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• Microsoft<sup>®</sup> Office

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# USING ACCESS

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## **INTRODUCTION TO ACCESS**

icrosoft Access is a database program that allows you to store and manage large collections of information. Access provides you with all the tools you need to create an efficient and effective database. Databases are very useful for finding specific data in a large collection of information.

Databases also allow you to perform calculations on the information they contain. For more information on Access, you can visit the following Web site: www.microsoft.com/access

#### **Personal and Business Uses**

Many people use a database to store personal information such as addresses, music and video collections, recipes or a wine list. Using a database to store and organize information is much more efficient than using sheets of paper or index cards.

Companies use a database to store information such as mailing lists, billing information, client orders, expenses, inventory and payroll. A database can help a company effectively manage information that is constantly being reviewed, updated and analyzed.

### Types of Databases

Flat file databases store information in one large table. This type of database often contains duplicate information. A flat file database is easy to set up, but is not very flexible or efficient for storing large amounts of information.

Relational databases store information in separate tables. You can use relationships to bring together information from different tables. This type of database is powerful, flexible and effectively stores large amounts of information. A relational database is faster and easier to maintain than a flat file database. You can use Access to create a relational database.

### **Database Applications**

A database stores and manages a collection of information related to a particular subject or purpose. You can efficiently add, update, view and organize the information stored in a database.

You can instantly locate information of interest in a database. For example, you can find all clients with the last name Smith. You can also perform more advanced searches, such as finding all clients who live in California and who purchased more than \$100.00 worth of supplies last year.

You can perform calculations on the information in a database to help you make quick, accurate and informed decisions. You can neatly present the information in professionally designed reports.



### PARTS OF A DATABASE

atabases consist of objects such as tables, forms, queries, reports, pages, macros and modules.



### **Tables**

A table is a collection of related information about a specific topic. You can have one or more tables in a database. A table consists of fields and records. A field is a specific category of information in a table such as the first names of all your clients. A record is a collection of

information about one person, place or thing such as the name and address of one client.



#### Forms

Forms provide a quick way to view, enter and modify information in a database by presenting information in an easy-to-use format. A form displays boxes that clearly show you where to enter or modify information. Forms usually display one record at a time.

### Queries

Queries allow you to find information of interest in a database. When you create a query, you ask Access to find information that meets the criteria,



or conditions, you specify. For example, you can create a query to find all items that cost less than \$100.00.





### Reports

Reports are professional-looking documents that summarize data from your database. You can perform calculations, such as averages or totals, in a report to summarize information. For example, you could

create a report that displays the total sales for each product.



#### Pages

Pages allow you to access a database on the Internet or an intranet using a Web browser. When you add pages to a database, other users can view and enter information in the database even if they do not have Access installed on their computers.

### Macros

A macro saves you time by combining a series of actions into a single action. Macros are ideal for tasks you perform frequently. For example, you can create a macro that calculates and prints daily sales figures. Instead of having to perform each action individually, you can have a macro automatically perform all the actions for you.

### Modules

Modules are programs created in Visual Basic for Applications (VBA), which is a programming language. Modules allow you to efficiently control a database.



# PLAN A DATABASE

**7** ou should take the time to properly design a database. A good database design ensures that you will be able to perform tasks efficiently

and accurately. As you add information and objects to a database, the database becomes larger and more complex. A database that is designed properly will be easier to modify and work with as it grows. Good planning can also make it easier for other users to work with a database you create.

### **Determine the Purpose of the Database**

Decide what you want the database to do and how you plan to use the information. If others will be using the database, you should consult with them and consider their needs. This can

help you determine what information you need to include to make the database complete.

#### **Determine the Tables You Need**

Gather all the information you want to store in the database and then divide the information into separate tables. A table should contain related information about one subject only. The same information should not appear in more than one table in a database. You can work more efficiently and reduce errors if you only need to update information in one location.

### **Determine the Fields You Need**

Each field should relate directly to the subject of the table. When adding fields, make sure you break down information into its smallest parts. For example, break down names into two fields called First Name and Last Name.

Try to keep the number of fields in a table to a minimum. For example, do not include a field containing data you can calculate from other fields. Tables with many fields increase the time it takes to process information in a database.

#### **Determine the Relationships Between Tables**

A relationship tells Access how to bring together related information stored in separate tables. You can use the primary key to form a relationship between tables. A primary key is one or more fields that uniquely identifies each record in a table. For example, the primary key for a table of employees could be the social security number for each employee.

Social Security ID	First Name	Last Name	City	Postal Code	Social Security ID	Position	Salary	Start Date
111-11-1111	Jim	Schmith	New York	10010	111-11-1111	Accountant	\$45,000	04/9
22 6 822	Brenda	Peterson	Boston	02117	22 8 822	Receptionist	\$28,000	06/9
	Todd	Talbat	San Francisco	94110		Admin Assistant	\$30,000	02/9
444 12444	Chuck	Dean	Las Vegas	89116	444. 10444	President	\$150,000	04/8
600- +6000	Melanie	Robinson	Jacksonville	32256	600- 6000	Sales Rep.	\$40,000	02/9
111- 1111	Susan	Hughes	Nashville	37243	777- 9777	Sales Rep.	\$55,000	11/9
888-88-8888	Allen	Toppins	Atlanta	30375	888-88-8888	Human Resources	\$42,000	05/9
999-99-9999	Grag	Kilkenny	Boston	02118	999-99-9999	Accountant	\$50,000	06/9
000-00-0000	Jason	Marcuson	New York	10020	000-00-0000	Marager	\$38,000	04/9
000-11-2222	,ăn	Maitin	San Diego	92121	000-11-2222	Sales Rep.	\$48,000	07/9

# START ACCESS

**T** ou can start Access to create a new database or work with a database you previously created.

Each time you start Access, the Microsoft Access dialog box appears. This dialog box allows you to create a blank database or use a Database Wizard to create a database. A Database Wizard

will guide you step-by-step through the process of creating a new database.

You can also use the Microsoft Access dialog box to open an existing database. The dialog box displays a list of the databases you most recently used. This allows you to quickly open a database vou use often.



The first time you start Access, the Office Assistant appears on your screen. The Office Assistant can provide you with information to help you perform tasks and understand the features Access offers. For more information on the Office Assistant, see page 16.

Note: To create a database see page 380 or 382. To open an existing database, see page 390.



### **CREATE A BLANK DATABASE**

f you want to design your own database, you can create a blank database.

Each time you start Access, a dialog box appears, allowing you to create a blank database or use the Database Wizard to create a simple database. Creating a blank database is useful when you have experience using Access or when you want to create a complex database. To store the database as a file on your computer, you must give the database a name. Access assigns a default name, such as db1, to each database you create. You should give the database a more descriptive name to help you recognize the database later.

Access automatically stores the database in the My Documents folder, but you can specify another folder. The Places Bar lets you quickly access many commonly used folders.

Access displays the blank database on your screen. The database does not contain any objects such as forms, reports or tables. You can create the objects you want to use in the database.



### Can I create a blank database while working in Access?

✓ Yes. Click the New button (□) to display the New dialog box. Click the General tab and then double-click Database. Type a name for the database and then click Create. Access will close a database displayed on your screen when you create a new database.

### How do I create a new folder to store my database?

✓ In the File New Database dialog box, click the Create New Folder button (). Type a name for the folder and then press the Enter key.



### What folders can I access using the Places Bar?

✓ The History folder lets you access folders you recently used. The My Documents folder provides a convenient place to store your database. The Desktop folder lets you store your database on the Windows desktop. The Favorites folder provides a place to store a database you will frequently access.

Microsoft Access <u>File Edit View Insert Tools Window Help</u> □ ☞ 및 ● 及 ♥ % 時 尾 ダ ∽ 點 • 歸 • 数 ┏ 吨 瘤 • 및 • - 🗆 × Husic CD Collection : Databas 🛱 Open 🔛 Design 🗥 New 🔀 🖭 🖽 🗰 Create table in Design view Ohiects III Tables Create table by using wizar Create table by entering data Querie E Form 🗖 Rep 🛍 Page 🛣 Macro 🚓 Modu Groups 🕷 Favor NUM 🔀 Start 🛛 🙆 🖸 🔌 📝 Microsoft Access √ 12:00 PM

Access creates a blank database.

▶ You can now add objects, such as tables and reports, to the database. The objects you add will appear in the Database window. USING

### CHAPTER **GETTING STARTED**

## CREATE A DATABASE USING THE DATABASE WIZARD

he Database Wizard lets you create a database quickly and efficiently. The wizard saves you time by providing ready-to-use objects, such as tables, forms, queries and reports.

Access offers ten databases, such as the Contact Management, Expenses, Inventory Control and Order Entry databases. You can choose the database that best suits the type of information you want to store. For additional databases, you can visit the following Web site: http://officeupdate.microsoft.com/ downloadCatalog/dldAccess.htm

To store the new database as a file on your computer, you must give the database a name. Using a descriptive name will help you recognize the database later.

Access automatically stores the database in the My Documents folder, but you can specify another

folder. Access lets you quickly access several commonly used folders, such as Desktop and Favorites.

The Database Wizard will ask you a series of questions to determine how to set up the database to suit your needs. When you start the wizard, the wizard describes the type of information the database will store.

#### \_ 8 × <u>File Edit View Insert Tools Window Help</u> <u>File Edit View Insert Tools Window H</u>elp ?×? 🗅 🖙 🖬 🎒 🗟 🚏 Microsoft Access New Create a new database using General Databases Blank Access database 99 III III Ø Ø Preview Access database wizards, pages, and projects Event Managemer Contact Managemer set Tracking Expenses Þ ð ð ð C Open an existing file Inventory Control Resource Scheduling... Ledger Order Entry More Files ess Sample Database Time and Billing Service Call ntory Sample Databas lanagement OK N Cancel Cancel NUM NUM 🙀 Start 🛛 🍘 🗹 🦉 🖉 Microsoft Access 🖁 🖁 Start 🛛 🎯 🙆 🦉 🖉 Microsoft Access € 12:00 PM 5 Click OK. The Microsoft Access 2 Click OK. 3 Click the Databases tab. dialog box appears each -4 Click the type of database The New dialog The File New time you start Access. box appears. you want to create. Database dialog -I Click this option to box appears. create a new database



### The Microsoft Access dialog box offers the "Access database wizards, pages, and projects" option. What are pages and projects?

 Pages are Web pages you can create to access a database on an intranet or the Internet using a Web browser.
 Projects allow you to create an Access database that can work with more sophisticated programs, such as network database programs.

> In the New dialog box, click the General tab. To create a page, click the Data Access Page icon. To create a project, click a Project icon. Then click OK.



using the Database Wizard

 $(\bigcap$  changes to  $\bigcirc$ ).

### How can I start the Database Wizard while working in Access?

✓ Click the New button (□) to display the New dialog box. Then perform steps 3 to 7 below. Access will close a database displayed on your screen when you create a new database.

### Can I change the way databases appear in the New dialog box?

✓ Yes. Click ➡ to display the databases as large icons. Click ➡ to display the databases as small icons in a list. Click ➡ to display additional information about the databases.

oft Access	
View Insert Tools Window Help	
Database Wizard  The Inventor  Product inf  Information  Categories  Click Next to	y Control database will store: 'ormation n about buying and selling inventory yrder information ; n about employees continue.
Cancel	Back Next > Einish
* Favorites	
Wizard	
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e Database Wizard ars.	8 Click Next to continue.

This area describes the type of information the database will store.



USING

ACCESS

## CREATE A DATABASE USING THE DATABASE WIZARD CONTINUED

hen using the Database Wizard to create a database, the wizard displays all the tables that Access will create. The wizard also displays the fields that will be included in each table. A field is a specific category of information in a table.

The wizard automatically includes required fields in each table. You can choose to include other optional fields. For example, in the Order Entry database, the Customer information table includes required fields such as Company Name, Billing Address and Phone Number. You can include optional fields in the table, such as Email Address and Notes.

The Database Wizard asks you to select the style you want to use for screen displays. A screen display style gives the database a consistent look. There are several screen display styles for you to choose from, including Blends, International and Stone.

The wizard also asks you to select a style for printed reports. Using a report style helps you create professional-looking reports. The wizard offers several report styles for you to choose from, including Bold, Corporate and Formal.





### Do I have to answer all the questions in the Database Wizard?

✓ No. You can click the Finish button at any time to create a database based on the answers you have provided so far. If you are using the Database Wizard for the first time, the wizard will use default settings for the questions you did not answer. If you have used the Database Wizard before, the wizard will use the last answers you provided.



### Can I change the style of my screen displays later on?

✓ You can easily change the style of your screen displays after you create a database. For more information, see page 463.

### Can I remove a required field from the Database Wizard?

✓ You can only remove a required field after you finish creating the database. When you try to remove a required field from the Database Wizard, a dialog box appears, stating that the field is required and must be selected. To remove a field from a database you have created, see page 402.

oft Access	X	
Yew Insert Tools Window Help         Database Wizard         What style would you like for printed reports?         Image: State	Next > Einish	
Wizard	NUM	
ick the style you	<sup>5</sup> Click Next to continue.	

- want to use for printed reports.
- This area displays a sample of the style you selected.



USING

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## **CREATE A DATABASE USING** THE DATABASE WIZARD CONTINUED

he Database Wizard asks you to specify a title for L the database. Do not confuse the title of the database with the name of the database. The title of the database appears on the switchboard, which is similar to a main menu for the database. The name of the database is the name vou used to store the database as a file on your computer.

After the wizard has finished creating the database, the wizard will start the database. You can specify whether or not you want to start using the database immediately after it is created.

The Database Wizard automatically creates objects for the database, such as tables, forms, queries and reports.

When the wizard is complete, the switchboard appears on your screen. You can use the switchboard to perform common tasks, such as adding records to the database and exiting the database.

#### Can I get help with my new database?

✔ Access can display help information when it starts your newly created database. In the last dialog box of the Database Wizard, click the Display Help on using a database option ( $\square$  changes to  $\square$ ).

#### Why does Access ask for information when the database starts?

Access may ask you to enter information, such as your company name and address, to finish setting up the database.







Access creates the objects for the database. including tables, forms, queries and reports.

The Main Switchboard window appears, which helps you perform common tasks.

**19** To perform a task. click the task you want to perform.

The datab vou to

### Can I include a picture on all my reports?

✓ You can include a picture, such as a company logo, next to the title on your reports. After you specify a title for the database in the Database Wizard, select the Yes, I'd like to include a picture option ( $\Box$  changes to  $\checkmark$ ). Then click the Picture button to find the picture on your computer. The picture you select will appear in the Database Wizard.

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View Insert Format	<u>R</u> ecords <u>T</u> ools <u>W</u>	/indow <u>H</u> elp				
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Products					- 🗆 🖂	-
Product ID	900-543-6	82	Lead Time	2 weeks		
Product Name	EZ Frost-free F	Refrigerator	Reorder Level	878	10	
Description	Height: 22 cu. Model #: S245	ft. i9	Units on Hand Units on Order		50 0	
Category	Major Applianc	es 🔹				
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Date	PO ID	Des	ription	# Ordered	# Rec	
Purchase Orders					<u> </u>	
ord: 🚺 🚺	 9 <u>+ + +</u> 0	f 9				-
60000	EZ Appliances	Inv	Switchboard	roducts	NUM	2:00 PM

task appears.

click x to close the object.

USING

## **USING THE DATABASE WINDOW**

**T** ou can use the Database window to view and work with all the objects in a database, including tables, queries, forms, reports, pages, macros and modules. Each type of object in the Database window displays a different icon, such as a table (III), query (III), form (III) and report (P).

The Database window allows you to quickly open an object in the

database to perform a task, such as adding a record to a table or changing a form.

You can change the name of an object displayed in the Database window to help you better identify the object.

You can delete an object you no longer need from your database. Before you can delete a table with a relationship to another

table, you must first delete the relationship. For more information on relationships. see page 442.

When the Database window is hidden, you can press the F11 key to place the Database window in front of all the open windows in Access.

Sta



Is there a more efficient way to work with the objects in the Database window?

✓ You can create groups to keep related objects in one place. For example, you can create a group named Sales to hold the tables and forms for your sales data. To create a group, click the Groups bar in the Database window. Right-click the area below the Groups bar and then select New Group. Type a name for the group and then click OK. To add an object to the group, drag the object from the right pane of the Database window to the name of the group below the Groups bar.

To display the objects in a group, click the group. You can work with an object in a group as you would work with any object in the Database window.



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Click the name of the object you want to change.	After a few seconds, click the name of the object again. A black border appears around the name of the object.	
	<b>3</b> Type a new name for the object and then	1

work with.

#### Can I change the way objects appear in the Database window?

 $\checkmark$  Yes. Click  $\mathbb{P}_2$  to display the objects as large icons. Click is to display the objects as small icons. Click I to display the objects as small icons in a list. Click i to display additional information about the objects.

oft Access	_ 8 ×
<u>View Insert T</u> ools <u>Window H</u> elp	
] 鲁飞** * 哈尼·· · ዄ· 雨· * 留 哈泊· Q.	
Contral Sporting Supplies : Database	
Objects       Create table in Design view         Image: Tables       Create table by using wizard         Image: Tables       Create table by entering data         Image: Tables       Customers         Image: Tables       Image: Tables         Image: Tables       Create table by entering data         Image: Tables       Image: Tables         Image: Tables       Image: Tab	
Microsoft Access  Do you want to delete the table 'Deliveries'?  For more information on how to prevent this message from displaying every time you delete an object, click Help.  Yes No Help	
🖉 🖸 🖞 📔 Total Sporting Suppli.	12:00 PM

#### TE AN OBJECT

lick the name of bject you want elete.

lick 🔀 to delete bject.

A dialog box appears, confirming the deletion.

-3 Click Yes to permanently delete the object.

USING

#### **GETTING STARTED** CHAPTER

# **OPEN A DATABASE**

**T** ou can open a database you previously created and display it on your screen. This lets you review and make changes to the database.

Each time you start Access, a dialog box appears, displaying a list of the databases you recently worked with. The names of sample databases, such as Contacts Sample

Database, may also appear in the list. You can quickly open one of these databases. If the database you want to open is not in the list, you can use the Open dialog box to open the database.

The Open dialog box allows you to specify where the database you want to open is located. You can use the Places Bar to quickly display the contents of commonly used folders, such as the Desktop and Favorites folders.

In the Open dialog box, the 🕙 icon appears beside the name of each database.

You can have only one database open at a time. Access will close a database displayed on your screen when you open another database.



NIM

The Microsoft Access dialog box appears each time vou start Access.

🏽 Start 🛛 🍘 🗹 🦉 🖉 Microsoft Access

1 Click this option to open an existing database  $(\bigcirc$  changes to  $\bigcirc$ ).



🙀 Start 🛛 🚳 🙆 🖉 🔮 📝 Microsoft Access

in the list.

want to open is not listed, double-click More Files. The Open dialog box appears.

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Note: The names of sample databases may also appear

the folder.

### How can I open a database while working in Access?

 $\checkmark$  Click the Open button ( $\blacksquare$ ) on the Database toolbar to display the Open dialog box. Click the name of the database you want to open and then click Open. If you want to open a database you recently worked with, click the File menu and then select the name of the database you want to open.

#### Can I prevent other people on a network from opening a database?

✓ If the database is saved on a network, other people may be able to open the database while you are using it. To prevent others from opening the database, in the Open dialog box, click ve beside Open and then select Open Exclusive.





### Why does a dialog box appear when I try to open a sample database?

✓ All of the sample databases may not have been installed on your computer when you installed Office 2000. Click Yes to install the sample database. A Microsoft Office 2000 dialog box appears, asking you to insert the CD-ROM disc you used to install Office. Insert the CD-ROM disc and click OK.

USING

**CREATE TABLES** CHAPTER

## **CREATE A TABLE IN** THE DATASHEET VIEW

table in a database stores a collection of information about a specific topic, such as a list of client addresses. You can create a table in the Datasheet view to store new information in rows and columns.

A table consists of records, fields and field names. A record is a collection of information about

one person, place or thing in a table. For example, a record can contain the name, address and account number for one client.

A field is a specific category of information in a table. For example, a field can contain the first names of all your clients.

A field name identifies the information in a field. You

can use up to 64 characters to name a field. You should avoid using long field names that will be difficult to remember and refer to later.

When you save a table, you give the table a name. You can use up to 64 characters to name a table. A descriptive name can help you recognize the table in a large database.



### table?

Is there another way to create a

✓ You can create a table in the Design view. In the Database window, click Tables and then double-click the Create table in Design view option. The Design view gives you more control over the structure of the table and the type of information each field will contain. For information on working in the Design view, see pages 418 to 445.

### Can Access help me create a table?

✓ You can use the Table Wizard to have Access take you step by step through the process of creating a table. For more information on the Table Wizard, see page 396.

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### Can I use a table I created in another database?

✓ You can import a table from another database. This saves you from having to create a new table. From the File menu, select Get External Data and then click Import. Click the name of the database that contains the table you want to import and then click the Import button. Click the name of the table you want to import and then click OK.

USING

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**CREATE TABLES** CHAPTER

## **CREATE A TABLE IN** THE DATASHEET VIEW CONTINUED

**T** ou can have Access set a primary key in your table for you. A primary key is one or more fields that uniquely identifies each record in a table, such as an ID number. Each table you create should have a primary key. You can use the primary key to establish relationships between the tables in a database.

File Edit View Insert Format Records Tools Window Help

There is no primary key defined

▶ **▶| ▶\*** 

No Cancel

III Favorite Recipes : Ta

Record: 14 4

🏽 🔀 Start 🛛 🎯 🕑 🖉 🖉 🕞 Recipes : Database

A dialog box appears,

not have a primary key.

stating that the table does

Datasheet Vie

The first time you save your table. Access removes the rows and columns that do not contain data. This reduces the clutter in the table and makes it easier to enter your data.

You can enter data into a table in Access as you would enter data into a worksheet in Excel. Access adds a new row to the

> number each record you add to the table.

table each time vou enter another record, so you can enter as many records as you need. Access automatically saves each record you enter.

When you finish entering the records for a table, you can close the table. The name of the table appears in the Database window.



#### I did not choose to have Access create a primary key for me. Can I set a primary key later?

see page 441.

✓ You can set the primary key at any time. To set the primary key,

\_ 8 ×

#### What are the symbols that appear to the left of a record?

 $\checkmark$  The arrow () indicates the current record. The pencil (..) indicates the record you are editing. The asterisk (\*) indicates where you can enter data for a new record.



🖬 Recipes : Database - 🗆 🛪 🛱 Qi 20 Minutes 20 Minutes Kids Lov 🖽 Forms 10 Minutes 20 Minutes Very Nic 🔳 Repo 省 Page 🖾 Mac 🐗 Mod Groups Favor NUM 🖁 Start 🛛 🏉 🖸 💋 🦉 👘 Recipes : Database 12 Repeat steps 10 and 11 The name of the table for each record. Access appears in the Database automatically saves each window.

-13 When you finish entering records, click X to close the table.

#### How do I insert a column?

✓ You can insert a column to add a new field to your table. Click the field name for the column you want to appear after the new column. Select the Insert menu and then choose Column.

### How do I delete a table?

✓ Before you delete a table, make sure other objects in your database, such as a form or report, do not use the table. In the Database window, click Tables. Click the name of the table you want to delete and then press the Delete key.



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CHAPTER CREATE TABLES

# CREATE A TABLE USING THE WIZARD

The Wizard helps you quickly create a table that suits your needs. The wizard asks you a series of questions and then sets up a table based on your answers.

The Table Wizard can help you create a table for business or personal use. The wizard provides sample business tables such as Customers, Products, Orders and Deliveries. For your personal needs, the wizard offers sample tables such as Recipes, Plants, Wine List and Investments. You can select a sample table that is similar to the table you want to create.

The Table Wizard displays the available fields for the sample

table you selected. You can include all or only some of the available fields in your table. You should make sure each field you include is directly related to the subject of the table. If you accidentally include a field in your table you do not need, you can remove the field.

you selected in step 3.

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### How can I quickly include all the available fields in my table?

✓ In the Table Wizard, click → to quickly include all the available fields from the sample table in your table.

### Can I rename a field in the Table Wizard?

✓ Yes. In the Fields in my new table area, click the field you want to rename and then click the Rename Field button. Type a new name for the field and then click OK.





### How can I quickly remove all the fields I included in my table?

 In the Table Wizard, click st to quickly remove all the fields you included.

### Do I have to complete all the steps in the Table Wizard?

✓ After you select the fields you want to include, you can click the Finish button at any time to create your table based on the information you have provided.

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CHAPTER CREATE TABLES

# CREATE A TABLE USING THE WIZARD

he Table Wizard asks you to name your table. You can use up to 64 characters to name a table. The name you specify will appear in the Tables area of the Database window.

You can set a primary key for your table. A primary key is a field that uniquely identifies each record in a table. Each table in a database should have a primary key. If you do not know which field to set as the primary key, you should allow the wizard to set the primary key for you. You can later change the primary key the wizard sets. See page 441.

If other tables already exist in the database, the Table Wizard

will show you how your new table relates to the other tables.

Access allows you to choose what you want to do when the wizard finishes creating your table. You can modify the table design, start entering data directly into the table or enter data using a form the wizard creates.



### I want to set the primary key. Which field should I use as the primary key?

✓ You should use a field that will hold a unique value for each record. For example, in a table that stores data related to inventory, you could use the Serial Number field as the primary key, since each product has its own unique serial number.

### Can I change how my table relates to another table in the database?

✓ Yes. In the Table Wizard, select the table you want to change the relationship for and then click the Relationships button. Select the type of relationship you want to create (O changes to ⊙). For more information on relationships, see page 442.





### How do I delete a table?

✓ Before you delete a table, make sure the table does not contain information you will need in the future and is not used by any other objects in your database, such as a form or report. Click Tables in the Database window, select the table you want to delete and then press the Delete key.

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5	Monthly Meeting	С	mmunity Center	7/21/99	7:00
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This area displays the field names for the table.

-14 To add a record, click the first empty cell in a row. Type the data that corresponds to the field and then press the Enter key to move to the next cell. Repeat this step until you finish entering all the data for the record.

**16** Repeat steps 14 and 15 for each record.

USING

## **RENAME A FIELD**

 $\checkmark$   $\checkmark$  ou can give a field a different name to more accurately describe the contents of the field. This can help prevent confusion between two similar fields in a table.

If you rename a field that is used in other objects in the database, such as a form or report, Access will automatically

change the references in the database to ensure the objects will be able to access the information in the renamed field.

You can use up to 64 characters to name a field. You cannot use the . ! [ or ] character to name a field.

You should also avoid including spaces when you rename a field if you plan to enter the field name in an expression for a calculation. A field name that contains spaces is more likely to be entered incorrectly than one without spaces. For more information on using expressions in calculations, see page 486.

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## **REARRANGE FIELDS**

**T** ou can change the order of fields to better organize the information in your table.

For example, in a table that stores employee names and phone numbers, you may want to move the field containing work phone numbers in front of the field containing home phone numbers.

Rearranging the fields in a ta will not affect how the fields are displayed in other object in the database, such as a form. Rearranging fields in the Datasheet view will also not affect the arrangement of fields in the Design view.

A thick line indicates the new location of the field you are moving. If you move a field





able	to an area of your table that
5	is not displayed on the screen,
S	Access will scroll through the
	table to show you the new
	location of the field.
f	After you change the order of
	fields in your table, you must
	save the table to keep the new
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The field appears in the new location.

3 Click 🔲 to save the change you made to the table.

# ADD OR DELETE A FIELD

**7** ou can add a field to a table when you want the table to include an additional category of information. For example, you may want to add a field for e-mail addresses to a table that contains client information.

If you no longer need a field, you can delete the field from your table. Deleting a field will permanently delete all the data in the field. Deleting unneeded fields will make your database smaller and may speed up the searches you perform.

Before you delete a field, you should make sure the field is not used in any other objects in the database, such as a form, query

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or report. If you delete a field used in another object, Access will not be able to find all the data for the object.

When you add or delete a field, Access automatically saves the changes for you.

How do I change the name of a field I added to my table?

✓ Access automatically assigns a default name to each new field you add to a table. To rename a field, double-click the field name, type a new name and then press the Enter key. For more information on field names, see page 400.

#### After I delete a field from a table, can I undo the change?

✓ You cannot use the Undo feature to reverse the results of deleting a field. If you regret deleting a field from your table, you must add the field to the table again.

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field is highlighted.

### Why won't Access let me delete a field?

✓ Access will not allow you to delete a field that is part of a relationship. A relationship tells Access how to bring together related information from more than one table in a database. You must delete the relationship before you can delete the field. To delete a relationship, see the top of page 469.



A dialog box appears, nfirming the deletion.

4 Click Yes to permanently delete the field.

The field disappears from the table.

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## CHANGE COLUMN WIDTH

**7** ou can change the width of a column in your table. Increasing the width of a column lets you view data that is too long to display in the column. Reducing the width of a column allows you to display more fields on your screen at once.

You can have Access automatically adjust the

width of a column to fit the longest item in the column.

After you change the width of a column, you must save the table to have Access save the new column width.

You can also change the height of rows in your table. Position the mouse over the bottom edge of the gray area to the left of

the row you want to change ( $\triangleright$  changes to  $\pm$ ). You can then drag the row edge to a new location. When you change the height of a row, all the rows in the table automatically change to the new height. You cannot change the height of a single row.

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# **OPEN A TABLE**

**T** ou can open a table and display its contents on your screen. This lets you review and make changes to the table.

You can open a table in the Datasheet or Design view. The Datasheet view displays all the records in a table. You can enter. edit and review records in the Datasheet view.

The Design view displays the structure of a table. You can change settings in the Design view to specify the kind of data you want to enter in each field of a table. For example, you can change settings for a field so you can enter only numbers in the field. For more information on the Design view, see pages 418 to 445.



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USING ACC ESS

When you have finished working with a table, you can close the table to remove it from your screen. A dialog box appears if you have not saved changes you made to the layout of the table, such as changing the column width or rearranging fields.

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	3	Treat for the Feet		25 Princ	eton St.	Boston
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	5	The Shoe Store	L	1212 Ja	rvis Ave.	New York
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The table appears.

When you finish reviewing the table, click x to close the table.

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## **MOVE THROUGH RECORDS**

**7** ou can easily move through the records in your table when reviewing or editing information.

You can change the location of the insertion point in your table. The insertion point is the flashing line on your screen that indicates where the text you type will appear. The insertion point must be located in the cell you want to edit. Access provides

buttons that allow you to instantly move the insertion point to the first, last, previous or next record.

If your table contains a large amount of information, your computer screen may not be able to display all of the fields and records at once. You can use the scroll bars to view the fields and records that are not displayed. You can scroll one field or record at a time. You can also quickly scroll to any field or record in your table. The scroll bars will not appear if all of the fields and records are displayed on your screen.

Scrolling allows you to move to another location in the table but does not move the insertion point.

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		2	The Meat Shop	Boston	Tables and chairs	
		3	Porky's Restaurant	St. Paul	Table decorations	- II.
	►	4	Mr. Steak	St. Louis	Cutlery	
		5	Healthy Food Inc.	Tampa	Dishes	
		6	Supper's Ready	Fort Worth	Menus	
		7	The Friendly Diner	Hartford	Cutlery and dishes	
		8	Henry's Kitchen	New York	Menus	
		9	Jay's Diner	Washington	Restaurant furniture	_
		10	Feeding Trough	Phoenix	Kitchen supplies	
		11	Lee's Fast Food	Raleigh	Menus and dishes	
		12	Vegetarian Cuisine	San Jose	Kitchen supplies	
		13	The Hot Grill	Dallas	Table decorations	
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#### MOVE THE INSERTION POINT

1 To move the insertion point, click the cell you want to contain the insertion point.

This area displays the number of the record containing the insertion point and the total number of records in the table.



-2 To quickly move the insertion point to another record, click one of the following buttons.

First Record

- Previous Record Next Record
- ▶ Last Record



#### How do I use my keyboard to move through fields and records?

✓ Press the Tab key to move to the next field in the current record. Press the  $\uparrow$  or  $\downarrow$  key to move up or down one record. Press the Page Up or Page Down key to move up or down one screen of records.

### Can I quickly display a specific record?

✓ Yes. This is useful if you know the number of the record you want to display. In the Record area at the bottom of the table, double-click the current number. Type the number of the record you want to display and then press the Enter key.

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				2 The Meat Shop	Boston	Tables and chairs				2	The Meat Shop	Boston	Tables and chairs		
				3 Porky's Restaurant	St. Paul	Table decorations				3	Porky's Restaurant	St. Paul	Table decorations		
		•		4 Mr. Steak	St. Louis	Cutlery				4	Mr. Steak	St. Louis	Cutlery		
				5 Healthy Food Inc.	Tampa	Dishes				5	Healthy Food Inc.	Tampa	Dishes		
				6 Supper's Ready	Fort Worth	Menus				6	Supper's Ready	Fort Worth	Menus		
				7 The Friendly Diner	Hartford	Cutlery and dishes				7	The Friendly Diner	Hartford	Cutlery and dishes		
				8 Henry's Kitchen	New York	Menus				8	Henry's Kitchen	New York	Menus		П
				9 Jay's Diner	Washington	Restaurant furniture				9	Jay's Diner	Washington	Restaurant furniture		
				10 Feeding Trough	Phoenix	Kitchen supplies				10	Feeding Trough	Phoenix	Kitchen supplies		
				11 Lee's Fast Food	Raleigh	Menus and dishes				11	Lee's Fast Food	Raleigh	Menus and dishes		
				12 Vegetarian Cuisine	San Jose	Kitchen supplies				12	Vegetarian Cuisine	San Jose	Kitchen supplies		
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### How can I quickly display a specific field?

✓ You can use the Formatting toolbar to quickly display a specific field. To display the Formatting toolbar, click the View menu, select Toolbars and then select Formatting (Datasheet). In the Go To Field area on the Formatting toolbar, click 🔽 and then select the name of the field you want to display.

you want to view.

USING

## SELECT DATA

B efore performing many tasks in a table, you must select the data you want to work with. For example, you must select data you want to move or copy.

Selected data appears highlighted on your screen. This makes data you select stand out from the rest of the data in your table.

You can select the part of the
table you want to work with.
You can select a field, record,
cell or data in a cell. Selecting
a field or record is useful when
you need to delete a field or
record from your table. Selecting
one cell or data in a cell is useful
when you are editing data in
your table.

You can select multiple fields, records or cells to perform the same task on all the fields, records or cells at once. This saves you from having to perform the same task again and again.

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		Mailing List ID	First Name	Last Name	Address	City	
		1	Ken	Petherick	432 Spring St.	Columbus	C
		2	Marty	Stumple	99 Grassy St.	Greensboro	N
		3	Cindy	Martin	36 Front St.	Orlando	F
		4	Mary	McNamara	800 King St.	Oakland	C
		5	Gery	Stingman	21 Belleview St.	Syracuse	N
6 Richard Coughlin 55 Milverton Blvd, Springfield II							
		7	Diana	Appleton	12 Palm St.	Sacramento	C
		8	John	Curran	35 Palmer Rd.	Fort Worth	Т
		9	Jennifer	Landry	73 Pine St.	Cleveland	C
	*	(AutoNumber)					Г
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SELECT A FIELD
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■ To select multiple fields, position the mouse over the name of the first field ( changes to ). Then drag the mouse until you highlight all the fields you want to select.

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		2	Marty	Stumple	99 Grassy St.	Greensboro	N						
		3	Cindy	Martin	36 Front St.	Orlando	F						
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#### SELECT A RECORD

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Position the mouse  $\[b]$  over the area to the left of the record you want to select ( $\[b]$  changes to  $\rightarrow$ ) and then click to select the record.

■ To select multiple records, position the mouse  $\triangleright$  over the area to the left of the first record ( $\triangleright$  changes to  $\rightarrow$ ). Then drag the mouse  $\rightarrow$ until you highlight all the records you want to select.



#### How do I deselect data?

✓ To deselect data, click anywhere in the table.

### How do I select all the records in a table?

✓ To select all the records in a table, click the blank area (□) to the left of the field names. You can also press the Ctrl+A keys to select all the records in a table.

#### Is there a fast way to select a word in a cell?

✓ To quickly select a word, double-click the word.

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		Mailing List ID	First Name	Last Name	Address	City		
1 Ken Petherick 432 Spring St. Columbus								
		2	Marty	Stumple	99 Grassy St.	Greensboro	Ν	
		3	Cindy	Martin	36 Front St.	Orlando	F	
		4	Mary	McNamara	800 King St.	Oakland	C	
			Gery	Stingman	21 Belleview St.	Syracuse	N	
		6	Richard	Coughlin	ughlin 55 Milverton Blvd. Sp		IL	
		7	Diana	Appleton	12 Palm St.	Sacramento	C	
		8	John 📕	Curran	35 Palmer Rd.	Fort Worth	Т	
	►	9	Jennifer 🤇	Landry	73 Pine St.	Cleveland	C	
	*	(AutoNumber)						

### SELECT A CELL

Position the mouse I over the left edge of the cell you want to select (I changes to D) and then click to select the cell.

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### How can I quickly select a large group of cells?

✓ To quickly select a large group of cells, click the first cell in the group you want to select and then scroll to the end of the group. Hold down the Shift key as you click the last cell in the group. Access highlights all the cells between the first and last cell you select.

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3	Cindy	Martin	36 Front St.	Orlando	F							
4	Mary	McNamara	800 King St.	Oakland	C							
5	Gery	Stingman	21 Belleview St.	Syracuse	N							
6	Richard	Coughlin	55 Milverton Blvd.	Springfield	IL							
7	Diana	Appleton	12 Palm St.	Sacramento	C							
8	John	Curran	35 Palmer Rd.	Fort Worth	Т							
9	Jennifer	Landry	73 Pine St.	Cleveland	C							
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#### SELECT DATA IN A CELL

Position the mouse I over the data. Then drag the mouse I until you highlight all the data you want to select. USING

PO

**CREATE TABLES** CHAPTER

### EDIT DATA

fter you enter data into your table, you can change the **L L** data to correct a mistake or update the data.

The flashing insertion point in a cell indicates where Access will remove or add data. When you remove data using the Backspace key, Access removes the character to the left of the insertion point. When you insert data, Access adds the characters you type at the location of the insertion point.

You can quickly replace all the data in a cell with new data.

As you edit data, Access displays symbols to the left of the records. The arrow  $(\blacktriangleright)$  indicates the current record. The pencil  $(.. \mathbb{Z})$  indicates the record you are editing. The asterisk ( $\ast$ ) indicates where you can enter data for a new record.

If you make a mistake while editing data, you can use the Undo feature to immediately undo your most recent change.

You do not have to save the changes you make. When you move from the record you are editing to another record, Access automatically saves your changes.

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EDIT DATA -1 Click the location in the cell where you want to change the data.

A flashing insertion point appears in the cell.

> Note: You can press the  $\leftarrow$  or  $\rightarrow$  key to move the insertion point to where you want to remove or add characters.

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2 To remove the character to the left of the insertion point, press the Backspace key.

3 To insert data where the insertion point flashes on your screen, type the data.

4 When you finish making changes to the data, press the Enter key.

### How can I quickly find data I want to edit?

✓ Click a cell in the field containing the data you want to find. Click the Find button (**M**). Type the data you want to find and then click the Find Next button.

### Can I check my table for spelling errors?

✓ You can find and correct all the spelling errors in a table. Click the Spelling button (🖤) to start the spell check. To spell check a single field or record, select the field or record before you begin.

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		3	White	Sandra	Denver	8/3/99					3 White	Sandra	Denver	8/3/99
		4	Burnes	Jennifer	Boston	10/18/99					4 Burnes	Jennifer	Boston	10/18/99
		5	Goderich	Jackie	Albany	2/2/99					5 Goderich	Jackie	Albany	2/2/99
		6	Davey	Erin	Atlanta	9/21/99					6 Davey	Erin	Atlanta	9/21/99
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### Can I copy data in a table?

✓ Yes. Copying data is useful when you want several records in a table to display the same information. After you edit the data in one record, you can copy the data to other records. Select the data you want to copy and then click the Copy button ( ). Click the location where you want to place the data and then click the Paste button (🖪).

USING

CHAPTER **CREATE TABLES** 

## **ZOOM INTO A CELL**

**7** ou can zoom into any cell in a table. This can make the contents of the cell easier to review and edit.

Zooming into a cell is useful when the columns in your table are not wide enough to display the entire contents of a cell. For example, a cell

may contain a long address or a long description that Access cannot completely display.

When you zoom into a cell, Access displays the contents of the cell in the Zoom dialog box. You can edit the contents of the cell directly in the Zoom dialog box.

If you plan to enter a large amount of data into a cell, vou can also zoom into an empty cell. This lets you easily view all the data you are typing into the cell at once.

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### **DISPLAY A SUBDATASHEET**

**7** hen viewing the records in a table, you can display a subdatasheet to view and edit related data from another table.

Access only displays subdatasheets for tables that have a relationship. If you used the Database Wizard to create your database, the wizard automatically defined relationships between tables

for you. For more information on relationships, see page 442.

A plus sign (+) appears beside each record that has related data. You can click a plus sign to display the related data in a subdatasheet. For example, a table containing customer information may be related to a table containing product orders. When viewing the customer table, you can click the plus





sign beside the record for a customer. A subdatasheet will appear, displaying information about the products the customer has ordered.

When you finish viewing and editing the data in a subdatasheet, you can hide the subdatasheet to remove it from your screen.

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The related data from the other table appears. You can review and edit

To once again hide the related data, click the minus sign (-)beside the record.

USING

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**CREATE TABLES** CHAPTER

## ADD OR DELETE A RECORD

**T** ou can add a new record to insert additional information into your table. Access automatically saves each new record you add to a table.

You can use the blank row at the bottom of a table to add a record. You cannot add a record to the middle of a table. If you want to change the order of the records, you can sort the records at any time. To sort records, see page 466.

If your table has an AutoNumber field, Access will automatically enter a number for each record vou add.

You can delete a record to remove information you no longer need. For example, you can delete a record containing a company you no longer deal with from your supplier table.

When you delete a record, you may also want to delete any related records in other tables. For example, if you delete a company from your supplier table, you may also want to delete records containing information about the products the company supplies from your product table.

Is there a faster way to enter data into cells in a new record?

✓ To copy the data from the cell above into the current cell, press the Ctrl+'(Apostrophe) keys. To insert the current date, press the Ctrl+;(Semicolon) keys.

#### Is there another way to add a record?

✓ You can use a form to add a record to a table. For more information, see page 452.

### How do I delete several records at once?

✓ Select the records you want to delete and then perform steps 2 and 3 on this page.

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ADD A RECORD



-2 Click the first empty cell in the row.

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Samantha

Last Name First Name Years as Member Renewal Date

10 years

3 years

7 years

12 years

10 years

15 years

11 years

10 years

4 years

7 years

12 years

1 year

**3** Type the data that corresponds to the field and then press the Enter key to move to the next cell. Repeat this step until you finish entering all the data for the record.

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#### Is there a way to ensure that related data in the database is removed when I delete a record?

✓ You can specify that if you delete a record in one table, related records in another table will also be removed. To do this, you must establish a relationship between the two tables. You must then enforce referential integrity and turn on the Cascade Delete Related Records option. For more information, see page 442.

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The record disappears.

A warning dialog box pears, confirming the eletion.

3 Click Yes to permanently delete the record.

USING

**CREATE TABLES** CHAPTER

## HIDE OR FREEZE A FIELD

▼ ou can temporarily hide a field in your table to reduce the amount of data displayed on your screen. This can help you work with specific data and can make your table easier to read.

Hiding a field allows you to review only fields of interest. For example, if you want to

browse through the names and telephone numbers of your clients, you can hide fields displaying other information.

When you hide a field, Access does not delete the field. The data in the hidden field remains intact.

You can freeze a field so it will remain on your screen at all times. Freezing a field allows you to keep important data displayed on your screen as you move through a large table. For example, you can freeze a field containing the names of your clients so that the names will remain on your screen while you scroll through the rest of the data for the clients.

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-1 Click the name of the field you want to hide.

3 Click Hide Columns.

from the table.

Address

190 Milverton Blvd. Hartford

14 Spencer Ave. Indianapolis IN

22 Whittle St.

125 Crane St.

772 Main St.

24 Pine St.

55 Sunset St

### How do I redisplay a hidden field?

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FREEZE

-1 Click

field yo -2 Click ✓ You can redisplay a hidden field to once again view the data in the field. From the Format menu, select Unhide Columns. A dialog box appears, displaying a list of the fields in your table. A check mark beside a field indicates the field is displayed on your screen. Click the box beside the field you want to redisplay ( changes to )

and then click Close.

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### How do I unfreeze a field?

✓ You can unfreeze a field at any time. From the Format menu, select Unfreeze All Columns.

#### Can I hide or freeze more than one field at a time?

✓ Yes. To hide or freeze multiple fields, you must first select the fields you want to hide or freeze. You can then hide or freeze the fields as you would hide or freeze a single field.

USING

# CHANGE VIEW OF TABLE

here are two ways you can view a table. Each view allows you to perform different tasks.

The Datasheet view displays all the records in a table. You can enter, edit and review records in this view.

The Design view displays the structure of a table. You can

change the data type and field property settings in this view. The data type determines the type of information you can enter in a field, such as text, numbers or dates. Specifying a data type helps ensure that you enter the correct information in a field.

The field properties are a set of characteristics that provide additional control over the information you can enter in a field. For example, you can specify the maximum number of characters a field will accept.

Access allows you to quickly switch between the Datasheet and Design views.

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A field name can be up to 64

characters long, including spaces. Press F1 for help on

The View button 🔛

can click the View button

to guickly switch between

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the Design (K) and

Datasheet () views.

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# **REARRANGE FIELDS**

**T 7** ou can rearrange the fields in a table to better organize your information.

When you rearrange fields

are also rearranged in the

Datasheet view.

in the Design view, the fields

Rearranging the fields in your

table allows you to place fields

in a logical order. For example,

telephone numbers so you can easily manage the related information. A thick line indicates where the field you are moving will appear. Rearranging the fields in a table will not affect how the fields are displayed in other objects based on the table in the database, such as forms.

in a table that stores client information, you may want to move the field containing first names in front of the field containing last names. Rearranging fields can also help you work with your table more efficiently. For example, you may want to place fields containing fax numbers and mobile phone numbers beside the field for



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### table in the Design view. the Datasheet view

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USING

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## ADD A FIELD DESCRIPTION

**V** ou can add a description to a field to identify the type of information the field contains. You can use up to 255 characters, including spaces, to describe a field.

Adding a description to a field can help you determine what kind of information you should enter in the field. For example, if a field has an abbreviated field

name such as CNum, you can add a description such as "This field contains customer numbers" to help you enter information in the field.

After you add a description to a field, you must save the table to have Access save the description.

When you display your table in the Datasheet view, you can click

anywhere in the field to display the description you added. The description will appear on the status bar at the bottom of your screen.

If you use the field in another object in the database, such as a form, the other object will display the description when you are working with the field.

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## **DISPLAY FIELD PROPERTIES**

ach field in a table has properties that you can display. The field properties are a set of characteristics that provide additional control over the kind of information you can enter in a field. For example, the Field Size property tells Access the maximum number of characters a field can contain.

The properties available for field depend on the type of d the field contains. For examp the Field Size property is available for a field containing text but is not available for a field containing currency. Th Decimal Places property is available for a field containing currency but is not available for a field containing text. You





a lata ple,	can display the available properties for any field in your table.
ng a ne	If you use a field in other objects in the database, such as a form or report, the other objects will also use the properties for the field.
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To display the properties for another field, click the field name. A triangle (▶) appears beside the field.

This area displays the properties for the field you selected.

USING

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CHAPTER - DESIGN TABLES

# CHANGE A DATA TYPE

Y ou can change the type of data you can enter in a field.

Before you change the data type for a field, you should consider what type of data you want to be able to enter in the field. Access will not accept entries that do not match the data type you specify. This helps prevent errors when entering data. For example, you cannot enter text in a field with the Number data type.

You should also determine whether you want to be able to perform calculations using the data in the field. For example, Access can calculate numbers in a Number or Currency field but cannot calculate numbers in a Text field. The ability to sort records is also a consideration. Some data types, such as Memo, Hyperlink and OLE Object, cannot be sorted.

If you change the data type for a field that contains data, Access may delete data in the field. Access will display a warning message before deleting any data.

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to display a list of data	

### DATA TYPES

### Text

Accepts entries up to 255 characters long that include any combination of text and numbers, such as an address. Make sure you use this data type for numbers you do not want to use in calculations, such as phone numbers or zip codes.

### Memo

Accepts entries up to 64,000 characters long that include any combination of text and numbers. The Memo data type is useful for notes, comments or

lengthy descriptions.



### Number

Accepts only numbers. You can enter numbers you want to be able to use in calculations in a field using the Number data type. By default, this data type does not accept decimal numbers.

### **Date/Time**

Accepts only dates and times.

### Currency

Accepts only monetary values. This data type accepts up to 15 numbers to the left of the decimal point and 4 numbers to the right of the decimal point. The Currency data type automatically displays data as currency. For example, if you type 3428, the data will be displayed as \$3,428.00.

### **AutoNumber**

Automatically numbers each record for you. The AutoNumber data type automatically assigns a unique number in a sequential or random order to each record in a table.

### Yes/No

Accepts only one of two values-Yes/No, True/False or On/Off.

### **OLE Object**

Accepts OLE objects. An OLE object is an item created in another program, such as a document created in Word or a chart created in Excel. OLE objects can also include sounds and pictures.

### Hyperlink

Accepts hyperlinks. You can select a hyperlink to jump to another document on an intranet or a Web page on the World Wide Web. You can enter a Web site address, such as www.maran.com, in a field using the Hyperlink data type to be able to quickly access the Web site from the table.





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ACCESS

CHAPTER – DESIGN TABLES

# SELECT A FORMAT

**W** ou can select a format to customize the way information appears in a field. When you select a format, you only change the way Access displays information on the screen. The values in the field do not change.

You can select a format for Number, Date/Time, Currency, AutoNumber and Yes/No fields. Access does not provide formats for Text, Memo, OLE Object or Hyperlink fields.

In a Number field, you can choose to display numbers in a format such as 1234.00 or \$1,234.00. If you want a number to display decimal places, you may also need to change the field size. For information on changing the field size, see page 426. In a Date/Time field, you can choose to display a date as Tuesday, July 20, 1999 or 7/20/99. A Yes/No field can display values as True/False, Yes/No or On/Off.

After you select a format, Access will automatically change any data you enter in the field to the new format. For example, if you type 3456, Access will automatically display the data as \$3,456.00.



## CHANGE NUMBER OF DECIMAL PLACES

ou can specify how many decimal places Access will use to display numbers in a field. Some numbers, such as prices, require only two decimal places. Numbers used in scientific calculations may require more decimal places.

You can choose to display between 0 and 15 decimal places after the decimal point. Changing the number of dec places only affects how a number is displayed on the screen, not how a number is stored or used in calculation For example, if you change number of decimal places to the number 2.3456 will be displayed as 2.3. However, Access will store and perfor calculations using the numb 2.3456.



cimal	If the Format property of a field is blank or set to General
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the	selecting a format, see page 424.
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# CHANGE THE FIELD SIZE

**• •** ou can change the field size of a text or number field to specify the maximum size of data you can enter into the field.

You can change the maximum number of characters that a text field will accept. Access allows you to specify a field size of up to 255 characters.

You can change the size of a number field to specify the size

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and type of numbers that can be entered into the field. Most field size options allow you to enter whole numbers only. If you want to be able to enter decimal numbers, such as 1.234, you must select the Single or Double field size option.

Access processes smaller field sizes more quickly than larger field sizes. Using smaller field sizes can help speed up tasks such as searching for data in a field.

Eile Edit View Insert Tools Window Help

Using small field sizes can also reduce the amount of space required to store a table on your computer. For example, if a table contains thousands of records, reducing the size of a text field by one or two characters may save a considerable amount of space.

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si

Vhat are some commonly used ize settings for number fields?

Setting	Number Size
Byte	Between 0 and 255
Integer	Between -32,768 and 32,767
Long Integer	Between -2,147,483,648 and 2,147,483,647

### Can I change the size of a field that already contains data?

✓ Yes. If you reduce the size of a text field containing data, Access will shorten any data that is longer than the new field size. If you reduce the size of a number field containing data, Access may change or delete data that is larger than the new field size. Access will display a warning message before changing any data.

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number to highlight the number.

#### Can I change the field size that Access automatically uses for new text or number fields?

✓ Yes. From the Tools menu, select Options and then choose the Tables/Queries tab. To change the size of text fields, double-click the Text area and type the new size. To change the size of number fields, click the Number area and choose a new size setting. Then click OK.

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CHAPTER – DESIGN TABLES

## ADD A CAPTION

**W** ou can create a caption for a field. The caption will appear as the heading for the field instead of the field name.

Adding a caption to a field is useful when you want the heading for a field to be longer and more descriptive than the field name allows. This can help you recognize the field more easily when you are entering or reviewing data in your table. For example, the caption Home Phone Number is much easier to understand than the field name HPhone.

A caption can be up to 2,048 characters in length, including letters, numbers and spaces. After adding a caption to a field, any forms, reports or queries you create that use the field will display the caption instead of the field name. Any forms or reports you created before adding the caption will continue to display the field name.



the Datasheet view.

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## ADD A DEFAULT VALU

what you can specify a value that you want to appear automatically in a field each time you add a new record. This saves you from having to type the same data over and over again.

For example, a table containing the addresses of your clients may contain a field for the country each client lives in. If the majority of your clients liv in the United States, you can set United States as the defau value for the field. This can save you a considerable amou of time if the table will contai a large number of records.

You do not have to accept the default value for each new



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int	not affect the existing data
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	data to the default value, click
	a cell containing data you
	want to change and then press
	the Ctrl+Alt+Spacebar keys.

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The default value automatically appears in the field each time you add a new record. You can accept the default value or type another value.

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## DATA ENTRY REQUIRED

**7** ou can specify that a field must contain data for each record.

Fields that require data prevent you from leaving out important information. For example, in a table that stores invoice information, you can specify that data must be entered in the Invoice Number field.

After you specify that a field must contain data, Access can check to see if the field contains data for all the existing records in the table. When you enter a new record in the table, an error message will appear if you do not enter data in the field.

You can also specify that a field requiring data may accept zerolength strings. A zero-length string indicates that no data exists for the

field. For example, if you set the Fax Number field to require data, but one of your clients does not have a fax machine, you will need to enter a zero-length string in the field.

To enter a zero-length string in a cell, type "" in the cell. When you enter a zero-length string, the cell in the table will appear empty.





### What is the difference between a null value and a zero-length string?

✔ A null value indicates that you do not know the information for the field. If the field is not set to require data, you can enter a null value by pressing the Enter key. This will leave the cell blank and allow you to move to the next field. A zero-length string indicates that no data exists for the field. If the field is set to require data, you can type "" to enter a zero-length string in the field.

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<b>5</b> To specify if the field can accept a zero-length string, click the area beside Allow Zero Length.	<b>7</b> Click Yes or No to specify if the field can accept a zero-length string.	<ul> <li>8 Click I to save the table.</li> <li>A dialog box appears, asking if you want to check</li> </ul>	If you do not want to check the field, click No. Note: If you want to check the field, click Yes.
<ul> <li>An arrow (♥) appears.</li> <li>6 Click the arrow (♥).</li> </ul>		if the field contains data for all existing records.	· ····, ···· · · · ·

#### I set a field in my table to require data and accept zero-length strings. Will these properties also be used in my forms?

✓ Properties you specify for a table also apply to forms that use data from the table. You should make sure you set the properties for a table before using the table to create a form.

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# ADD A VALIDATION RULE

**7** ou can add a validation rule to a field to help reduce errors when entering data. A field that uses a validation rule can only accept data that meets certain requirements.

Access automatically sets rules based on the data type of the field. For example, you cannot enter text in a field that has a Number data type. You can use a validation rule to set more specific rules. For example, you can type <50 to specify that numbers entered in the field must be less than 50.

Access will display an error message if the data you enter does not meet the requirements of the field. You can specify the error message you want Access to display. The error message can contain up to 255 characters. If you do not specify an error message, Access will display a standard error message.

When you add a validation rule, you can check to see if the existing data in the field meets the requirements of the new rule. Access notifies you if any existing data violates the new rule.

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Quick and Easy Recipes : Table     Field Name Data Type     Do AutoNumber     Category Text     Name Text     Minutes to Prepare Text	Description	Image: Second
General       Lookup         Field Size       S0         Format       Input Mask         Caption       Default Value         Validation Rule       <30	An expression that limits the values that can be entered in the field. Press F1 for help on validation rules.	Field Properties         General Lookup         Field Size       50         Format       Input Mask         Caption       Caption         Default Value       validation Rule         Validation Text       Time must be 30 minutes or less.         Required       No         Indexed       No         Unicode Compression       Yes         Design view. P6 = Switch panes. F1 = Help.       Image: Recipes : Database         Image: Recipes : Database       Image: Recipes : Database
1 Click the field you want to accept only certain values.	<ul> <li>2 Click the area beside Validation Rule.</li> <li>3 Type the validation rule that will limit the data you can enter into the field.</li> </ul>	<ul> <li>4 To create the error message you want to appear when you enter incorrect data, click the area beside Validation Text.</li> <li>5 Type the error message</li> </ul>

you want to appear.

#### What types of validation rules can use?

 Examples of validation rules include the following.

<1000	Entry must be less than 1000
>M	Entry must begin with M or a letter after M
<>0	Entry cannot be zero
Between 100 and 200	Entry must be between 100 and 200
USA or Canada	Entry must be USA or Canada
Like "????"	Entry must have 4 characters
Like "##"	Entry must have 2 numbers



### What type of error message should i create?

✓ You should create an error message that explains exactly why the data violates the validation rule. For example, the error message "You must enter a number between 0 and 9", is more informative than the message "Data Rejected".

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Click OK to close the dialog box and then retype



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## **CREATE A YES/NO FIELD**

**7** ou can create a field that accepts only one of two values, such as Yes or No. Creating a Yes/No field is useful when a field in your table requires a simple answer. For example, a table that stores product information could contain a Yes/No field that indicates whether or not a product has been discontinued.

You can choose one of three available formats for a Yes/No field-Yes/No, True/False or On/Off.

Access offers three ways to display data in a Yes/No field. The Check Box option displays a check box to indicate a value, such as Yes ( $\checkmark$ ) or No ( $\square$ ). The Text Box option displays

a text value, such as "Yes" or "No". The Combo Box option displays a text value, such as "Yes" or "No", and allows you to select the value you want from a drop-down list.

When you display your table in the Datasheet view, the Yes/No field displays the options you selected.



### When would I use the True/False format?

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✓ The True/False format is often used to determine if an action is required. For example, a True/False format could be used to indicate whether or not you should send mailings, such as newsletters, to a client.

#### How can I speed up the entry of data in a Yes/No field?

✓ By default, Access displays the No value in Yes/No fields. If most of your records require a Yes value, you can change the default value to Yes. For information on setting the default value for a field, see page 429.



#### In the Datasheet view, why doesn't the Combo Box drop-down list display any values?

✓ You must specify the values you want the drop-down list to display. In the Design view, click the Lookup tab and then click the area beside Row Source Type. Click the arrow ( ) that appears and then select Value List. Click the area beside Row Source and then type the values you want to display in the drop-down list, separated by a semicolon. For example, type Yes;No.

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### CHAPTER – DESIGN TABLES

## CREATE A LOOKUP COLUMN

**W** ou can create a list of values, called a lookup column, that you can choose from when entering information in a field. This can save you time since you do not have to type the values for each record.

Creating a lookup column is very useful if you repeatedly enter the same values in a field. For example, if you always use one of three methods to ship your orders, you can create a lookup column that displays the three shipping methods, such as land, sea and air. In a table that stores the names of your clients, you may want to create a lookup column that displays the Mr., Ms. and Mrs. values.

The Lookup Wizard guides you through the process of creating a lookup column. You can enter the values you want to appear in the lookup column using the Lookup Wizard.

### Can I create a lookup column that contains more than one column?

Yes. For example, the first column could contain shipping methods and the second column could contain costs. Perform steps 1 to 5 below. In the Number of columns area, type the number of columns you want to use. Then enter the values for the columns. The wizard will ask which column contains the values you want to use in the field.

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Microsoft Access \_ 8 × \_ 8 × \_ 8 × Eile Edit View Insert Tools Window Help <u>File Edit View Insert Tools Window Help</u> File Edit <u>View Insert Tools Window Help</u> Lookup Wizard Lookup Wizard · · |■・日母ほどより良ぐい ♀ ジュラ 留会 同為・日。 -This wizard creates a lookup column, which displays a list of values What values do you want to see in your lookup column? Enter the number of columns you want in the list, and then type the values you want in each cell. you can choose from. How do you want your lookup column to ge 🖩 Favorite Books : Table - 🗆 × its values? - 🗆 🗵 To adjust the width of a column, drag its right edge to the width you want, or double-click the BookID
 Title
 Category Field Name Data Type **^** right edge of the column heading to get the best f ..... I want the lookup column to look up the values in a table or AutoNumber Number of columns: 1 Text I will type in the values that I want. Col1 C Memo Properties Number General Lookup Date/Time Currency Fiel For Field Size 50 AutoNumber Format Yes/No Input Mask Inp Cap Def OLE Object Caption Hyperlink Lookup Wizard. Default Value The data type determines the kind of values that users can store in the field. Press F1 for Validation Rule Vali Vali Validation Text help on data types Rec Next > N < Back Next > Cancel Einish Required Allo Indexed Allow Zero Length Indexed Indexed Unicode Compression Unicode Compression Unicode Compressi Design view, F6 = Switch panes, F1 = Heli NUM okup Wizan NUM NUM kup Wizard 🖁 Start 🛛 🍘 💽 🧭 🦉 🗍 🛱 Book Collection : Database 🛛 🏢 Favorite Books : Table 🔀 Start 🛛 🎯 🕑 💋 🧕 🛱 Book Collection : Database 🛛 🔠 Favorite Books : Table 😹 Start 🛛 🚳 💽 💋 🥹 🛛 🛱 Book Collection : Database 🛛 🗐 Favorite Books : Table √F 12:00 PM 3 Click Lookup Wizard. -4 To type the values you 6 Click this area and -1 Click the Data Type 5 Click Next to continue. want the lookup column area for the field you then type the first value The Lookup Wizard want to use a lookup to offer, click this option you want to appear in appears. column. An arrow () ( $\bigcirc$  changes to  $\bigcirc$ ). the lookup column. appears.

Click the arrow () to display a list of data types.

### How can I adjust the width of a lookup column?

✓ Perform steps 1 to 8 below. Position the mouse ♀ over the right edge of the column heading (♀ changes to ↔) and then drag the column edge to a new location.

### Is there another way to enter values for a lookup column?

✓ You can create a lookup column that uses values from a table or query in your database. In the Lookup Wizard, choose the I want the lookup column to look up the values in a table or query option.

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To enter the next value, press the Tab key and then type the value.

8 Repeat step 7 for each value you want to appear in the lookup column.





CHAPTER

he Lookup Wizard displays the name of the **I** field that will offer the lookup column. If you want the field to display a different field name, you can enter a new name.

After creating a lookup column, you must save the table to have Access save the lookup column. When your table is displayed in the Datasheet view, users will be able to display the lookup column and select the value they want to enter in the field. Entering information by selecting a value from a lookup column can help prevent errors such as spelling mistakes. Using a lookup column can also ensure that

**DESIGN TABLES** 

users enter the correct type of information in a field.

If a lookup column does not display the value you want to use, you can type a different value in the field. To hide a lookup column you displayed without selecting a value, you can click outside the lookup column.

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To change the field name,					
type a new name.					



- will only enter a value from the ✓ You can have Access display an
- error message when a user enters a value that is not displayed in the lookup column. In the Design view, click the field that offers the lookup column, select the Lookup tab and then click the area beside Limit To List. Click the arrow ( that appears and then select Yes.

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### Can I change the values in an existing lookup column?

✓ Yes. In the Design view, click the field that offers the lookup column and then select the Lookup tab. The area beside Row Source displays the values that currently appear in the lookup column. You can delete, edit or add values in this area. You must use a semicolon (;) to separate the values.

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# **CREATE AN INDEX**

**7** ou can create an index for a field to speed up searching and sorting information in the field. Access uses the index to find the location of information.

You should index the fields you will frequently search. For example, in a table containing client information, you should

index the Last Name field since it is likely you will search for a client using the last name.

You can specify if the field you want to index can contain duplicates. The Yes (Duplicates OK) option allows you to enter the same data in more than one cell in a field. The Yes (No Duplicates)

option does not allow you to enter the same data in more than one cell in a field.

The primary key is automatically indexed. The primary key is a field that uniquely identifies each record in a table. The index for the primary key is automatically set to Yes (No Duplicates).

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Click the field you want to index.	<ul> <li>2 Click the area beside Indexed. An arrow () appears.</li> <li>3 Click the arrow ().</li> </ul>	4 Click an option to specify if you want to create an index for the field.	5 Click 🔳 to save the table.

# SET THE PRIMARY KEY

primary key is one or more fields that uniquely identifies each record in a table. Each table in a database should have a primary key. You should not change the primary key in a table that has a relationship with another table in the database.

There are three types of primary keys you can create-AutoNumber, single-field and multiple-field.

The AutoNumber primary field automatically assigns unique number to each rec you add. When you create table, Access can create an AutoNumber primary key for you.

A single-field primary key a field that contains a unio value for each record, such a social security number.

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## **DEFINE RELATIONSHIPS BETWEEN TABLES**

**T** ou can create relationships between tables to bring together related information. Relationships between tables are essential for creating a form, report or query that uses information from more than one table in a database.

For example, one table in the database could contain the names and addresses of your

clients, while the other table could contain the phone numbers of your clients. After you define a relationship between the two tables, you can create a query to have Access display client names, addresses and phone numbers.

The Relationships window shows the relationships that exist between the tables in vour database. You can add tables to this window.

You establish a relationship by identifying matching fields in two tables. The fields do not need to have the same name, but they must use the same data type and contain the same kind of information. You will usually relate the primary key in one table to a matching field in the other table. A primary key is a field that uniquely identifies each record in a table.



listing all the tables in

the database.

#### Why do relationships already exist between tables in my database?

✓ If you used the Database Wizard to create your database, the wizard automatically created relationships between tables for you.

### The Relationships window is cluttered. How can I view the relationships for just one table?

 $\checkmark$  Click the Clear Layout button ( $\boxtimes$ ) to remove all the tables from the Relationships window. Click Yes in the dialog box that appears and then perform steps 2 to 4 below to add a table to the Relationships window. Close the Show Table dialog box and then click the Show Direct Relationships button (P) to view the relationships for the table.



### How can I quickly display all the relationships in the database?

✓ To view all the relationships in the database, click the Show All Relationships button (I)

### How do I remove a table from the **Relationships window?**

Click the box for the table you want to remove and then press the Delete key. This table and any relationships defined for the table are removed from the Relationships window, but not from the database.



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## **DEFINE RELATIONSHIPS BETWEEN TABLES** CONTINUED

he type of relationship Access creates between **L** two tables depends on the fields you use to create the relationship.

If only one field in the relationship is a primary key, Access creates a one-to-many relationship. In this type of relationship, each record in a table relates to one or more

records in the other table. For example, if one table stores the names of clients and the other table stores orders, the one-to-many relationship allows each client to have more than one order. This is the most common type of relationship.

If both fields in the relationship are primary keys, Access creates a one-to-one relationship. In this

type of relationship, each record in a table relates to just one record in the other table. For example, if one table stores available rental cars and the other table stores the dates the cars are reserved, the one-to-one relationship allows each car to have only one reserve date.

### What is referential integrity?

✓ Referential integrity is a set of rules that prevent you from changing or deleting a record if matching records exist in a related table. Access provides two options that let you override the rules of referential integrity but still protect data from accidental changes or deletions. The Cascade Update Related Fields option allows Access to update matching data in all related records when you change the data in the primary key. The Cascade Delete Related Records option allows Access to delete matching records in related tables when you delete a record.





#### Can I change the referential integrity options later?

✓ Yes. To redisplay the Edit Relationships dialog box so you can change these options, double-click the line representing the relationship you want to change.

### How do I delete a relationship?

✓ In the Relationships window, click the line representing the relationship you want to delete and then press the Delete key.

USING

CHAPTER CREATE FORMS

## CREATE A FORM USING THE FORM WIZARD

The Form Wizard helps you create a form that suits your needs. The wizard asks you a series of questions and then sets up a form based on your answers.

A form presents information from a table in your database in an attractive format. You can use a form to add, edit and delete information in a table. You may find that a form is easier to work with than a table.

The Form Wizard allows you to choose the table containing the fields you want to include in the form. After you choose a table, you can select the fields you want to include. A form can include all or only some of the fields in a table.

If you accidentally select a field you do not want to include in the form, you can easily remove the field from the list of selected fields in the wizard.



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### Can I create a form that uses fields from more than one table?

✓ Yes. Perform steps 1 to 7 below to select the fields you want to include from one table. Then repeat steps 5 to 7 until you have chosen all the tables and selected all the fields you want to include in the form. To use more than one table to create a form, relationships must exist between the tables. For information on defining relationships between tables, see page 442.



### In what order will the fields I select appear in the form?

✓ The fields will appear in the form in the order you select them. You can rearrange the fields after you create the form. See page 456. USING

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### Is there another way to start the Form Wizard?

✓ Yes. In the Database window, click Forms and then double-click the Create form by using wizard option. This option is not available for some types of databases.

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# CREATE A FORM USING THE FORM WIZARD CONTINUED

CHAPTER

hen you use the Form Wizard to create a form, you can choose between several layouts for the form. The layout of a form determines the arrangement of information on the form.

The Form Wizard offers four layouts for you to choose from. The Columnar layout displays one record at a time and lines up information in a column. The Tabular layout displays multiple records and presents information in rows and columns. The Datasheet layout displays multiple records and is similar to the Datasheet view for tables. The Justified layout displays one record at a time and aligns information along both the left and right sides of a form.

**CREATE FORMS** 

You can apply a style to the form, such as Blends, International or Stone. Most styles use colors and patterns to enhance the appearance of a form.

You must specify a name for the form. You can use up to 64 characters to name a form. The name you specify will appear at the top of the form and in the Forms area of the Database window.





Can I later change the style of a form?

You can use the AutoFormat feature to later change the style of a form. Display the form you want to change in the Design view and then click the AutoFormat button ()). In the AutoFormat dialog box, select the style you want to use and then click OK. For more information on the AutoFormat feature, see page 463.

### How do I rename a form I have created?

✓ In the Database window, click Forms and then right-click the form you want to rename. From the menu that appears, select Rename. Type a new name for the form and then press the Enter key.



### Is there a faster way to create a form?

✓ You can use an AutoForm to quickly create a form based on one table in your database. In the Database window, select Forms and then click New. Choose the Columnar, Tabular or Datasheet AutoForm style. Click ▼ and then select the table that will supply the information for the form. Then click OK.

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CHAPTER CREATE FORMS

## MOVE THROUGH RECORDS

W ou can easily move through the records in a form to review or edit information. Any changes you make to the information in a form will also appear in the table you used to create the form.

Access displays the number of the current record and the total number of records in the form. Access also displays buttons you can use to move through the records in the form. You can quickly move to the first, last, previous or next record. If you know the number of the record you want to view, you can quickly move to that record.

You can also use the keyboard to move through records. Use the Page Up or Page Down key to move to the previous or next record. Use the Ctrl+ keys or the Ctrl+ keys to move to the first or last record.

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## EDIT DATA

ccess allows you to edit the data in a form. This lets you correct a mistake or update the data in a record.

You can insert new data in a cell. The flashing insertion point in a cell indicates where Access will insert new data. You can also delete data you no longer need from a cell. You can delete all or part of the data in a cell.

Access remembers the changes you make to a record. If you make a mistake while editing data in a cell, you can use the Undo feature to immediately undo the changes in the current cell. If you move the insertion point to another cell and then select the





Undo button (), Access will undo all the changes you made to the entire record. You do not have to save the changes you make. When you

changes you make. When you move from the record you are editing to another record, Access automatically saves your changes.

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### DELETE DATA

■ Drag the mouse 1 over the data you want to delete. Then press the Delete key.

Note: To delete a single character, click to the right of the character you want to delete and then press the Backspace key. Access will delete the character to the left of the flashing insertion point.

#### UNDO CHANGES

Click I to undo your most recent change.

# ADD OR DELETE A RECORD

Y ou can use a form to add a record to the table you used to create the form. For example, you may want to add information about a new client.

Access checks to make sure the data you enter in each field is valid for the specified data type and field properties. If an entry is invalid, Access notifies you before you move to the next field or record. For example, Access will notify you if you try to enter text in a Number field.

You can delete a record to remove information you no longer need. Deleting records saves storage space on your computer and keeps the database from becoming cluttered with unnecessary information. When you delete a record using a form, you may also want to delete any related data in other tables in the database. For example, if you use a form to delete a company you no longer deal with from your supplier table, you may also want to delete information about the products the company supplies from your product table.



corresponds to the field.

### How many records can I add to a database?

✓ Since each table can contain up to 1 gigabyte of information, table size does not limit the number of records you can add. The number of records you can add to a database is normally determined by the storage capacity of your computer.

### Can I restore a record I accidentally deleted?

✓ When you delete a record from the database, you cannot undo the deletion. If you have a backup copy of the database, you may be able to use the backup to restore a record you deleted.



#### Is there a way to ensure that related data in the database is removed when I delete a record?

✓ You can specify that if you delete a record from one table, related records from another table will also be removed. To do this, you must establish a relationship between the two tables. You must then enforce referential integrity and turn on the Cascade Delete Related Records option. For more information, see page 442. USING

## **OPEN A FORM**

**7** ou can open a form and display its contents on your screen. This lets you review and make changes to the form.

You can open a form in the Form or Design view. The Form view usually displays one record at a time in an organized and

attractive format. This view is useful for entering, editing and reviewing records.

The Design view displays the structure of a form. This view lets you customize the design of a form to make the form easier to use and enhance the appearance of the form.

When you have finished working with a form, you can close the form to remove it from your screen. A dialog box appears if you have not saved changes you made to the design of the form, such as adding a record to the form or moving items on the form.



## CHANGE VIEW OF FORM

here are three ways you can view a form. Each view allows you to perform different tasks.

The Design view allows you to change the design of a form. You can customize a form in this view to make the form easier to use or to enhance the appearance of the form.

The Form view usually displays one record at a time in an organized and attractive format. The Form view may display all the records at once, depending on the layout you selected when you created the form. This view is often used to enter, edit and review records.







The Datasheet view displays all the records in rows and columns. Each row displays the information for one record. The field names appear directly above the first record. You can enter, edit and review records in this view.

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The form appears in the view you selected.

In this example, the View button K changes to . You can click the View button to quickly switch between the Design (1) and Form ( 🗐 ) views.

# MOVE, RESIZE OR DELETE A CONTROL

**7** ou can move, resize or delete a control to enhance the appearance of a form and make the form easier to use. A control is an item on a form, such as a label that displays a field name or a text box that displays data from a field.

You can change the location of a control on a form. You can move a label and its corresponding text box together or individually.

You can change the size of a control. Larger controls allow you to display longer entries. For example, you may want to resize a text box that displays long Web page addresses.

When you move or resize a control, Access automatically aligns the control with the dots on the form. This allows you to neatly arrange controls on the form.

You can delete a control you no longer want to appear on a form. Access allows you to delete just a label or a label and its corresponding text box.

Before you close a form, make sure you save the changes you made to the form.

### How do I move, resize or delete several controls at once?

✓ You must first select the controls you want to move, resize or delete. To select multiple controls, hold down the Shift key as you click each control.

### Can I resize an entire form?

✓ Yes. Resizing a form is useful when you want to increase the space available for moving and resizing controls. Position the mouse k over an edge of the form (k changes to ↔, + or ↔) and then drag the mouse until the form is the size vou want.

Image: Second state of the second	
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Design View           Image: Start         I	

### MOVE A CONTROL

1 Display the form you want to change in the Design view.

2 Click the control you want to move. Handles ( appear around the control.

**3** Position the mouse  $\mathbb{R}$ over the border of the control ( $\bigcirc$  changes to  $\clubsuit$ ) and then drag the control to a new location.

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Design View	
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The label and corresponding text box appear in the new location.

icrosoft Access

To move a label or text box individually, position the mouse  $\bigcirc$  over the large handle (■) at the top left corner of the label or text box in step 3 (changes to b)



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### Can I increase the space between the dots on a form?

✓ Yes. Double-click or I in the top left corner of the form and then select the Format tab. Scroll through the contents of the tab until you reach the Grid X option. Enter the horizontal dots per inch you want to use. Beside the Grid Y option, enter the vertical dots per inch. You must enter a smaller number to increase the space between the dots.

USING

#### **CREATE FORMS** CHAPTER

## CHANGE APPEARANCE **OF CONTROLS**

**T** ou can change the font, size, style and alignment of text in a control to customize the appearance of a form. You must display the form in the Design view before you can format the text in a control.

Changing the font can help you enhance the appearance of a form. Access provides a list of fonts for you to choose from.

The fonts appear in the list as they will appear in the control. This lets you preview a font before you select it.

You can increase or decrease the size of text in a control. Access measures the size of text in points. There are 72 points in an inch.

You can use the Bold, Italic and Underline features to change

the style of text in a control. This can help you emphasize important information on a form.

Access automatically aligns text to the left and numbers to the right in a control. You can choose to align data to the left, to the right or in the center of a control.

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displayed, click 🔋 on the

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all the buttons.

want to use.

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#### CHANGE THE FONT

1 Display the form in the Design view.

2 Click the control that displays the text you want to change.

3 Click - in this area to display a list of the available fonts.

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### CHANGE THE SIZE

Click the control that displays the text you want to change.

2 Click I in this area to display a list of the available sizes.

Note: If the Font Size area is not displayed, click on the Formatting toolbar to display all the buttons.

\_ 8 ×

Click the size you want to use.



#### Why is the text I formatted no longer fully displayed in the control?

✓ If you changed the font or size of the text, the text may be too large to be fully displayed in the control. To display all the text, you can resize the control. Click the control you want to resize. From the Format menu, select Size and then click To Fit.

### Can I format several controls at once?

✓ Yes. Select the controls you want to format before you begin. To select multiple controls, hold down the Shift key as you click each control.



is not displayed, click on the Formatting toolbar to display all the buttons.

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### Can I copy formatting from one control to another?

✓ You can copy formatting to give the controls on a form a consistent appearance. Click the control that displays the formatting you want to copy and then click the Format Painter button (). Then click the control you want to copy the formatting to.

is not displayed, click 😤 on the Formatting toolbar to display all the buttons.

USING

**CREATE FORMS** 

File Edit View Insert Format Tools Window Help

UnitPrice\_Label - Aria

Form Header

ProductID

Product Name

Units In Stock

Units On Order

Jnit Price

😰 Product Inventory : Form

## **CHANGE APPEARANCE OF CONTROLS**

CHAPTER

**7** ou can change the background, text and border colors of a control on a form. You can also change the width of a control's border. Before formatting a control, you must display the form in the Design view.

Changing the background and text colors of a control can help draw attention to important

information on a form. Access provides several background and text colors for you to choose from. Make sure you select background and text colors that work well together. For example, red text on a blue background can be difficult to read.

You can change the color and width of a control's border to make the control stand out.

If you are printing a form using a black-and-white printer, any colors you add to the text, background or border of a control will appear as shades of gray.

When you close a form, make sure you save the changes you made to the controls.

B-B-C-V-L B-C-V-6-E-X-V (2) B-D-D-Q.

ProductID

ProductName

UnitsInStock

UnitsOnOrder



#### Is there another way to enhance the appearance of a control?

✓ You can make a control appear raised, sunken or shadowed to enhance the appearance of the control. Click the control you want to enhance. Click • on the Formatting toolbar and then click the effect you want to use.

### Can I have a list of colors displayed on my screen at all times?

✔ Yes. Display the list of colors you want to appear on your screen at all times. Position the mouse pointer over the bar at the top of the list of colors and then drag the list to a new location on your screen.



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#### CHANGE BACKGROUND COLOR

1 Display the form in the Design view.

2 Click the control you want to change.

3 Click r in this area to display a list of colors.

Note: If 💁 🛛 is not displayed, click " on the Formatting toolbar to display all the buttons.

-4 Click the background color vou want to use.

Click the control that displays the text you want to change.

2 Click 🔹 in this area to display a list of colors.



• 12 • B I U 🗄 🗐 🖥 • A • 🦽 •



-3 Click the text color vou want to use.

\_ 8 ×

▼ Toolbox 🖾

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### How can I quickly change the text color in a control?

✓ The Font/Fore Color button (▲) on the Formatting toolbar displays the last text color you selected. To quickly add this color to text in a control, click the control you want to change and then click the Font/Fore Color button (A).

USING

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**CREATE FORMS** CHAPTER

## **ADD A FIELD**

**f** you left out a field when vou created a form, vou can add the field later. For example, you may want to add a telephone number field to a form that displays client addresses.

Before you can add a field to a form, you must display the form in the Design view. Access allows you to add a field from

the table you used to create the form.

Access uses labels and text boxes to display information on a form. When you add a field, Access adds a label and its corresponding text box for you.

Access automatically uses the correct data type and field properties for a field you add

to a form. For example, if you add a field that has the Yes/No data type with the Check Box option, Access adds a check box  $(\checkmark)$  to the form instead of a text box.

You may need to resize a form to make room for a field vou add. For information on resizing a form, see the top of page 457.



## SELECT AN AUTOFORMAT

**T** ou can select an autoformat to instantly L change the overall look of a form. Selecting an autoformat changes the background and text colors of a form.

Before you can select an autoformat, you must display the form in the Design view. You must also select the form to ensure that Access will ap the autoformat you choose to the entire form.

There are several autoformate you can choose from, includi Blends, Industrial, Internatio and Stone.

You should use the same autoformat for all the forms in your database. Using one





ply o	autoformat for all the forms will give the database a more consistent appearance.
s ing onal	Access allows you to preview a sample of the autoformat you select before you apply it to a form. This can help you
	determine if the autoformat suits your needs.

USING PO



## **FIND DATA**

**W** ou can search for records that contain specific data. You can search for data in tables, queries and forms.

By default, Access performs a search of the current field. To perform a more advanced search, you can create a query. For more information, see page 472.

You can specify how you want Access to search for data in a field. The Any Part of Field option allows you to find data anywhere in a field. For example, a search for smith finds Smithson and Macsmith. The Whole Field option allows you to find data that is exactly the same as the data you specify. For example, a search for smith finds Smith but not Smithson. You can also choose the Start of Field option to find data only at the beginning of a field. For example, a search for smith finds Smithson but not Macsmith.

After you start the search, Access finds and highlights the first instance of the data. You can continue the search to find the next instance of the data.

### Can I find data that matches the case of the data I specify?

#### H da

✓ You can have Access find only data with exactly matching uppercase and lowercase letters. Click the More button in the Find and Replace dialog box and then select the Match Case option (☐ changes to ☑).

### How do I search only part of a field?

✓ Click the More button in the Find and Replace dialog box and then click the Search area. Select Up or Down to search above or below the current record.



### How can I have Access replace the data I find with new data?

✓ Perform steps 1 to 3 below and then click the Replace tab. In the Replace With area, type the new data. Click the Find Next button to start the search. To replace the data Access finds with the new data, click the Replace button. To ignore the data and continue with the search, click Find Next.

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8 Repeat step 7 until a dialog box appears, telling you the search is complete.

To close the Find and Replace dialog box, click Cancel.

9 Click OK to close the dialog box.

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USING

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# SORT RECORDS

where the order of records in a table, query or form. This can help you find, organize and analyze data.

You can sort by one or more fields. Sorting by more than one field can help you refine the sort. For example, if several of your clients have the same last name, you can sort by the last name field and the first name field. When you sort by multiple fields, you must place the fields side-by-side and in the order you want to perform the sort. Access sorts the records in the far left field first.

You can sort records in ascending or descending order. Sorting in ascending order displays text in alphabetical order from A to Z and displays numbers from smallest to largest. The opposite occurs when you sort text or numbers in descending order.

When you save the table, query or form, Access saves the sort order you specified.

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	l		3	2/10/99	\$350.00	Cash	
	l		4	2/15/99	\$500.00	Credit Card	
	l		5	2/17/99	\$375.00	Cash	
	l		6	2/19/99	\$180.00	Cash	
	U		7	2/22/99	\$380.00	Check	
			8	2/12/99	\$575.00	Credit Card	
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Sort Z to A, 9 to 1

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		15	2/17/99	\$570.00	Check		
		4	2/15/99	\$500.00	Credit Card		
		12	2/13/99	\$460.00	Cash		
		2	2/14/99	\$400.00	Check		
		9	2/11/99	\$400.00	Cash		
		7	2/22/99	\$380.00	Check		
		5	2/17/99	\$375.00	Cash		
		3	2/10/99	\$350.00	Cash		
		13	2/23/99	\$300.00	Check		
		1	2/13/99	\$250.00	Cash		
		16	2/22/99	\$235.00	Cash		
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The records appear in the new order. In this example, the records are sorted by payment amount.

### How do I rearrange the fields in a table?

### You may need to rearrange the fields when sorting records by two fields. Click the name of the field you want to move. Position the mouse pointer over the field name and then drag the field to a new location. A thick black line

### Why are the Sort buttons ( and ) unavailable?

shows where the field will appear.

✓ The Sort buttons are not available when you select a field that has a Hyperlink, Memo or OLE Object data type. Access will not allow you to sort a field that has one of these data types.

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use to sort the records.

### How do I remove a sort from my records?

✓ If you no longer want to display your records in the sort order you specified, you can return your records to the primary key order at any time. From the Records menu, click Remove Filter/Sort.

Vew Insert Farmat Becords Iools Window Help ● ひ、 ジ よ 印 記 ジ い 像 丸 科 ジ 酒 マ 鍋 ト・ M 節 泡 ・ ⑦ 、 winents Received : Table ID Payment Date Payment Method Payment Amount	
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Click one of the lowing buttons.

Sort A to Z, 1 to 9

Sort Z to A, 9 to 1

The records appear in the new order. In this example, the records are sorted by payment method. All records with the same payment method are sorted by payment amount.

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## FILTER DATA

Y ou can filter records in a table, form or query to display only specific records. Filtering data can help you review and analyze information in your database by temporarily hiding information not currently of interest. For example, in a table that stores client addresses, you can filter the data to display only the records for clients who live in California.

When you filter by selection, you select data and have Access display only the records that contain the same data. Filtering by selection is useful when you want to find records containing specific data.

When you filter by input, you enter data or criteria and have Access display only the records containing matching data or data that meets the criteria. Filtering by input is useful when you want to specify exact data or find records containing data within a specific range.

Filtering data does not change how the records are stored in the database.

You can add, delete or edit records when you are viewing filtered records.



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### Is there another way to filter by selection?

Yes. You can select specific characters you want to use to filter the records. For example, select "Smi" in Smith to display records containing data that starts with "Smi", such as Smidley and Smithson. If you do not select the first character, Access will display all the records containing the characters. For example, select "one" in Jones to display records containing Oneida and Stone.

### How can I use criteria to filter data?

✓ When filtering by input, you can use criteria to define which records Access displays. For example, type <1/1/99 to display records containing dates before 1-Jan-99. For examples of criteria, see page 484.

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### Can I filter records that have already been filtered?

Yes. When Access displays filtered records, you can filter the records again. You can continue to filter records until Access displays the records you want to view.

### Can I use a filter to hide records that contain specific data?

Yes. Click the data you do not want to display. From the Records menu, click Filter and then select Filter Excluding Selection.





### FILTER DATA CONTINUED

**W** ou can use the Filter by Form feature to perform powerful searches of a table, form or query in a database. Filtering records allows you to quickly find and display records of interest in a database.

When you filter by form, you can specify the criteria that records must meet to be displayed. For example, you can have Access find clients who made purchases of more than \$100.00.

You can specify multiple criteria to filter records. Access will display only records that meet all of the criteria you specify. For example, you can have Access find clients living in California who made purchases of more than \$100.00. For examples of criteria you can use, see page 484.

When you save a table, form or query, the last filter you performed is also saved. You can quickly apply the same filter the next time you open the table, form or query.



F

### Can I display records that meet one of the criteria I specified?

✓ When you use the steps below to filter by form, Access displays records that meet all of the criteria you specify. You can use the Or tab when filtering by form to display records that meet at least one of the criteria. For example, you can find clients with the first name Bill or William. Perform steps 1 to 3 below to enter the first criteria you want the records to meet. Click the Or tab in the bottom left corner of the Filter by Form window and then enter the second criteria.

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### How can I quickly enter the data I want to use to filter records?

Click the field you want to use to filter records. To display a list of the values in the field, click the arrow () that appears. Then click the value you want to use to filter the records.

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USING

## **CREATE A QUERY** IN THE DESIGN VIEW

CHAPTER

**T** ou can create a query to find information of interest in a database. When you create a query, you ask Access to find information that meets certain conditions. The Design view allows you to plan and set up your own query.

A query brings together information from different tables in a database. This makes queries one of the most powerful features of Access. The results of a query are often used to create forms and reports.

You can select each table that contains information you want to use in a query. To perform a query on more than one table, the tables you select should be related. Access displays a line joining the related fields in the tables you select.

The tables you will use in the query appear in the top half of the Select Query window. The bottom half of the window displays a grid, called the design grid, where you can specify the information you want the query to display.



### How do I add another table to a query?

✓ Click the Show Table button ( ) on the toolbar to redisplay the Show Table dialog box. Double-click the table you want to add to the query and then click the Close button.

#### How do I remove a table from a query?

✓ In the Select Query window, click the box displaying the fields for the table you want to remove and then press the Delete key. The table is removed from the query but not from the database.



### Can I use an existing query to create a new query?

✓ Yes. This is useful if you want to refine an existing query to produce fewer records. In the Show Table dialog box, click the Oueries tab and then double-click the name of the query you want to use. Click the Close button and then perform steps 7 to 9 on page 474 to create the new query.



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USING

# **CREATE A QUERY** IN THE DESIGN VIEW CONTINUED

**CHAPTER** 

**T** ou can select the fields you want to include in a query.

After you select the fields you want to include, you can choose to hide a field. Hiding a field is useful when you need to use a field to find information in the database but do not want the field to appear in the results of the query.

When you run a query, Access displays the results of the query in the Datasheet view. If you change the information when the query is displayed in the Datasheet view, the table that supplies the information for the query will also change.

If you want to run a query later, you must save the query. When you save a query, you save only

the conditions you specified. You do not save the information gathered by the query. This allows you to view the most current information each time you run the query.

You can give the query a name. Make sure you use a descriptive name that allows you to distinguish the query from the other queries in the database.





#### How do I quickly include all the fields from a table in a query?

✓ In the Select Query window, double-click the title bar of the box displaying the fields for the table. Position the mouse pointer over the selected fields and then drag the fields to the first empty column in the design grid.

#### How do I remove a field I included in a query?

✓ Click anywhere in the field. Select the Edit menu and then click Delete Columns.

	📰 Query1 : Select Query				
	Company Name	Product Name	Quantity		
	Reel Fishing	Tents	11		
	Outdoor Sports	Hiking Boots	12		
	Outer World	Fly Tying Kits	7		
	Rod 'n' Reel	Canoe Paddles	20		
	Camping USA	Folarized Sunglasses	25		
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### Can I change the order of fields in a query?

✓ Yes. Rearranging fields in a query will affect the order the fields appear in the results. In the design grid, position the mouse  $\Bbbk$  over the top of the field you want to move ( changes to  $\downarrow$  ) and click to select the field. Then position the mouse k directly above the selected field and drag the field to a new location.

### Can I clear a query and start over?

✓ If you make mistakes while selecting fields for a query, you can start over by clearing the design grid. From the Edit menu, click Clear Grid.



USING

# CREATE A QUERY USING THE SIMPLE QUERY WIZARD

**CHAPTER** 

**W**izard to gather information from one or more tables in a database. The wizard asks you a series of questions and then sets up a query based on your answers. The Simple Query Wizard is useful when you want to perform simple calculations in a query, such as finding the sum of values.

The Simple Query Wizard allows you to choose the table containing the fields you want to include in the query. After you choose a table, you can select the fields you want to include. A query can include all or only some of the fields in a table. If you accidentally select a field you do not want to include in the query, you can remove the field from the list of selected fields in the wizard.

You can select fields from multiple tables. If you include fields from more than one table, the tables must be related. For information on relationships between tables, see page 442.



Are use

### Are there any other wizards I can use to create a query?

Yes. In the Database window, click Queries and then click the New button. The Crosstab Query Wizard allows you to create a query that groups related information together and displays summarized information. The Find Duplicates Query Wizard allows you to find records that contain the same values to avoid duplication. The Find Unmatched Query Wizard allows you to compare two tables to find records in one table that do not have related records in the other table.

### Why should I use a wizard instead of creating my own query?

✓ Using a wizard is a fast way to create a basic query. If you want to plan and set up your own query, you can create a query in the Design view. For more information, see page 472. USING

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Each field you select appears in this area.	6 You can add fields from other tables by
To remove a field you accidentally selected, double-click the field in	for each table.
this area. Note: To remove all the fields	CONTINUED
at once, click << .	177

# **CREATE A QUERY USING** THE SIMPLE QUERY WIZARD CONTINUED

**CHAPTER** 

**T** f the fields you selected for a query contain information L that can be calculated, you can choose to display all the records or a summary of the records in the results of the query.

You can calculate values in a query to summarize information. The Sum option adds values. The Avg option calculates the average value. The Min and Max options find the smallest or largest value.

Simple Query Wizard

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Summary

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When you calculate values in a query, Access groups related records together. For example, in a query that contains an Employee Name field and a Products Sold field, Access will group together the records for each employee to find the total number of products each employee sold.

You can have Access count the number of records used in each

group to perform a calculation. The count appears as a field in the query results.

To finish creating a query, you must name the query. You should choose a descriptive name that will help you recognize the query in the future.

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-11 To display a count for

the number of records in

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each group, click this option

B Click the way you want to display the information in the query results ( $\bigcirc$  changes to  $\bigcirc$ ). If you select Detail, skip to step 13.

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Note: If this question does not appear, skip to step 14. 9 Click Summary Options to select how vou want to summarize the information.

The Summary Options dialog box appears.





### Why didn't Access summarize my information properly in the query?

✓ To ensure Access will properly summarize information, you must make sure you only include the fields you need to create the query. Also make sure you select the field you want to group the records by first. Access will group records starting with the first field and then consider the data in each of the following fields.

#### How can I make changes to a query I created using the Simple Query Wizard?

✓ You can use the Design view to make changes to any query you create. You can sort records, add and remove fields and more. To display the query in the Design view, see page 481.



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438 8

Simple Query Wizard

Why does another dialog box appear, asking me how I would like to group dates in my query?

✓ If one of the fields in your query stores dates, the Simple Query Wizard may ask you how you want to group the dates. You can choose to group the dates in your query by the individual date, day, month, quarter or year.

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^ query.

# **OPEN A QUERY**

**7** ou can open a query to display the results of the query or change the design of the query. You can open a query in the Datasheet or Design view.

When you open a query in the Datasheet view, Access runs the query and displays the results. This view is similar to the Datasheet view for tables but

displays only the information that meets the criteria or conditions of the query.

CHAPTER

In the Design view, you can make changes to the structure of a query. You can use this view to tell Access what data you want to find, where to find the data and how you want to display the results.

When you have finished working with a query, you can close the query to remove it from your screen. A dialog box appears if you have not saved changes you made to the query.

# CHANGE VIEW OF QUERY

here are three ways you can view a query. Each view allows you to perform different tasks.

The Design view allows you to plan your query. You can use this view to tell Access what data you want to find, where Access can find the data and how you want to display the results.

The Datasheet view allows you to review the results of a query. The field names appear across the top of the window. Each row shows the information for a record that meets the criteria or conditions you specified.

The SQL view displays the SQL statement for the current query. Structured Query Language (SQL)

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	Outdoor Sports	CO	Hiking Boots	12	
	Outer World	TX	Fly Tying Kits	7	
	Rod 'n' Reel	GA	Canoe Paddles	20	
	Camping USA	MD	Polarized Sunglasses	25	
	Outside Fun	OH	Fishing Rods	11	
L	Outdoor Store	NJ	Life Jackets	30	
	Sports Superstore	NC	Portable Stoves	7	
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Top Selling Products				Outside Fun	OH	Fishing Rods	11
Reports				Outdoor Store	NJ	Life Jackets	30
Pages				Sports Superstore	NC	Portable Stoves	7
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is a computer language. When you create a query, Access creates the SQL statement that describes your query. You do not need to use this view to effectively use Access.

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button to quickly switch between the Design (K) and Datasheet () views. **DNISN** 

ACCESS

# SET CRITERIA

**W** ou can use criteria to find specific records in a database. Criteria are conditions that identify which records you want to find. For examples of criteria you can use, see page 484.

To set criteria, you must display the query you want to change in the Design view. You can set criteria for the field you want to use to find specific records. For example, you can set criteria for the State field to find all the clients who live in California.

**CHAPTER** 

You can use multiple criteria to find information in the database. Using the "Or" condition allows you to find records that meet at least one of the criteria you specify. For example, you can find clients living in California or Texas. You can use the "Or" condition with one or more fields.

Using the "And" condition allows you to find records that meet all of the criteria you specify. You can use the "And" condition with one or more fields. For example, you can find clients living in California who bought more than 500 units of a product.



### Can I have Access display only a portion of the records in the results?

✓ When you know there will be many records in the results of a query, you may want to have Access display only the top or bottom values in the results. Click the Sort area for the field you want to show the top or bottom values. Click the arrow  $(\frown)$  that appears. Select Ascending to display the bottom values or Descending to display the top values. In the Top Values box on the toolbar, click and then select the values you want to display. You can display the top or bottom 5, 25 or 100 records. You can also display the top or bottom 5 or 25 percent.





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you type.

### How do I use the "And" condition in one field?

✓ In the Criteria area for the field, enter both criteria separated by the word "And". For example, to find records that contain invoice numbers between 100 and 150, type >100 And <150 in the Criteria area of the Invoice Number field.

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Table:	Clients	Clients	Orders	Orders		
Sort: Show:						
Criteria:			="Canoe Paddles"	>10		
or:						
					NUM	
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for the first field.

Click the Criteria area for the second field and then type the second criteria.

■ In this example, Access will find customers who have ordered canoe paddles and purchased more than ten units.

USING

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# **EXAMPLES OF CRITERIA**

CHAPTER

### Exact matches

=100 ..... Finds the number 100. =California ...... Finds California. =1/5/99 ..... Finds the date 5-Jan-99.

Less than	
<100	Finds numbers less than 100.
<n< th=""><th>Finds text starting with the</th></n<>	Finds text starting with the
	letters A to M.
<1/5/99	Finds dates before 5-Jan-99.

Less than or e	qual to
<=100	Finds numbers less than or equal to 100
<=N	Finds the letter N and text starting with the letters A to M.
<=1/5/99	Finds dates before and on 5-Jan-99.

_		
	Greater than	
	>100 >N	Finds numbers greater than 100. Finds text starting with the
	>1/5/99	Finds dates after 5-Jan-99.

Greater than o	r equal to
>=100	Finds numbers greater than or
>=N	Finds the letter N and text starting with the letters N to 7.
>=1/5/99	Finds dates on and after 5-Jan-99.

### Not equal to

<>100 ..... Finds numbers not equal to 100. <>California ..... Finds text not equal to California. <>1/5/99 ..... Finds dates not on 5-Jan-99.

### **Empty fields**

Is Null ..... Finds records that do not contain data in the field. Is Not Null ..... Finds records that contain data in the field.

Find list of items	
In (100,101) In (California,CA) In (#1/5/99#,#1/6/99#)	Finds the numbers 100 and 101. Finds California and CA. Finds the dates 5-Jan-99 and 6-Jan-99.

BetweenAnd	
Between 100 And 200	Finds numbers from
Between A And D	Finds the letter D and text starting with the
Between 1/5/99 And 1/15/99	letters A to C. Finds dates on and between 5-Jan-99 and 15-Jan-99.

### Wildcards

The asterisk (*) wildcard represents one or more
characters. The question mark (?) wildcard
represents a single character.
Like Br* Finds text starting with <b>Br</b> , such
as <b>Br</b> enda or <b>Br</b> own.
Like *ar* Finds text containing <b>ar</b> , such as
Arnold or Marc.
Like Wend? Finds 5 letter words starting with
Wend, such as Wendi or Wendy.

# SORT THE QUERY RESULTS

**7** ou can sort the results of a query to better organize **L** the results. This can help you find information of interest more quickly.

The results of a query can be sorted in ascending or descending order. Sorting in ascending order sorts text in alphabetical order from A to Z and sorts numbers from

smallest to largest. When you sort in descending order, the opposite occurs.

You can choose not to sort the results of a query. If you do n sort the results, Access displa the results in the order they found.

You can sort by one or more fields. When you sort by more





ı	than one field, you must place
	the fields in the order you
	want to perform the sort.
	Access sorts the records in
e	the far left field first.
iot	
ays	You cannot sort a field that
are	has a Hyperlink, Memo or
	OLE Object data type.
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					-
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Mailing List ID	First Name	Last Name	State		
2	Marty	Stumple	AK		
20	Glen	Muir	AK		
10	Pete	Phillips	AK		
16	Mel	Lang	CA		
18	Will	Jones	CA		
7	Diana	Appleton	CA		
19	Angel	Granger	DC		
23	Jenn	Daley	FL		
17	Nadine	Woods	FL		
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## PERFORM CALCULATIONS

CHAPTER

**Y** ou can perform calculations on records in a database. You can then review and analyze the results.

In a blank field, you can type a name for the field that will display the results of the calculation, followed by an expression. An expression tells Access which items to use in the calculation. An expression also contains operators that tell Access to multiply (\*), add (+), subtract (-), divide (/) or raise values to a power (^).

To enter a field name in an expression, type the field name in square brackets. For example, type [Quantity]\*[Cost] to multiply the Quantity field by the Cost field. Make sure you type the field names exactly.

If the same field name is found in more than one table, type the table

name in square brackets followed by a period (.) and the field name in square brackets. For example, type [**Products**].[**Quantity**] to ensure Access uses the Quantity field in the Products table.

The results of a calculation are not stored in the database. If you run the query again, Access will use the most current data in the database to perform the calculation.

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Ready	Num           Sale:         Query : Select	Ready           Image: Start         Image: Sporting Goods : Database         Image: Select         Image: Selec
1 Display the query you want to change in the Design view.	2 Click the Field area in the first empty column.	<b>3</b> Type a name for the field that will display the results of the calculation, followed by a colon (:). Then press

the Spacebar to leave a

blank space.



### How can I display an entire expression?

An expression you type may be too long to fit in the Field area. To display the entire expression, click the cell containing the expression and then press the Shift+F2 keys. The Zoom dialog box appears, displaying the entire expression. You can edit an expression in the Zoom dialog box.

### Can I change the format of calculated information?

✓ You can change the way calculated information appears in the query results. In the Design view, click anywhere in the calculated field. Click the Properties button () and then select the Format area. Click the arrow () that appears and then select the format you want to use.



# What types of expressions can l use? ✓ Here are some examples of expressions you can use. Inventory Value: [Price]\*[Quantity] Total Price: [Cost]+[Profit] New Price: [Price]-[Discount] Item Cost: [Price of Case]/[Items]

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18	Sales Query : Select Query					
	Product	Unit Price	Quantity	Total Price		
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	Tents	\$65.25	25	\$1,631.25		
	Hiking Boots	\$45.00	20	\$900.00		
	Fly Tying Kits	\$99.99	25	\$2,499.75		
	Sleeping Bags	\$40.00	35	\$1,400.00		
	Canoe Paddles	\$25.00	40	\$1,000.00		
	Compasses	\$15.00	75	\$1,125.00		
	Survival Kits	\$19.99	40	\$799.60		
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CHAPTER

## SUMMARIZE DATA

**T** ou can summarize the information in a database to help you analyze the information.

You can divide records into groups and summarize the information for each group. For example, you can summarize information grouped by date to determine the number of orders for each day.

To group records, you must display the Total row. The words "Group By" automatically appear in each field in the Total row. You can leave the words "Group By" in the field you want Access to use to group the records. In the other field, you can specify the calculation you want to perform on the group to summarize the information.

Access provides several calculations you can perform. The Sum option adds the values. The Avg option calculates the average value. You can use the Min or Max option to find the smallest or largest value. The Count option calculates the number of values, excluding empty records. You can use the StDev (standard deviation) or Var (variance) option to perform statistical functions. You can use the First or Last option to find the value of the first or last record.

- Can I use more than one field to group records?
- ✓ You can group records using more than one field. For example, you can use the Company and Product fields to group the records and the Quantity Ordered field to summarize the data. This lets you display the total amount of each product purchased by each company. Access groups records using fields from left to right. In the Design view, place each field in the order you want to group the records.





#### Can I limit the records that appear in the results?

✓ You can summarize all the records in a query but show only some of the records in the results. For example, you may want to display only the companies who had orders totaling more than \$100.00. In the Criteria area of the field you are summarizing, type the criteria you want to limit the records that will be shown in the results. For examples of criteria, see page 484.

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	Ш		Fast Track Footwear	430		
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	Ш		Made for Walking	223		
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USING

#### **CREATE REPORTS** CHAPTER

## **CREATE A REPORT USING** THE REPORT WIZARD

**7** ou can use the Report Wizard to help you create a professionally designed report that summarizes the data from a table. The Report Wizard asks you a series of questions and then creates a report based on your answers.

You can choose the table containing the fields you want to include in the report. After

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you choose a table, you can select the fields you want to include. For example, in a report that will display monthly sales, you may want to select the Date, Product, Unit Price and Quantity Sold fields. A report can include all or only some of the fields in a table.

The Report Wizard can help you organize the data that will appear in the report by grouping related

data together. If you choose to group related data together, Access automatically places the data in the appropriate sections in the report. For example, you can group data by the Date field to have Access place all the sales for the same month together.

### Can I specify how I want Access to group data in my report?

✓ After you select the field you want to use to group related data, you can click the Grouping Options button to specify how you want Access to group the data. In the Grouping intervals area, click 🔽 and then select the way you want to group the data. The available options depend on the type of field you selected. For example, you can group data in a Date field by day, month or year.



### Can I create a report based on more than one table?

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✓ Yes. Relationships must exist between the tables you use. For information on relationships, see page 442. To create the report, perform steps 1 to 5 below and then repeat steps 3 to 5 until you have chosen all the tables and fields vou want to include. Then click Next. If the Report Wizard asks how you want to view your data, click the fields in the area below the question until the preview area displays the view you want to use. Then perform steps 6 to 25 to finish creating the report.

#### **CREATE REPORTS** CHAPTER

## **CREATE A REPORT USING** THE REPORT WIZARD CONTINUED

**T** ou can sort the records in a report to better organize the records. The Report Wizard lets you select the fields you want to use to sort the records. For example, you can alphabetically sort records by the Last Name field. If the same data appears more than once in the field, you can sort by a second field, such as First Name.

You can sort records in ascending or descending order. When you sort in ascending order, text is sorted from A to Z and numbers are sorted from 1 to 9. When you sort in descending order, the opposite occurs.

You can perform calculations to summarize the data in a report. When you perform calculations, you can have Access display all

the records and the calculated summary for each group of records or just the calculated summaries in the report.

You can also choose to display the percentage of the total that each group represents. For example, in a database that stores sales information, you can calculate the percent of total sales for each region.

You can sort records by up to four fields, in eithe

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Note: If Summary Options is

not displayed, skip to step 18.

The Summary Options

dialog box appears.

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Company Name

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Cancel 🖁 Start 🛛 🎯 🗹 📎 👘 Store Inventory : Dat... 14 Click the box ( ) for each calculation you want to perform ( changes to ). -15 Click an option to specify if you want to show all

Why isn't the Summary Options button displayed?

✓ The Summary Options button will not be displayed if you did not include any fields that store numbers in the report. The button will also not be displayed if you did not choose to group related data together in your report. For information on grouping related data, see page 488.

#### What calculations can I perform on the data in my report?

✔ Access offers several calculations you can perform. The Sum option adds values. The Avg option calculates the average value. The Min and Max options find the smallest or largest value.



### Is there a faster way to create a report?

✓ You can use an AutoReport to quickly create a report based on one table in your database. In the Database window, select Reports and then click New. Choose the Columnar or Tabular AutoReport style. Click and select the table that will supply the information for the report. Then click OK.

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Report Wizard         What sort order and summary information do you want for according or descending or descendi	detail records?       ds by up to four fields, in either ending order.       e	
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18 Click Next to continue.

You can click Back at any time to return to a previous step and change vour answers.



USING

#### **CREATE REPORTS** CHAPTER

## **CREATE A REPORT USING** THE REPORT WIZARD CONTINUED

**T** ou can choose between several layouts for a report. **L** The layout you choose determines the arrangement of data in the report.

The available layouts depend on the options you previously selected for the report. If you chose to group related data, the Stepped, Block, Outline and Align Left lavouts are available. If you chose not to group related data, the

Columnar, Tabular and Justified layouts are available.

You can specify the page orientation of the printed report. The portrait orientation prints data across the short side of a page. The landscape orientation prints data across the long side of a page.

You can choose a style for the report, such as Casual, Corporate or Formal. Most styles use colors

and patterns to enhance the appearance of a report.

The Report Wizard asks you to name your report. The name you select will appear in the Reports area of the Database window.

The report appears in a window on your screen. If the report consists of more than one page, you can move through the pages in the report.





a report?

### Can I later change the style of

✓ Yes. In the Database window, click Reports. Select the name of the report you want to change and then click the Design button. Click the AutoFormat button () and select the style you want to use. Then click OK.

#### When viewing my report, how can I display an entire page on my screen?

- ✓ You can click the Zoom button  $(\square)$ to display the entire page on your screen. For more information on changing the magnification of a page, see page 498.

This area displays a sample

of the layout you selected.

### How do I print a report?

When the report is displayed on vour screen, vou can click the Print button ( ) to print the report.

### I changed data in a table I used to create a report. How do I update the report?

When you open the report, Access will automatically gather the most current data from the table(s) you used to create the report. Access will also update the date displayed in the report.

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- This area shows the number of the page displayed on the screen.
- -26 If the report contains more than one page. click one of the following options to display another page.
- First Page Previous Page
- Next Page
- Last Page

Note: If an option is dimmed. the option is currently not available.



# **OPEN A REPORT**

**V** ou can open a report to display the contents of the report on your screen. This allows you to review the information in the report.

You can open a report in the Print Preview or Design view. The Print Preview view allows you to see how a report will look when printed. The Design view

allows you to change the design of a report.

When you open a report, Access gathers the most current data from the table or query used to create the report. If the table or query contains a large amount of data, it may take a few moments for the report to appear on your screen.

When you finish working with a report, you can close the report to remove it from your screen. A dialog box appears if you have not saved changes you made to the design of the report, such as changing the font or size of text.

## **CHANGE VIEW OF REPORT**

here are three ways you can view a report. Each view allows you to perform a different task.

The Design view allows you to change the layout and design of a report. The Design view displays a grid of small, evenly spaced dots to help you line up the items in a report. This view displays information in several

sections, such as the report header and page footer sections

The Print Preview view allows you to see how a report will look when printed. You can use this view to display all the pages in the report and examin how each page will print.

The Layout Preview view allow you to quickly view the layout



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Customers		
Clusioner ID Company Name Meyer Inc. Units Purchased City Products Purchased Page: II INI Ready Ready Ready		L Design Vir J Start
In this example, the report appears in the Print Preview view.	2 Click the view you want to use.	■ Th the vi
<ol> <li>Click I in this area to display the report in another view.</li> </ol>	does not appear on the menu, position the mouse $\Im$ over the bottom of the menu	
Note: The available views depend on the view you are currently using.	to display all the views.	



	and style of a report. The
s.	Layout Preview view is only
	available when a report is
	displayed in the Design view.
	The Layout Preview view is
	similar to the Print Preview
	view, but only allows you to
ıe	see a few pages of a report. The
	data from the table or query
VS	used to create the report may
*3	not update properly in the
	Layout Preview view.



le report appears in iew you selected.

In this example, the View button k changes to 🖪. You can click the View button to guickly switch between the Design (☑) and Print Preview ( ) views.

USING

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### CHAPTER PRINT

# PREVIEW BEFORE PRINTING

ou can use the Print Preview feature to see how your tables, queries, forms and reports will look when printed. Using the Print Preview feature can help you confirm that the printed pages will appear the way you want.

The Print Preview window indicates which page you are currently viewing. If an object contains more than one page, you can easily view the other pages.

You can magnify an area of a page. This allows you to view the area in more detail. When you magnify a page, Access displays scroll bars that you can use to move through the information on the page. You can have Access display several pages in the Print Preview window at once. This gives you an overall view of the pages in an object.

When you have finished using the Print Preview feature, you can close the Print Preview window to return to the Database window.



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### Can I preview an object at different magnification levels?

Yes. In the Print Preview window, you can select a new zoom setting to change the level of magnification. Click in the Zoom area and then select the zoom setting you want to use. By default, Access displays an object in the Fit zoom setting. This zoom setting allows Access to use the magnification level that best fits the currently displayed page(s).

### Can I print directly from the Print Preview window?

✓ To print an object directly from the Print Preview window, click the Print button (▲).





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		2	Custo	mer ID	Company Name	Billing Address	City		
				1	Ski World	255 Linton Ave.	New York		
				2	Big League Inc.	423 Idon Dr.	Nashville		
				3	Varsity Supply	32 Buzzard St.	Boston		
				4	Stadium Sports	54 Arnold Cres.	Jacksonvil		
				5	Risky Wheelz	23 Bizzo Cres.	New York		
				6	Surfers' Apparel	62 Cracker Ave.	San Diegc		
				7	Indoor Sports	4 Overly Rd.	Beverly Hi		
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#### DISPLAY MULTIPLE PAGES

-1 Click 🗐 to display multiple pages.

■ Drag the mouse down and to the right until you select the number of pages you want to display.

#### **CLOSE PRINT PREVIEW**

Click Close to close the Print Preview window.



USING

## **PRINT INFORMATION**

**7** ou can produce a paper copy of a table, query, form or report. A paper copy is often referred to as a hard copy.

Before printing, make sure your printer is turned on and contains an adequate supply of paper.

You can choose the information you want to print. Access allows you to print all the records, specific pages or specific records. Printing only specific records saves you from printing information you do not want to review. To print only specific records, you must select the records before you begin.

CHAPTER

PRINT

If the current printer settings suit your needs, you can use the Print

button () to quickly print all the records without displaying the Print dialog box.

When you print a table or query, Access prints the title, date and page number on each page. This information can help you organize the printed data.



### **Can I specify the printer I want** to use to print information?

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✓ If you have more than one printer installed on your computer, you can select the printer you want to use. This is useful when you use different printers to print different types of information. For example, you may want to use a color printer to print forms and a black-and-white printer to print tables. In the Print dialog box. click the Name area and then select the printer you want to use.

Eile Edit View Insert Format Records Tools Window Help <u>File</u> <u>E</u>dit 坐•目兽집,♥% 睧尾彡 ∽ 售到↓↓ 孯茵▽椭 ↦ ≤ 匝海• ②. × - -? × \_ 🗆 × 🏾 Cus Purchase \* 10 Printer 1/12/99 Name: HP LaserJet 5MP Properties 12/20/99 Status: Default printer; Ready 1/3/99 Type: HP LaserJet 5MP 1/16/99 Where: LPT1: 2/12/99 Comment Print to File 11/24/99 -Print Range Copies 11/10/99 12/12/99 Number of Copies: 1 + 12/19/99 Pages Erom: \_2<sup>3</sup> \_2<sup>3</sup> ▼ Collate 10/29/99 Selected <u>R</u>ecord(s) 9/15/99 12/15/99 OK N Setup... Cancel 10/24/99 Record: IN TT Record NUM Datasheel Customers : Table Start 😹 Start 🛛 🖉 🖄 🦞 🕴 🛱 Customers : Database 5 Click the print If you selected Pages in **QUICKLY PRINT ALL RECORDS** option you want to use step 5, type the number of -1 Click 🕘 to quickly print ( $\bigcirc$  changes to  $\bigcirc$ ). the first page you want to all the records. print. Press the Tab key and then type the number of the last page you want to print. 6 Click OK.

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#### **Can I print multiple copies?**

✓ Yes. In the Print dialog box, double-click the Number of Copies area and then type the number of copies you want to print.

#### **Can I prevent Access from printing** the title, date and page number when I print tables and queries?

✓ Yes. In the Print dialog box, select the Setup button. On the Margins tab, click the Print Headings option ( $\checkmark$  changes to  $\square$ ) and then click OK.

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1	Hungry Pete's	Los Angeles	Cutlery and dishes	1/12/99						
2	The Meat Shop	Boston	Tables and chairs	12/20/99						
3	Porky's Restaurant	St. Paul	Table decorations	1/3/99						
4	Mr. Steak	St. Louis	Cutlery	1/16/99						
5	Healthy Food Inc.	Tampa	Dishes	2/12/99						
6	Supper's Ready	Fort Worth	Menus	11/24/99						
7	The Friendly Diner	Hartford Cutlery and dishes		11/10/99						
8	Henry's Kitchen	New York Menus		12/12/99						
9	Jay's Diner	Washington	Restaurant furniture	12/19/99						
0	Feeding Trough	Phoenix	Kitchen supplies	10/29/99						
1	Lee's Fast Food Raleigh		Menus and dishes	9/15/99						
2	Vegetarian Cuisine San Jose		Kitchen supplies	12/15/99						
3	The Hot Grill	Dallas	Table decorations	10/24/99						
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## **CREATE MAILING LABELS**

**W** ou can create a mailing label for every person in a table. You can use labels for addressing envelopes and packages, labeling file folders and creating name tags.

The Label Wizard asks you a series of questions and then creates labels based on your answers.

You can choose the table that contains the names and

addresses you want to appear on the labels.

There are two types of labels you can use–sheet feed and continuous. Sheet feed labels are individual sheets of labels. Continuous labels are connected sheets of labels, with holes punched along each side. You can consult the manual that came with your printer to determine which type of labels your printer can use. You can select the label size you want to use. Check your label packaging to determine which label size to select.

The wizard allows you to change the appearance of the text that will appear on the labels. You can choose between various fonts, sizes, weights and colors. The text appearance you choose affects all the text on every label.



#### I cannot find the label size I want in the Label Wizard. What is wrong?

✓ By default, the Label Wizard displays standard Avery labels. You can display a list of label sizes for a different manufacturer. Click imes in the Filter by manufacturer area and then select the manufacturer of the labels you are using.

### How do I specify a custom label size in the Label Wizard?

Click the Customize button and then click New. A dialog box appears, displaying sample labels and areas where you can enter measurements for your labels. Enter the measurements you want to use and then click OK.



### How do I change the Text appearance options in the Label Wizard?

 ✓ You can click in the Font name, Font size or Font weight areas to display a list of options. You can then select the option you want to use. Click beside the Text color area to display a list of colors and then select the color you want to use. To italicize or underline text, click the appropriate option ( changes to ).

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s area displays he labels will ar. u can use these hs to change opearance of xt on the labels.	<ul> <li>9 Click Next to continue.</li> <li>You can click Back at any time to return to a previous step and change your answers.</li> <li>CONTINUED</li> </ul>
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### CHAPTER PRINT

## CREATE MAILING LABELS CONTINUED

he Label Wizard asks you to select the fields you want to appear on the labels. You do not have to select all the fields from the table.

The fields you select should appear in the Label Wizard in the order and location that you want them to print on the labels. Make sure you add spaces or commas where needed, such as a space between the first and last name.

You can specify how you want to sort the labels. Sorting the labels determines the order that Access arranges the labels on a printed sheet. For example, you may want to sort mailing labels by city to place all labels for the same city together. You can type a name for the labels. Access stores the labels as a report that you can open as you would open any report. To open a report, see page 496.

The labels appear on your screen as they will look when printed. This allows you to preview the labels before you print them.

#### \_ 8 × \_ 8 × <u>File Edit View Insert Tools Window Help</u> Eile Edit View Insert Tools Window Help □☞目母及♥ % 階尾ダ ∽ 點•嗣•数 ┏ 唱 徊• ②• Label ₩izard Label Wizard What would you like on your mailing label? You can sort your labels by one or more fields in your database. You might want to sort by more than one field (such as last name, then first name), or by just one field (such as postal code). Construct your label on the right by choosing fields from the left. You may also whe text that you would like to see on every label right onto the r Which fields would you like to sort by: Prototype label Available field Available fields Sort by MailingListID FirstName} {LastName FirstName Address} ailingListIC LastName stName {City}, {State} > address stName (PostalCode} ddress < Back Next > < Back Next > N Cancel Einish Cancel Einish ahel Wizarı NUM 🖁 Start 🛛 🙆 🖸 🦉 📑 Northwood Chess C u.. 🖁 Start 🛛 🎯 🗹 👰 🔚 Northwood Chess Clu... 12 To sort the labels, 10 Double-click each The fields should appear To remove a field you field you want to appear the same way you want double-click the field accidentally selected, double-click the field in on the labels. them to print on the labels. you want to sort by. Make sure you add spaces this area. The field you select Each field you select and commas where needed. 13 Click Next to continue. appears in this area. appears in this area. -11 Click Next to continue.

### Can I sort the labels by more than one field?

#### Yes. If the first field you are using to sort the labels contains matching data, you can sort by a second field. For example, you may want to sort by state and then by city. In the Label Wizard, double-click the first field you want to sort by and then double-click the second field you want to sort by.

### How do I print labels I created?



#### How do I edit labels I created?

✓ To edit labels, you must change the data in the table you used to create the labels. For example, to change the address of a client, you must change the data in the table that stores the client's address. Changes you make to the data in the table will automatically appear in the labels.

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Pete Phillips 8756 June Blvd.	Mei Lang 23 May Dr.
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A new window opens, displaying a personalized label for each person in the table.

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