



A black and white photograph of a mountain range. The mountains are covered in snow and have a rugged, layered appearance. In the foreground, there are dark, dense evergreen trees. In the upper right corner, a full moon is visible in the dark sky. The overall scene is serene and majestic.

Chapter

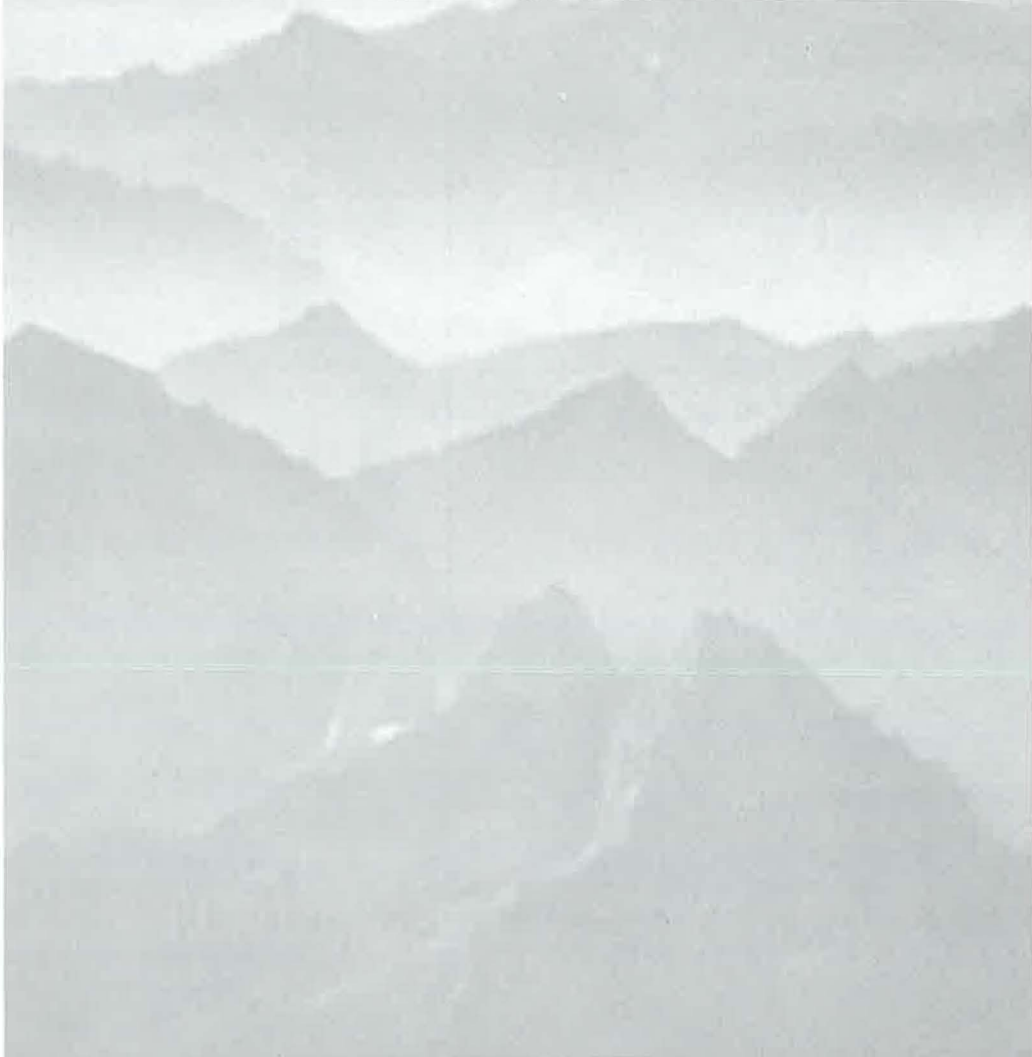
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Understanding Databases



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Understanding Databases

Most people are accustomed to working with *information*, which is *data* that's organized into some meaningful form. You probably can recognize the information shown in Figure 2.1 as an invoice. You can find the customer's name and address, the products that person ordered, and just about any other information you might want simply by looking at the invoice. The invoice as a whole presents business information—namely, what happened in a transaction—by meaningfully drawing together various related items of data.

Suppose you want to store all your invoices on the computer. You might consider buying a scanner and scanning each invoice into a computer file. Later, you could display a copy of the invoice on the screen and print it. You wouldn't even need a database management system; all you would need is a scanner and a simple graphics program.

Why Store Data?


The problem with the scanner approach is that *all* you can do is retrieve, view, and print the invoices. You can't analyze or reformat the data on the invoice. For instance, you can't print mailing labels, envelopes, or form letters for all your customers. You can't analyze your orders to view overall sales. Why not? Because the computer doesn't have the eyes or brains it takes to look into the invoice and pull out certain types of information. Only you can do that job because you do have eyes and a brain.

FIGURE 2.1

A sample printed invoice. You probably can find whatever information you need about the transaction on this sheet of paper because you recognize different types of information (name, address, products, order total) based on their context.

Invoice

E & K Sporting Goods
 1337 West 47th Street
 Fritley, NC 28228
 USA
 Phone: (704) 555-1555 Fax: (704) 555-1556



Invoice Date	8/31/95	Contact Name	Shirley Ujest
Order ID	16	PO Number	78
Order Date	2/1/95	Terms	Net 10 days.
		Customer ID	4
		Ship Date	2/1/95
		Shipping Method	Federal Express

Ship To:
 WorldWide Widgets
 187 Suffolk Ln.
 Boise, ID 83720
 USA
 (208) 555-8097

Bill To:
 WorldWide Widgets
 187 Suffolk Ln.
 Boise, ID 83720
 USA
 (208) 555-8097

Product ID	Product Name	Quantity	Unit Price	Discount	Line Total
3	Billiard balls	2	\$127.45	0.00%	\$254.90
2	Football	1	\$5.65	0.00%	\$5.66

Subtotal	\$260.56
Freight Charge	\$2.00
Sales Tax	\$0.00
Order Total	\$262.56
Total Payments	\$10.00
Total Due	\$252.56

You'll never go wrong with our products along!

Flexibility Is the Goal

If you want the flexibility to display, print, and analyze your information in whatever format you wish, you first need to break down that information into small units of *data*. For example, a person's last name is one unit of data. That person's zip code is another. The name of one product the customer purchased is another unit of data, and so forth.

After breaking the information into discrete units of data, you can use a database management system, such as Access, to analyze and present that data in any way you wish. If each person's surname is a discrete unit of data, for example, you can tell Access to alphabetize your customers by name or to find the order that Smith placed yesterday.

You can put the individual units of data into any format you wish—for example, mailing labels, envelopes, or invoices.

You Use Tables to Store Data

In Access, you must break all your information into data that's stored in tables. A *table* is just a collection of data that's organized into rows and columns. You can put any information that's available to you into a table.

Let's forget about invoices for a moment and focus on storing information about customers. Suppose you have a Rolodex or card file containing customer names and addresses as shown below. For each customer you maintain the same pieces of information—name, address, and so on.



How can you break down the information on this Rolodex into raw data that's neatly organized as a table? Easy. Just make a column for each data element, such as last name or state, and then list the corresponding data elements for each customer in rows, as shown in Figure 2.2.

FIGURE 2.2

Names and addresses, which might once have been on Rolodex cards, organized and typed into an Access table.

The screenshot shows a Microsoft Access window titled 'Microsoft Access - [My Customers : Table]'. The window has a menu bar (File, Edit, View, Insert, Format, Records, Tools, Window, Help) and a toolbar with various icons. Below the toolbar is a table with the following data:

Mr/Mrs	FirstName	LastName	Address	City	State	PostalCode	Phone
Mr.	Wilbur	Sturningi	P.O. Box 555	Lander	WY	82520-	(307)555-4680
Dr.	Shirley	Ujest	187 Suffolk Ln.	Boise	ID	83720-	(208)555-8097
Ms.	Susita	Echumack	2817 Milton Dr.	Albuquerque	NM	87110-	(505)555-5939
Dr.	Anita	Adams	5356 E. 20th St.	Santa Fe	NM	87110-3857	(505)555-1232
Ms.	Sheila	Sturningi	P.O. Box 23981	San Diego	CA	92575-4747	(619)555-4725
Mr.	Andy	Adams	87 Polk St.	San Francisco	CA	94117-	(415)555-5938
Mr.	Hanley	Strappman	2743 Bering St.	Anchorage	AK	99508-	(907)555-7584

At the bottom of the window, there is a status bar showing 'Record: 14' and '7 of 7'. The 'Datasheet View' button is visible in the bottom right corner.

Terminology Time

Now is as good a time as any to get some terminology out of the way so that we can talk about tables and databases more precisely. Here are four terms you'll see often as you work with any database management system:

Table A collection of data organized into rows and columns.

Field A single unit (or column) of information in a table. The sample table in Figure 2.2 consists of fields named Mr/Mrs, FirstName, LastName, Address, City, State, PostalCode, and Phone, as you can see by looking across the top of the table.

Record The set of all data fields for one row of the table. The sample table in Figure 2.2 contains seven filled records: one for a customer named Andy Adams, another for Anita Adams, and so forth.

Database Contrary to what some people think, a database is not a table. A database is a collection of *all* the tables and other objects (such as forms and reports) that you use to manage data.

We'll tell you more about why a database might contain several tables later in this chapter.

The More Fields, the Better

Looking back at Figure 2.2, you may be wondering *why* we bothered to break the information into so many different fields. Isn't using the three fields Mr/Mrs, LastName, and FirstName a little excessive?

Not really, because organizing the data into separate fields now will make it easier to arrange the data in a meaningful form later. Here are some ways to arrange the data in the first record of the table shown in Figure 2.2:

Mr. Andy Adams
Mr. Adams
Adams, Andy
Dear Andy:
Andy Adams
Yo Andy!

As you'll see in later chapters, you can rearrange the table columns in any order you wish, and you can use forms and reports to organize table data into any format.

Why Use Multiple Tables?

Earlier we said that a database can contain many tables. So now you may be wondering why you'd want to put more than one table into a database. The simple reason is that it's easier to manage data if all the information about a particular subject is in its own table. For example, if you're designing a database to track membership in an organization, you might create separate tables such as these:

All Members
Committees
Payments Made
Your Company or Organization
Membership Types and Dues
Committee Members
Payment Methods

If you're using Access to manage orders for your company's products, you might use these tables:

- Customers
- Order Details
- Payment Methods
- Products
- Employees
- Orders
- Payments
- Shipping Methods

Remember that these tables are suggestions only. Access really doesn't care *what* type of data you put into tables. All that matters is that you find a way to break the information you need to manage into the tabular fields-and-records format.

**TIP**

The Database Wizard and Table Wizard can create many types of tables for you automatically. These Wizards break your database into tables and divide your tables into separate fields with only a small amount of guidance from you. The process is so fast and painless that you'll be creating complete databases in no time. You'll learn more about these Wizards in Chapters 3, 5, and 6.

When to Use One Table

Until you get the hang of how to structure a database, deciding whether data should go into one table or several tables is a bit difficult. But this general rule of thumb always applies: If a one-to-one correspondence exists between two fields, put those fields into the same table.

For example, it makes sense to put all the My Customers information in one table because there's an exact one-to-one dependency between fields. That is, for every one customer there's one customer name, one address, one city, and so forth.

When to Use More Than One Table

Just because you put all your customer information into a single table doesn't mean you should put all the information for an entire business in one table. After all, you wouldn't put all the information for your customers, orders, products, and so forth on one Rolodex card. Likewise, you wouldn't put all that information into a single table.

A better plan is to put customer data in one table, product data in another, and order data in yet another because no one-to-one correspondence exists among these categories of information. Any one customer might place many orders, and any order might be for many products. So here we have some natural one-to-many relationships among the subjects of your tables.

The One-to-Many Relationship

The *one-to-many relationship* describes a situation in which every item of data in a table may be related to many items of information in another table. For example, each one of your customers might place many orders (at least you hope so!). Therefore, it makes sense to put all your customer data in one table and data about the orders they place in another table, as shown in Figure 2.3. (In the figure, only the first few fields from each table are shown. Additional information about customers and orders is scrolled off the screen.)

If we do use more than one table, however, we also need a way to determine exactly *which* customer goes with each order. And that's where the primary key field comes in.

FIGURE 2.3

A one-to-many relationship between orders and customers (any one customer might place many orders). The Customer ID field in the My Orders table identifies which customer placed each order.

Microsoft Access

File Edit View Insert Format Records Tools Window Help

My Orders : Table

Order ID	Customer ID	Order Date	PO Number	Ship Name
6	2	2/1/97	122	RNAA Associates
16	4	2/1/97	78	WorldWide Widgets
21	5	2/1/97	222	University of the Elite
1	1	2/2/97	52	ABC Corporation
17	4	2/11/97	98	WorldWide Widgets
11	3	2/18/97	55	Reese Clinic
12	3	2/25/97	124	Reese Clinic
18	4	2/28/97	105	WorldWide Widgets

My Customers : Table

Customer ID	Mr/Mrs	FirstName	LastName	Address	City	State
1	Mr.	Wilbur	Stumingi	P.O. Box 555	Lander	WY
2	Dr.	Shirley	Ujest	187 Suffolk Ln.	Boise	ID
3	Ms.	Susita	Schumack	2817 Milton Dr.	Albuquerque	NM
4	Dr.	Anita	Adams	5356 E. 20th St.	Santa Fe	NM
5	Ms.	Sheila	Stumingi	P.O. Box 23981	San Diego	CA
6	Mr.	Andy	Adams	87 Polk St.	San Francisco	CA
7	Mr.	Hanley	Strappman	2743 Bering St.	Anchorage	AK

Record: 7 of 7

Datasheet View

The Primary Key Field

The *primary key field* in a table uniquely identifies each record in that table. In the My Customers table shown in Figure 2.3, only one customer has the ID 4. Even if that table has other people named Shirley Ujest from other cities, only one customer has the ID 4. When we added the Customer ID field to the My Customers table we made it the primary key so that Access would make sure that no two people were given the same Customer ID number.



TIP

Your social security number is an example of a primary key field because it uniquely identifies you on the government's databases. Even though other people in the country may have the same first, last, and even middle name as you, *nobody* else in the country has the same social security number.

Notice too that the information in the My Orders tables is compact. For example, the customer's honorific, first name, and last name aren't repeated in the My Orders table. All the My Orders table needs to get that information is the customer's unique ID number. Access can then dig up any information about that customer just by looking up the corresponding record in the My Customers table.

It's Easier Than It Looks

This business of breaking down information into data in separate tables confuses many beginners, and it has been known to end the careers of many budding database designers. But there's no need to throw in the towel if you're feeling uneasy. As you'll see in the following chapters, Access will help you figure out how to break your information into related tables, and it will help you define primary key fields for the tables. So all you really need to understand now is that

- Your database is likely to contain several tables.
- Your tables will use a primary key field to uniquely identify each record in the table.

Where to Go from Here

Remember that the reason for breaking down information into raw data is to give you the flexibility to analyze and display data any way you wish. Once your data is organized into a database on disk, there's no limit to the type of *information* you can glean

from that data (Chapters 10 through 14 will explain more about analyzing and displaying data).

Where should you go next in this book? Here are some suggestions:

- To learn the basics of Access in a hurry, try the hands-on practice in Chapter 3. In just minutes, you'll create a fully functional database—complete with data, forms, reports, and a push-button menu for managing it.
- To get an idea about how Access and the other programs in the Microsoft Office suite can work together, check out Chapter 4.
- To find out how to create a database for storing your tables, proceed to Chapter 5. (All tables must be stored in a database.)
- To find out how to create tables for data that's all on paper and not on any computer, see Chapter 6.
- To learn how to manage data that's already on the computer in some database format (such as Access, dBASE, Paradox, SQL, text, HTML, and so forth), jump to Chapter 7. You may be able to use that data without creating your own tables from scratch.





Chapter

3

Access in an Evening





Chapter

3

Access in an Evening



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Access in an Evening

T

his chapter is a hands-on guided tour of Access databases in seven quick lessons. These lessons probably won't

make you an Access guru, but they'll give you both the big picture of what Access is all about and direct experience in using its most important features.

During these lessons, you'll use Wizards to create an application for managing information about your contacts complete with data, forms, reports, and a push-button Switchboard form that makes the database a cinch to use. You'll also learn how to enter data, sort it in alphabetical order, find specific information, customize forms and reports, isolate specific information by using queries, and tweak the descriptions that appear on the Switchboard form.



Access offers many automated Wizards to help you set up new databases, tables, forms, reports, and queries in a flash. We strongly encourage you to use Wizards, rather than from-scratch methods, to create most new objects, especially if you're new to Access or to database management. Once an object exists, you can tweak it as necessary. This "create it with a Wizard and then refine it" approach is sure to save you time, and it will help you learn Access more quickly.

Before You Start These Lessons

Before you start these lessons, you already should have your basic Windows skills down pat—using a mouse; sizing, moving, opening, and closing windows; using dialog boxes, and so on. (If you haven't already done so, you should browse through Chapters 1 and 2 to get an idea of what you'll be doing here.)

For best results, give yourself 15 to 30 *uninterrupted* minutes to finish each lesson. If you need to pause after a lesson, see "Taking a Break" at the end of Lesson 1. To resume with the next lesson, see "Returning from a Break."

Lesson 1: Creating a Database and Tables Automatically

The first step to using Access is to start the program and go to the Microsoft Access startup dialog box or the main Microsoft Access window. If you don't know how, see Chapter 1 for help.

Creating an Instant Database

During these hands-on lessons, you'll create a new database (named Address Book Lessons) that can help you manage information about your contacts. You'll use the Database Wizard to create this database. Here goes:

1. If you're starting from the Microsoft Access startup dialog box, choose Database Wizard and then click on OK.

Or

If you're starting from the main Microsoft Access window, choose File ► New Database from the menu bar.

2. Click on the Databases tab in the New dialog box and then double-click on the Address Book icon.



NOTE

In Windows 95, file name extensions for registered file types usually are hidden. If you've chosen *not* to hide those extensions, Access and other Windows 95 programs will show them in various dialog boxes. For example, the icon for the Address Book database will be named Address Book.mdb when file name extensions are displayed. For more about showing or hiding file name extensions, see Chapter 5. In this book, we'll assume file name extensions are hidden.

3. Type **Address Book Lessons** in the File Name text box of the File New Database dialog box and then click on Create or press Enter.

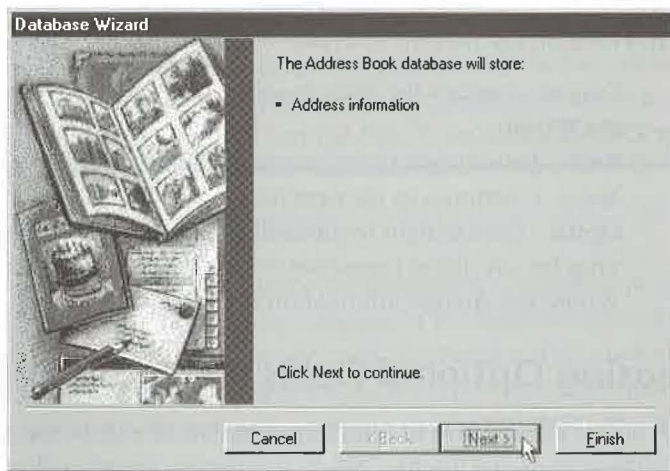
**NOTE**

Access normally looks for and stores your databases in a folder named \My Documents on the disk drive where Access is installed. To change this default location, open any database and choose Tools ► Options, click on the General tab, and specify a folder name in the Default Database Folder text box. To return to the default setting, change the folder name in the Default Database Folder text box back to. (a period). See Chapter 15 for more details.

You'll see an empty database window titled *Address Book Lessons: Database*. After a brief delay, the first Database Wizard dialog box will appear atop the database window, as shown in Figure 3.1. This dialog box tells you something about the database you're about to create.

FIGURE 3.1

The first Database Wizard dialog box appears on top of the Address Book Lessons: Database window.



Understanding the Wizards

The Database Wizard will ask you a few questions and then use your answers to build tables, forms, and reports automatically. Read the first Database Wizard dialog box and then click on Next. The second dialog box, shown in Figure 3.2, asks which fields to include in each table and whether to include sample data.

FIGURE 3.2

The second Database Wizard dialog box lets you choose optional fields for tables in the database and whether to include sample data.



All the Access Wizards work in similar ways, and they have the same buttons at the bottom of each dialog box (see Figure 3.2). Just follow the directions, answer questions, and click on the buttons described below until you finish using the Wizard:

Cancel Cancels the Wizard and returns to wherever you were before you started the Wizard.

Back Returns you to the previous Wizard dialog box.

Next Continues to the next dialog box.

Finish Goes straight to the last Wizard dialog box. The Wizard will use default settings for any dialog boxes that it skips. The Finish button is available only when the Wizard has enough information to complete its job.

Choosing Optional Fields for Your Tables

A *field* is a single unit of information stored in a table; for example, a person's name, address, or phone number. When you use the Database Wizard to create a database, all the necessary tables and fields will be defined automatically and you don't have to make any changes. But if you do want to include optional fields, or omit fields, here are the steps to follow:

1. Scroll to and click on the name of the table you want to work with in the tables list at the left side of the dialog box shown in Figure 3.2. (The Address Book database contains only one table, and it's selected already.)

2. Scroll to the field you want to work with in the fields list at the right side of the dialog box. To include the field, check the box next to its name. To omit the field, clear the check mark from the box. As usual in Windows, clicking on a checked box clears the check mark; clicking on an empty checkbox puts a check mark in the box.
3. Repeat steps 1 and 2 as needed.

For these lessons, we'll assume you've chosen the fields that the Wizard suggested initially. That is, italicized fields are not checked, and non-italicized fields are checked.

Including Sample Data

The Database Wizard can add some sample data to your database. Using sample data will help you learn to use the database more quickly, and it will save you time. (You can delete the sample data later.)

We want you to start with some sample data, so please select (check) the box next to Yes, Include Sample Data (refer to Figure 3.2); then click on the Next button to continue to the third Database Wizard dialog box.



If you forgot to check the Yes, Include Sample Data box before clicking on the Next button, it's easy to recover. Just click on the Back button in the next dialog box that appears, check the Yes, Include Sample Data box, and then click on Next.

Choosing a Style for Forms

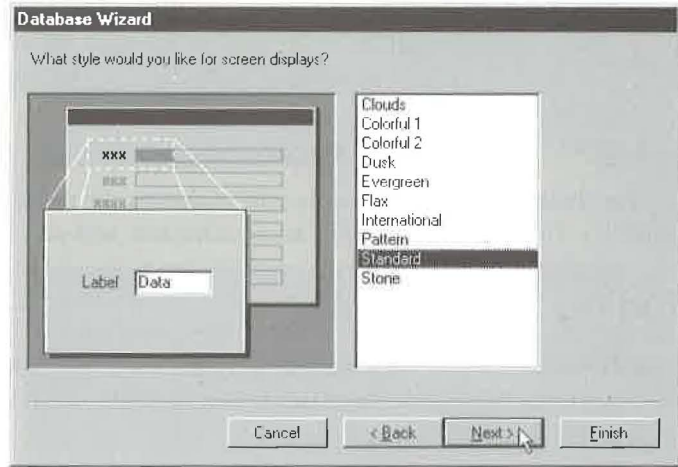
The third Database Wizard dialog box lets you choose a background color and general style for database forms (called *screen displays* in the Database Wizard dialog box). In Figure 3.3, we've selected the Standard style. To choose a style, click on it in the list of styles. The left side of the dialog box will show a sample form that reflects your current choice. Preview any styles you wish and then choose Standard, which is the style used throughout this chapter. When you're ready to continue, click on the Next button.

Choosing a Style for Printed Reports

In the fourth Database Wizard dialog box, you'll choose a general style for printed reports (see Figure 3.4). Again, you can click on a style in the list and preview a sample until you find a style you like. Pick a style that appeals to you (or use the Compact style that we chose) and then click on Next.

FIGURE 3.3

The third Database Wizard dialog box with the Standard style selected for forms.

**FIGURE 3.4**

The fourth Database Wizard dialog box with the Compact report style selected.

**NOTE**

In Chapter 13 you'll learn how to set up your own form and report styles and how to add them to the list of predefined styles. You'll also find out how to reformat an existing form or report with a different style.

Choosing a Database Title and Adding a Picture

In the fifth Wizard dialog box (see Figure 3.5), you can choose a different title for your database. This title will appear on the Main Switchboard form (which you'll see soon) and on all reports. For now, Address Book is fine, so leave the title unchanged.

You also can include a picture on all reports. Just for grins, add a picture by following these steps:

1. Click on Yes, Include A Picture to check that option and then click on the Picture button.
2. Use the techniques discussed in Chapter 1 to locate the folder named `\MSOffice\Clipart` in the Insert Picture dialog box (see Figure 3.6). Assuming you did a standard installation, you can just type `\msoffice\clipart` in the File name text box and press Enter.
3. Make sure the Preview button is selected (pushed in) on the dialog box toolbar and then click on a file name in the left side of the dialog box. Each time you click on a file name, a preview of the picture it contains will appear in the preview area. The example in Figure 3.6 shows the Music file name and preview selected.
4. Click on OK when you're satisfied with the picture you've selected. The sample picture will appear in the Database Wizard text box, next to the Picture button.
5. Click on Next to continue to the next dialog box.

FIGURE 3.5

The fifth Database Wizard dialog box lets you choose a title and a picture to use for your database. In this example, we've used the suggested title and chosen the Music picture from the `\MSOffice\Clipart` folder.

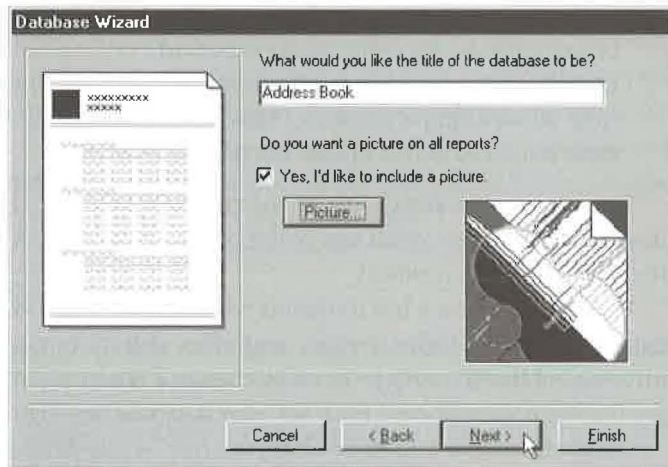
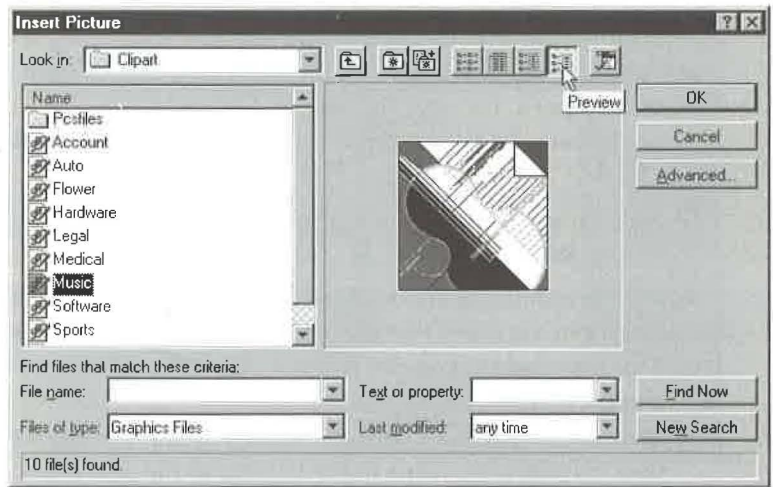


FIGURE 3.6

After clicking on the Picture button in the dialog box shown in Figure 3.5, you can search for and preview pictures. The list of graphics will depend on which software you've installed and which folder you've chosen to search.



Finishing Up

That's all the information the Wizard needs. In the final dialog box, you have two options:

Yes, Start The Database Leave this option checked if you want to go to a Switchboard form that lets you start working with your database immediately. Clear this option if you want to go directly to the database window, bypassing the Switchboard. For now, leave this option checked.

Display Help On Using A Database Checking this option will display online help about using a database. Leaving this option unchecked won't display any extra help. Leave this option unchecked for now.

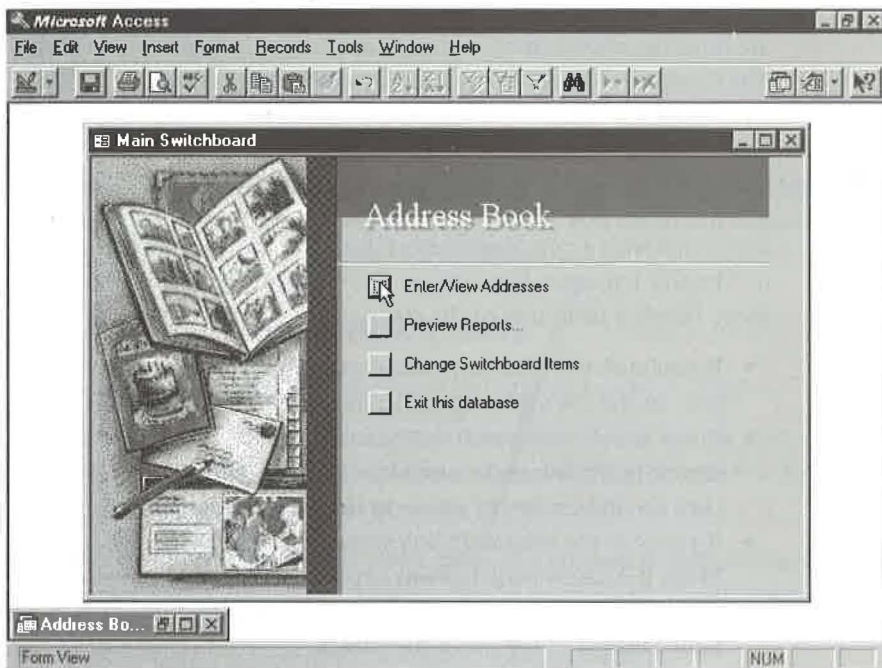
To create the database with all the choices you made, click on the Finish button now. (If you need to revisit any of the previous Database Wizard dialog boxes, click on the Back button as needed.)

Wait patiently for a few moments while the Database Wizard conjures up an entire database of tables, forms, reports, and other objects. (On-screen bars will keep you informed of the Wizard's progress as it works.) When the Wizard finishes its job, you'll see the Main Switchboard form for your database (see Figure 3.7).

Congratulations! You've created your first Access database. Easy, isn't it? In the following lessons, you'll learn how to work with and customize your new database.

FIGURE 3.7

The Main Switchboard form gives you all the options you need to create and manage Address Book data. Access creates a Main Switchboard form automatically any time you use the Database Wizard to create a non-blank database.



At Your Leisure

To learn more about databases and tables, see Chapters 5 through 7 of this book. Or go to the Access Help Contents, open the *Creating A Database And Working In The Database Window* book, and then peruse the subtopics. Or just skip all that and move on to Lesson 2.

If you want to take a break at the end of this or any other lesson, close your database as discussed next under "Taking a Break." Before you resume a lesson, reopen the Address Book Lessons database (see "Returning from a Break").

Taking a Break

Anytime you want to take a break at the end of a lesson, do one of these steps to save your work and close the database (*before* you turn off the computer!):

- If you're viewing the Main Switchboard form, shown in Figure 3.7, click on the button next to the last option, Exit this database.
- If you're viewing the database window (see Chapter 1), choose File ► Close from the menu bar or press Ctrl+W or click on the Close button on the database window.

Then, if you're done using Access for a while, exit Access by choosing File ► Exit from the Access menu bar. If you plan to turn off your computer, exit any other programs that are running, choose Start ► Shut Down from the Taskbar, and then choose Shut Down The Computer? ► Yes in the Shut Down Windows dialog box. When the message tells you it's safe to turn off your computer, go ahead and turn it off (if necessary).

Returning from a Break

To resume with a new lesson after taking a break, use any of the techniques you learned in Chapter 1 to open the Address Book Lessons database and its Main Switchboard form. Here's a summary of the steps:

- If you're at the Microsoft Access startup dialog box and you see Address Book Lessons in the list under Open An Existing Database, double-click on that name.
- If you're at the Microsoft Access startup dialog box and Address Book Lessons doesn't appear in the list, make sure More Files is highlighted, click on OK, and then double-click on Address Book Lessons in the list of file names.
- If you're at the Microsoft Access main menu, choose File from the Access menu bar. Then, if Address Book Lessons appears near the bottom of the File menu, click on its name. If it doesn't appear, choose Open Database and then double-click on Address Book Lessons in the list of file names.
- If you're at the Windows 95 desktop and you've used the Address Book Lessons database recently, choose Start ► Documents ► Address Book Lessons.

The Address Book Lessons database will open, and the Main Switchboard form will appear (see Figure 3.7).

Some Important Switchboard and Database Window Tips

These tips are worth remembering as you work with the Address Book Lessons database:

- **To open the Address Book Lessons database window without opening the Main Switchboard first**, hold down the Shift key while you open the Address Book Lessons database. You'll be taken directly to the database window.
- **To open the Main Switchboard form from the database window**, click on the Forms tab on the database window and then double-click on the Switchboard form name.
- **To open the database window without closing the Switchboard form first**, press F11 or click on the Database Window toolbar button or choose Window ► Address Book Lessons : Database from the menu bar.

- To open the database window when it's minimized on the Access desktop, click on the database window's Restore button or double-click on the window's title bar or press F11.

Lesson 2: Exploring the Address Book Lessons Database

Before you enter any data or print any reports, why not explore the Address Book Lessons database and Switchboard forms a little? Because you asked the Wizard to add sample data, you'll have plenty of places to investigate.

Exploring the Address Book Form

Let's start with the first option on the Main Switchboard (refer to Figure 3.7):

1. Click on the button next to Enter/View Addresses. You'll see the Addresses form, which lets you review or change information for each contact. Here's what you can do with the buttons at the bottom of this form:
 - To preview and print a fact sheet about the contact shown on the form, click on the Preview Fact Sheet button. You'll learn more about previewing and printing in Lesson 4. (For now, click on the Fact Sheet report's Close toolbar button or press Ctrl+W to return to the Addresses form.)
 - To dial your contact's phone with your computer's modem, click in the box that contains the phone number you want to dial and then click on the Dial button. An easy-to-use AutoDialer box appears. (For now, click on Cancel if you've opened that dialog box.)
 - To switch between page 1 and 2 of the Addresses form, click on the 1 or 2 button—or click on the Page Up and Page Down key.
2. Click on its Close button or press Ctrl+W to return to the Main Switchboard form when you are finished exploring the Addresses form.

NOTE

In Lesson 4, you'll learn how to add and change data and how to use navigation buttons to move from record to record. For now, just take a look at what's available and don't worry too much about changing any data or viewing other records in the table.

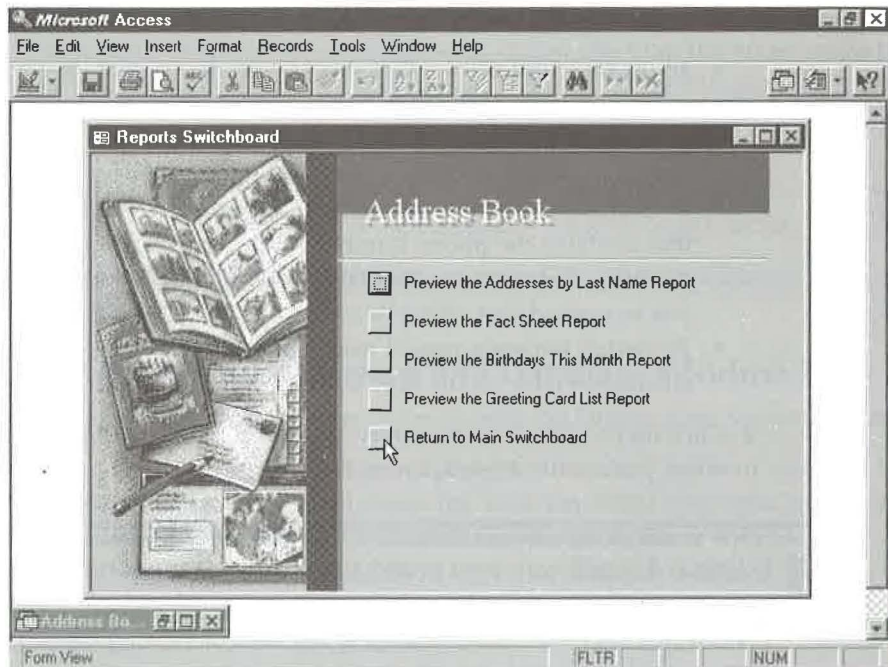
Exploring the Address Book Reports

The Main Switchboard's Preview Reports option lets you preview and print a variety of reports about your contacts. Here are some steps to try:

1. Click on the button next to Preview Reports. A new Reports Switchboard will appear (see Figure 3.8).
2. Click on a button to preview one of the reports (the Greeting Card List, for example). Lesson 5 will show you how to work with reports.
3. Return to the Main Switchboard by clicking on the Close button on the Preview Reports window's toolbar or by pressing Ctrl+W.
4. Return to the Main Switchboard form by clicking on the button next to Return to Main Switchboard.

FIGURE 3.8

These options let you preview or print information about your contacts. The last option returns you to the Main Switchboard form.



Other Buttons on the Address Book Main Switchboard

Figure 3.7 shows two more options on the Address Book Main Switchboard:

- **Change Switchboard Items** Lets you add, change, and delete prompts on the switchboards and create new switchboards. We'll look briefly at ways to customize the switchboards in Lessons 7. Chapter 21 of this book explains how to create custom switchboards.
- **Exit this Database** Lets you close the Main Switchboard form and the Address Book Lessons database window in one step and return directly to the main Microsoft Access menu.

Lesson 3: Creating and Customizing a Form

An Access form is like a fill-in-the-blanks paper form, except that you fill it in using the keyboard rather than pencil or pen. Our Address Book Lessons database already has a nice form. But let's go ahead and create a new one for practice:

1. Close the Address Book Switchboard form and return to the database window. To do so quickly, click on the Close button in the upper-right corner of any Address Book switchboard form and then press F11 to restore the database window.
2. Click on the Tables tab in the database window and then click on the Addresses table name to highlight it.

WARNING

The Switchboard Items table contains entries that control the switchboard forms for your database. Do not change items in this table, or your switchboards may stop working correctly. In Lesson 7 you'll learn how to use the Switchboard Manager to maintain this table in a safe manner.

3. Click on the drop-down arrow next to the New Object toolbar button (shown at left and second-to-last on the toolbar) and then choose Form from the menu that appears (or choose Insert ► Form). In the New Form dialog box, double-click on AutoForm: Columnar. Wait a few moments while Access creates an automatic form.

Access instantly creates the form for entering and editing Address Book data and names it Addresses (see Figure 3.9). The form contains one *control* for each field in your table.

NOTE

A *control* is a graphical object that displays data, performs an action, or makes the form (or report) easier to read. You'll learn more about controls in Chapter 13.

FIGURE 3.9

To create this form, choose the *New Form* option from the toolbar's *New Object* drop-down button and then double-click on *AutoForm: Columnar* in the *New Form* dialog box.

Modifying and Saving the Form Design

The new form is perfectly usable as-is. But chances are you'll want to tailor the Wizard's instant form to your own personal tastes. We'll show you some basic skills for designing fancier forms. When you finish the next set of steps, your form will resemble Figure 3.10.

Whenever you want to change the look or behavior of something in Access, you must switch to Design view. In Design view, you'll see menu commands and toolbar buttons that help you make changes. You also may see a grid, which makes it easier to

FIGURE 3.10

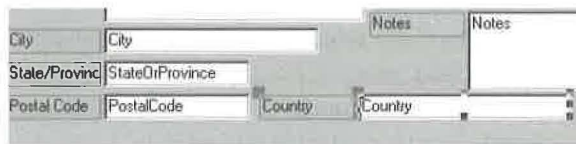
The *Addresses* form after changing some field labels, dragging fields to more convenient places on the form, and changing the *AddressID* field.

some people to size and align controls on the form. Let's switch to Design view now and move some controls around on the Address Book form.

1. To switch from Form view to Design view, click on the Form View toolbar button (shown at left), or choose View ► Design View from the menu bar.
2. To give yourself lots of room to work, maximize the Design view window.
3. To hide or show the optional tools in Design view (if they are covering your form or are missing), choose the appropriate options on the View menu. For example, if the Toolbox is in your way, choose View ► Toolbox. For this exercise, select (check) the Ruler and Form Header/Footer options on the View menu. Leave the other options unchecked to hide those other tools.
4. Scroll down until you can see the Country control and then click on the Country control (the empty box just to the right of the Country label). When selected, "move" and "size" handles appear on the control, as shown below:



5. Keep your finger *off* the mouse button and move the mouse pointer to any edge of the control until the mouse pointer changes to a "move" icon (a hand with all five fingers showing), as shown at left.
6. Press the mouse button (without moving the mouse) and drag the Country control up and to the right until it's in line with the Postal Code control, as shown below:



NOTE

These mouse operations may take some practice. If you don't get them right the first time, repeat steps 5 and 6 until you do.

You've now moved the Country control. You can use the same dragging technique to size controls and to move a label and/or text box independently. Try this technique

to move the EmailAddress control and label to fill in the gap left by the Country field. Always move the mouse pointer to an edge or corner of the control first until you see the mouse pointer change to the icon that best expresses what you want to do. The functions of the icons are summarized below:



Move all selected controls.



Move current control only.



Size diagonally.



Size horizontally.



Size vertically.

A Few Designer Tips

Here are some designer tips that might help you fine-tune the form. (You don't need to try them now.)

- **To select several controls at once**, hold down the Shift key as you select or drag a “lasso” around them. (To lasso those critters, start with no control selected and place the mouse pointer on the grid or an empty part of the form, not on the controls. Then drag a frame around all the controls you want to select.)
- **To select all the controls at once**, choose Edit ► Select All or press Ctrl+A.
- **To deselect one selected control or all selected controls**, click anywhere outside the selection area.
- **To deselect only one of several selected controls**, hold down the Shift key while clicking on the control(s) you want to deselect.
- **To size and align the selected controls**, use the Format ► Align and Format ► Size commands from the menu bar (see Chapter 13).
- **To make a label fit its text exactly**, select the label, move your mouse pointer to any of the sizing handles, and then double-click on the sizing handle. Or select the labels you want to resize and then choose Format ► Size ► To Fit from the menu bar.
- **To delete the selected control(s)**, press the Delete key.
- **To undo a change you're not happy with**, choose Edit ► Undo or press Ctrl+Z or click on the Undo toolbar button.

To change the text in a label (the part that appears to the left of a control):

1. Click on the label text so that selection handles appear around the label.
2. Click inside the selection. An insertion point will appear and the sizing handles will disappear temporarily.
3. Use normal Windows text editing techniques, including these, to change the text:
 - To **highlight (select) text**, drag the mouse through that text or double-click on a word.
 - To **position the blinking insertion point**, click the mouse or press the ← and → keys.
 - To **delete selected text or text at the insertion point**, press Delete or Backspace.
 - To **add new text at the insertion point**, simply type it.
4. Press Enter when you're done making changes. The selection handles will reappear around the label.

Try Some Hands-on Designing

Go ahead and try some more hands-on designing now. Don't worry if you don't get *exactly* the results we show—it's OK to make mistakes, and it's OK to experiment.

1. Change the label text for these controls, as follows:
 - Change the label for the SpouseName control from Spouse Name to **Spouse**.
 - Change the label for the StateOrProvince control from State/Province to **State/Prov**.
 - Change the label for the WorkExtension control from Work Extension to **Work Ext**.
 - Change the label for the EmailAddress control from Email Address to **Email Number**
2. Resize all the labels on the form so they have a snug fit. The quickest way is to select all the controls (Ctrl+A) and then choose Format ► Size ► To Fit.
3. Click in an empty area of the form to deselect all the controls.

Next, make the Country control smaller so that it doesn't crowd the Notes control: Click on the Country control (the box to the left of the Country label). Move the mouse pointer to the sizing handle at the right edge of that control (the mouse pointer changes to a horizontal two-headed arrow) and then drag to the left until you've sized the control to your liking.

To move the Country control closer to its label, make sure the Country control is selected and then move the mouse pointer to the sizing handle at the upper-left corner of the Country control (the pointer changes to a hand with one pointing finger). Drag to the left until the Country control is closer to the Country label.

Preventing the Cursor from Landing in a Field

When you enter a new record, Access will assign a value to the AddressID field automatically. (You can't change this value.) The form will be more convenient to use if you prevent the cursor (also called the *insertion point* or *highlight*, depending on its shape) from landing in that field. To disable the AddressID control:

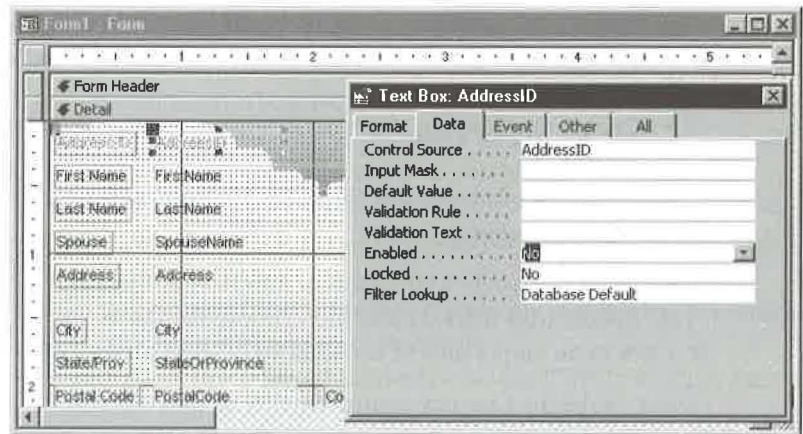
1. Click on the AddressID control (the box to the right of the AddressID label) to select it.
2. Click on the Properties toolbar button (shown at left) or choose View ► Properties. You'll see the *property sheet* on the screen.
3. Click on the Data tab at the top of the property sheet and then double-click on the Enabled option to change its setting from Yes to No (see Figure 3.11). The AddressID control will be dimmed on the screen.
4. Click on the Close button on the property sheet (or click on the Properties button or choose View ► Properties) to hide the property sheet again.

As you'll learn later in this book, *properties* are characteristics of elements in your database, and you can change them anytime. Don't worry too much about properties now.



FIGURE 3.11

The Enabled property for the AddressID control is set to No to prevent the cursor from landing on that control when you use the form for data entry.



Closing and Saving the Form

None of the design work you've done so far is saved yet, so saving is the next order of business. To save the form and close it:

1. Choose File ► Close or press Ctrl+W.

2. Click on Yes when asked about saving the form.
3. Type **Addresses1** (or just accept the suggested form name) in the Save As dialog box and click on OK.
4. (Optional) Click on the Restore button on the database window to restore the window to its previous size.

That's all there is to it! The form name will appear in the database window whenever you're viewing form names (that is, after you've clicked on the Forms object tab on the database window). In the next lesson, you'll open the form and start using it.

At Your Leisure

To reinforce what you've learned, and explore forms in more depth, look at Chapters 11 and 13. Or go to the Access Help Contents, open the *Working With Forms* book, open the *Basics* book, and then explore any subtopics that intrigue you. Or just move on to Lesson 4.

Lesson 4: Adding, Editing, Sorting, and Searching

Your database now contains several *objects*, including a table and two forms. You can use either form to enter some data into the table.

Opening the Form

To open the Addresses1 form:

1. Start from the database window and click on the Forms tab.
2. Double-click on the Addresses1 form name, or highlight (click on) the name and then click on Open. Your form will appear in Form view (refer to Figure 3.10). Notice that the AddressID field is dimmed and the cursor is positioned in the First-Name field. The cursor skips the AddressID field because you changed the Enabled property for that field to No in the previous lesson.



If you prefer to use the Addresses form that the Database Wizard created for you automatically, either double-click on the Addresses form name on the Forms tab of the database window or click on the button next to the Enter/View Addresses option on the Main Switchboard form.

Entering Data

If you have a Rolodex or little black book of contact names, addresses, and other vital statistics, grab it now. Or if you don't want to bother with real names and addresses, use the fake one shown in Figure 3.12. Either way, follow these general steps to add some names and addresses to your Addresses table via the Addresses1 (or Addresses) form. (If the table is currently empty, you can skip to step 2 and begin entering data immediately.)



1. Click on the New Record button (shown at left) on the toolbar or the navigation bar (see Figure 3.12) to move to a new, blank record.
2. Type the person's first name into the First Name field; then press Tab or Enter or click anywhere within the Last Name field.
3. Type that person's surname into the Last Name field; then press Tab or Enter or click within the Spouse Name field.
4. Fill in each of the remaining fields, as shown in Figure 3.12. Here are some tips to help you enter the remaining data:
 - To move forward from one field to the next, press Tab or use the mouse. If the field doesn't display a vertical scroll bar and scroll arrows when the cursor lands in it, you also can press Enter to move to the next field. (The Address and Notes fields include vertical scroll bars and arrows.) If the field does display a vertical scroll bar and scroll arrows when the cursor lands in it, pressing Enter will end the current line of text and move the insertion point to the start of the next line *within* the field.

FIGURE 3.12

A new record added to the Addresses table via the Addresses1 form you created earlier.

Address ID	6	Home Phone	(216) 555-1225	
First Name	Hanley	Work Phone	(216) 555-1235	
Last Name	Strappman	Work Ext.	3	
Spouse	Sheila	Fax Number	(216) 555-1236	
Address	8891 West 47th Street		Birthdate	4/7/47
City	Fridley	Send Card	Yes	
State/Prov	OH	Notes	Hanley is a swell guy who makes awesome gazpacho and pasta sandwiches	
Postal Code	44147-	Country	USA	
Email Number	747_5947			

Record: 6 of 6

- **To leave a field empty**, press Tab to skip it, or click on the field you want to type in next.
- **To enter Postal Codes**, type the numbers only. The form automatically displays a hyphen after the first five digits. *Example:* When you type 441471234 in the Postal Code field, Access changes your entry to 44147-1234.
- **To enter telephone numbers**, type the numbers only. The form automatically displays parentheses around the area code and a hyphen after the exchange. *Example:* When you type 2165551225 in the Home Phone field, Access changes your entry to (216)555-1225 as you type.
- **To enter birth dates**, omit slashes between the numbers for the month and day if the numbers have two digits. If the numbers for the month and day have only one digit, type a slash to move to the next part of the date. Access will insert slashes in the field automatically. *Example:* When you type 121595 in the Birthdate field, Access automatically changes your entry to 12/15/95 as you type. To enter the numbers for an April 7, 1947 birthdate, type 4/7/47 or 040747.

NOTE

You can enter the punctuation in the postal code, telephone number, and date fields, but doing so takes extra work. Data entry shortcuts, such as automatically inserting parentheses and hyphens in telephone numbers, are controlled by Input Mask properties in the table or form design. See Chapters 6 and 13 for more details.

5. Press Tab to move to the next blank record after filling in the last field (Notes).
6. Repeat steps 2 through 5 to fill in more names and addresses. For practice, make at least three entries. If possible, include some entries that have the same State/Province.

Making Changes and Corrections

If you're an experienced Windows user, you'll probably find that editing text in an Access form (or the Datasheet view) is similar to typing and editing text in any other Windows program. But even if you're not experienced, these techniques can help you fix typing mistakes:

- **To delete text at the highlight or insertion point position**, use the Backspace and Delete keys.
- **To move to the next field**, press Tab. To move to the previous field, press Shift+Tab. To move to any field in the form, click on that field.

- **To switch between Navigation mode and Edit mode**, press F2. You're in Navigation mode when you use the keyboard (Tab, Shift+Tab, and Enter) to move to another field; in this mode, the field's contents will be selected, and anything you type will *replace* what's already in the field. When you switch to Edit mode, you can *change* (rather than replace) what's already in the field; in this mode, the blinking insertion point replaces the selection highlight. You can press F2 anytime you need to switch from one mode to the other.
- **To move to other records**, use the navigation bar at the bottom of the window (see Figure 3.13). Or press Page Up and Page Down to scroll up and down through existing records.

**NOTE**

In the Addresses form created by the Database Wizard, Page Up and Page Down display the first or second page of the Address form, respectively. Pressing Page Down when you're on the second page of the form takes you to the second page of the next record. Pressing Page Up when you're on the first page of the form takes you to the first page of the previous record (if any).



- **To switch to Datasheet view**, where you can see all the data that you've entered so far, click on the drop-down arrow next to the Form View toolbar button (shown at left, and the first button on the toolbar) and then choose Datasheet View; or choose View ► Datasheet View (see Figure 3.14). You can make changes and corrections in Datasheet view, if you wish—it's not necessary to switch back to Form view.
- **To resize columns in Datasheet view**, move the mouse pointer to the vertical line at the right edge of the column header for the column you want to resize and then drag the line to the left or right. For a snug fit, double-click on the vertical line that's just to the right of the column name.
- **To move an entire column in Datasheet view**, move the mouse pointer to the column name in the header, click the mouse, and then drag the column to the left or right.

FIGURE 3.13

The navigation bar allows you to move through existing records and to add new records.



FIGURE 3.14

The sample table in Datasheet view. We resized the columns to fit snugly around the data.

Address ID	First Name	Last Name	Spouse	Address	City	State
1	Nancy	Davolio	Paul	507 - 20th Ave. E.	Seattle	WA
2	Andrew	Fuller	Anne	908 W. Capital Way	Tacoma	WA
3	Janet	Leverling	Robert	722 Moss Bay Blvd.	Kirkland	WA
4	Margaret	Peacock	Michael	4110 Old Redmond Rd.	Redmond	WA
5	Steven	Buchanan		14 Garrett Hill	London	
6	Hanley	Strappman	Sheila	8891 West 47th Street	Fridley	OH

AutoNumber)

Record: 6 of 6

- To switch to **Form view**, click on the drop-down arrow next to the Form View toolbar button and choose Form View; or choose View ► Form View.

NOTE

If you click on the Form View toolbar button (instead of clicking on the drop-down arrow next to that button), you'll switch to the view that's shown on the button. For example, clicking on the Form View button when you're in form view takes you to form Design view. Clicking on the Form View button when you're in form Design view takes you to Form view.

TIP

You can't change the contents of the AddressID field, and there's no reason to. In fact, you can't even move the cursor into that field.

- To **move to a new, blank record**, click on the New Record button on either the toolbar or the navigation bar (see Figures 3.12, 3.13, and 3.14).
- To **delete a record**, click on the record selector at the left side of the record and press Delete. Or click anywhere in the record you want to delete and then click on the Delete Record toolbar button (shown at left). When prompted, click on Yes if you're sure you want to delete the record or click on No to retain the record.
Warning: Once you click on Yes to delete the record, it's gone for good!



Don't Save Each Record



In case you're paranoid about losing your work (which certainly is understandable!), rest assured that as soon as you finish filling in (or changing) a record and move to another record, Access saves that record to disk. The only record that isn't saved is the one you're editing at the moment. (This unsaved record is marked at the left with a pencil icon.)

Sorting and Filtering

After you've put a few records into your table, you can unleash Access's real power. Let's begin by sorting (alphabetizing) the records:

1. Switch to Datasheet view if necessary. To do so, choose View ► Datasheet View from the menu bar.
2. Click on any person's surname to move the cursor into the Last Name column.
3. Click on the Sort Ascending toolbar button (shown at left), or choose Records ► Sort ► Sort Ascending. Or right-click and then choose Sort Ascending from the shortcut menu.



Instantly your records are sorted (alphabetized) by surnames. You can follow steps 1 through 3 to sort on any field in your table. Try it and see.

Now suppose you want to see only contacts who live in Washington (or whichever state you want to look for). Here's a quick way to filter out those unwanted non-Washington contacts temporarily:

1. Put the cursor in any State/Province field that contains WA (for example)—be sure not to highlight any text in the field.
2. Click on the Filter By Selection toolbar button (shown at left) or choose Records ► Filter ► Filter By Selection. Or right-click on the field and choose Filter By Selection from the shortcut menu. (If you prefer to see all records *except* those for your Washington contacts, right-click and choose Filter Excluding Selection instead.)



The non-Washington records will disappear temporarily. To return the records to their original order and display the hidden records again, choose Records ► Remove Filter/Sort; or right-click and choose Remove Filter/Sort from the shortcut menu.

Filter by Input is another easy way to filter records. This feature is new to Access 97. To see how Filter by Input works, point with your mouse anywhere in the State/Prov field (but not on the header!) and right-click. In the box after Filter For, enter WA and press Enter. As with Filter by Selection, to display the hidden records again, choose Records ► Remove Filter/Sort; or right-click and choose Remove Filter/Sort from the shortcut menu.





You can sort and filter records in Form view or Datasheet view. However, we suggest using Datasheet view because the results are easier to see from there. See Chapter 9 for more about sorting and filtering.

Finding a Record

Suppose you've added hundreds, or even thousands, of names and addresses to your Addresses table, and now you want to look up a particular contact's address or phone number. Here's the easy way to do a lookup:

1. Switch to Form view or Datasheet view (choose View ► Form View or View ► Datasheet View).
2. Click in the field you want to search (in this example, click in any Last Name field).
3. Choose Edit ► Find or press Ctrl+F or click on the Find toolbar button (shown at left). You'll see the Find In Field dialog box.
4. Type *exactly* the last name you're looking for in the Find What text box. (Don't worry about upper/lowercase, but do spell the name correctly.)
5. Click on the Find First button. The Last Name field of the first record that has the requested name will appear highlighted on the screen. (If Access didn't find a match, a message will appear; click on OK to clear the message.)



If several people in your table have the same last name and you want to find each one in turn, click on the Find Next button as needed. When Access tells you it has finished searching, click on OK.

6. Click on the Close button in the Find In Field dialog box when you're done searching.

Remember: Computers Are Dumb!

If your search doesn't find what you were expecting, remember that the computer isn't smart and it can't read your mind. You must click on the field you want to search before starting the Find command and typing the text you want to search for. (For example, if you click on the Address field and search for *Strappman*, you'll get no match.)

Likewise, if you type a first name such as Steven into your table and then search for Stephen, Access won't find the correct record. *Steven* and *Stephen* are similar enough for you to say "Yeah, that's a match." However, Access isn't smart enough to figure out that *Steven* and *Stephen* sound alike, and it certainly won't know if you want to match either name.

NOTE

Filter by Form, Advance Filter/Sort, and queries let you search for text that's similar to text that you enter. For example, you can tell Access to find a First Name *like St*en*. This statement will match records that contain Steven or Stephen in the First Name field. See Chapters 9 and 10 for details.

Closing the Form or Datasheet

When you're done playing with the data, close the Form or Datasheet view:

1. Choose File ► Close or press Ctrl+W. Access might ask you if you want to save your current work.
2. Click on Yes if you want to save any filtering or other changes to the table or form; click on No if you want to discard those changes.

Don't worry if you're not asked for permission to save your work—Access will ask only if you've altered the Form or Datasheet view. All the names and addresses you typed are stored safely on disk for future reference.

At Your Leisure

If you'd like to explore the topics described in this lesson on your own, skip to Chapter 9. To explore the topics online, go to the Help Contents, open the *Finding And Sorting Data* book, and then investigate the subtopics shown. Or move ahead to the next lesson now.

Lesson 5: Creating and Printing Reports

In this lesson you'll create, preview, and print a set of mailing labels. These mailing labels will be a nice addition to the Birthdays This Month, Fact Sheet, Addresses by Last Name, and Greeting Card List reports that the Database Wizard created for you automatically.

Preparing Mailing Labels

Let's prepare a report that can print names and addresses on standard Avery mailing labels. Here are the steps:

1. Click on the Tables tab in the database window and then click on the Addresses table name.
2. Click on the drop-down arrow next to the New Object toolbar button (shown at left and the second-to-last toolbar button) and then choose Report (or choose Insert ► Report from the menus).



3. Double-click on Label Wizard in the New Report dialog box. In a moment the Label Wizard dialog box will ask, What label size would you like?

NOTE

If you forget to choose a table (or query) in step 1, you'll need to choose one from the drop-down list in the New Report dialog box.

4. Choose Sheet feed under Label Type if you are using a laser printer (or other sheet-fed printer) to print labels. Otherwise, choose Continuous (if you are using a dot-matrix printer to print labels).
5. Scroll to and click on the appropriate Avery label size and then click on Next.

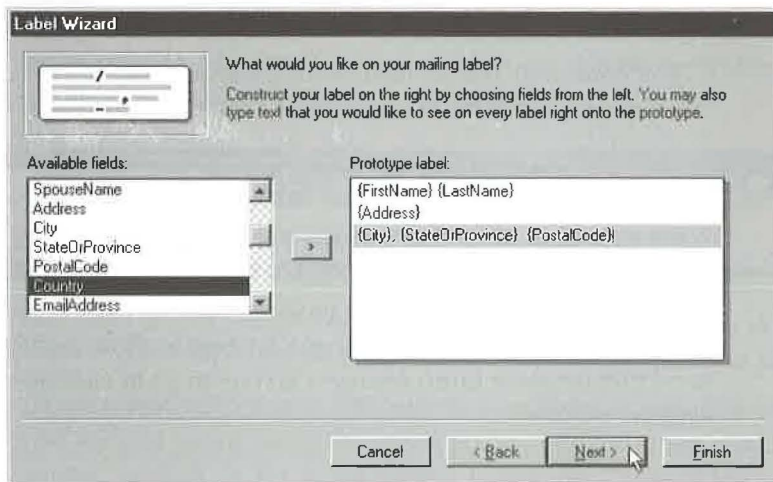
TIP

The Avery label number and label dimensions are printed on the box of labels. If you don't have labels already, just pick Avery number 5095 or some other two-across size.

6. Choose any font and color options you want to use. The Sample text at the left side of the dialog box will reflect your current choices. Click on the Next button to continue.
7. Use these techniques to fill in the Prototype Label box, making it look like the example shown in Figure 3.15.

FIGURE 3.15

Fields from the Addresses table arranged for printing on a mailing label.



- **To add a field to the label**, click in the Prototype Label box where you want the field to appear. Then double-click on the field in the Available Fields list, or click on the field and then click on the > button. The field will appear in the Prototype Label box.
 - **To add a space, punctuation mark, or other text**, click where you want the space or text to appear (if the insertion point isn't there already) and then press the appropriate key(s) on your keyboard.
 - **To start a new line on the prototype label**, click on the next line in the Prototype Label box or press ↓ or Enter.
 - **To delete a field or text**, position the insertion point in the Prototype Label box where you want to start deleting and then press the Delete or Backspace key as needed. Or select text with your mouse or keyboard and then press Delete or Backspace.
8. Click on Next when you're done filling in the Prototype Label box. Access will ask you which fields you want to sort by.
 9. Scroll down to PostalCode in the Available fields list and double-click on that field name. (If you prefer to sort by LastName and FirstName, double-click on those field names instead.) Click on Next to continue.



If you accidentally double-click on the wrong field(s), click on the << button to clear all the fields and then double-click on the correct field(s). To clear just one field, click on that field in the Sort by list and then click on the < button.

10. Click on the Finish button in the last dialog box and wait a few seconds.

The Wizard will create a report with names and addresses formatted for the label size you specified. When the Wizard is done, you'll see a preview of the labels on the screen.

Closing and Saving the Report

You'll learn more about how to preview and print the report in a moment. But first, save the report and close the report preview window. To do so, choose File ► Close or press Ctrl+W. (If you click on the Close toolbar button by accident, you'll be taken to Design view. Just press Ctrl+W to return to the database window quickly.) Your report format is saved with the name Labels Addresses as you can see by clicking on the Reports tab in the database window.

Don't Reinvent the Wheel!

Keep in mind that Access has saved the report format, not its contents. So even if you add, change, or delete addresses in the future, you do not need to re-create the reports to print the data. Whenever you print a report, Access automatically puts the table's current data into the report's format.

Previewing and Printing a Report

Previewing and printing a formatted report is a snap. Here are the steps:

1. Make sure your printer is ready. If you want to print on mailing labels, load the labels into the printer.
2. To see the list of available reports, do one of the following:
 - **If you're starting from the database window**, click on the database window's Reports tab. You should see the names of the reports the Database Wizard created, plus the one you created.
 - **If you're using the Main Switchboard form** in your Address Book application, click on the button next to the Preview Reports option. You'll see options for printing reports created by the Database Wizard. (Later in this chapter, we'll show you how to add your new Labels Addresses report to this list of options.)
3. To preview the report, do one of the following:
 - **If you're starting from the database window**, click on the name of the report you want to print (for example, Labels Addresses) and then click on the Preview button on the database window; or just double-click on the report name. You also can choose File ► Print Preview from the menu bar.
 - **If you're starting from the list of reports** on the Reports Switchboard, click on the button next to the report you want to view.

TIP To print a report from the database window without previewing it first, click on the report name you want to print and then choose File ► Print ► OK.

4. The report will open in Print Preview mode with sample data shown. (Maximize the window if you wish.) Here are some tricks you can use to view your report:
 - **To zoom in and out** between 100 percent magnification and a full-page view that fits on your screen, move the mouse pointer into the report area and click the mouse, or click on the Zoom toolbar button (see Figure 3.16). Click the mouse on the Zoom button again to return to the previous size.

FIGURE 3.16

The Preview mode toolbar.



- To zoom to various magnifications, choose options from the toolbar's Zoom Control drop-down list. Or right-click in the report area, choose Zoom from the shortcut menu, and then choose a magnification. Or choose View ► Zoom options from the menu bar.
- To display multiple pages at once, right-click in the report area, choose Pages, and then choose a page layout. Or choose View ► Pages options from the menu bar. Or click on the toolbar's One Page and Two Pages buttons.



5. Choose File ► Print (or press Ctrl+P) when you're ready to print the report and then click on OK in the Print dialog box that appears. Or to bypass the Print dialog box, click on the Print toolbar button (shown at left).

NOTE

The Print dialog box lets you choose a printer, print the report to a file, select a range of pages to print, and specify the number of copies and collation method. The Setup button in that dialog box lets you change the margins and layout for the report.

6. Click on the Close toolbar button to return to the database window or the Report Switchboard form.

At Your Leisure

If you want to learn more about reports before moving on to the next lesson, skip ahead to Chapters 12 and 13. Or go to the Access Help Contents, open the *Working With Reports* book, and then explore the subtopics shown.

Lesson 6: Using Queries

You can use *queries* to isolate certain fields and records of data in a table, to sort data into alphabetical or numeric order, to combine data from several related tables, and perform calculations on data in tables. In this lesson you'll use queries to set up a simple list that shows specific fields and specific records in the Addresses table in sorted order by last name. Then you'll change the query to show records for everyone in the table.

Creating a Query

To create a query from your Addresses table:

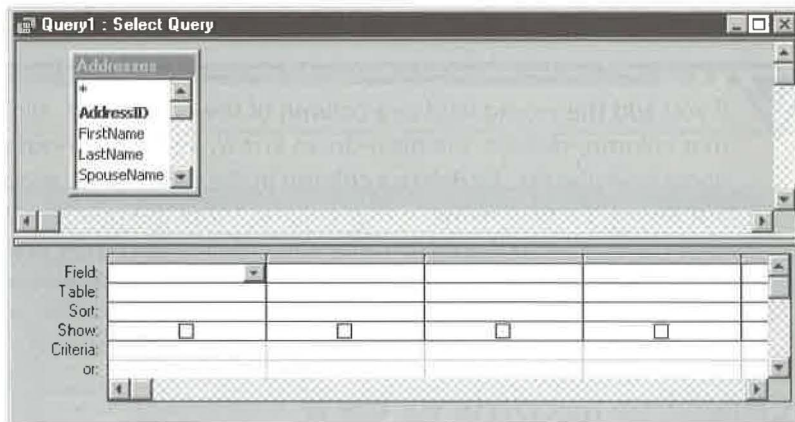
1. Click on the Tables tab in the database window and then click on the Addresses table name.
2. Click on the drop-down arrow next to the New Object toolbar button (shown at left and the second-to-last toolbar button) and then choose Query (or choose Insert ► Query from the menus).
3. Double-click on Design View in the New Query dialog box. Figure 3.17 shows the query design window that appears.

NOTE

Using the Simple Query Wizard (and other query Wizards) is often the easiest way to speed up the job of creating queries. However, for the query you'll be designing next, the from-scratch method is a little faster and it gives you practice using the query design window.

FIGURE 3.17

The query design window shows the field list for the Addresses table in the top pane and the design grid in the bottom pane.



Choosing Fields to View

To fill in the design grid, you first choose the fields you want to work with in the order you want them to appear. Follow these steps now to add the LastName, FirstName, City, StateOrProvince, and HomePhone fields to the grid:

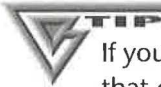
1. Maximize the query design window so you can see more columns in the design grid at once.

2. Add the LastName field to the design grid by double-clicking on that field in the Addresses field list near the top of the window. The LastName field will appear in the first blank column of the design grid. The Table row in that column will show the name of the table the field comes from, and the Show row will include a check mark to tell Access to display that field when you run the query.



Here are two other ways to add a field to the query design grid: (1) Drag the field name from the Addresses field list to the appropriate column in the design grid; or (2) click on the Field box in the appropriate column of the design grid, click on the drop-down arrow that appears, and then choose the field name you want to use.

3. Add the FirstName field to the design grid by double-clicking on that field in the Addresses field list. The field will appear in the next (second) column of the design grid.
4. Add the City field by scrolling down in the Addresses field list and double-click on the City field name.
5. Use the same techniques described in step 3 to add the StateOrProvince and Home-Phone fields to the design grid.



If you add the wrong field to a column of the design grid, click in the Field box for that column, click on the drop-down arrow, and then choose the correct field name from the list. To delete a column in the design grid, move the mouse pointer just above the field name in that column (until the pointer changes to a black ↓), click the mouse to highlight the entire column, and then press Delete.

Figure 3.18 shows the five fields in the query design grid.

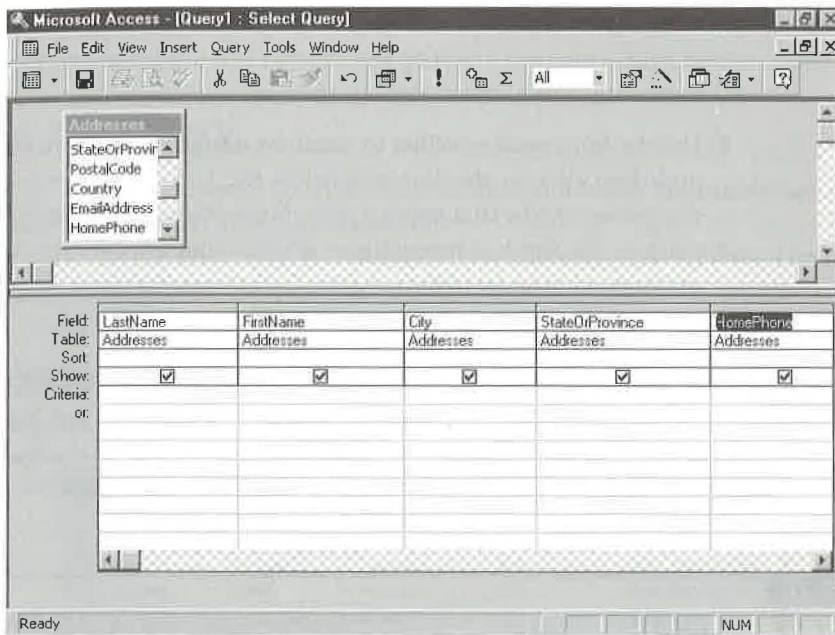
Choosing Records to View

Suppose you want to view the list only for people who live in Washington. To do so, type **wa** (or **WA**) into the Criteria row under the StateOrProvince column. Here's how:

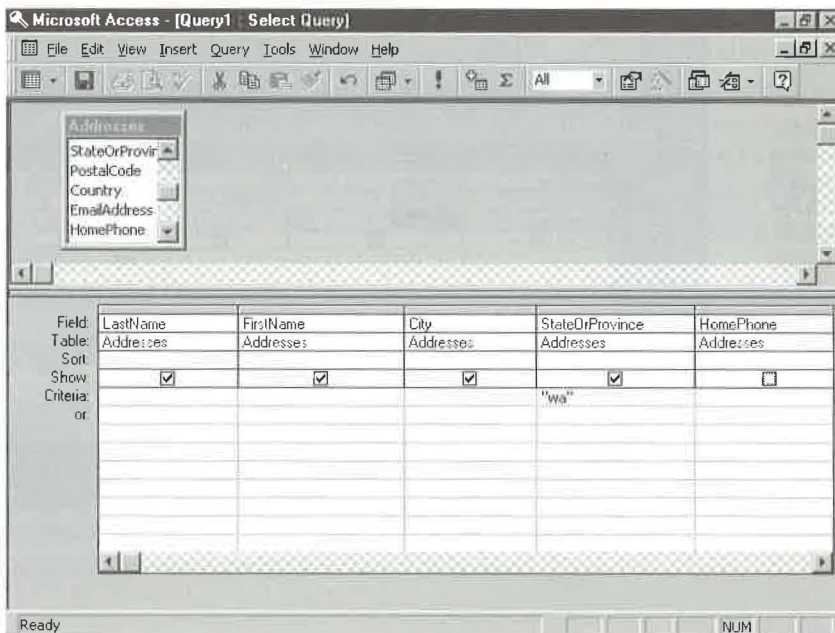
1. Click in the Criteria box that's underneath the StateOrProvince column.
2. Type **wa** or any state that you've stored in the table (see Figure 3.19). Don't worry about typing exact uppercase and lowercase letters.
3. Press Enter. Access automatically adds quotation marks around the text you typed and moves the cursor to the next column.

FIGURE 3.18

Five fields—*LastName*, *FirstName*, *City*, *StateOrProvince*, and *HomePhone*—added to the query design grid.

**FIGURE 3.19**

The query will display the *LastName*, *FirstName*, *City*, *StateOrProvince*, and *HomePhone* fields of records that have Washington ("wa") in the *StateOrProvince* field.



Choosing the Sort Order

To sort the list by last name and then by first name within identical last names, tell Access which fields (columns) to sort by and whether you want to sort in Ascending (A to Z) or Descending (Z to A) order. Here are the steps:

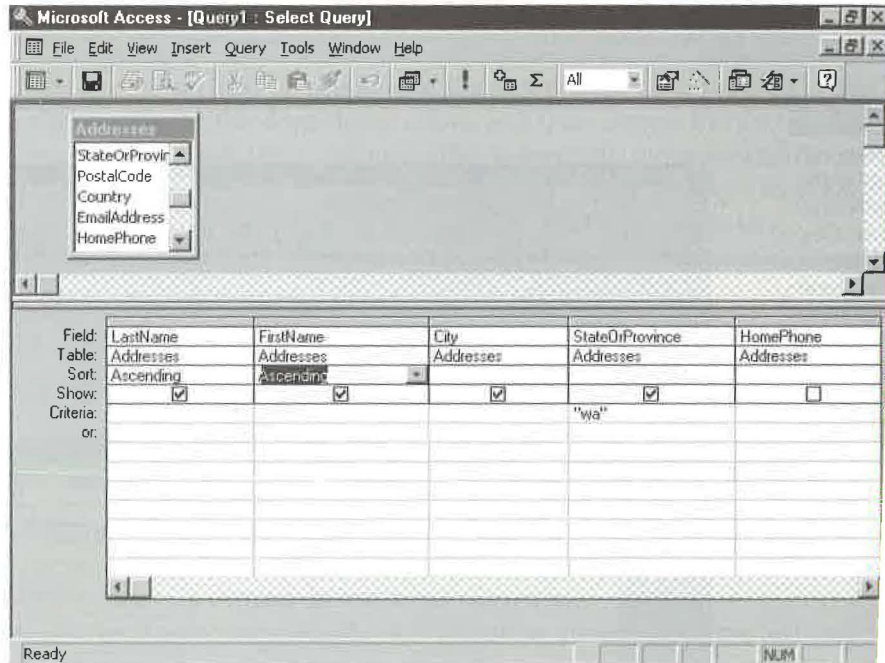
1. Use the horizontal scrollbar to scroll the design grid back to the LastName column and then click in the Sort box below the LastName column. Then click on the drop-down arrow that appears and choose Ascending from the list.
2. Click in the Sort box below the FirstName column, click on the drop-down arrow and then choose Ascending. Figure 3.20 shows the query design window after you complete this step.



If you choose the wrong column to sort by, click on the Sort box below the appropriate column, click on the drop-down arrow, and then choose Not Sorted.

FIGURE 3.20

This query will sort the query results by last name and first name within identical last names. Because the Criteria for StateOrProvince is set to "wa" (Washington), the query results will show data for people in Washington only.



Because the LastName column appears to the left of the FirstName column in the design grid, records will be alphabetized by people's last names. The FirstName field will act as a tie breaker, meaning that records with identical last names will be alphabetized by first name.

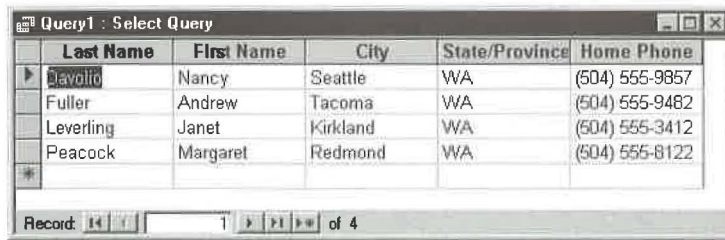
Running the Query

Running the query is a snap. To try it, click on the Run toolbar button (shown at left) or choose Query ► Run from the menus.

The query results will appear in Datasheet view and will show only the Last Name, First Name, City, State/Province, Home Phone columns, and only the people in Washington, alphabetized by last name and first name (see Figure 3.21). All the data is *live*, and you can change it the same way you change any data in Datasheet view.

FIGURE 3.21

The query results appear in Datasheet view.



Last Name	First Name	City	State/Province	Home Phone
Davolio	Nancy	Seattle	WA	(504) 555-9857
Fuller	Andrew	Tacoma	WA	(504) 555-9482
Leverling	Janet	Kirkland	WA	(504) 555-3412
Peacock	Margaret	Redmond	WA	(504) 555-8122

NOTE

You might have noticed that the column headings (or captions) shown in Figures 3.14 and 3.21 don't exactly match the field names. For example, the field name for a person's surname is *LastName*; however, the column heading shows *Last Name* (with a blank space between words). These column headings are controlled by the *Caption* property in the table or query design. Chapter 6 explains how to change table properties, and Chapter 10 delves into changing properties in a query.

Changing the Query

Changing the query to display an alphabetized list of all the records in the table is easy. Try it now:

1. Click on the Query View toolbar button (shown at left, and the first button on the toolbar) or choose View ► Design View to switch back to the query design window. Maximize the query design window if necessary.

2. Delete “wa” in the Criteria box below the StateOrProvince column. To do this quickly, select (drag your mouse through) “wa” and then press Delete.
3. Run the query again (click on the Run toolbar button).

Now the Datasheet view resembles Figure 3.22. Because you removed “wa” (Washington), the query results show all records in the table—not just the people from Washington.

Just for grins, print a quick copy of this list now by choosing File ► Print ► OK or by clicking on the Print toolbar button.

FIGURE 3.22

The datasheet after removing “wa” from the StateOrProvince field of the query design, running the query again, and restoring and resizing the window.

Last Name	First Name	City	State/Province	Home Phone
Davolio	Nancy	Seattle	WA	(504) 555-9857
Fuller	Andrew	Tacoma	WA	(504) 555-9482
Levering	Janet	Kirkland	WA	(504) 555-3412
Peacock	Margaret	Redmond	WA	(504) 555-8122
Buchanan	Steven	London	(71)	555-4848
Strappman	Hanley	Fridley	OH	(216) 555-1225

Saving and Reusing the Query

You’ll probably want to see an updated list sometime later, perhaps after you’ve added, deleted, or changed some records. Rather than re-creating this query each time, you can save it and reuse it anytime. To save the query now:

1. Click on the Save toolbar button or choose File ► Save.
2. Type a valid Access object name (such as **Addresses PhoneList Query**) and then click on OK.
3. Close the Select Query window (press Ctrl+W). The query design and datasheet disappear, but your query will be saved.



You can save the query design from the design window or the datasheet window; the steps are the same. You also can save the design when you close the window. If you’re asked about saving changes, click on the Yes button and enter a query name if prompted to do so.

To run a saved query, go to the database window (press F11 if necessary), click on the Queries tab, click on the query you want to run (Addresses PhoneList Query in this example), and then click on the Open button on the database window. Or just double-click on the query name. The query will run on the latest data in your table. (If you wish, close the datasheet window and return to the database window.)

NOTE

To change the query design instead of running the query, click on the Queries tab on the database window, click on the query you want to change, and then click on the Design button on the database window.

At Your Leisure

To learn more about queries, see Chapter 10. Or open the Access Help Contents, open the *Working With Queries* book, open the *Creating A Query* book, and then explore the subtopics that appear.

Lesson 7: Customizing an Application

Now you've created several database objects—a table, a form, a report, and a query. But those objects aren't put together in a way that allows people who know nothing about those objects to use the database easily. To make your database extra easy to use, you can add these objects to the "turnkey" application that the Database Wizard created for you automatically. In this lesson, you'll learn some techniques for doing just that.

Adding a Hyperlink to a Form

Hyperlinks are a new feature of Access 97 that let you jump to other Access database objects or even to information on the Web. We'll step through a simple example here that shows you how to add a hyperlink to jump to the labels report from the Addresses1 form we created in Lesson 3. For more information on working with hyperlinks, check Chapters 7 and 8.

1. Click on the Forms tab, click on Addresses1, and then click on the Design button in the database window. You'll see the form design window, where you can modify the form.
2. Click on the Insert Hyperlink toolbar button to open the Insert Hyperlink dialog box.
3. Leave the box under *Link to file or URL:* blank. Click on the Browse button after *Named location in file: (Optional)* to open the Select Location dialog box. You should see a window like the Database window for the Address Book database. Click on the Reports tab, click the name of the labels report, and then click on OK.

4. Click on OK in the Insert Hyperlink dialog box.
5. Notice the underlined reference to the report name you selected in step 4 in the form design window. This reference is the hyperlink. Drag the hyperlink to the place you want it to appear on the form.
6. To test the hyperlink, click on the Form View toolbar button. Then click on the hyperlink to open the report. When you close the report window, you'll return to the form window.

Adding Command Buttons to a Form

Let's begin by adding command buttons, like those shown in Figure 3.23, to the Addresses1 form you created in Lesson 3.

1. Go to the database window, click on the Forms tab, click on Addresses1, and then click on the Design button on the database window. You'll see the form design window where you can modify the form. Maximize the form design window to give yourself some room to work.
2. Move the mouse pointer to the bottom of the Form Header section until it changes to an up/down arrow crossed by a bar (shown at left). Then drag the horizontal line at the bottom of the section downward. This action increases the height of the Form Header so that it is big enough to hold the command buttons. For this example, make the Form Header about .75 inch high. (Look at the vertical ruler, which is marked in .25-inch increments, as you resize the form header.)



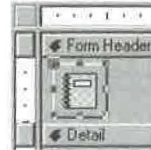
FIGURE 3.23

This Addresses1 form has four command buttons and a hyperlink in its form header. These buttons are similar to the Preview Fact Sheet and Dial buttons on the Addresses form created by the Database Wizard.

Addresses	
Address ID	
First Name	Nancy
Last Name	Davolio
Spouse	Paul
Address	507 - 20th Ave. E. Apt. 2A
City	Seattle
State/Prov	WA
Postal Code	98122-
Country	USA
Email Number	nancyd@anywhere.com
Home Phone	(504) 555-9857
Work Phone	(504) 555-9922
Work Ext.	
Fax Number	(504) 555-7722
Birthdate	8/4/72
Send Card	No
Notes	

Record: 14 of 6

The button appears on the form as shown below. You can't test the button yet because it works only when you're in Form view (you're in Design view now). Before testing that button, you'll add three more buttons.



To move a button, drag it to a new location. If you want to bypass “grid snap” while moving or sizing an object, hold down the Ctrl key while you're dragging.

Creating the Button for Mailing Labels

Follow these steps to add a second button to your form:

1. Click on the Command Button tool in the toolbox and then click slightly to the right of the command button you just created.
2. Click on Report Operations and Preview Report in the two columns in the next Wizard dialog box and then click on Next.
3. Click on Labels Addresses in the list of available reports and then click on Next.
4. Select (check) Show All Pictures in the next Wizard dialog box. Then scroll up to Mailbox (the pictures are listed in alphabetical order, by picture name) and click that picture name. This step will put a picture of an envelope going through a mailbox slot on the button.
5. Click on Next.
6. Type **Labels Button** and click on Finish.

Creating the Query Button

Follow these steps to add a button that will run the query named Addresses Phone Query:

1. Click on the Command Button tool in the toolbox and then click slightly to the right of the “mailbox” command button you just created.
2. Click on Miscellaneous and Run Query in the two columns in the next Wizard dialog box and then click on Next.

3. Click on **Addresses PhoneList Query** in the list of available queries and then click on **Next**.
4. Click on **Next** to choose the suggested picture in the next Wizard dialog box.
5. Type **Addresses PhoneList Query Button** and click on **Finish**.

Creating the Close Button

The final button will make it easy to close the form. To create it:

1. Click on the **Command Button** tool on the toolbar and then click just to the right of the last button at the top of the form.
2. Click on **Form Operations** in the first column, click on **Close Form** in the second column, and then click on the **Next** button.
3. Click on **Next** to accept the default **Exit** picture in the next Wizard dialog box.
4. Type **Exit Button** and click on **Finish** in the next Wizard dialog box.
5. Save your work by clicking on the **Save** button on the toolbar or by pressing **Ctrl+S**.



To align buttons or other objects on the form, select the objects you want to align, and then choose **Format > Align** and an appropriate alignment option. To set equal horizontal spacing between objects, select the objects and choose **Format > Horizontal Spacing > Make Equal**. See Chapter 13 for more information.

Adding Visual Basic Code to a Form

Next you'll learn how to add some Visual Basic for Applications (VBA) code to your form. Please don't think that programming is something you have to do in Access. You can create very powerful Access applications with no programming whatsoever. This little experiment with Visual Basic serves mainly as a way to get your hands dirty, so you can see how programming with VBA works.

Follow these steps (carefully!) to add some programming code to your form now:

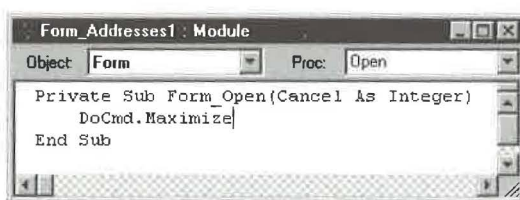
1. Click on the **Properties** toolbar button or choose **View > Properties** to open the property sheet.
2. Choose **Edit > Select Form**. The property sheet displays the properties for the entire form.
3. Click on the **Event** tab on the property sheet and then scroll down to the **On Open** property. You'll add some code to maximize the **Addresses1** form window anytime you open the **Addresses1** form.



4. Click in the On Open text box, click on the Build (...) button that appears, and then double-click on Code Builder. A module editing window will appear with the cursor positioned on the blank line between the Private Sub Form_Open and End Sub statements.
5. Press the Tab key and then type *exactly*:

DoCmd.Maximize

as shown below. Be careful to type the text correctly—there's no margin for error when you're writing program code.



6. Choose File ► Close (or press Ctrl+W) to return to the form design window. Notice that [Event Procedure] now appears as the On Open property.
7. Scroll down to the On Close property of the property sheet. You'll add some code that restores the previously displayed window to its original size anytime you close the Addresses form.
8. Click on the On Close text box, click on the Build (...) button that appears, and then double-click on Code Builder. A module editing window will appear with the cursor positioned on the blank line between the Private Sub Form_Close and End Sub statements.
9. Press the Tab key and then type *exactly*:

DoCmd.Restore

NOTE

This DoCmd.Restore command restores a window to its previous size. For example if you open the Addresses1 form from the database window, the database window will reappear at its previous size when you close Addresses1. Likewise, if you open Addresses1 from the Main Switchboard (as explained later), the Main Switchboard form will reappear at its previous size.

10. Choose File ► Close (or press Ctrl+W) to return to the form design window.
11. Choose File ► Close ► Yes to save and close the modified form.

You'll return to the database window (press F11 if necessary).

Customizing the Switchboard Form

The Switchboard form that the Database Wizard created when you set up the Address Book Lessons database provides buttons and options that make it easy to update and report on information about your contacts. Since you've gone to the trouble of setting up some new forms and reports, you'll probably want to add them to the switchboard. You also might want to change the names of options that appear on the switchboard.

To begin, open the Main Switchboard form and then click on the button next to Change Switchboard Items. Or choose Tools ► Add-Ins ► Switchboard Manager from the menu bar. You'll see the Switchboard Manager dialog box shown in Figure 3.25.

Adding the Addresses1 Form to the Main Switchboard

Follow these steps to add your new Addresses1 form to the Main Switchboard Page:

1. Click on Main Switchboard (Default) in the Switchboard Pages list and then click on the Edit button in the Switchboard Manager dialog box. The Edit Switchboard Page dialog box will appear (see Figure 3.26 for a completed example).
2. Click on the New button to open the Edit Switchboard Item dialog box.
3. Type **Enter/View Addresses1** in the Text box.
4. Click on the drop-down list button next to the Command box and choose Open Form In Edit Mode. A Form box will appear.

FIGURE 3.25

The Switchboard Manager lets you create new switchboard pages, edit existing pages, delete pages, and choose a default switchboard page.

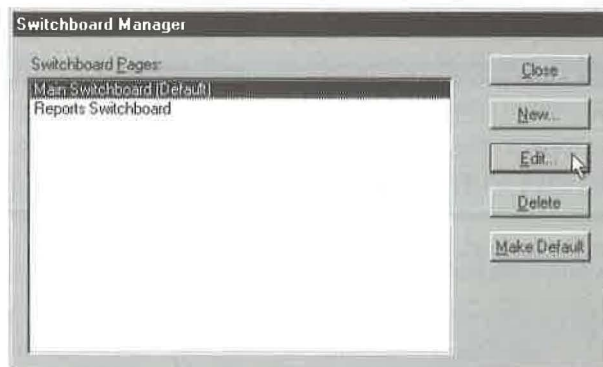
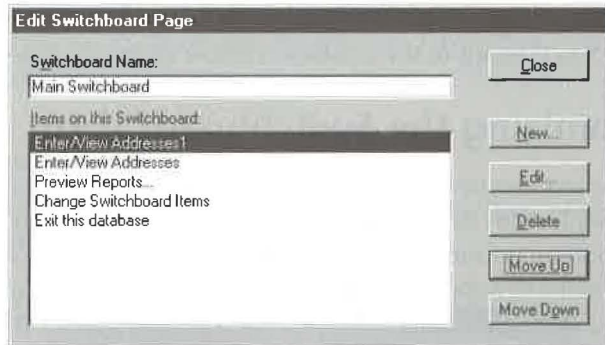


FIGURE 3.26

The Edit Switchboard Page dialog box after you add a new item and move it to the top of the list.



5. Click on the drop-down list button next to the Form box and choose Addresses1. The completed Edit Switchboard Item dialog box looks like this:



6. Click on OK to return to the Edit Switchboard Page dialog box. Your new entry appears at the bottom of the Items On This Switchboard list.
7. Move your new item to the top of the list by clicking on that item; then click on the Move Up button four times. Figure 3.26 shows the completed Edit Switchboard Page dialog box.



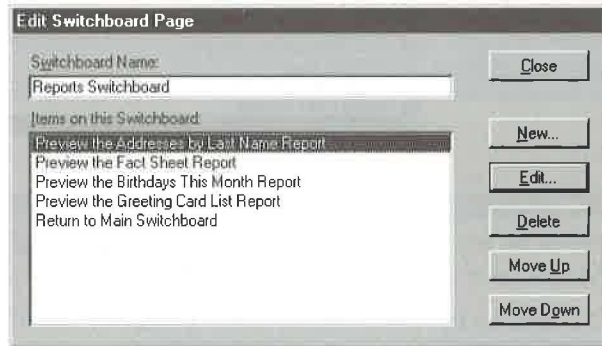
If you want to remove the old Enter/View Addresses option from the list, click on that item in the Items On This Switchboard list, click on the Delete button, and then click on Yes to confirm the deletion.

8. Click on the Close button to return to the Switchboard Manager dialog box.

Changing the Option Names on the Reports Switchboard

We think the options for printing reports on the Reports Switchboard are a bit verbose and maybe even somewhat wordy. If you agree, follow these steps:

1. Click on Reports Switchboard in the Switchboard Pages list and then click on the Edit button. Here's what you'll see:

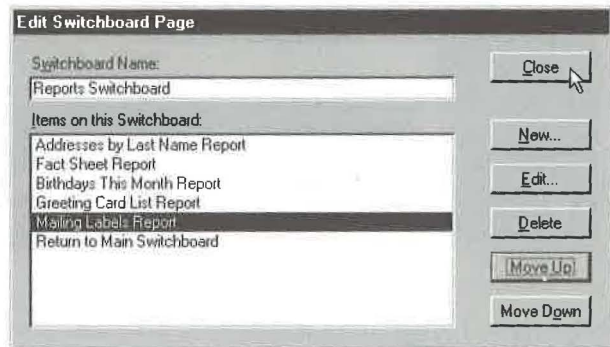


2. Click on the first item in the Items on this switchboard list and then click on the Edit button. The option name will be highlighted in the Text box.
3. Replace the selected text with **Addresses by Last Name Report**. To do this task quickly, select *Preview the* (and the space after *the*) and press Delete. Then click on OK.
4. Repeat steps 2 and 3 for the second, third, and fourth items on the switchboard using the guidelines below:
 - For the *second* item, change the Text to **Fact Sheet Report**.
 - For the *third* item, change the Text to **Birthdays This Month Report**.
 - For the *fourth* item, change the Text to **Greeting Card List Report**.

Now add the new Labels Addresses report to the list of items on the Reports Switchboard:

1. Click on the New button to open the Edit Switchboard Item dialog box.
2. Type **Mailing Labels Report** in the Text box.
3. Click on the drop-down list button next to the Command box and choose Open Report. A Report box will appear.
4. Click on the drop-down list button next to the Report box and choose Labels Addresses.
5. Click on OK to return to the Edit Switchboard Page dialog box. Your new entry appears at the bottom of the Items on this switchboard list.

6. Click on the Mailing Labels Report item to move your new entry up a notch; then click on the Move Up button once. The Edit Switchboard Dialog box will resemble the example shown below:



7. Click on the Close button twice to return to the database window.

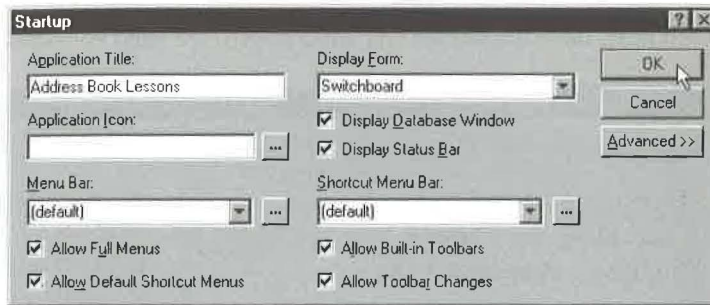
Putting It All Together with Startup Commands

When you open a database, Access looks for certain startup commands and executes them automatically. You can customize your database by choosing startup commands that hide the database window, go straight to a specific form, and more. The Database Wizard took care of setting up the essential startup commands for you automatically. But let's customize those startup commands just for practice:

1. Choose **Tools** ► **Startup**, or right-click on any tab in the database window and choose **Startup** from the shortcut menus. You'll see the Startup dialog box (a completed example appears in Figure 3.27).
2. Type **Address Book Lessons** in the Application Title box. (This title will appear in the Access title bar anytime the database is open and on the Taskbar.)
3. Make sure **Switchboard** appears in the box below **Display Form**. (You can use the dropdown list below **Display Form** to choose any form that's available for the Address Book Lessons database; however, using **Switchboard** gives you the most flexibility.)
4. Click on **OK**. The new application title immediately replaces Microsoft Access in the window's title bar.

FIGURE 3.27

The Startup dialog box after we filled in the Application Title.

**NOTE**

The Main Switchboard form automatically minimizes the database window when you open the form; therefore, you don't need to clear the Display Database Window checkbox in the Startup dialog box.

Testing the Application

Now you're ready to test the whole thing. Follow these steps to close and then reopen the database:

1. Choose File ► Close, or press Ctrl+W, until the Main Switchboard form and database window disappear.
2. Open the database you just closed by choosing File from the menu bar; then choose Address Book Lessons.

The Main Switchboard form will open, and you'll see the text Address Book Lessons in the Access window's title bar. Now you can explore the Address Book Switchboard form to your heart's content. When you're finished, do one of the following:

- To close the Main Switchboard form and the database window, click on the button next to Exit This Database on the Main Switchboard form.
- To close the Switchboard form but leave the database window open, click on the Close button on the Main Switchboard or Reports Switchboard form (or press Ctrl+W) and then press F11 to display the database window.

When you're done using Access, choose File ► Exit to return to Windows. Your database application will be stored safely on disk for future use. To use the application in the future, start Access and open the Address Book Lessons database.

At Your Leisure

To learn more about creating applications, see Parts Four and Five of this book.

There's More Than One Way to Create Turnkey Applications

As you've seen, there's more than one way to automate your work and to create turnkey applications with Access. For example, you can use a Switchboard form, which Access sets up anytime you use the Database Wizard, to create a database. You also

can add hyperlinks, command buttons, and Visual Basic programming to forms as you did for your Addresses1 form. And you can use combinations of these and other techniques that you'll learn about in Parts Four and Five of this book. Your application can be as simple or as sophisticated as you wish, depending on your requirements and your expertise. It's all up to you!

Where to Go from Here

Congratulations! You've just created your first Access database and your first custom Access application. The steps you followed to set up the Address Book example also work for more than 20 other applications that Access can create automatically.

If you'd like to build a fancier application now, use the Database Wizard to create an Order Entry database (with sample data, of course). We'll use the Wizard-generated Order Entry database—with some tweaks to the Wizard-supplied data—to illustrate key concepts throughout this book. Alternatively, you can copy our sample Order Entry database from the CD-ROM supplied with this book (see Appendix B for details). Having your own Order Entry database to experiment with as you read will make learning Access easier and more fun.

What's New in the Access Zoo?

You've just taken a look at many of the features that make Access 97 for Windows 95 so much easier for beginners to learn and use than previous versions of Access were.

These features include

- Improved Database Wizards that can create more than 20 turnkey applications, complete with sample data.
- A new way to filter records called Filter by Input.



