reports – and may have used macros to achieve a little automation. You have not really programmed before, but are keen to learn how to tap the power that VBA offers.
- ❑ You have programmed a little with another language, perhaps Visual Basic or some of the scripting languages (such as VBScript or JScript), and need a primer on VBA and its use within Access. Even if you know a little VBA you'll find plenty in the book to keep you occupied.

What Does this Book Cover?

Beginning Access 2002 VBA Programming covers everything that you need to gain the confidence to go away and experiment on your own. Programming is an art and cannot simply be taught – like anything worth doing in life, it's a question of "practice makes perfect". This book will provide the necessary information to get you up and running, and will show you enough interesting and practical examples to whet your appetite and ensure that your experiences of VBA don't end with the last page of the book.

After looking at application design, we will examine event-driven programming and what it really means in terms of programming Access. We'll then introduce you to the coding environment and basic principles such as variables, controls structures, data types, and procedures. We'll also look at objects and classes within Access, which will help you to get the best from your code.