Access™ 2007 FOR DUMMIES®

**by Laurie Ulrich Fuller,
Ken Cook & John Kaufeld**

Wiley Publishing, Inc.

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About the Authors

Laurie Ulrich Fuller has been writing about and teaching people to use Microsoft Office since the 1980's. Her teaching career goes back to the time before Microsoft Windows – which means she also remembers the first time she taught people to use a Windows-based application, and a student picked up the mouse and aimed it at the computer screen as though using a TV remote. Nobody laughed (except Laurie, after class), because everyone was new to the mouse back then. As new as the mouse was, so was the idea of keeping a database on a computer that could fit on your desk — and Laurie's been there through every new version of Access — as Office has evolved to meet the needs of users from all walks of life — from individuals to huge corporations, from growing business to non-profit organizations.

Since those early days of Office and Windows, Laurie has personally trained more than 10,000 people to make better, more creative use of their computers, has written and co-written more than 25 nationally-published books on computers and software — including several titles on Microsoft Office. In the last few years, she's also created two video training courses — one on Word 2003, and the other on the entire Office 2003 suite. She runs her own company, Limehat & Company, offering training, educational materials, and web development services. She invites you to contact her at `laurie@limehat.com`, and to visit her personal website, `www.planetlaurie.com`, for more information.

Laurie would also like you to know that despite being able to remember the world before Windows, she does not remember a time before cars, television, or fire.

Ken Cook has built and managed a successful computer consulting business since 1990 serving clients in New Jersey, New York, Pennsylvania, and California. He began as a trainer - training numerous users (too many to count!) on a variety of software packages — specializing in Microsoft Office. Currently, he "dabbles in training" but his main focus is creating expert Microsoft Office solutions and Microsoft Access database solutions for Fortune 500 and small business clients.

He can be contacted through his Web site `www.kcookpcbiz.com` or email: `ken@kcookpcbiz.com`.

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We're proud of this book; please send us your comments through our online registration form located at www.dummies.com/register/.

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Contents at a Glance

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Introduction

You've picked up this book and are hoping it will teach you to use Microsoft Access. Of course, as the authors, we believe that it was some sort of divine intervention that led you to our pages, and we're quite certain that this is The Book For You. We could be wrong, but that happens so infrequently that we're hardly considering it. No, the reason you picked up this book is that you want to learn Access, and this is the best place to do that. Really. No kidding.

Of course, being a normal human being, you probably have work to do, and whether we're right about this being The Book For You or not, you need Access. You need it to organize your data. You need it to store and allow you to use all the information that's currently spilling out of notebooks, file drawers, your pockets, your glove compartment, everywhere. You need it so you can print out snappy looking reports that make you look like the genius you are. You need it so you can create cool forms that will help your staff enter all the data you've got stacked on their desks — and in a way that lets you know that the data was entered properly, so it's accurate and useful. You need Access so you can find little bits of data out of the huge pool of information you need to store. You just need it.

About This Book

Because with all the power that Access has (and that it therefore gives *you*), there comes a small price: complexity. Access isn't one of those applications you can just sit down and use, "right out of the box". It's not scarily difficult or anything, but there's a lot going on and you need some guidance, some help, some direction, to really use it and make it sing and dance. And that's where this book, a "reference for the rest of us" comes in.

So you've picked up this book. Hang on to it. Clutch it to your chest and run gleefully from the store (stop and pay for it first, please). And then start reading — whether you begin with Chapter 1 or whether you dive in and start with a particular feature or area of interest that's been giving you fits on your own. Just read, and then go put Access through its paces.

Conventions Used in This Book

As you work with Access, you're going to need to tell it to do things. You'll also find that at times, Access has questions for you, usually in response to your asking it to do something. This book will show you how to talk to Access, and how Access will talk to you. To show the difference between the two sides of that conversation, we format the commands as follows:

This is something you type into the computer.

```
This is how the computer responds to your command.
```

Because Access *is* a Windows program, you don't just type, type, type — you also mouse around quite a bit. Here are the mouse movements necessary to make Access (and any other Windows program) work:

- **Click:** Position the tip of the mouse pointer (the end of the arrow) on the menu item, button, check box, or whatever else you happen to be aiming at, and then quickly press and release the left mouse button.
- **Double-click:** Position the mouse pointer as though you're going to click, but fool it at the last minute by clicking twice in rapid succession.
- **Click and drag (highlight):** Put the tip of the mouse pointer at the place you want to start highlighting and then press and hold the left mouse button. While holding down the mouse button, drag the pointer across whatever you want to highlight. When you reach the end of what you're highlighting, release the mouse button.
- **Right-click:** Right-clicking works just like clicking, except that you're exercising the right instead of the left mouse button.

What You Don't Have to Read

Now that we've told you that you should read the book, we're telling you don't have to read *all* of it. Confused? Don't be. This section of the introduction exists to put your mind at ease, so you won't worry that you have to digest every syllable of this book in order to make sense of Access. And more than just being a required section of the introduction, this is true. You don't have to read the whole book.

You should read the chapters that pertain to things you don't know, but you can skip the stuff you do know or that you're fairly sure you don't need to know. If the situation changes and you eventually *do* need to know something, you can go back and read that part later.

If you only use Access at work, and you're using an Access database that some geek in your IT department created, chances are you can't tinker with it. Therefore, if you only need to know about using an existing Access database, you can skip the chapters on designing databases.

On the other hand, it might be nice to know what's happening "behind the scenes", but you don't have to read those chapters if you don't want to.

Foolish Assumptions

You need to know only a few things about your computer and Windows to get the most out of *Access 2007 For Dummies.* In the following pages, we presume that you:

- Know the basics of Windows — how to open programs, save your files, create folders, find your files once you've saved them, print, and do basic stuff like that.
- Want to build your own databases.
- Want to work with databases that other people have created.
- Want to use and create queries, reports, and an occasional form.
- Have either Windows XP with Service Pack 2 or Windows Vista.

  If your computer uses Windows 98 or 2000, you can't run Office 2007.

You don't have to know (or even care) about table design, field types, relational databases, or any of that other database stuff to make Access work for you. Everything you need to know is right here, just waiting for you to read it. Of course, you may *want* to know what's going on under the hood (so to speak). You'll find that information within this book's pages.

How This Book Is Organized

Here's a breakdown of the parts in this book. Each part covers a general aspect of Access. The part's individual chapters dig into the details.

Part 1: Basic Training

In this first part of the book, you'll find out what Access is, what it isn't, how it works, and how you open it up and start using it. You'll find out how to navigate and tame the Access workspace, and for people who've used previous

versions of Access, you'll find out about all the new doo-dads that are part of Access 2007.

Part I also takes you through the process of planning your database — deciding what to store, how to structure your database, and how to use some of Access 2007's very helpful tools for starting a database with templates — cookie cutters, if you will — for a variety of common database designs. Be prepared to pick up some helpful jargon, as you learn a bit about a few specialized terms that you really need to know.

Part II: Getting It All on the Table

Part II takes you a bit deeper, starting out with a chapter on setting up more than one table to store related data — and moving on with chapters on setting up relationships between those tables, customizing the way data is stored in your tables, and ways to control how data is entered into the tables in your database.

Part III: Data Mania and Management

You'll find out all about forms, the customized interfaces you create to make it easier to enter, edit, and look at your database. You'll also discover cool ways to share your Access data with other programs and how to bring content from Word documents and Excel worksheets into Access to save time, reduce the margin for data entry errors, and build consistency within all the work you do in Microsoft Office. You'll also find out about using Access tables on the web, and how to publish your database to the internet. Look out world!

Part IV: Ask Your Data, and Ye Shall Receive Answers

In Part IV, you'll discover how to ask questions like "How many customers do we have in Peoria?" and "How long has that guy in Accounting worked here?" Of course, you already know how to form sentences that go up at the end (so people know you're asking a question), but when you ask a question in Access, the pitch of your voice rarely makes any difference. You'll need, therefore, to know how to sort, filter, and query your data to get at the information you're storing in your Access database.

Part V: Plain and Fancy Reports

Reports are compilations of data from one or more tables in your database. That statement might sound a bit scary, because "compilations" has four syllables and you might not be sure what a table is yet. Have no fear, however, because Access provides some cool automatic tools that let you pick and choose what you want in your report, and then it goes and makes the report *for you.* How neat is that?

Automatic reports weren't good enough for you, eh? If your jobs relies upon reports not only being informative but also attractive and attention-grabbing, Part V will be like opening a birthday present. Well, not really, but you'll find out about charts, printing labels, and putting page numbers on your reports.

Part VI: More Power to You

Part VI gives more power in the form of the Access Analyzer, a tool that tunes up your database for better performance. It also gives you more power by showing you how to create a user interface that controls what people see, which tables they can edit, and how they work with your database overall.

Part VII: The Part of Tens

The format of these chapters is designed to give you a lot of information in a simple, digestible fashion so you can absorb it without realizing you're actually learning something. Sneaky, huh?

Appendix: Getting Help

This isn't really a whole part, but it's darn useful. Remember how your mom told you the only foolish question is the one you don't ask? In this appendix, you'll find out about the online and built-in help that Access offers.

Icons Used in This Book

When something in this book is particularly valuable, we go out of our way to make sure that it stands out. We use these cool icons to mark text that (for one reason or another) *really* needs your attention. Here's a quick preview of the ones waiting for you in this book and what they mean:

Tips are incredibly helpful words of wisdom that promise to save you time, energy, and the embarrassment of being caught swearing out loud, while you're alone. Whenever you see a tip, take a second to check it out.

Some things are too important to forget, so the Remember icon points them out. These items are critical steps in a process — points that you don't want to miss.

Sometimes we give in to the techno-geek lurking inside of us and slip some technical babble into the book. The Technical Stuff icon protects you from obscure details by making them easy to avoid. On the other hand, you may find them interesting.

The Warning icon says it all: *Skipping this information may be hazardous to your data's health.* Pay attention to these icons and follow their instructions to keep your databases happy and intact.

Where to Go from Here

Now nothing's left to hold you back from the delights and amazing wonders of Access. Hold on tight to this copy of *Access 2007 For Dummies* and leap into Access.

- If you're brand new to the program and don't know which way to turn, start with the general overview in Chapter 1.
- If you're about to design a database, I we salute you — and recommend flipping through Chapter 4 for some helpful design and development tips.
- Looking for something specific? Try the Table of Contents or the Index.

Now, go. Have fun. And look both ways before crossing the street.

Part I
Basic Training

The 5th Wave By Rich Tennant

"Once I told Mona that Access was an 'argument' based program, she seemed to warm up to it."

In this part . . .

Don't worry, even though this part of the book is called "Access Basic Training", nobody's going to shout at you, demand you call them "Sir!", or make you do pushups. I promise. Instead, you'll find out what Access is, what it does, and how to get started using it.

The three chapters in this part of the book introduce you to the Access 2007 workspace, and show you how to start building your first database. You'll also find out about some essential terms and concepts that will help you make better use of the rest of the book and any other print, online, or even in-person discussions of databases. This will help you talk about your database needs at work, with clients, or if you're trying to bore people to death at a party.

Ready? Then let's get started!

Chapter 1

Getting to Know Access 2007

In This Chapter

- Deciding when to use Access
- Unlocking the basics of working with Access
- Figuring out how to get started

Access 2007, the most recent version of Microsoft Office's database application, is a very robust and powerful program. You probably already know that, and perhaps that power, or your perceptions of all that Access can do, is what made you reach for this book. Good decision!

For all of Access's power, it's important to note that Access is also very — pardon the expression — *accessible*. It's pretty easy to use at the edges, where a new user will be; you don't have to venture all the way in to its core to get quite a lot out of the software. In fact, with just the basic functionality that you'll discover in this book, you'll be able to put Access through many of its most important paces, yet you'll be working with wizards and other on-screen tools that keep you at a comfortable arm's distance from the software's inner workings, the things that programmers and serious developers play with.

You don't need to use every feature and tool and push the edges of the Access envelope. In fact, you can use very little of everything Access has to offer and still have quite a significant solution to your needs for storing and accessing data — all because Access can really "do it all" — enabling you to set up a database quickly, build records into that database, and then use that data in several useful ways. Later on, who knows? You may become an Access guru.

In this chapter, you'll discover what Access does best (and when you might want to use another tool instead), you'll see how it does what it does, and hopefully you'll begin to understand and absorb some basic terminology. Now, don't panic — nobody's expecting you to memorize any vocabulary or anything scary like that. The goal here (and in the next two chapters) with regard to terms is to introduce you to some basic words and concepts that will help you make better use of Access in general and in the subsequent chapters in this book, too.

What Is Access Good For, Anyway?

What *is* Access good for? That's a good question. Well, the list of what you can do with it is a lot longer than the list of what you *can't* do with it — of course, only if you leave things like "paint your car" and "do the dishes" off the "can't do" list. When it comes to data organization, storage, and retrieval, Access is at the head of the class.

Building big databases

What do I mean by *big database?* I mean any database with a lot of records. And by *a lot,* I mean hundreds. And certainly if you have thousands of records, you need a tool like Access to manage them. Although you can use Microsoft Excel to store lists of records, you are limited as to how many you can store (the number of rows in a single worksheet) and you can't set up anything beyond a simple list that can be sorted and filtered. So anything with a lot of records is best done in Access.

Some reasons why Access handles big databases well:

- Typically, a big database has big data entry needs to go along with it. Access offers forms, or more accurately, the ability for you to create a quick form through which someone can enter all those records. This can make data entry easier and faster and can reduce the margin for error significantly. Check out Chapter 5 for more information on building forms.
- When you have lots and lots of records, the margin for error within them — duplicate records, records with misspellings, records with missing information — is great. So you need an application like Access to ferret out those errors and fix them. See Chapter 9 to see how Access lets you find and replace errors and search for duplicate entries.
- Big databases mean big needs for accurate, insightful reporting. Access has powerful reporting tools that allow you to create printed and on-screen reports that include as few or as many pieces of your data as you need, and to include data from more than one table in the report. You can tailor your reports to your audience, from what's shown on the reports pages to the colors and fonts used.
- Big databases are hard to wade through when you want to find something. Access provides several tools for sorting, searching, and creating your own specialized tools (known as *queries*) for finding the elusive single record or group of records you need.

- Access saves time by giving you great tools for importing data from other sources, such as Excel worksheets (if you started in Excel and have maxed out its usefulness as a data storage device) and Word tables. This saves you from re-entering all your data and allows you to keep multiple data sources consistent.

Creating databases with multiple tables

Whether your database holds 100 records or 1,000 records (or more), if you need to keep separate tables and relate them for maximum use of the information, you need a *relational* database — and that's Access. How do you know whether your data needs to be in separate tables? Think about your data — is it very compartmentalized? Does it go off on tangents? Consider the following example and apply the concepts to your data and see if you need multiple tables for your database.

The Big Customer database

A large contracting business has a database of customers — past, present, and potential clients — and wants to keep track of a lot of information on them. For the current and past clients, the bigwigs want to store information about the work that was done, what materials were used — paint colors, tile designs, carpet styles, preferred fixtures, and so on. For potential customers, they want to keep track of when and how they've contacted them with mailings, phone calls, and visits from sales reps. Imagine keeping all of that in a single table — with everything from the customer's name to what wallpaper was used in the bedroom.

For a complex database like this one, you'd need multiple tables, as follows:

- One table would house the customer contact information — names, addresses, phone numbers, fax numbers, and e-mail addresses. A field one might also include would be customer number, which makes each record unique, and in that number, one or more of the characters could be used to differentiate between different customer types — past, current, or potential.
- A second table would contain the customer number again (as a way to link or connect the two tables) and also the customer's status information — what work was done (kitchen, bathroom, painting, restoration, any number of established classifications) and what was charged for the work.
- A third table, again containing the customer number, would include the customer's preferences for paint manufacturers and colors, wallpaper, tile, countertops, fixtures, carpet, and so on. Because you don't have to fill in every field in a record, if no carpeting was done for a particular customer, for example, that field can be left blank.

With these three tables in place, any type of customer (past, current, or potential) can be entered into the database, and only the table or tables that apply to that customer need be populated with data. When a potential customer becomes a current one, relevant data can be entered into the appropriate table(s). If a potential customer never buys, he or she can be deleted when a prescribed length of time has elapsed, or perhaps a fourth table, with archived customer records, can be set up. The options are limited only by your needs and intended use of the data.

Failure to plan? Plan to fail

If you think carefully about your database and how you use your data and what you need to know about your customers, products, or whatever you're storing information about, you can plan

- How many tables you'll need
- Which data will go into which table
- How you'll use the tables together to get the reports you need

Feel free to sketch your planned database on paper, drawing a kind of flow chart with boxes for each table and lists of fields that you'll have in each one. Draw arrows to show how they might be related — sort of like drawing a simple family tree — and you're well on your way to a well-planned, useful database.

Here's a handy procedure to follow if you're new to the process of planning a database:

1. **On paper or in a word processing document, whichever is more comfortable, type the following:**
   - A tentative name for your database
   - A list of the pieces of information you get from that database on a daily or regular basis
2. **Now, based on that information, create a new list of the actual details you could store:**

   List every piece of information you can possibly think of about the customers, products, ideas, cases, books, works of art, students — whatever your database pertains to. Don't be afraid to go overboard — you can always skip some of the items in the list if they don't end up being things you really need to know or can possibly find out about each item in your database.
3. **Take the list of fields — that's what all those pieces of information are — and start breaking them up into logical groups.**

How? Think about the fields and how they work together:

- If the database keeps track of a library of books, for example, perhaps the title, publication date, publisher, and ISBN (International Standard Book Number, which is unique for each book), price, and page count can be stored in one group, and author information, reviews, and lists of other titles by the same author or books on the same topic can be stored in another group. These groups become individual tables, creating your relational database of books.
- Figure out what's unique about each record. As stated in the previous point, you need a field that's unique for each record, and while Access can create this for you if no unique data exists for each record in your database, it's often best if you actually have or create one yourself. Customer numbers, student numbers, book ISBNs, catalog numbers, serial numbers — anything that won't be the same for any two records will do.

With a big list of fields and some tentative groupings of those fields at the ready, and with an idea of which field is unique for each record, you can begin figuring out how to *use* the data.

4. **Make a list of ways you might use the data:**
   - Reports you'd like to create, including a list of which fields should be included for each report.
   - Other ways you can use the data — labels for mailings, product labels, catalogue data, price lists, contact lists, and so on.
5. **List all the places your data currently resides — on slips of paper in your pocket, on cards in a box, in another program (such as Excel), or maybe through a company that sells data for marketing purposes.**

With this planning done, you're ready to start building your database. The particulars of that process come later in this chapter and in subsequent chapters, so don't jump in yet. Do pat yourself on the back, though, because if you read this procedure and applied even some of it to your potential database, you're way ahead of the game, and I feel very positive about your ability to make good use of all that Access has to offer.

Databases with user forms

When planning your database, consider how the data will be entered:

- If you'll be doing the data entry, perhaps you're comfortable working in a spreadsheet-like environment, known in Access as *Table view,* where the table is a big grid, and you fill it in row by row (each row is a record).

  Figure 1-1 shows a table in progress in Table view. You decide — is it easy to use, or can you picture yourself forgetting to move down a row and entering the wrong stuff in the wrong columns as you enter each record?

- You may want to use a *form* (shown in Figure 1-2), a specialized interface for data entry and editing and for viewing your database one record at a time, if
  - Someone else will be handling data entry
  - Typing row after row of data into a big grid seems mind-numbing.

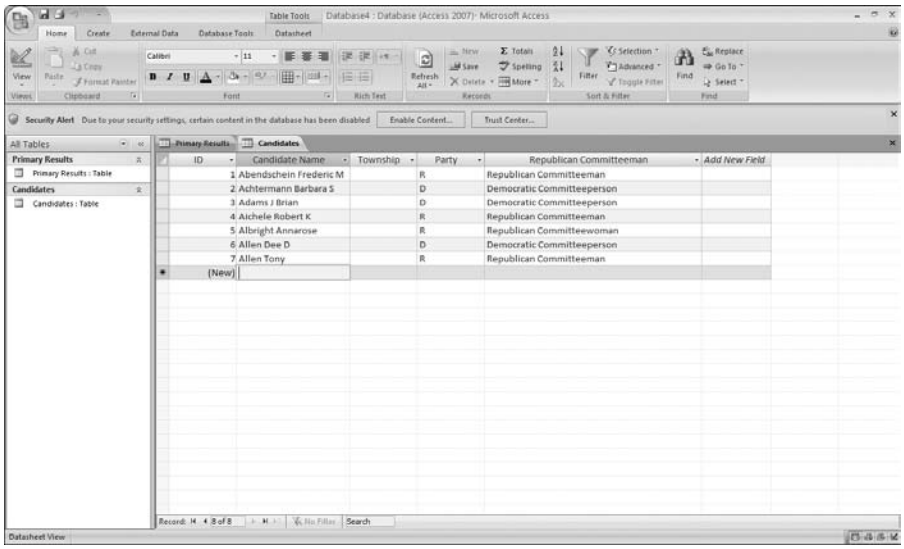

Figure 1-1: Table view can be an easy environment for data entry. Or not.

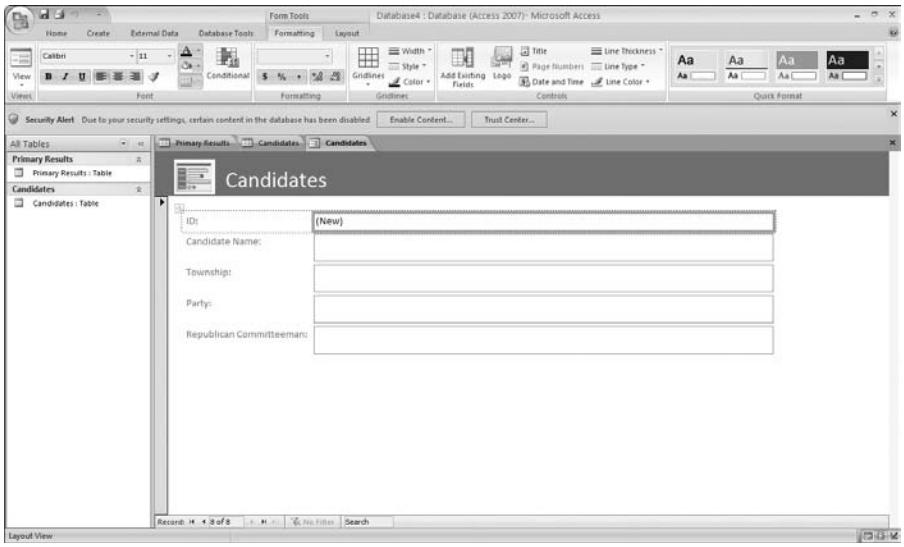

Figure 1-2: A form for entering new records or reviewing existing ones can be a great tool.