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.

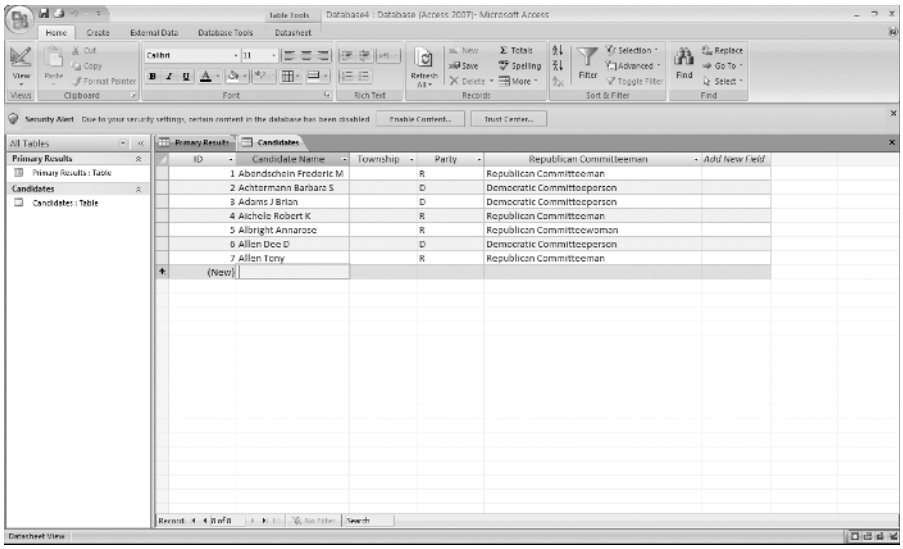

Figure 1-1: Table view can be an easy environment for data entry. Or not.

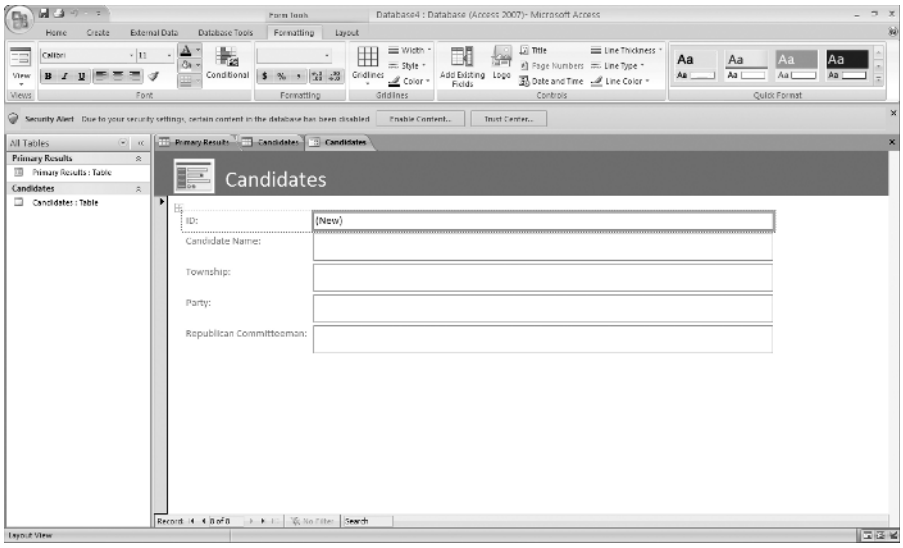

Figure 1-2: A form for entering new records or reviewing existing ones can be a great tool.

You can find out all about forms in Chapter 5, and if your database is large enough to require help doing the data entry, or if it will continue to grow over time and an on-going data entry process is likely, Access is the tool for you. The fact that it offers simple forms of data entry and editing is reason enough.

Databases requiring special reporting

Yet another reason to use Access is its ability to create customized reports quickly and easily. Some database programs, especially those designed for single-table *flat file* databases, have some canned reports built in, and that's all you can do — just select a report from the list and run the same report every other user of that software runs.

If you're an Excel user, your reporting capabilities are far from easy or simple, and they're not designed for use with large databases — they're meant for spreadsheets and small, flat-file lists. Further, you have to dig much deeper into Excel's tools to get at these reports. Because Access is a database application, reporting is a major feature.

An example? In Excel, to get a report that groups your data by one or more of the fields in your list, you have to sort the database first, using the field/s to sort the data, and then you can create what's known as a subtotal report. To create it, you use a dialog box that asks you about calculations you want to perform, where to place the results, and whether you're sorting and subtotaling on more than one field. The resulting report is not designed for printing, and you have to tinker with your spreadsheet pagination (through a specialized view of the spreadsheet) in order to control how the report prints out.

In Access? Just fire up the Report Wizard, and you can sort your data, choose how to group it, decide which pieces of data to include in the report, and pick a visual layout and color scheme — all in one simple, stream-lined process. Without your doing anything, the report is ready for printing. Access is built for reporting, because it's a database application — and reports are one of the most, if not *the* most important way you'll use and share your data.

Because reports are such an important part of Access, you can create them quickly and easily, but you can also customize them to create powerful documentation of your most important data:

- Build a quick, simple report that just spits out whatever's in your table in a tidy, easy-to-read format. See Figure 1-3 for a sample.
- Create a customized report that you design step-by-step with the Report Wizard. See Figure 1-4.
- You can really roll up your sleeves and design a new report or play with an existing one, adding all sorts of bells and whistles. Figure 1-5 shows this happening in Design view.

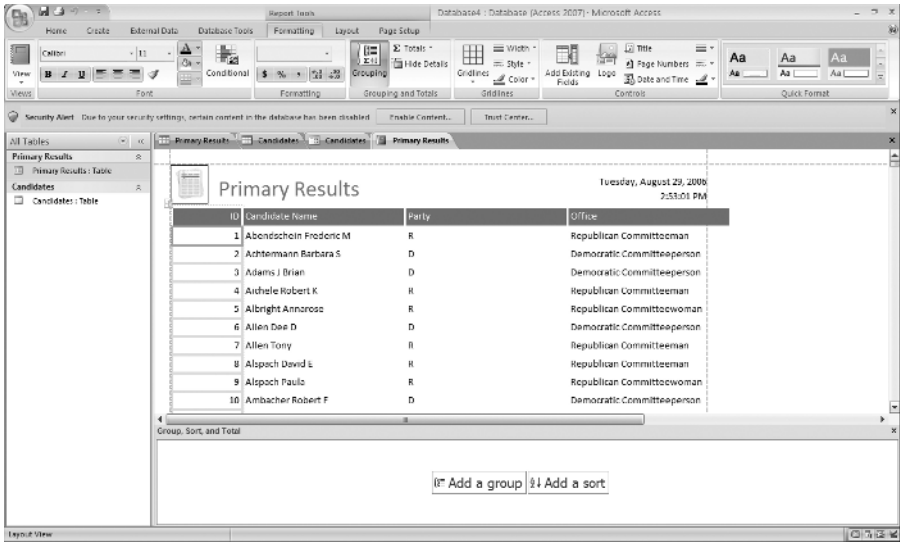

Figure 1-3: Ah, simplicity. A quick report is just one click away.

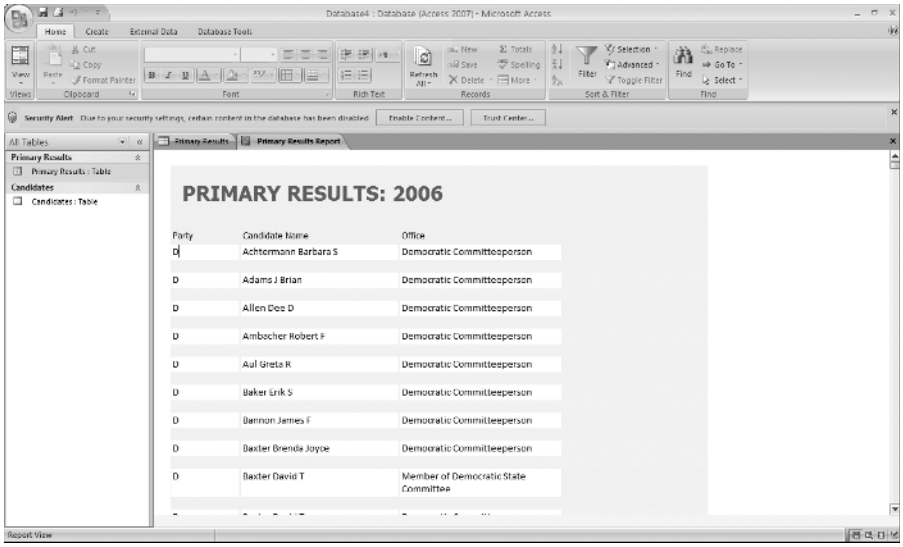

Figure 1-4: The Report Wizard creates more elaborate (yet simple) reports, like this one.

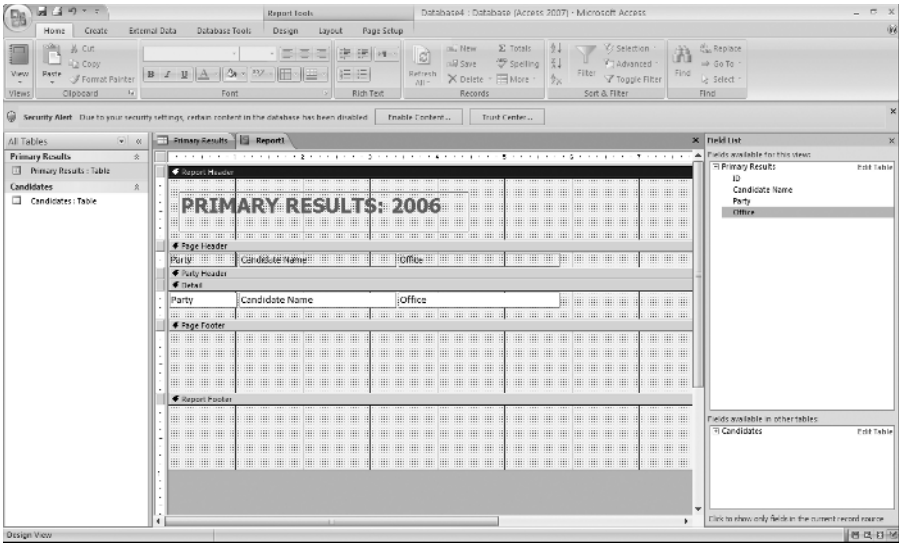

Figure 1-5: You *can* avoid Design view, but to really customize things, you'll need it.

So, you can create any kind of custom report in Access, using any or all of your database tables and any of the fields from those tables, and you can group fields and place them in any order you want:

- With the Report Wizard, you can choose from several preset layouts for your report, and it can all be customized row by row, column by column.
- Quick Format buttons apply preset designs to existing reports.
- If you want to place your personal stamp on every aspect of your report, you can use Design view to
  - Add titles, instructional or descriptive text boxes, and graphics.
  - Set up customized headers and footers to include any information you want to appear on all the report's pages.

If all this sounds exciting, or at least interesting, then you're really on the right track with Access. The need to create custom reports is a major reason to use Access, and you can find out about all these reporting options in Chapters 14 through 17. That's right: four whole chapters on reporting — it *must* be a big feature in Access!

How Access Works and How You Work with It

When you look at all the applications in Microsoft Office — Word, Excel, PowerPoint, Outlook, and of course, Access — you'll see some features that are consistent throughout the suite. There are big differences, too, and that's where books like these come in handy, helping you deal with what's different or not terribly obvious to a new user.

Access has several features in common with the rest of the applications in the Microsoft Office suite. You'll find the same buttons on several of the tabs, and the Quick Access toolbar, demonstrated in Chapter 2, appears in all the applications, as do the items on the menu.

If you already know how to open, save, and print in, say, Word, you're probably ready to do the same things in Access without any difficulty.

To make sure you're totally Access-ready, here are the basic procedures to make sure that you have a solid foundation on which to build.

Opening Access

Access opens in any one of several ways. So, like a restaurant with a very comprehensive menu, some people will love all the choices, and others will say, "I can't decide! There are just too many things to choose from!" Of course, the multiple ways to open Access aren't designed to suit any diner's palate, but to accommodate all the different situations Access users find themselves in.

Now, you'll run into situations in which one of the ways is the glaringly best choice — hands down, that one will be the way to go. But what if you've never heard of it? You'll be trying to find my phone number (I'm unlisted — ha!) so you can give me a piece of your mind. So to acquaint you with *all* your choices, so you'll be ready for any situation, here are all the ways that you can open Access:

- Click the Start menu button (in the lower-left corner of the screen) and choose All Programs➪Microsoft Office➪Microsoft Office Access 2007.

  Figure 1-6 shows my Start menu. I have a lot of programs, many of which you may not have; don't worry about that — just focus on the Microsoft Office submenu and make your choice from that.

- If you've recently used Access, it's listed on the left side of the Start menu (see Figure 1-7). Just choose Start➪Microsoft Office Access 2007, and Access opens.

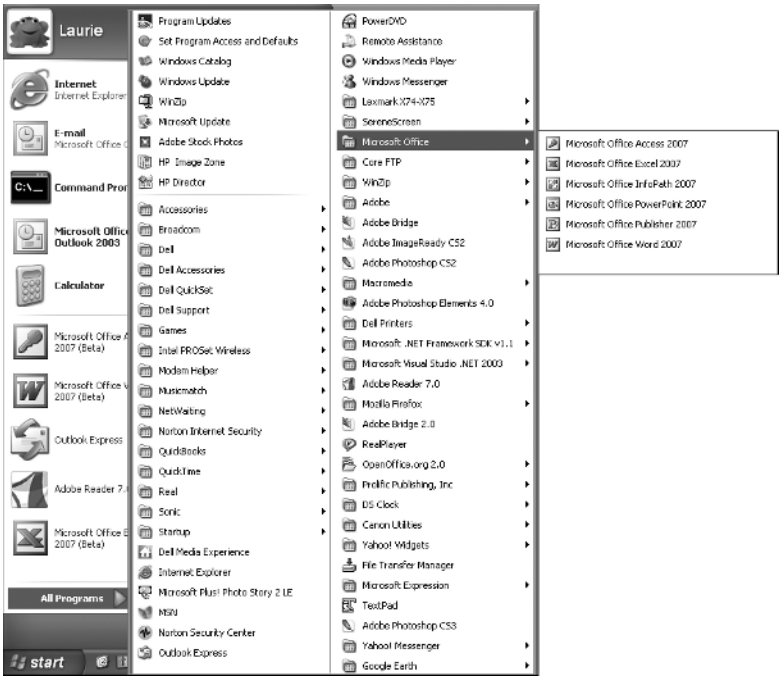

Figure 1-6: The Windows Start menu offers all the Microsoft Office applications in one submenu.

Figure 1-7: Been there, done that — and the Start menu knows it.

- Double-click any existing Access database file on your Desktop or in a folder (as shown in Figure 1-8). Access opens automatically.

  Access 2007 will open the database files you created with previous versions of Access, and should support whatever features are employed within the database. All your tables should open properly, and reports, forms, and queries should all work fine, too.

- If some helpful person has added Access to the Quick Launch toolbar (on the Windows Taskbar), you can click the Access 2007 icon (it looks like a pink key) and there you go. Access opens for you right then and there.

Does having an Access icon on the Taskbar sound extremely convenient? It is! To add the icon, follow these steps:

1. **Choose Start⇨Microsoft Office.**
2. **Hold down the Ctrl key and click and drag the Access menu command down to the Quick Launch bar.**

   A black I-beam will appear where you point with your mouse on the bar, indicating where the new icon will go.

3. **Release the mouse button and then the Ctrl key**

   You've got yourself single-click access to, well, *Access.*

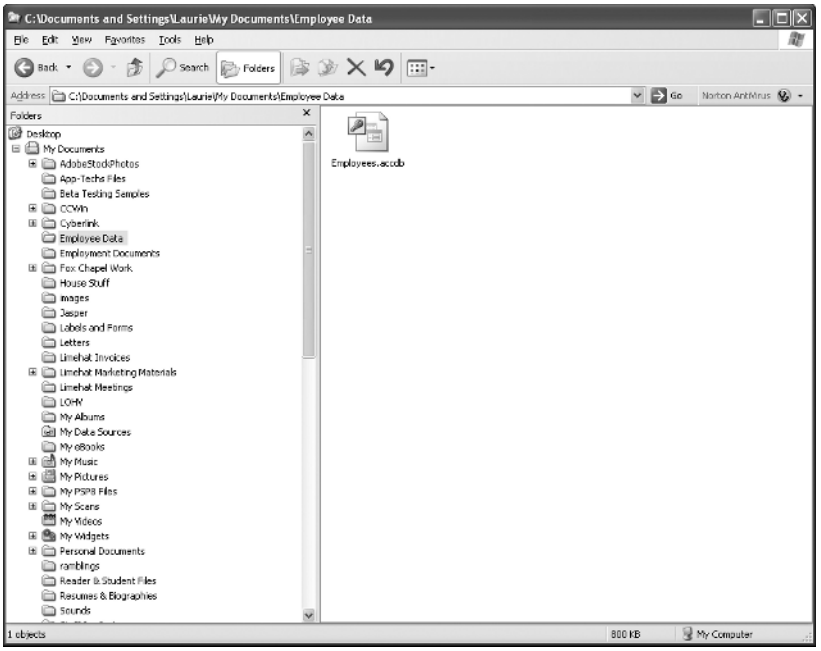

Figure 1-8: Double-click an Access database file, and Access opens right up.

Selecting a starting point

So Access is open, and assuming you opened it from the Start menu or from the Quick Launch bar, you're staring at the Access interface, which includes some features whose purposes may elude you or that you may not know how to use. Hey — don't worry — that's why you're reading this book!

You can find out more about all the tabs and buttons, panels and menus, and all that fun stuff in Chapter 2 — for now, just look at the ways Access lets you get started with your database, be it an existing one that needs work or a new one you have all planned out and ready to go.

Opening an existing database

Well, this is the easy one. If a database already exists, you can open it by selecting it from the Open Recent Database list on the far right side of the Access window (see Figure 1-9). Just click once on the database in the list and it opens, listing its current tables, queries, reports, and forms on the far left side of the window.

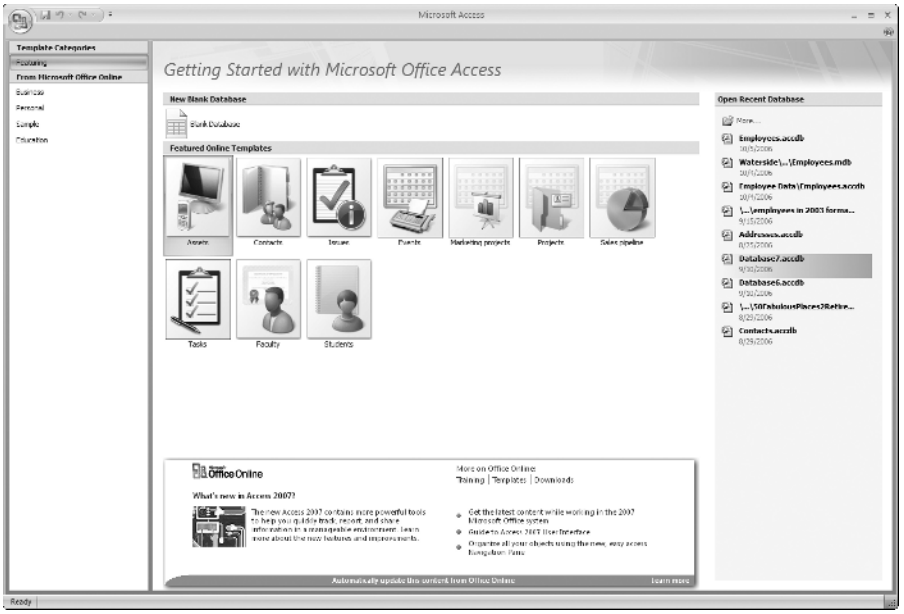

Figure 1-9: Pick your recently used database from the list on the right and see its parts listed on the left.

When the database is open, you can open its various parts just by double-clicking them in that left-most panel, and whatever you open appears in the main, central part of the window. Figure 1-10 shows a table, ready for editing.

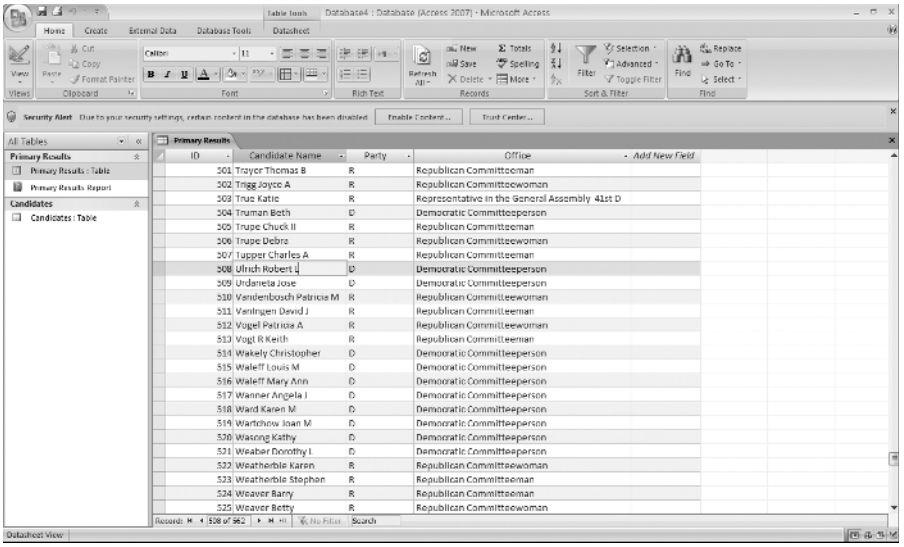

Figure 1-10: An existing table, ready for records.

After you open a table, you can begin entering or editing records — and you can read more about how that's done in Chapter 6, where the different ways to edit your data and tweak your tables' setups are demonstrated. If you want to tinker with any existing queries, these, too, open just by clicking them in the list on the left side of the workspace. For more information on queries, check out Chapters 11 and 12. You can do simple sorting and look for particular records with the skills you'll discover in Chapter 9.

Starting a new database from scratch

So you don't have a database to open, eh? Well, don't let that stop you. To start a new one, all you have to do is open Access using any of the techniques listed earlier in this chapter — except the one that starts Access by opening an existing database file.

A database file holds *all* your database components. Everything associated with the data is part of the database, including

- All the tables that house your data
- Queries that help you search and use the data
- Reports that show what your data is and what it means
- Forms that allow people to view, enter, and edit data

After Access is open, you can click the Blank Database button (shown in Figure 1-11) to get started. Clicking that button opens a panel on the far right, which allows you to name your database and select a home for it. For the specific steps in this process, read on:

1. **With Access open and the "Getting Started with Microsoft Access" screen displayed, click the Blank Database button under the heading New Blank Database.**

   A panel appears on the right side of the Access window asking for a name for your new database (see Figure 1-11).

Figure 1-11: The far-right panel lets you name and choose a home for your database.

2. **Replace the default** `DatabaseX.accdb` **with whatever name you want to use.**

   The *X* in the preceding filename represents a number — Access assigns a consecutive number to the default names, based on any previously created databases.

   If this is your absolute first one in a fresh installation of Access, the filename offered in this panel will be `Database1.accdb`. Note that the "accdb" extension appears automatically — you don't need to type that yourself.

3. **As needed, choose a new location for the database file by following these steps:**

   a. *Click the little file folder (with an arrow on it) found to the right of the File Name box.*

      This opens the File New Database dialog box, shown in Figure 1-12, which you can use to navigate to the drive/folder where your database should live.

   b. *Use the Save In drop list or the panel on the left side of the dialog box to choose a folder for your database. Once you're looking at a list of*

folders, click once to select the one in which you want to store your database.

c. *As needed, click the New Folder button (a folder with an asterisk on it) and name your new folder — click OK to return to the File New Database dialog box.*

d. *Click OK — the name you gave the file in Step 2 is applied, and the file is saved to the location you chose.*

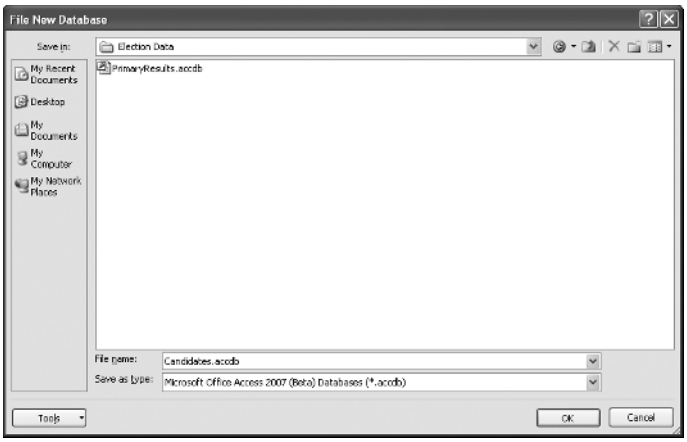

Figure 1-12: Name and choose a location to store your database file.

4. **Click the Create button.**

   A blank table opens with the first cell in the grid (the first field in the first record) selected.

At this point, you can begin entering records into your first table or begin naming your fields and setting them up. The field names go in the topmost row (the "ID" field is already created), and "Add New Field" is atop the column with the active cell. If you choose to save your table now (right-click the Table1 tab and choose Save), you can name your table something more useful than "Table1."

Starting with a template

Access provides templates, or database cookie-cutters, for your new database needs. You'll find a list of template categories on the left side of the Access window when you first open the application. As shown in Figure 1-13, you can choose a template category on the left (which changes the displayed icons in the center of the workspace), or pick a particular template from the icons representing the templates available at Microsoft Office Online. Everything from Assets and Inventory to Marketing to Accounting and Finance is represented, so chances are, you'll find just what you need.

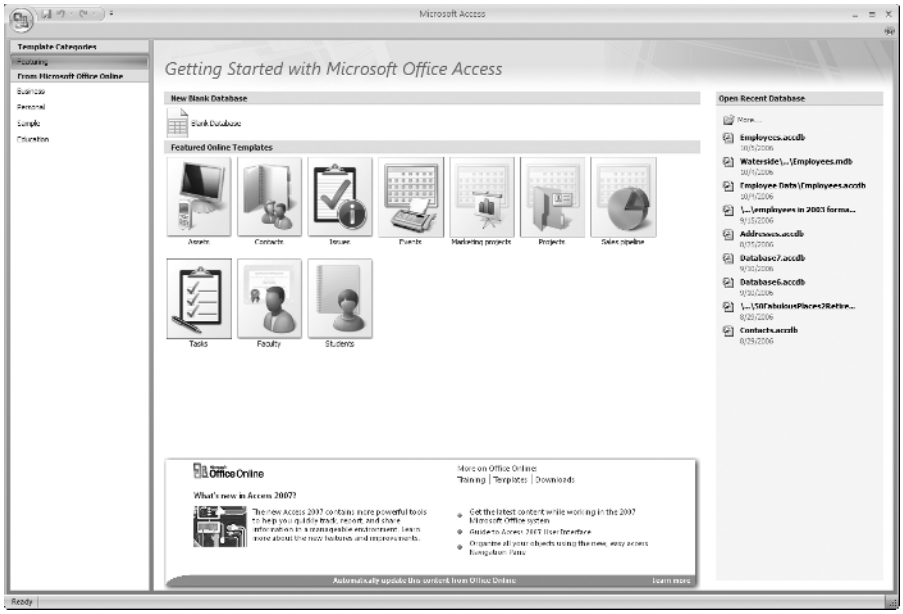

Figure 1-13: Pick a template, any template.

What about those big icons in the middle of the Access window? As shown in Figure 1-15, there's also a big Microsoft Office Online tab in the middle of the window, with three icons: Customer Service Database, Marketing Projects Database, and Gradebook Database. Covering everyone from someone in sales to a school teacher, these templates are also accompanied by a link to more online templates (see "More on Microsoft Office Online" and the three links beneath it, also shown in Figure 1-14).

When you click a template category in the left-hand list "From Microsoft Office Online," the center area in the workspace changes. It shows the name of the category you clicked and a series of template icons for that category. For example, if you click Business, you see the icons shown in Figure 1-15, where you can pick from different business databases — Assets, Contacts, Events, Issues, and so on.

Figure 1-14: There are more templates here and online!

Figure 1-15: Make a template selection, and relevant icons appear.

If you click an icon (such as Marketing Projects), the right-hand panel discussed earlier (when we started with a new, blank database) activates, and you can now give your new database a name and click the Download button to download it from the Web (see Figure 1-16).

After the template is downloaded (or if it was a template that was available within your installed copy of Access and no download was needed), you can start building data into it. What's different than the previous procedure that uses this right-side panel to build a database from scratch (naming it, choosing a place to store it) is that instead of having a blank "Table1" and nothing else, the template gives you pre-made tables, reports, queries, and forms (in various combinations and numbers, based on the template you chose) and they're all set up — all *you* have to do is start entering records. Figure 1-17 shows the populated list of database components — a table and three reports — that comes with the Contacts database template.

Just like the table you built from scratch, the template-based tables need to be populated with data. You can change field names (see Chapter 5 for directions) and add and remove fields, too. After you tweak them to be appropriate for *your* database, you can begin entering records, one field at a time.

Figure 1-16: Download a template from the Web and give it a name that suits your needs.

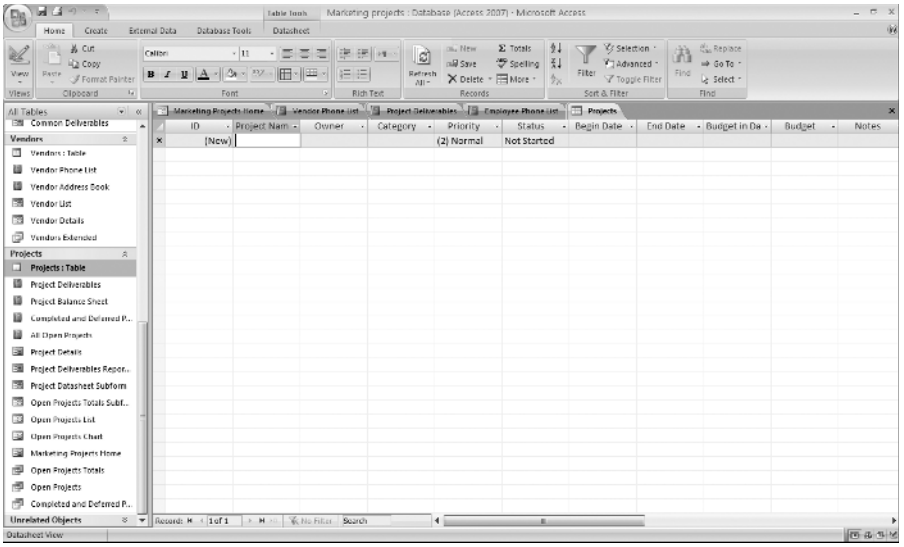

Figure 1-17: The basic fields for each table are already set up for you, along with reports based on the table's fields.

Now what?

So you've got a new database started. What do you do now? You leaf on over to Chapter 2, where you can find out more about all the tools that Access offers — tools that are on-screen almost all the time and those that are specific to the way you chose to dig in and start that database.

In Chapter 3, you actually begin building a database, setting up tables and the fields that give them structure. And you'll figure out which tables you need to set up, putting that great plan that this chapter helped you build to work!