
ACCESS 2002 (XP)

LEVEL 1: THE FUNDAMENTALS

December 16, 2005

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LESSON 1 - EXPLORING ACCESS

In this lesson, you will learn how to:

- Start Access
- Open an existing database
- Use menu commands
- Display and hide toolbars
- Change menu and toolbar options
- Use database objects
- Use the Database window
- Open a database object
- Use the task pane
- Exit Access

STARTING ACCESS



Discussion

A database is any collection of information organized into a group. The information should be organized in a way that allows for easy retrieval. For example, a telephone book is a non-computerized database of information. It is organized in alphabetical order and includes information such as names, addresses, and telephone numbers. Other examples of non-computerized databases include address books and inventory lists.

Electronic databases can be maintained on a computer. Computerized databases allow you to manipulate large amounts of data quickly and easily. They simplify tasks such as searching for specific data, organizing and sorting data, and making corrections or changes to data.

In Microsoft Access 2002, the database information is stored in data tables. Every data table has a structure that provides for the collection, organization, storage, and retrieval of data. These tables of information are contained in a database file. Each database file can have numerous data tables.

A data table consists of fields and records. Fields are categories of information. For example, in an address table, you may maintain names, addresses, cities, states, and zip codes. Each of these categories is a field in the address database.

The set of fields containing the data for a single entry is called a record. For example, Charles Hardy, 1234 Main St., Bridgeville, NY, 11012 is a record in the address data table. Each piece of information in the record is stored in a field and is referred to as a field value. NY is the field value for the **State** field in this particular record. An address table would most likely consist of a number of records, and the data values for each record would be stored in the appropriate fields.

Access is a relational database application. A relational database contains a large amount of data that is split into numerous tables; each table should include only the information pertinent to one subject, such as **Customer**, **Orders**, or **Items**. As a result, each table is smaller; more manageable; and, in turn, more efficient. These tables can then be joined together to make them related. When tables are related, you can access information from any field in any related table, eliminating the need to add the same information to more than one table. In addition, you can create reports, forms, and queries from data stored in any related table.

In addition to extensive built-in help, the Microsoft Office Assistant is available to offer tips and hints for using Access more efficiently. The Office Assistant, a context-sensitive Help feature, may appear when you start Access. You can adjust the capabilities of the Office Assistant, as well as choose not to have the Office Assistant appear at all.

Another method of obtaining help is the **Ask a Question** feature. You can type a question into the **Ask a Question** box on the menu bar to get help with a specific feature.

Additionally, Office on the Web provides an online link to resources you can use to create better databases. For example, you can use Office on the Web to link to Internet sites, where you can access technical resources and free product enhancements.

Microsoft Access 2002 is designed to run under the Windows operating system. By default, Windows creates a startup command for Access on the **Programs** submenu, which is accessed from the **Start** menu. Your system may be different, depending on how Access was installed or customized.

When you start Access, the **New File** task pane appears on the right side of the application window. The **New File** task pane provides links for opening existing databases, as well as for creating new ones.



You can create a shortcut on the Windows desktop to start Access.



The first time you open the Microsoft Access dialog box after installation, the list of recently used files and the **More Files** option will not be available in the **New File** task pane. As you begin working with databases in Access, you will be able to open recently used files under **More Files** in the **Open a File** section of the task pane.



The first time you open Access after installation, the User Name dialog box may appear. You can enter your name and initials as necessary, and then select **OK**.



Procedures

1. Click the **Start** button on the taskbar.
2. Point to **Programs**.
3. Select **Microsoft Access**.

OPENING AN EXISTING DATABASE



Discussion

An Access database is a collection of information organized into a number of objects including tables, queries, forms, reports, pages, macros, and modules.

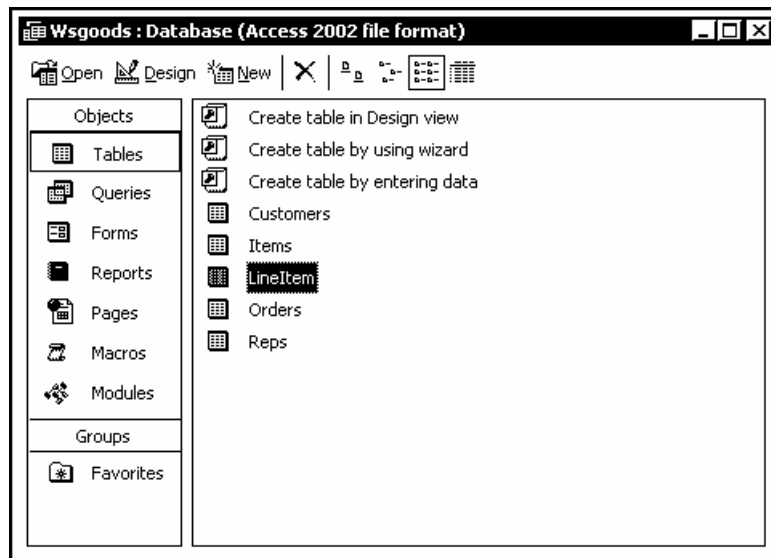
When you want to work with an Access database, you must first load the database file into memory. This process enables you to open all the tables or other objects within that database.

You can view or edit an existing database by opening it from disk. You do not need to remember the file name because the Open dialog box displays a list of folders and files in the current drive and folder. You can select the desired database file from the list, or you can type the name of the database you want to open.

If the database resides in a different drive or folder, you can use the **Look in** list to select the correct location. The folders and files residing in the selected location appear in the box below the **Look in** box.

In addition to using the **Look in** list to open databases, the Open dialog box contains a Places Bar on the left side of the dialog box. The Places Bar contains shortcuts to various folders containing commonly used files, as well as desktop options and recently opened files.

If you want to protect the original version of a database from modifications, you can use the **Open** list to open a copy of the database or the database as read-only. Only one database can be open at any time.



The Database window



You can also access the Open dialog box by selecting the **More files** link in the **New File** task pane, or by selecting the **File** menu and then the **Open** command.



Access displays the names of the four most recently opened databases at the bottom of the **File** menu and in the **Open a file** list at the top of the **New File** task pane. When you click a file name in the list, the corresponding database opens.




You can use the **Tools** menu in the Open dialog box to add the currently selected folder to the Places Bar.



Procedures



1. Click the **Open** button  on the **Standard** toolbar.
2. Select the **Look in** list.
3. Select the drive where the database you want to open is located.
4. Open the folder where the database you want to open is located.
5. Select the name of the database you want to open.
6. Select **Open**.

USING MENU COMMANDS



Discussion

The menu bar, located below the application title bar, provides access to all the features of Access. Each menu contains commands grouped by function. When you select an item on the menu bar, a menu of corresponding commands appears, from which you can select the desired command. Some menu commands are dimmed, which indicates that the command is not available for the current task.

Each menu appears in two stages, a short menu and a full menu. When you first select a menu, the short menu appears and displays the most frequently used commands.

If a command does not appear on the short menu, you can click the double arrows that appear at the bottom of the menu. This action expands the short menu to display the full menu with all available commands. Once you have expanded a menu, all menus

are expanded until you choose a command or perform an action. Other ways to expand a menu include double-clicking the menu name on the menu bar or hovering over the double arrows or menu name with the mouse pointer.

As soon as you select a command from the full menu, it is added to the short menu. In this way, your short menus are updated with the most frequently used commands. Commands stay on the short menu until you stop using them for a while or reset your data usage.

When a menu command is followed by an ellipsis (...), selecting it opens a dialog box, in which additional information is entered. A menu command that displays a right-pointing triangle indicates a submenu. When you point to this command, the associated submenu cascades to the right.

In addition to the standard menus on the menu bar, Access provides shortcut menus that are accessed by right-clicking text or an object such as a toolbar. Shortcut menus provide commonly used commands and are context-sensitive. Therefore, the options available on a shortcut menu vary, depending on the object clicked.



You can also use key combinations to execute menu commands. To display a menu, press the [Alt] key and the underlined letter in the menu name. You can then press the underlined letter in the desired command to perform the action.



Some Office XP components are available on an **Install on First Use** basis. This term means that, although the component appears on the menu, it is not actually installed until the first time you use it. Office XP prompts you to install the component and then installs it from the original installation source.



Procedures

1. Click the desired menu.
2. To display the full menu, click the double arrow at the bottom of the short menu.
3. Click the desired command.

DISPLAYING AND HIDING TOOLBARS



Discussion

Toolbars provide shortcuts to menu commands. Each Access toolbar is composed of buttons and pull-down lists. Each button executes a specific menu command.

When Access starts, the **Database** toolbar appears by default below the menu bar. The **Database** toolbar provides buttons for many general Access functions. You can also display the **Web** toolbar, which provides buttons for creating web pages.

In addition to the default toolbars you can select in Access, task-specific toolbars appear when you are working in the various views. For example, when you open a **Table** object type, the **Formatting (Datasheet)**, **Table Datasheet**, and **Web** toolbars are available.

You can choose to display one, several, or all the toolbars at any given time, or you can hide all the toolbars to create a larger working area.

Toolbars can be displayed as either docked or floating. A docked toolbar appears at one edge of the window, whereas a floating toolbar can be moved to any location on the screen. You can also change the size and shape of a floating toolbar. These options provide flexibility when you need to display several toolbars at once, or when you need to see all the available buttons on a docked toolbar.

When you point to a button on a toolbar, the name of the function associated with it appears. This description is referred to as a ScreenTip. Even if a toolbar button is dimmed (because it is not available for the current task), the ScreenTip still appears when you point to the button.

The **Toolbar Options** button at the right end of a toolbar can be used to see any buttons that do not fit on the docked toolbar. In addition, you can customize any toolbar by adding or removing buttons.



You can also display and hide toolbars by right-clicking any toolbar and selecting or deselecting toolbars as desired. A checkmark next to the name of a toolbar (selected) indicates that it is displayed.



If you have hidden all the toolbars, you can redisplay one toolbar by selecting the **View** menu, pointing to the **Toolbars** command, and selecting the toolbar you want to display, or you can right-click the menu bar and select the desired toolbar.



Procedures

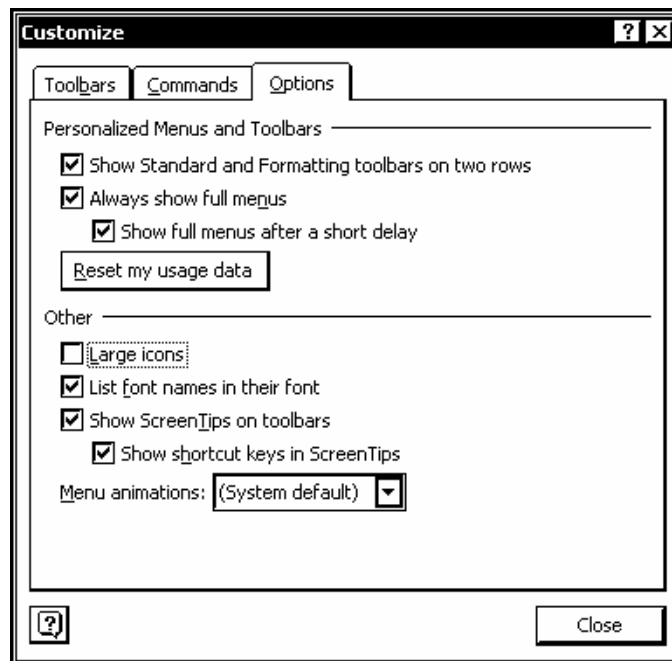
1. Select the **View** menu.
2. Point to the **Toolbars** command.
3. Select the toolbar you want to display or hide.

CHANGING MENU AND TOOLBAR OPTIONS



Discussion

You can change menu and toolbar options in order to adjust the behavior of these objects. The **Options** page in the Customize dialog box allows you to select menu and toolbar preferences. If you prefer to see full menus, you can disable the option to show recently used commands first. You can also reset any data usage changes that have occurred as a result of using the menus and toolbars.



The Customize dialog box



The **Reset my usage data** option only affects Access. All other options affect all Office XP applications.



Procedures

1. Select the **Tools** menu.
2. Select the **Customize** command.
3. Select the **Options** tab.
4. To restore toolbars and menus to the default, select **Reset my usage data**.
5. Select **Yes**.
6. To change the menu display, select or deselect the **Always show full menus** option.
7. Change additional options as desired.
8. Select **Close**.

USING DATABASE OBJECTS



Discussion

An Access database file can contain objects such as tables, queries, forms, reports, pages, macros, and modules. Database objects are created to input, edit, retrieve, display, and print data. You can include up to seven different object types in an Access database. A description of each of these object types is listed in the following table:

Object Type	Object Purpose
Table	This object type defines the structure of an Access database. Tables display multiple records in rows and columns. Information in these records can be entered, edited, stored, and retrieved.
Query	A way of requesting selected information from a table. When you run a query, a selected set of records, called the recordset, appears. You can then edit or print the recordset.
Form	A screen display you can create to show selected fields in a record. Forms allow you to enter, view, and edit data. You can use a form as an alternative to displaying data in rows and columns.

Object Type	Object Purpose
Report	A design for printed data. Reports can include lists and mailing labels, as well as database reports. Reports can also perform mathematical operations and calculate summaries.
Page	A data access web page used for viewing and working with Microsoft Access databases on the Internet or an intranet.
Macro	A stored set of Access commands that can be repeated as a unit to automate database functions.
Module	This object type stores Visual Basic for Applications Edition programming code that can be used to further customize and enhance database functions.

When you open a database, all objects in the database are grouped under one of the object types listed in the preceding table. These object types, along with their corresponding objects, appear in the Database window.

USING THE DATABASE WINDOW

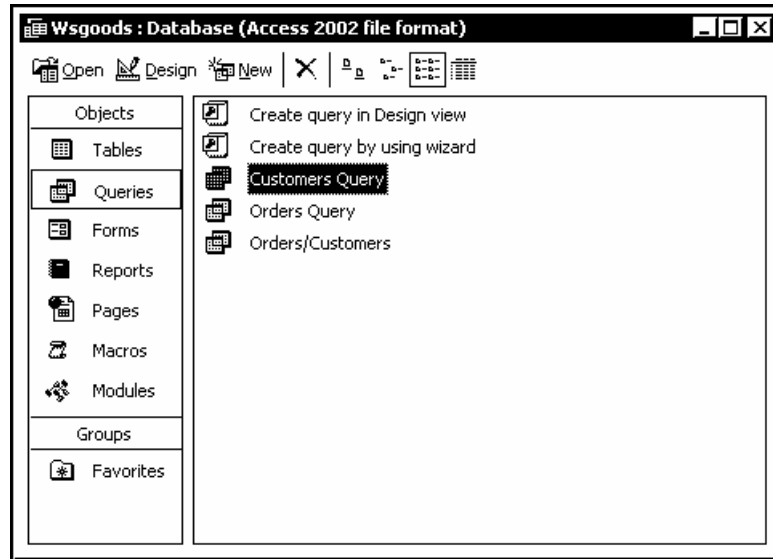


Discussion

When you open a database, it appears in a Database window. The Database window provides a toolbar below the title bar, the **Objects** and **Groups** bar below the toolbar to the left and an object list to the right. The **Objects** bar displays the various object types that are available in Access: **Tables**, **Queries**, **Forms**, **Reports**, **Pages**, **Macros**, and **Modules**. The **Groups** bar displays the default **Favorites** group; you can use this group to organize related objects in your Access database. You can also create and add new groups.

When an object type is selected, all objects (if any) associated with that object type appear in the object list. For example, selecting the **Queries** object type displays all query objects in the database and selecting the **Forms** object type displays all the form objects.

Shortcuts also appear in the object list for some object types. These shortcuts enable you to create new objects, such as tables, queries, forms, and reports, in **Design** view or using a wizard.



The Queries object list



You can also use the [Ctrl+Tab] key combination to select the desired object type in the **Objects** bar.



The toolbar buttons available in the Database window vary according to the object type selected.



Procedures

1. Open the desired database.
2. Click the desired object type in the **Objects** bar.

OPENING A DATABASE OBJECT





Discussion

You can open a database object to view the data stored in it. The view in which the data appears depends on the type of object you open. Tables and queries appear in **Datasheet** view. Forms appear in **Form** view. Reports display the data in print preview. Macros and modules run programs attached to the object.

Customer Number	Store Name	Contact Name	Phone Number	Fax Number	Address	City	State/Province	Postal Code
1014	Athletic Supply	Alex Feodorov	202-732-5085	202-732-5184	11692 J St. NW	Washington	DC	20013
1092	Ace Sporting Goods	Jim Robinson	410-577-1213	410-577-1218	42263 Charles St.	Baltimore	MD	21237
1437	Johnson's Leisure	Dave Robbins	203-399-4830	203-399-4848	1747 Broad St.	Hartford	CT	06155
1486	Jake's Fitness	Cheryl Thompson	609-275-3944	609-275-3950	467 E. State St.	Trenton	NJ	08632
1490	Sportsman's Delight	Melissa Patterson	518-442-8181	518-442-8180	1273 Broadway	Saratoga Springs	NY	12839
1503	AI's Sporting Goods	Barbara Jackson	207-846-7732		132 Congress St.	Portland	ME	04095
1776	World of Sports	Kathy Winters	412-927-8878	412-927-8880	16 Allegheny Ct.	Pittsburgh	PA	16489
1836	Athlete's Dream	Tina Goodman	215-557-7781	215-557-7891	1642 Walnut St.	Philadelphia	PA	19110
1837	Athlete's Dream	Tina Goodman	215-557-7781	215-557-7891	1310 South St.	Philadelphia	PA	19130
1842	Sports Outfitter	Rick Decker	212-921-3827	212-921-3817	1119 W. 57th St.	New York	NY	10010
1923	Wheels and Wheels	Kelly Norris	617-925-1173	617-925-1176	2001 Adams Pl.	Boston	MA	02160
2113	Joe's Sports Shop	Tim Parkins	912-465-7322		927 Gwinnett St.	Savannah	GA	31431
2401	Jones Sports Shop	Fred Silvestri	606-567-1212		1012 Broadway	Lexington	KY	40567
2500	Time Out Sports	Clint Moore	501-222-1717	501-223-1718	9876 W. 36th St.	Little Rock	AR	72220
2503	Big Marty's Sports	Pat Tuttle	804-338-1184	804-338-1153	1492 Shore Driv	Virginia Beach	VA	23211
2560	Showcase Sports	Marianna Duncan	804-986-9111	804-986-9117	1521 Hermitage	Richmond	VA	23211
2569	Sports Supplier	Bob Arnold	205-593-4903	205-593-4905	110 Daughin St.	Mobile	AL	32116
2594	Champs	Ralph Crosby	404-321-7355	404-321-7355	551 Peachtree	Atlanta	GA	30331
2684	SportsWorld	Jack Townsend	615-423-1779	615-423-1780	1947 Lafayette	Nashville	TN	37211
2905	Sports & Leisure	Mike Beaulieu	504-354-3159	504-354-3160	637 Robert E. L.	New Orleans	LA	70120
3032	Just for Fun Sports	Stan Summers	217-559-8392	217-559-8399	Suite 21, Lincoln	Springfield	IL	62701
3285	Champion Sports	Dawn Smith	312-888-8274	312-888-8276	P.O. Box 4377	Chicago	IL	60661
3504	Sports and Fitness	Karl Petersson	612-332-7770	612-332-7775	426 E. Lake St.	Minneapolis	MN	55362
3598	Specialty Sports	Linda McDonald	513-385-4038	513-385-4040	4618 Madison H	Cincinnati	OH	45213


The Customers table in Datasheet view

 You can also open an object by double-clicking its name in the object list.

 You can use the **Close** button on the applicable window title bar to close a database object (such as a table or form), a database, or Access itself.



Procedures

1. Open the desired database.
2. Display the desired object list.
3. Click the name of the object you want to open.
4. Select the  **Open** button on the Database window toolbar.

USING THE TASK PANE



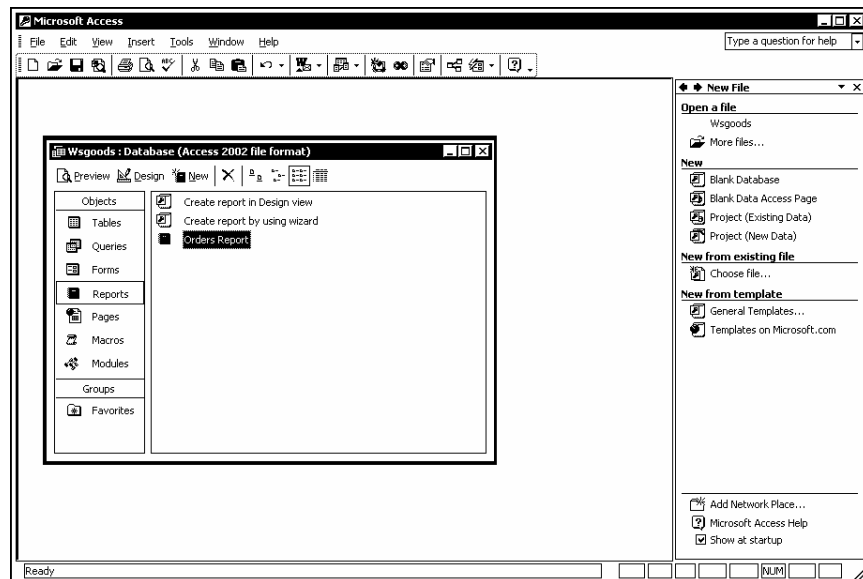
Discussion

The task pane provides links to many common tasks in Access. For example, you can use the **New File** task pane to create a new, blank database or to open a recently modified one.

The task pane is actually comprised of several panes, which can be viewed using the **Other Task Panes** list. The name of the current task pane appears on the task pane title bar. You can use the other task panes to perform other tasks in Access, such as performing searches and working with the Office Clipboard.

The **Back** and **Forward** buttons located on the task pane title bar navigate to previously viewed task panes. Blue text in the task pane indicates a link to an action or to a dialog box.

You can hide or display the task pane according to your needs. When you open a database, the task pane automatically closes. You can display or hide the task pane at any time while working with database objects. Although the features in the task pane are useful, you may want to hide it to display a larger working area. By default, the task pane appears each time you start Access. You can disable this feature by deselecting the **Show at startup** option at the bottom of the **New File** task pane.



The New File task pane



Each task pane can be opened with a separate menu command. The **Task Pane** command on the **View** menu opens the most recently used task pane.



You can change the size of the task pane by dragging the splitter bar (the left border of the task pane) as needed.



Procedures

1. Select the **View** menu.
2. Point to the **Toolbars** command.
3. Select the **Task Pane** command.
4. To view a different task pane, select the **Other Task Panes** list on the task pane title bar.
5. Select the desired task pane.
6. Click the **Back** or **Forward** button in the upper left corner of the task pane to return to a previous task pane.
7. Click the desired task pane link.
8. To close the task pane, click the **Close** button in the upper right corner of the task pane.

EXITING ACCESS



Discussion

In order to be efficient, you should close any objects you are not using. You can have several objects open at once, but multiple objects use more system resources. Changes to databases are saved automatically when you close the Database window.

In addition, when you have finished using Access, you should exit the application properly, since Access performs necessary housekeeping before it closes. If a database object has been modified, but not saved, an Access dialog box or the Office Assistant prompts you to save the changes before exiting.



You can also close an object or database by clicking the **Close** button on the applicable window title bar.



Procedures

1. Select the **File** menu.
2. Select the **Exit** command.

LESSON 2 - CREATING TABLES

In this lesson, you will learn how to:

- Use the Database Wizard
- Create a new database
- Design tables
- Create a table in Design view
- Use Design view
- Add field names
- Assign data types
- Add a field description
- Set a primary key
- Save a new table
- Use the Table Wizard

USING THE DATABASE WIZARD

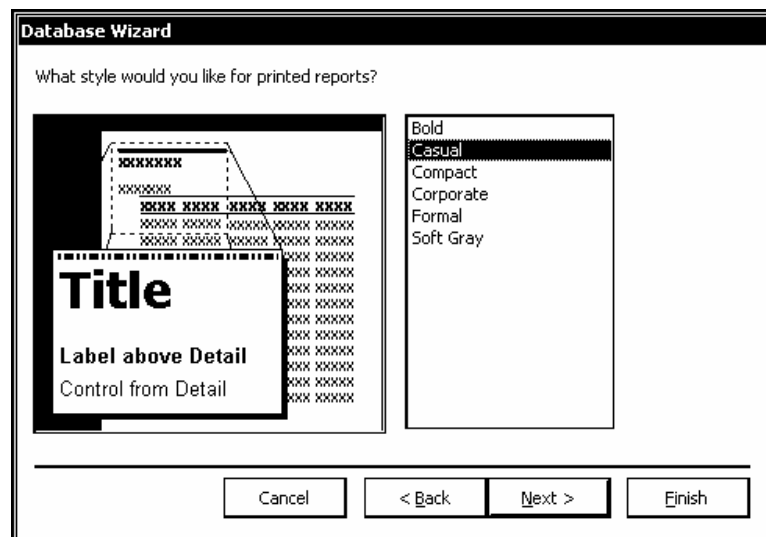
Discussion

When you create a database in Access, you are creating a container for related tables, forms, queries, reports, and other database objects. You can create a new database manually or with the help of the Database Wizard. If you create a new database manually, you must then create your own tables, queries, and other objects. To save time, you can use the Database Wizard.

Access 2002 offers several Database Wizard templates you can use to quickly create a database. The Database Wizard templates include preformatted database objects, such as tables, forms, and reports. A variety of business and personal Database Wizard templates are available on the **Databases** page in the Templates dialog box. If you use any Database Wizard template, Access creates not only the database, but also the tables, queries, and other objects in it.

When you use the Database Wizard, you select the fields you want to use in the database tables, the desired screen style, and the desired report style. Lastly, you can add a database title, include a picture on reports, and choose whether to open the database in the Database window or start the database from its Switchboard. The first time you start the database, a message box prompts you to enter your name and address information. After you have provided this information, the Main Switchboard (a form containing command buttons and other objects to help you navigate and use the database) opens.

After you have used a Database Wizard template, a link to it appears under **New from template** in the **New File** task pane. You can click this link to quickly create another database using the same template and settings.



Using the Database Wizard to create a new database




When you create a new database, it is saved in the default file format for Access 2000 so that it can be opened in Access 2000 as well as Access 2002. To create databases to be used strictly in Access 2002, you can change the default file format by selecting the **Tools** menu, the **Options** command, and the **Advanced** tab in the Options dialog box. Then, select the **Default File Format** list and **Access 2002**.



Procedures



1. Click the **New** button  on the **Database** toolbar.
2. Select the **General Templates** link under **New from template** in the **New File** task pane.
3. Select the **Databases** tab.
4. Select the desired Database Wizard template.
5. Select **OK**.
6. Type the desired file name.
7. Select the **Save in** list.
8. Select the drive where you want to store the file.
9. Open the folder where you want to store the file.
10. Select **Create**.
11. Select **Next >**.
12. Select the table in the **Tables in the database** list box for which you want to view the fields.
13. Select or deselect fields in the **Fields in the table** list box to include them in or to exclude them from the database, respectively.
14. Select **Next >**.
15. Select the desired screen style.
16. Select **Next >**.
17. Select the desired report style.
18. Select **Next >**.
19. Type the desired database title.

20. Select **Next** >.
21. Indicate whether or not you want to start the database after the Database Wizard has built it.
22. Select **Finish**.
23. Select **OK**.

CREATING A NEW DATABASE



Discussion

You can create a new database in Access without using the Database Wizard; however, you must then create the tables, queries, and other objects in the database.

When you create a new database, you must specify the desired file name, as well as where you want to store the database file.

After you have created the database, the Database window opens. Its toolbar buttons allow you to open objects, modify the design of existing objects, and create new objects. The **Objects** bar in the Database window allows you to access the following object types: **Tables, Queries, Forms, Reports, Pages, Macros, and Modules**. Created objects can belong to any of these categories.



The **New File** task pane closes as soon as you create a new, blank database.



You can also create a new, blank database by selecting the **General Templates** link on the **New File** task pane and the **Blank Database** icon on the **General** page in the Templates dialog box.




To open the **New File** task pane, select the **File** menu and the **New** command.



Procedures



1. Click the **New** button  on the **Database** toolbar.
2. Select the **Blank Database** link under **New** in the **New File** task pane.
3. Type the desired file name.
4. Select the **Save in** list.
5. Select the drive where you want to store the file.
6. Open the folder where you want to store the file.
7. Select **Create**.

DESIGNING TABLES



Discussion

In Access, there are five steps to designing a table. The first step is to develop a thorough understanding of the system, including all the data to be entered and all the reports, statistics, labels, and other output you want to generate. It is helpful to gather all the forms you use for input and all the reports generated from the data. This process serves two purposes. First, these forms and reports are invaluable when you begin detailing exactly what information you want stored in each table. Second, once you have collected a set of these forms, you can make sure that every item of information on your reports is either included in your database or can be derived from data in your database.

The second step is to determine how many tables you need and what information to store in each table. Once you have gained an overview of the system, you are ready to begin designing your database. The most important decision you must make before you begin creating tables is how many tables you want the database to include.

The third step is to design the tables by selecting the fields you want to include, the type of data you want to store in each field, and the size of the fields. Once you have developed an overview of your application and a list of tables, you can make a preliminary list of fields, based on the categories of information that each table will include. You can refine the list by considering the following: if the data is to be sorted or selected, it should be in a separate field; if the data is to be calculated from other fields, you do not need to store it in its own field; and, if the table is to be linked to another table, both tables should contain common fields.

The fourth step is to create the table structures by defining the name, data type, and size of the fields.

The fifth and final step is to enter sample data. This step is important because it helps you determine whether or not the table fields are the correct size and if all the necessary fields have been included. You can then modify the tables as necessary.

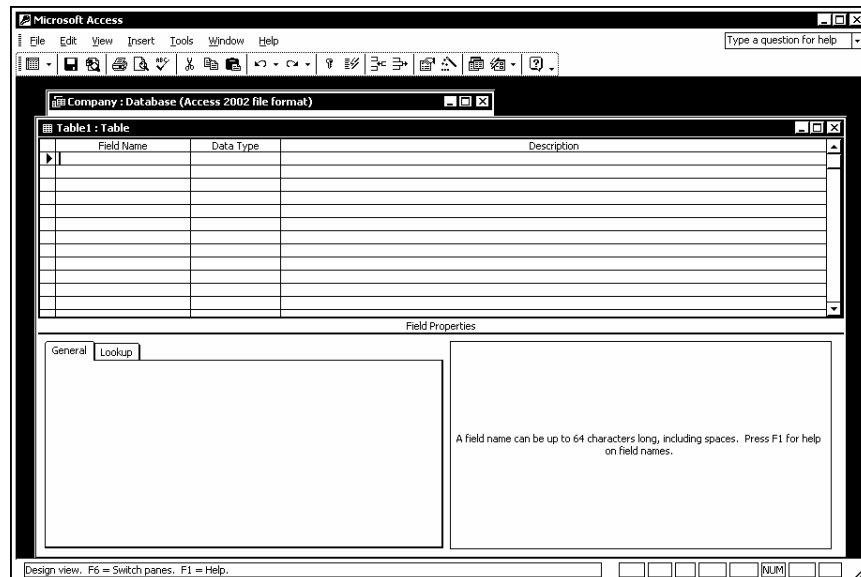
CREATING A TABLE IN DESIGN VIEW



Discussion

A table is the basic building block of a database. All queries, reports, and forms use the fields and records in the database tables as the basis for their output. You must create at least one table in the database before you can create any other object.

When you create a new table, you can use either **Datasheet** or **Design** view, work in the Table Wizard, import data from another data source, or link to data in another data source. Usually, a table is created in **Design** view, which gives you the most control over the database design.



The blank table in Design view



You can also create a new table in **Design** view by double-clicking the **Create table in Design view** object in the **Tables** object list.




Datasheet view displays a grid of rows and columns. Field names are entered as column headings.



The Table Wizard uses a series of steps to help you create a table. You can select a sample table on which to base your table and choose field names from commonly used fields, such as **LastName** and **CompanyName**.



Procedures

1. Display the **Tables** objects.
2. Select the  **New** button on the Database window toolbar.
3. Select **Design View**.
4. Select **OK**.

USING DESIGN VIEW



Discussion

The **Design** view window is split into two panes. The upper pane displays a design grid. You can use the rows and columns in this design grid to enter the field names, data types, and field descriptions for each field in the table. The small box to the left of each field name is the row selector. A black triangle in the row selector indicates the current field.

The lower pane displays the properties of the selected field. A property is a characteristic of a field, such as the number of characters a field can contain. Access automatically assigns default field properties, which you can modify as desired.



Once you have entered at least one field, you can press the **[F6]** key to move between the upper and lower panes of the **Design** view window.

ADDING FIELD NAMES



Discussion

Field names are entered into the **Field Name** column in the **Design** view window. Field names are labels that identify the data stored in a field. For example, the **OrderNumber** field will most likely contain order numbers.

Field names can be up to 64 characters long and can include letters, numbers, and spaces. (Field names, however, cannot begin with a space.) Field names cannot contain a period (.), an exclamation point (!), a back quote (`), brackets ([]), or ASCII control characters. In addition, field names within a table must be unique.

Making field names descriptive and meaningful can help with data entry and data retrieval. However, you should avoid long and complicated field names because they can be cumbersome to remember and difficult to reference when performing database functions.



The order in which the field names appear in **Design** view determines the order in which the columns appear in **Database** view.



Do not include spaces in field names if you work with other database formats or plan to use macros with VBA (Visual Basic for Applications) code.



Procedures

1. Open or create a table in **Design** view.
2. Type the desired field name.
3. Press **[Down]**.

ASSIGNING DATA TYPES



Discussion

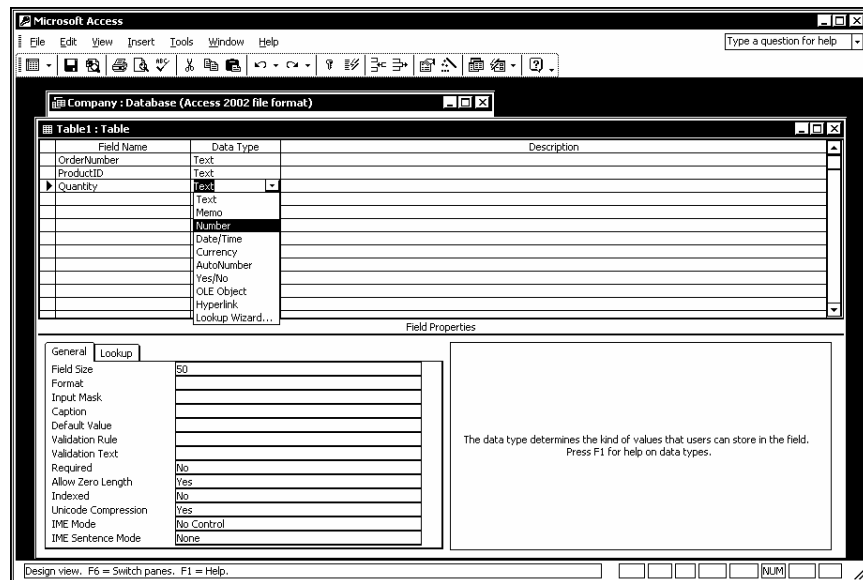
The field data type tells Access what kind of values you plan to store in a field and how much storage space to set aside for the field. Although you can change a data

type after a field contains data, doing so may erase some or all of the information in the field.

The following table describes the available data types:

Data Type	Description
Text	Text is the default data type; a text field can contain any combination of letters, numbers, punctuation marks, and spaces. The default width is 50 characters and the maximum length is 255 characters.
Memo	A memo field is similar to a text field, except that a memo field can contain up to 65,535 characters. You can use memo fields for notes or long descriptions in a database.
Number	A number field can contain only numeric characters, a comma (used as a thousands separator), a period (used as a decimal point), and a hyphen (used as a negative number sign). You should use a number field only when you want to perform calculations using the field values. For example, even though zip codes and telephone numbers consist of numeric characters, you would not use them in calculations; therefore, they should be entered in text rather than number fields.
Date/Time	The Date/Time data type is used for dates and/or times. Access automatically validates all entries to ensure that they are valid dates and/or times. For example, Access will not allow you to enter 2/31/99 because February does not have 31 days. Date/Time fields are useful in performing calculations on dates and times.
Currency	The Currency data type is similar to the Number data type and can be used in calculations. However, the values in a currency field can have a maximum of four decimal places and automatically appear with dollar signs and thousands separators (commas). You should use currency fields whenever possible because they use fixed point calculation, which is faster than the floating point calculation used in number fields.
AutoNumber	The AutoNumber data type allows Access to automatically assign a unique number (consecutively from 1) to each record in the database. You cannot manually enter a value into an AutoNumbered field or change a number Access has assigned to a record. You use this data type when you want a unique identification number for each record.

Data Type	Description
Yes/No	A Yes/No data type is used to signify one of two conditions, Yes or No . You use a yes/no field when only two possibilities (i.e., True or False) exist for a field value.
OLE object	The OLE object data type allows you to either embed an object created in another Windows application or create a link to such an object. You use an OLE object data type for graphics, spreadsheets, or sound files.
Hyperlink	A Hyperlink data type is used to store a link to anywhere you choose. The link could go to an Internet page, a Word document on an intranet, or even a form in the current database. A hyperlink field can contain a description, an address, and a sub-address [separated by number signs (#)], as well as up to 2,048 characters; only the address, however, is mandatory.
Lookup Wizard	The Lookup Wizard data type allows you to create a lookup field. A lookup field displays a list of values that are either stored in another table or created by you. A lookup field allows you to choose values from a list during data entry, thereby reducing repetitive typing and eliminating typing errors.



Assigning a data type



Procedures

1. Open or create a table in **Design** view.
2. Enter field names as desired.
3. Select the **Data Type** column in the field for which you want to change the data type.
4. Select the **Data Type** list.
5. Select the desired data type.

ADDING A FIELD DESCRIPTION



Discussion

You can use the **Description** column in the design grid to enter a description for each field. The description appears on the status bar when the field is accessed on a form. You can enter brief comments as to the purpose of the field or the data that should be stored in it.



Procedures

1. Open or create a table in **Design** view.
2. Enter field names as desired.
3. Select the **Description** column in the field to which you want to add a description.
4. Type the desired description.

SETTING A PRIMARY KEY



Discussion

Access works most efficiently if you specify a primary key for each table. The primary key is a field or group of fields that uniquely identifies each record in the table. Therefore, the value of the key field, or the combined values of a group of key fields, must not be found in more than one record. Consequently, a **LastName** field

would be a poor primary field, because several records may have the same last name; it would not, therefore, be unique.

There are several advantages to setting a primary key. First, the primary key is automatically indexed, which makes information retrieval faster. Second, when you open a table, the records are automatically sorted in order by the primary key. Finally, a primary key prevents the entry of duplicate data because Access does not allow duplicates in the primary key field.



If you have trouble identifying the primary key field, you can create an AutoNumber field and designate it as the primary key.




You cannot choose a memo, OLE, or hyperlink field as the primary key.



To create a multi-field primary key, hold the **[Ctrl]** key, click the desired fields, and then click the **Primary Key** button on the **Table Design** toolbar.



Procedures

1. Open or create a table in **Design** view.
2. Enter field names as desired.
3. Select the field you want to designate as the primary key.
4. Click the **Primary Key** button  on the **Table Design** toolbar.

SAVING A NEW TABLE



Discussion

After you have designed the fields for a table, you must save the table before you can add any data. When you save a new table, you should give it a name that describes the records it stores. You can use up to 64 characters, including spaces. These characters can include letters, numbers, and spaces. They cannot contain a period (.), an exclamation point (!), a back quote (`), brackets ([]), or ASCII control characters.

After you have saved a table, an icon for it appears in the **Tables** object list in the Database window.




When you save a table for the first time, Access opens the Save As dialog box, in which you enter the desired table name.



When you save a table, you are not creating a file. You are adding an object to the existing database.



Procedures

1. Create a table in **Design** view.
2. Enter the desired table data.
3. Click the **Save** button  on the **Table Design** toolbar.
4. Type the desired table name.
5. Select **OK**.

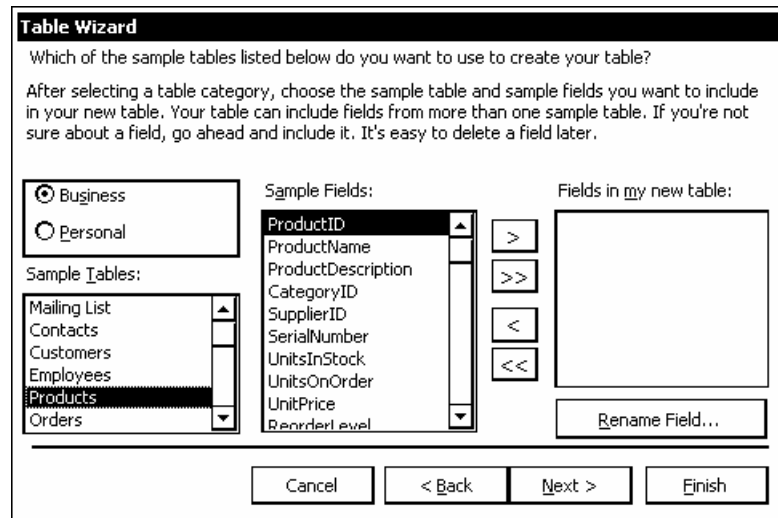
USING THE TABLE WIZARD



Discussion

The Table Wizard leads you through the steps needed to create a new table. The Table Wizard provides many table templates for typical business and personal use. You select the type of table you want to create, and then the fields you want to add to the table.

The Table Wizard allows you to relate your new table to an existing table in your database. However, if your database does not contain any tables when you begin the Table Wizard, you will not be prompted to relate tables.



The Table Wizard



You can use the right-pointing, double arrow button on the first page of the Table Wizard to add all the fields in the **Sample Fields** list to your new table. The left-pointing arrow buttons allow you to remove either the selected field or all fields from the **Fields in my new table** list box.




You can rename any field in the **Fields in my new table** list box by selecting it and then selecting the **Rename Field** button.




You can also activate the Table Wizard by double-clicking the **Create table by using wizard** object in the **Tables** object list.



Procedures

1. Display the **Tables** object list.
2. Select the  **New** button on the Database window toolbar.
3. Select **Table Wizard**.
4. Select **OK**.
5. Select the **Business** or **Personal** option, as desired.
6. Select the desired table from the **Sample Tables** list box.

7. Select a field you want to add to your table from the **Sample Fields** list box.
8. Select  to the right of the **Sample Fields** list box.
9. Add other fields as desired.
10. Select **Next >**.
11. Type the desired table name in the **What do you want to name your table?** box.
12. Select the desired primary key option.
13. Select **Next >**.
14. If you chose to set your own primary key, select the **What field will hold data that is unique for each record?** list.
15. Select the desired field.
16. Select the desired data option for the primary key field.
17. Select **Next >**.
18. Review or create table relationships, as desired.
19. Select **Next >**.
20. Select the desired view option.
21. Select **Finish**.

LESSON 3 - WORKING WITH TABLES

In this lesson, you will learn how to:

- Use Datasheet view
- Navigate fields in tables
- Add records
- Move through records
- Select records
- Edit records
- Save records
- Delete records

USING DATASHEET VIEW



Discussion

When you open a table, it appears in **Datasheet** view by default. **Datasheet** view is useful when you want to enter, edit, or delete records.

In **Datasheet** view, the table data is arranged in rows and columns, with the columns representing the table fields and the rows the individual records. Multiple records appear in the table. The small box at the far left of each row is the record selector; a black triangle in the record selector indicates the current record.

NAVIGATING FIELDS IN TABLES



Discussion

In **Datasheet** view, you can use the mouse or the keyboard to move through the fields and records. If there are too many fields to display on screen at the same time, the window scrolls automatically as you move to the right or left.

As you enter or edit data, you can use the **[Tab]** or **[Enter]** keys to move from field to field. You can also use the **[Right]** and **[Left]** arrow keys to navigate across fields. These keys are helpful because they allow you to keep your hands on the keyboard at all times, rather than having to switch back and forth from the keyboard to the mouse. However, the mouse is useful if you want to skip certain fields. You simply click in the field where you want to enter or edit data.

The **[Up]** and **[Down]** arrow keys allow you to move from record to record. In addition, the navigation toolbar at the bottom of the datasheet allows you to select the first, last, next, or previous record, as well as specify a particular record you want to view.



The **[Page Up]** and **[Page Down]** keys scroll to the previous or next page of records, respectively.

ADDING RECORDS



Discussion

A blank row follows the last record in an existing table. This blank row, the new record row, displays an asterisk (*) in the record selector. As soon as you begin entering data into the new record row, the asterisk in the record selector changes to a pencil to indicate that the record is being entered or edited, and Access creates another new record row below it.

If there is no data in the table, only the new record row appears. It does not display an asterisk, however; rather, it displays the black triangle that indicates the current record.

When you enter data into a row, the amount of characters you can enter is limited by the size of the field. The field size, however, can actually be larger than the column width in **Datasheet** view; if the field size is larger than the column width, the text scrolls as you type.

After you have typed the desired information into a field, you can press the **[Enter]** or **[Tab]** key to save the record and move the insertion point to the next field.

Product ID	Product Description	Unit Price
10-1437	shoes, soccer	\$65.75
10-2562	skates, hockey	\$98.50
▶ 10-3827	shoes, baseball	\$97.81
*		

Adding records in Datasheet view



You can use the **Clipboard** task pane to enter repeated values. You can copy as many as 24 separate entries to the **Clipboard** task pane. To display the **Clipboard** task pane, select the **Edit** menu and then the **Office Clipboard** command. Copying two items in succession also displays the **Clipboard** task pane. For each copied item, the **Clipboard** task pane displays an icon and a portion of the copied or cut text. Clicking an item in the **Clipboard** task pane inserts it into the current field.



You can press the **[Ctrl+']** key combination to insert the data from the corresponding field of the previous record into the current field.



You can also use the **New Record** button on the **Table Datasheet** toolbar or at the bottom of the **Datasheet** view window to add a new record.



Procedures

1. Open the desired table in **Datasheet** view.
2. Select the first field in the new record row, if necessary.
3. Type the desired data.
4. Press **[Enter]**.
5. Enter the desired record data into the remaining fields, pressing **[Enter]** after each entry.

MOVING THROUGH RECORDS



Discussion

If there are more records in a table than can be displayed in **Datasheet** view, a vertical scroll bar appears. You can use this scroll bar to view additional records.





Access also provides a navigation toolbar at the bottom of the datasheet that can be used to select the first, last, next, or previous record in the datasheet, as well as to specify a particular record you want to view.



You can also use the **[Up]** and **[Down]** arrow keys to move from record to record and the **[Page Up]** and **[Page Down]** keys to display the previous or next page of records, respectively.



Procedures

1. Open a table in **Datasheet** view.
2. To move to the last record in the table, click the **Last Record** button  on the navigation toolbar.
3. To move to the first record, click the **First Record** button  on the navigation toolbar.
4. To move to the next record, click the **Next Record** button  on the navigation toolbar.
5. To move to the previous record, click the **Previous Record** button  on the navigation toolbar.

SELECTING RECORDS



Discussion

When you select any field in a record, that record becomes the active record. A black triangle appears in the record selector to the left of the record to indicate that it is the active record. You can then edit any field in the record as desired.

Selecting a record is different than making a record active. To select a record, you must select the entire row. Selecting a record is useful when you want to delete or copy it. For example, if you want to add a record containing almost identical information as the current record, you can select the current record, copy it, paste it into a new record, and then edit it as needed.



You can also use the **[Up]** and **[Down]** arrow keys to activate the next or previous record, respectively, and the **[Page Up]** and **[Page Down]** keys to activate the first record on the corresponding datasheet page.



Procedures

1. Open a table in **Datasheet** view.
2. Click anywhere in the record you want to make active.

3. Point to the record selector of a record you want to select.
4. Click in the record selector of the record you want to select.

EDITING RECORDS



Discussion

You can edit records at any time. You cannot edit an AutoNumber field, however, because Access automatically generates the data in it.

When you use the keyboard to access a field, the entire field is selected, and you can replace all data simply by typing new data. This is select mode. Access also allows you to edit individual characters within a field. To do this, you must switch to edit mode. In edit mode, the insertion point appears in the field. You can click in a field to access edit mode.

While you are editing a record, a pencil appears in its record selector. The following table describes various keystrokes you can use to edit records:

Keystroke	Description
[Up]	Selects the same field in the previous record.
[Down]	Selects the same field in the next record.
[Right]	In select mode, selects the next field; in edit mode, moves one character to the right.
[Left]	In select mode, selects the previous field; in edit mode, moves one character to the left.
[F2]	Toggles between select and edit modes.
[Ctrl+Enter]	Inserts a new line character in a field.
[Ctrl+']	Inserts the data from the corresponding field in the previous record.
[Ctrl+Alt+Spacebar]	Replaces the data with the default data, if available.
[Ctrl+Shift+:]	In select mode, replaces the field data with the current time.
[Ctrl+;]	In select mode, replaces the field data with the current date.



Procedures

1. Open a table in **Datasheet** view.
2. Click in the field you want to edit.
3. Select the text you want to edit.
4. Type the desired text.
5. Press [**Enter**].

SAVING RECORDS



Discussion

Access automatically saves a new record or changes made to an existing record as soon as you move to the next field. You can also save a record manually. This option is useful if a record has numerous fields and you want to save the changes made to a field without leaving the field. You may also want to save a record manually to save changes made to automatically generated data.



Access also saves records automatically when you close a table.



You can also press the [**Shift+Enter**] key combination to save a record.



Procedures

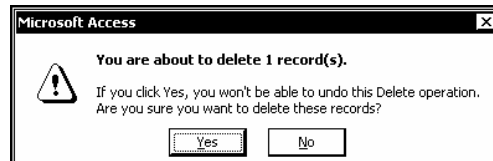
1. Open a table in **Datasheet** view.
2. Select the **Records** menu.
3. Select the **Save Record** command.

DELETING RECORDS



Discussion

When you no longer need a record, you can delete it. Deleting records saves disk space and keeps your tables smaller and more manageable.



Deleting a record



After you have deleted a record, you cannot undo the deletion.



Procedures

1. Open a table in **Datasheet** view.
2. Select the record you want to delete.
3. Click the **Delete Record** button  on the **Table Datasheet** toolbar.
4. Select **Yes** to delete the record.

LESSON 4 - EDITING TABLES

In this lesson, you will learn how to:

- Change the row height
- Change the column width
- Change a font attribute
- Change a cell effect
- Select a column
- Move a column
- Hide a column
- Unhide a column
- Freeze a column

CHANGING THE ROW HEIGHT



Discussion

In **Database** view, the default row height is 12.75 points. You can change the row height to allow long field entries to wrap. This option allows you to display more of the data in a long field entry.

Changing the height of a single row changes the height of every row in the table.



You can also select the **Format** menu and the **Row Height** command to change the row height in a table. In the Row Height dialog box, you can enter the desired row height or select the **Standard Height** option to reset the row height to the default 12.75 points.



You cannot use the **Undo** feature to undo a change in the row height. To undo a row height change, you must close the table without saving the changes.



Procedures

1. Open a table in **Datasheet** view.
2. Point to any horizontal line between records in the record selector.
3. Drag the line to the desired row height.

CHANGING THE COLUMN WIDTH



Discussion

In **Database** view, the standard column width is 15.6667 characters. If a field contains a long entry, you can change the column width to display more of the field entry.



You can select the **Format** menu and the **Column Width** command to change the column width in a table. In the Column Width dialog box, you can enter the desired column width or select the **Standard Width** option to reset the column width to its default 15.6667 characters.



You cannot use the **Undo** feature to undo changes in column width. To undo a column width change, you must close the table without saving the changes.



If you double-click the column separator line to the right of any column header, the width of that column automatically adjusts to display the longest entry in the column.



Procedures

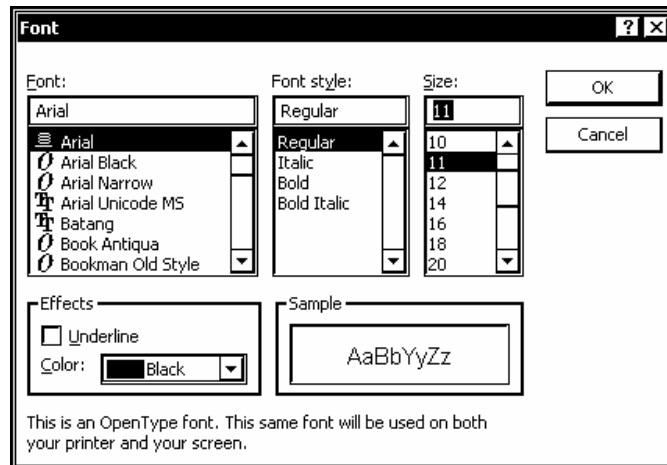
1. Open a table in **Datasheet** view.
2. Point to the vertical line to the right of the header of the column you want to adjust.
3. Drag the line to the desired width.

CHANGING A FONT ATTRIBUTE



Discussion

You can change datasheet font attributes. The font attributes affect the appearance of the data and column headings. You can change the font type, style, and size, as well as add or remove font effects.



The Font dialog box



Procedures

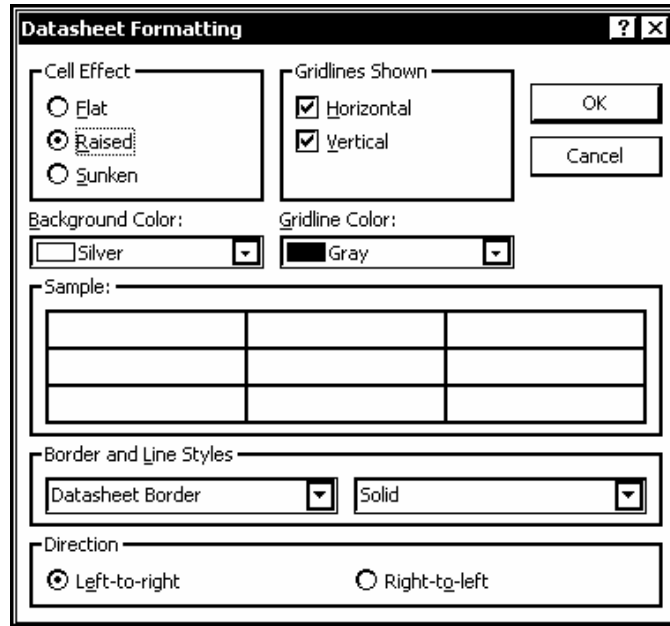
1. Open a table in **Datasheet** view.
2. Select the **Format** menu.
3. Select the **Font** command.
4. Select the desired options.
5. Select **OK**.

CHANGING A CELL EFFECT



Discussion

You can change the appearance of cells in **Datasheet** view. For example, you can make cells raised or sunken. You can also change the look of the horizontal and vertical gridlines, and the cell background.



The Datasheet Formatting dialog box



Procedures

1. Open a table in **Datasheet** view.
2. Select the **Format** menu.
3. Select the **Datasheet** command.
4. Select the desired option.
5. Select **OK**.

SELECTING A COLUMN



Discussion

Before you can manipulate table columns, you must select them. You can perform a number of actions on selected columns, as well as select a single column or multiple adjacent columns.



Column headers are also called field selectors.



To select multiple adjacent columns, drag across the headers of the columns you want to select.



Right-clicking a column header selects the column and displays the column shortcut menu at the same time. The shortcut menu provides access to common column commands, such as changing column width or hiding columns.



Procedures

1. Open a table in **Datasheet** view.
2. Click the header of the column you want to select.

MOVING A COLUMN



Discussion

You can move one or more columns in **Datasheet** view. For example, you can reposition columns to view data more easily or organize the datasheet logically.

You can move a single column or multiple, adjacent columns. Before you can move a column or multiple columns, however, you must first select them.



Moving columns does not change the order of the fields in the table design.



To undo a column move, you must close the table without saving the changes. You cannot use the **Undo** feature to undo a column move.



When you are dragging a column to move it, a vertical divider bar appears in the destination location when the mouse pointer is correctly positioned.



Procedures

1. Open a table in **Datasheet** view.
2. Select the column you want to move.
3. Drag the column to the new location.

HIDING A COLUMN



Discussion

If you do not regularly view or edit one or more table fields, you can hide their corresponding table columns. Hiding columns can make your datasheet narrower and easier to view.

You can hide a single column or multiple adjacent columns.



You can also use the **Hide Columns** command on the column header shortcut menu to hide the current column.



Procedures

1. Open a table in **Datasheet** view.
2. Select the column you want to hide.
3. Select the **Format** menu.
4. Select the **Hide Columns** command.

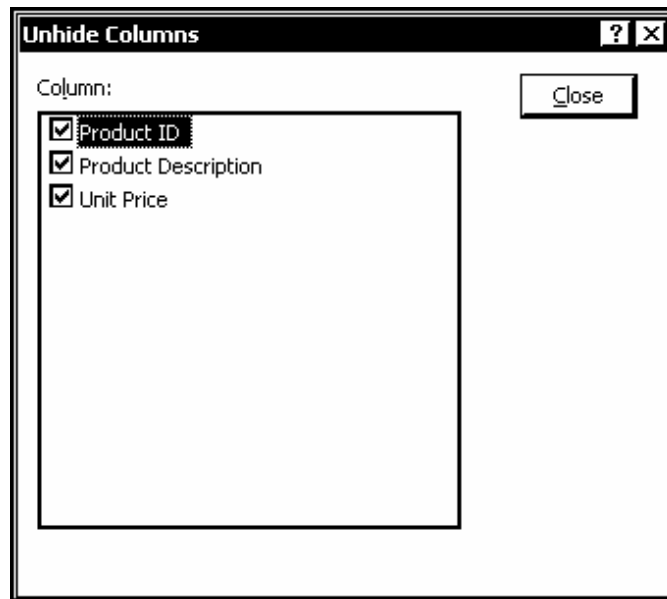
UNHIDING A COLUMN



Discussion

You can redisplay hidden columns. The Unhide Columns dialog box lists all the columns in the table, with a check box to the left of each column name. The check box

is deselected for hidden columns. You can select the check box to redisplay a hidden column.



The Unhide Columns dialog box



You can also use the Unhide Columns dialog box to hide multiple, non-adjacent columns.



Procedures

1. Open a table in **Datasheet** view.
2. Select the **Format** menu.
3. Select the **Unhide Columns** command.
4. Select the column you want to unhide.
5. Select **Close**.

FREEZING A COLUMN



Discussion

If you have a table with multiple fields, all of the columns may not display on screen at the same time. You can scroll to the right to view additional columns; however, you may not be able to see the columns at the far left, which may display necessary information, such as the record identification.

You can freeze columns in **Datasheet** view. Freezing one or more columns allows you to see the information in the frozen columns no matter how many columns you scroll to the right.



You can also use the **Freeze Columns** command on the column header shortcut menu to freeze the current column. If you freeze a column other than the first column, however, the frozen column moves to the far left position in the datasheet.



A solid, dark line appears to the right of the last frozen column.



To unfreeze columns, select the **Format** menu and the **Unfreeze All Columns** command.



Procedures

1. Open a table in **Datasheet** view.
2. Select the column you want to freeze.
3. Select the **Format** menu.
4. Select the **Freeze Columns** command.

LESSON 5 - FINDING AND FILTERING DATA

In this lesson, you will learn how to:

- Sort records
- Find specific records
- Find records using wildcards
- Use Replace
- Use Filter By Selection
- Apply/Remove a filter
- Use Filter Excluding Selection
- Use Filter For
- Use Filter By Form

SORTING RECORDS



Discussion

When you display a table in **Datasheet** view, Access displays the records in order by their primary key. You may want to edit or print records in a different order (e.g., by last name, zip code, or amount due).

You can sort records in either ascending or descending order. Ascending order sorts numerically from 0 to 9 and then alphabetically from A to Z. Descending order sorts numerically from 9 to 0 and then alphabetically from Z to A. The **Table Datasheet** toolbar provides buttons for both ascending and descending sorts.





You can remove a sort by selecting the **Records** menu and the **Remove Filter/Sort** command.



You can also sort records by selecting the **Records** menu, pointing to the **Sort** command, and selecting the desired sort command, or by right-clicking in the field you want to sort and selecting the desired sort command.



Procedures

1. Open a table in **Datasheet** view.
2. Select the field by which you want to sort.
3. Click the **Sort Ascending** button  or the **Sort Descending** button  on the **Table Datasheet** toolbar.

FINDING SPECIFIC RECORDS



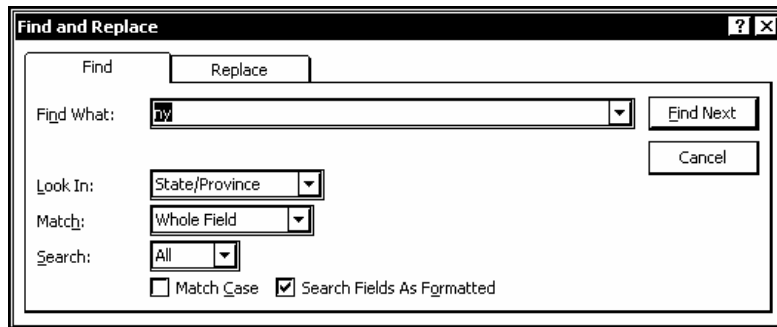
Discussion

The **Find** feature allows you to locate records quickly. You can search for records that contain a unique value in a certain field, or you can find all records that have a

common value in a field. Access scans the selected field, beginning with the current record, and highlights the first instance of the search text it finds. You can repeat the search to find additional records containing the same data.

In the Find and Replace dialog box, you can select options to control how Access searches for matching records. You can use the **Look In** list to search the current column or the entire table. The options on the **Match** list allow you to specify whether to match any part of the field, the whole field, or only the start of the field.

The Find and Replace dialog box remains open during a search. If needed, you can move the dialog box out of the way to view the search as it progresses.



The Find and Replace dialog box




The Find and Replace dialog box retains the settings of the most recent search. Pressing the **[Shift+F4]** key combination performs the same search again.



You can also open the **Find** page in the Find and Replace dialog box by selecting the **Edit** menu and the **Find** command.



Procedures

1. Open a table in **Datasheet** view.
2. Select the field you want to search.
3. Click the **Find** button  on the **Table Datasheet** toolbar.
4. Type the text you want to find in the **Find What** box.
5. Select the **Match** list.
6. Select the desired option.
7. Select **Find Next** to begin the search.

8. Select **Find Next** to find the next matching record.
9. When all records have been searched, select **OK**.
10. Select **Cancel** to close the Find and Replace dialog box.

FINDING RECORDS USING WILDCARDS



Discussion


You can use wildcards in a find. Wildcards are characters that represent other characters. They allow you to find records, even if you are not sure how the entry appears in the field. Wildcards also allow you to find records that share a common entry within a field, but not necessarily the entire field entry. For example, you may want to search for the area code at the beginning of a telephone number field.

You can use the following wildcards in a find:

Wildcard	Description
*	Represents any number of characters. It can be used anywhere in the search text. For example, North* will find all entries beginning with the word North ; *Sports will find all entries ending with the word Sports ; and *Sports* will find all entries containing the word Sports .
?	Represents only one character; for example, Sm?th will find Smith , Smyth , etc.
[]	Finds any character enclosed in the set; for example, b[ai]t will find bat and bit , but not bet and but .
!	Finds any character except the ones enclosed in the set; for example, b[!ai]t will find bet and but , but not bat or bit .
-	Finds any character in a range in a set; for example, b[u-w]t finds but , bvt , and bwt .
#	Represents only one digit; for example, 1980# finds 19801 , 19802 , 19803 , etc.



Procedures

1. Open a table in **Datasheet** view.
2. Select the field you want to search.
3. Click the **Find** button  on the **Table Datasheet** toolbar.
4. Type the text you want to find in the **Find What** box.
5. Select the **Match** list.
6. Select the desired option.
7. Select **Find Next** to begin the search.
8. Select **Find Next** to find the next matching record.
9. When all records have been searched, select **OK**.
10. Select **Cancel**.

USING REPLACE

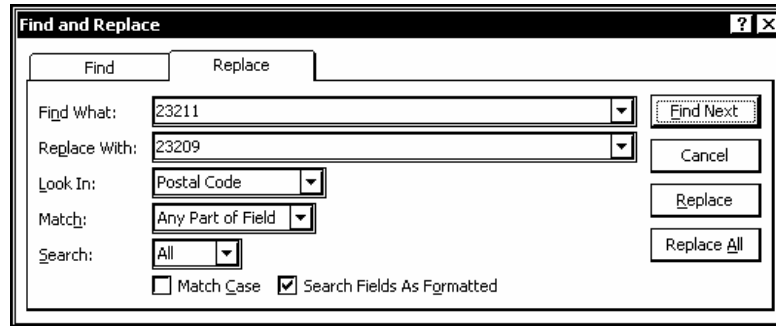


Discussion

The **Replace** feature allows you to quickly locate and replace data in a field. This feature is especially useful if the same information must be changed in several records. Access scans the selected field, beginning with the current record, and selects the first instance of the search text it finds. You can replace the text or search for the next instance of the search text. You can also replace all the instances of the search text at once.

In the Find and Replace dialog box, you can control how Access searches for matching records. The **Look In** list enables you to search either the current column or the entire table. The options on the **Match** list allow you to specify whether to match any part of the field, the whole field, or only the start of the field.

The Find and Replace dialog box remains open during a search. You can move it as needed to view the datasheet records.



Replacing data




You can also display the **Replace** page in the Find and Replace dialog box by selecting the **Edit** menu and the **Replace** command.



Selecting the **Replace All** button in the Find and Replace dialog box replaces all data that matches the search text. Make sure that you want to replace all data before you use the **Replace All** button because you may not be able to retrieve the data once it has been replaced.



Procedures

1. Open a table in **Datasheet** view.
2. Select the field you want to search.
3. Click the **Find** button  on the **Table Datasheet** toolbar.
4. Select the **Replace** tab.
5. Type the text you want to find in the **Find What** box.
6. Select the **Replace With** box.
7. Type the desired replacement text.
8. Select **Find Next** to begin the search.
9. Select **Replace**.
10. Select **Replace All**.
11. Select **Yes** to replace all remaining matches.

12. Select **Cancel**.

USING FILTER BY SELECTION



Discussion

You can filter data in Access. Filtering data allows you to view only those records with which you want to work by hiding the records you do not want to see. For example, you can filter data in a customers table so that only the records of those customers located in a specific region appear.

A quick and easy way to filter data in Access is to use the **Filter By Selection** feature, in which only those records that match the data in the selected field are displayed.

A filter remains in effect until you remove it.

Postal Code	Country	Note	Region	Sales Rep	Credit Limit	Contract Date
31431	U.S.A.		Southeast	NTB	1500	3/22/1998
40567	U.S.A.		Southeast	NTB	1900	2/17/1998
72220	U.S.A.	Wanted to know	Southeast	NTB	5000	3/25/1997
23209	U.S.A.		Southeast	NTB	7000	12/15/1997
23209	U.S.A.		Southeast	NTB	1900	12/1/1997
32116	U.S.A.		Southeast	NTB	2200	1/3/1998
30331	U.S.A.		Southeast	NTB	2300	5/13/1997
37211	U.S.A.		Southeast	NTB	3000	11/9/1997
70120	U.S.A.		Southeast	NTB	4300	10/15/1998
*						

A filtered table




When a filter is in effect, the **(Filtered)** indicator appears on the status bar.



You can also filter by selection by selecting the **Records** menu, pointing to the **Filter** command, and selecting the **Filter By Selection** command, or by right-clicking the field containing the value by which you want to filter and selecting the **Filter By Selection** command.



Procedures

1. Open a table in **Datasheet** view.
2. Select any field that contains the data by which you want to filter.
3. Click the **Filter By Selection** button  on the **Table Datasheet** toolbar.

APPLYING/REMOVING A FILTER



Discussion

The **Apply Filter** button acts a toggle. If a filter is in effect, it becomes the **Remove Filter** button. If no filter is in effect, it applies the most recent filter when you click it.




You can also reapply the previous filter by selecting the **Records** menu and the **Apply Filter/Sort** command.



You can also remove a filter by selecting the **Records** menu and the **Remove Filter/Sort** command or by right-clicking any field and selecting the **Remove Filter/Sort** command.



Procedures

1. Open a table in **Datasheet** view.
2. Click the **Apply Filter** or **Remove Filter** button  on the **Table Datasheet** toolbar, as applicable.

USING FILTER EXCLUDING SELECTION



Discussion

The **Filter Excluding Selection** feature is similar to the **Filter by Selection** feature except that it displays all records that do not match the filter criteria. For example, if most of the customers in a customers table are located in the state of New York, you can use the **Filter Excluding Selection** feature to display only those records in which the customers are not located in New York.



You can also enable the **Filter Excluding Selection** feature by right-clicking any field containing the value you want to exclude and selecting the **Filter Excluding Selection** command.



Procedures

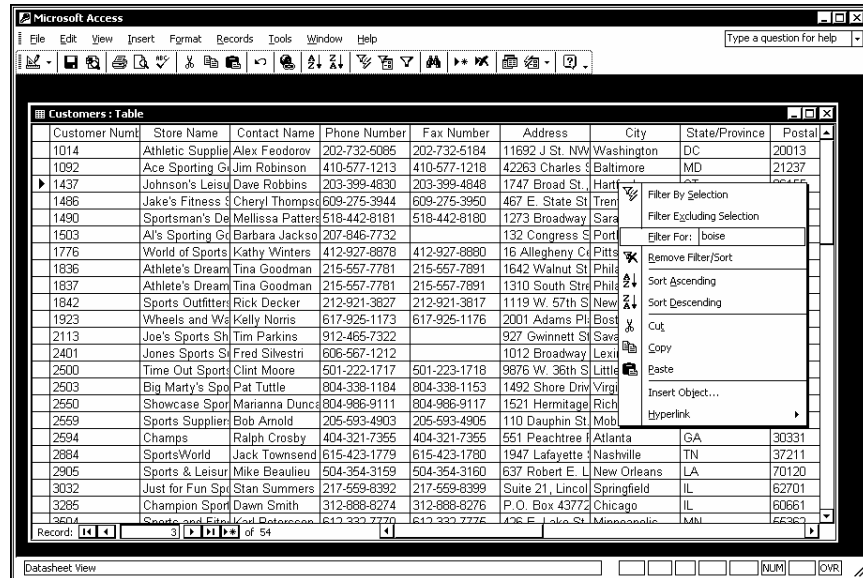
1. Open a table in **Datasheet** view.
2. Select the field that contains the data you want to exclude.
3. Select the **Records** menu.
4. Point to the **Filter** command.
5. Select the **Filter Excluding Selection** command.

USING FILTER FOR



Discussion

The **Filter For** feature allows you to quickly display records containing specific data in a field. When you apply this type of filter, Access filters the table and displays only those records containing data that matches the filter.



Using Filter For



You can use wildcards with the **Filter For** feature.



Procedures

1. Open a table in **Datasheet** view.
2. Right-click the field by which you want to filter.
3. Select the **Filter For** command.
4. Type the desired filter.
5. Press **[Enter]**.

USING FILTER BY FORM

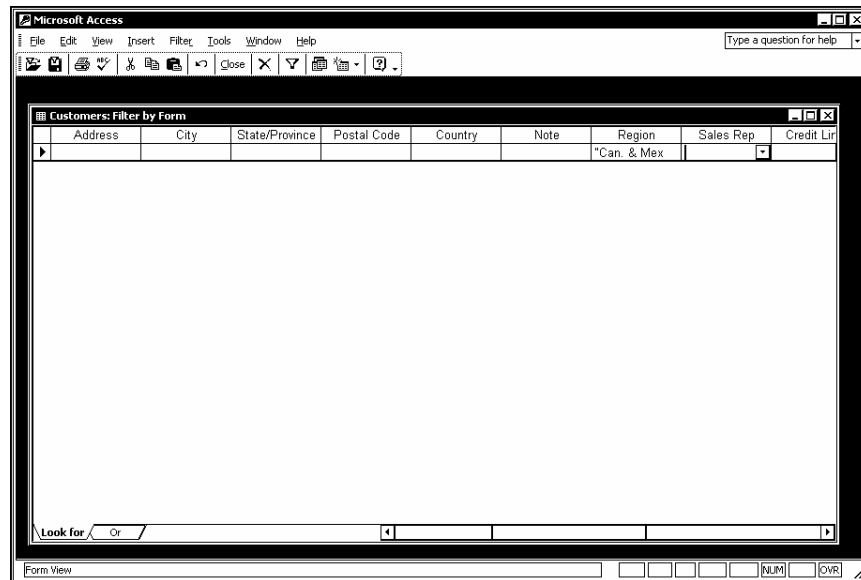


Discussion

You can use the **Filter By Form** feature to filter data. The **Filter By Form** feature displays a blank record in the Filter by Form window. You enter the data by which you want to filter in the corresponding field. When the filter is applied, only those records with matching data appear; all the other records are hidden.

The **Filter by Form** feature allows you to filter by more than one field. This feature is especially useful when you are filtering a large database with many fields and/or records.

All fields in the Filter By Form window have a lookup list that displays existing field data so that you can easily choose the data by which you want to filter. These lookup lists are useful because you do not have to remember exactly how the data was entered into the field.



The Filter by Form window



The most recent filter appears in the Filter by Form window, if applicable; you can click the **Clear Grid** button on the **Filter/Sort** toolbar to clear the previous filter.





You can also enable the **Filter By Form** feature by selecting the **Records** menu, pointing to the **Filter** command, and selecting the **Filter By Form** command.



Procedures

1. Open a table in **Datasheet** view.
2. Click the **Filter By Form** button  on the **Table Datasheet** toolbar.

3. Click the **Clear Grid** button  on the **Filter/Sort** toolbar to clear the previous filter, if necessary.
4. Select the field by which you want to filter.
5. Select the field lookup list.
6. Select the data by which you want to filter.
7. Click the **Apply Filter** button  on the **Filter/Sort** toolbar.

LESSON 6 - PRINTING DATA

In this lesson, you will learn how to:

- Print table data
- Change the page setup
- Use print preview
- Print selected records

PRINTING TABLE DATA



Discussion

You can print table data from either the Database window or **Datasheet** view. When you use the **Print** button, Access uses the default printer settings.


If there are too many fields to fit on one page, Access prints as many fields as possible on the first page and then prints additional pages for the next set of fields, etc., until all the fields have been printed. If you have a large table with multiple fields, the printout could result in many pages of disjointed information. Consequently, the **Print** button is best utilized for printing smaller, more compact tables.



If a filter is applied, only the displayed records will print.



Procedures

1. Open a table in **Datasheet** view.
2. Click the **Print** button  on the **Table Datasheet** toolbar.

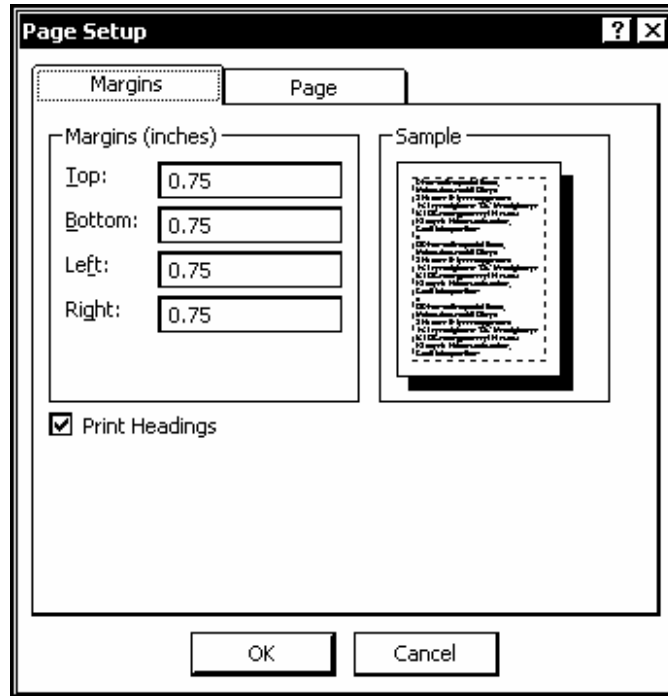
CHANGING THE PAGE SETUP



Discussion

You can control how a table is printed by changing the page setup options. You can adjust the margins, as well as change the page orientation so that more data can fit on fewer pages.

On the **Margins** page in the Page Setup dialog box, you can change the size of the margins and choose whether or not to print column headings. On the **Page** page, you can select either portrait orientation (with the shorter edge of the page at the top) or landscape orientation (with the longer edge of the page at the top). You can also choose a different paper size, paper source, and printer.



The Page Setup dialog box



You can also open the Page Setup dialog box by selecting the **Setup** button in the Print dialog box.



Print settings are saved for forms and reports, but not for tables.



Procedures




1. Open a table in **Datasheet** view.
2. Select the **File** menu.
3. Select the **Page Setup** command.
4. Select the desired options.
5. Select the **Page** tab.
6. Select the desired options.
7. Select **OK**.



Clicking the **Setup** button on the **Print Preview** toolbar opens the Page Setup dialog box.



Procedures

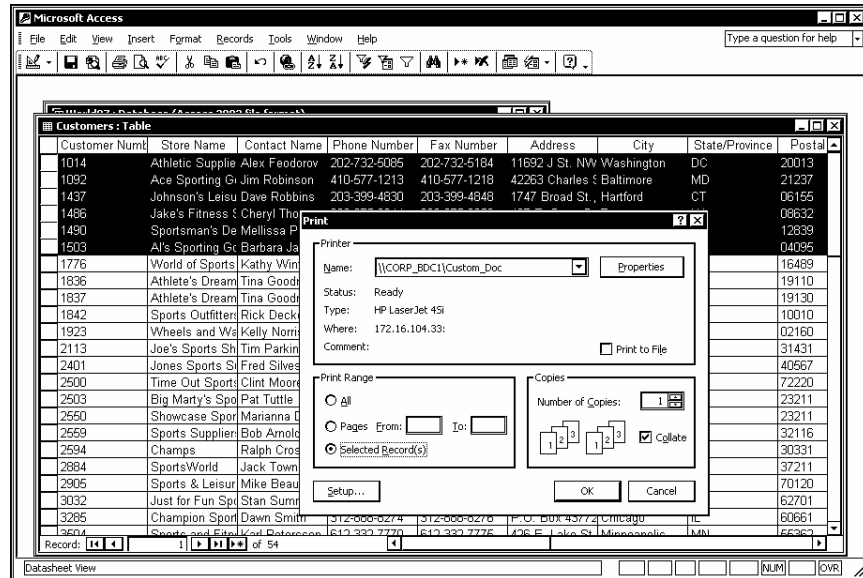
1. Open a table in **Datasheet** view.
2. Click the **Print Preview** button  on the **Table Datasheet** toolbar.
3. Click the area of the page you want to magnify.
4. Click anywhere in the page to return to full page view.
5. Press [**Page Down**] or [**Page Up**] to display the next or previous page of the printout, respectively.
6. To view more than one page at a time, click and hold the **Multiple Pages** button .
7. Select the desired page layout.
8. To view a single page, click the **One Page** button .
9. Select **Close**.

PRINTING SELECTED RECORDS



Discussion

You can print selected, adjacent records. You can print selected records by first selecting the records in the table and then selecting the **Selected Records(s)** option in the Print dialog box.



Printing selected records



You can also select other options in the Print dialog box, such as the number of copies you want to print.



You can select multiple, adjacent records by selecting the first record you want to print, holding the [Shift] key, and clicking the last record you want to print.



Procedures

1. Open a table in **Datasheet** view.
2. Select the records you want to print.
3. Select the **File** menu.
4. Select the **Print** command.
5. Select the **Selected Record(s)** option under **Print Range**.
6. Select **OK**.

LESSON 7 - USING SIMPLE QUERIES

In this lesson, you will learn how to:

- Use queries and recordsets
- Use the Simple Query Wizard
- Create a query in Design view
- Open a query
- Add a table to a query
- Join tables in a query
- Run a query

USING QUERIES AND RECORDSETS



Discussion

A query is a means of extracting information from tables. You can use queries to analyze the data in a table or to extract data for a form or report. Queries are commonly used to display data in related tables and enable you to control not only which records to display, but also which fields. For example, you may want to give a sales representative a list of the contacts and telephone numbers for a particular region; you can create a query to extract just the contact names and telephone numbers within the specified region.

A query does not contain data; rather, it is a set of instructions. Access uses these instructions to select and display the desired records in a table. As a result, whenever new data is added to the queried table, the query is automatically updated; if the new records meet the conditions of the query, they will be included when the query runs.

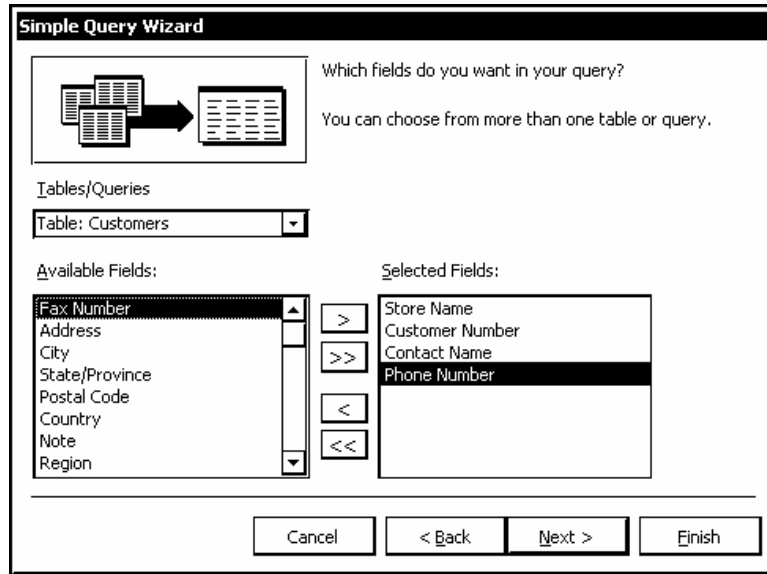
When you open or run a query, a recordset appears. A recordset contains all the fields and records that meet the conditions of the query. Although the recordset is not a table, it can be used to edit or add new records in the queried tables.

USING THE SIMPLE QUERY WIZARD



Discussion

The Simple Query Wizard guides you through the steps for creating a basic select query. When you use the Simple Query Wizard, you select the table you want to use and the fields you want the query to display. Then, you name the query and choose whether to display the results of the query (recordset) or go to **Design** view to work with the query design.



Adding fields to a query





You can also activate the Simple Query Wizard by double-clicking the **Create query by using wizard** option in the **Queries** object list in the Database window or by selecting the **Insert** menu and the **Query** command.



You can also add fields to the **Selected Fields** list by double-clicking the name of the field in the **Available Fields** list.



Procedures

1. Display the **Queries** object list.
2. Select the  **New** button on the Database window toolbar.
3. Select **Simple Query Wizard**.
4. Select **OK**.
5. Select the **Tables/Queries** list.
6. Select the table or query you want to query.
7. Select the first field you want to add to the query from the **Sample Fields** list box.
8. Select the arrow  to the right of the **Sample Fields** list box.

9. Add other fields to the **Selected Fields** list box, as desired.
10. Select **Next >**.
11. Type the desired query name.
12. Select **Finish**.

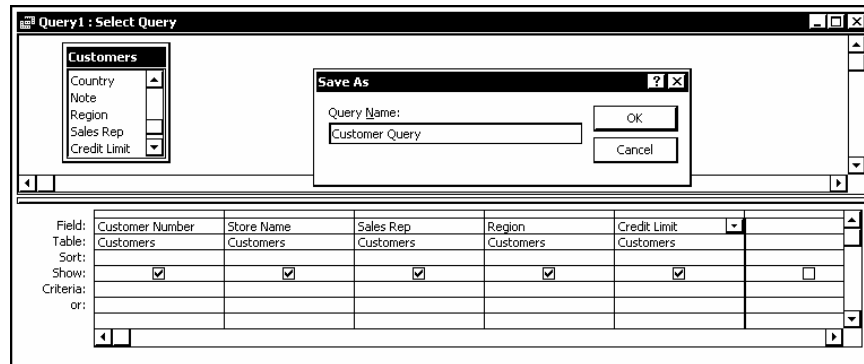
CREATING A QUERY IN DESIGN VIEW



Discussion

You can create a query in **Design** view. This option gives you the most flexibility in designing a query. It allows you to add criteria for selecting records, as well as sort the recordset.

When you create a query in **Design** view, the design grid is used to set up the query. The field lists of all tables to be used in the query appears in the top pane. The design grid appears in the bottom pane. You drag the fields you want to use in the query to the design grid and then add the desired criteria and sorts.



Creating a query in Design view



You can also open **Design** view by double-clicking the **Create query in Design view** option in the **Queries** object list.





You can also add a field to a query by clicking in any blank column in the **Field** row, clicking the drop-down arrow, and then selecting the field you want to add, or by dragging the field to the design grid.



You can add all the fields to the design grid by dragging the asterisk (*) at the top of the field list to the **Field** row in any column.



Procedures

1. Display the **Queries** object list.
2. Click the  **New** button on the Database window toolbar.
3. Select **Design View**.
4. Select **OK**.
5. Add the table you want to query.
6. Select **Close**.
7. Add the desired fields to the query.
8. Click the **Save** button .
9. Type the desired query name.
10. Select **OK**.

OPENING A QUERY



Discussion

When you open a query, Access runs the query and displays its recordset in **Datasheet** view. If you have added records since the last time you ran the query, the new records will appear as long as they meet the query criteria.



You can also run a query by selecting it in the **Queries** object list and then selecting the **Open** button or by right-clicking it and then selecting the **Open** command.



Procedures

1. Select the **Queries** object list.
2. Double-click the name of the query you want to run.

ADDING A TABLE TO A QUERY



Discussion

You can use more than one table in a query. The tables must be joined, however, in order for the query to produce accurate results. If the tables are not yet joined, you can create a join in the top pane of **Design** view.

The field lists of all tables added to a query appear in the top pane of **Design** view. If the tables are already related, join lines appear as well.

Once you have added a table to a query, you can then add fields from its field list to the design grid. The **Table** row in the design grid indicates the table in which a field is stored.



When you create a new query in **Design** view, the Show Table dialog box opens automatically so that you can add the desired tables. However, when you modify an existing query in **Design** view, you must manually open the Show Table dialog box.



You can also open the Show Table dialog box by right-clicking in the top pane of **Design** view and then selecting the **Show Table** command or by selecting the **Query** menu and the **Show Table** command.



Procedures

1. Select the **Queries** object list.
2. Select the query you want to edit.
3. Select the  **Design** button on the Database window toolbar.
4. Click the **Show Table** button  on the **Query Design** toolbar.
5. Double-click the table you want to add to the query.
6. Select **Close**.

JOINING TABLES IN A QUERY

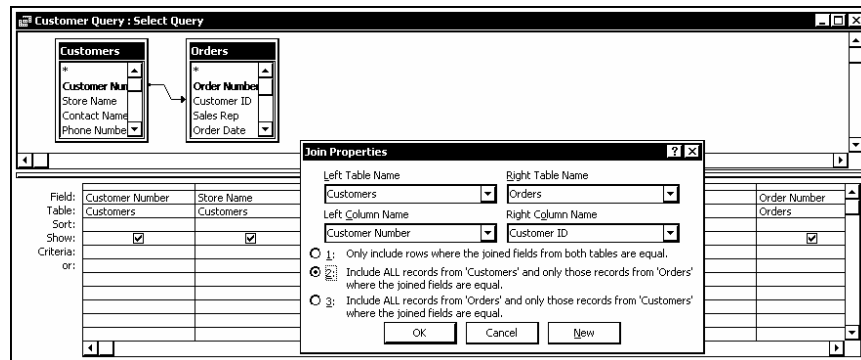


Discussion

If you have multiple tables in a query, the tables must be joined in order for the query to produce accurate and meaningful results. Otherwise, Access will not know which records are associated with which, so every possible combination of records would appear in the recordset. For example, if one table has 20 records and the other has 5, then the recordset will contain 100 records and the results are virtually meaningless.

If table relationships have already been defined, the join lines appear automatically in **Design** view. In addition, Access will automatically create a join if there are fields with the same name in multiple tables. If Access cannot define the relationships between query tables, you must create them.

The join type defined in the relationship is particularly important in queries. The default type is an inner join, in which records are only included in the recordset if there is matching data in the join fields of both tables. You can also create an outer join, in which all the records from the “one” table appear, even if there is no matching data in the “many” table.



Joining tables in a query



Joins that you define in a query do not appear in the Relationships window.



You can remove a join line from a query by selecting it and then pressing the **[Delete]** key. You must remove referential integrity before deleting a join.



You can also open the Join Properties dialog box by right-clicking the join line and selecting the **Join Properties** command or by selecting the **View** menu and the **Join Properties** command.



Procedures

1. Open the desired query in **Design** view.
2. Add a new table to the query, if necessary.
3. Drag the desired join field from one field list to the matching field in a second field list.
4. Double-click the middle segment of the join line.
5. Select the desired join type.
6. Select **OK**.

RUNNING A QUERY



Discussion

You can run a query and display its recordset directly from **Design** view. This option is useful for testing the query design to see if its recordset contains the desired information.

Running a query does not save the query design. If you close the recordset after running a query, you are prompted to save the changes.




You can also run a query by selecting the **Query** menu and the **Run** command.



After running a query, you can switch back to **Design** view by clicking the **View** button on the **Query Datasheet** toolbar.



Procedures

1. Open a query in **Design** view.
2. Click the **Run** button  on the **Query Design** toolbar.

LESSON 8 - MODIFYING QUERY RESULTS

In this lesson, you will learn how to:

- Sort a query
- Add criteria to a query
- Hide a field in a query
- Add a record using a query
- Print a query

SORTING A QUERY



Discussion

When you run a query, the records in the recordset appear in the same order in which they appear in the design grid. You can either sort the recordset or assign a sort order in the query design. You can sort a recordset just as you would sort a table; however, you would have to perform the sort every time you run the query. If you assign a sort order in the query design, Access will sort the recordset automatically each time you run the query.

You can sort on more than one field. For example, you can sort by region and then by states within each region. To sort on more than one field, the first sort field must be to the left of the second sort field in the query design grid, since Access sorts from left to right.

Field:	Customer Number	Store Name	Sales Rep	Region	Credit Limit	Order Number	Order Date
Table:	Customers	Customers	Customers	Customers	Customers	Orders	Orders
Sort:		Ascending					
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:		Descending (not sorted)					
or:							

Adding a sort order to the design grid



Procedures

1. Open a query in **Design** view.
2. Select the **Sort** row for the field by which you want to sort.
3. Select the **Sort** list.
4. Select the desired sort option.

ADDING CRITERIA TO A QUERY



Discussion

You can use the **Criteria** row in the design grid to restrict the number of records a query returns.

To select records that match a single value, you can enter the value you want to match in the **Criteria** row of the applicable field. Access automatically inserts quotation marks (" ") around alphanumeric entries and number symbols (#) around date entries; nothing appears around numeric entries. When you run the query, only those records with values that match the criteria appear in the recordset.

Field:	Customer Number	Store Name	Sales Rep	Region	Credit Limit	Order Number	Order Date
Table:	Customers	Customers	Customers	Customers	Customers	Orders	Orders
Sort:		Ascending					
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:				"Southeast"			
or:							

Adding criteria to a query



A field name in the **Criteria** row must be entered exactly as it appears in the field list.



Procedures

1. Open a query in **Design** view.
2. Select the **Criteria** row for the field you want to match.
3. Type the value you want to match.
4. Press **[Enter]**.

HIDING A FIELD IN A QUERY



Discussion

You can select records that meet specified field criteria without displaying the field in the recordset. This option is useful when all the records meet the same specified criteria and, as a result, the field does not need to appear.

For example, you may create a query to display customers in the **Southeast** region. The **Region** field must be added to the query with a criterion of **Southeast**; since all the data in the **Region** field would be the same (**Southeast**), the **Region** field does not need to appear in the recordset. In this case, you can hide the **Region** field.

The design grid provides a **Show** row for each field. If the **Show** option is selected, the field will appear in the recordset; if it is deselected, the field will not appear in the recordset. The **Show** option is selected by default.



Procedures

1. Open a query in **Design** view.
2. Deselect the **Show** option in the field you want to hide.

ADDING A RECORD USING A QUERY



Discussion

You can use a query to update records in related tables. When you enter data into a query recordset, Access automatically completes the recordset data, as applicable, and enters the data into the related tables as well. For example, if you run a query using the related **Orders** and **Customers** tables and you enter a new order into the recordset, Access automatically completes the customer information in the recordset and enters the data into the **Orders** table as well.

You can always edit information in queries based on a single table. In queries based on related tables, Access must be able to determine the relationship type (one-to-one or one-to-many) in order for you to be able to edit information. In queries based on a one-to-one relationship, you can always edit the data. In queries based on a one-to-many relationship, you may not always be able to edit the data. For instance, this can happen if the join field from the “many” table is not included in the query. For example, you cannot add a new customer order to a query recordset based on the


related **Customers** and **Orders** table unless the join field (**Customer ID**) in the **Orders** table is included in the query.



You can use help to get more information about using a query to update data in tables having a one-to-many relationship.



Procedures

1. Open a query in **Datasheet** view.
2. Click the **New Record** button  on the **Query Datasheet** toolbar.
3. Type the desired data into the first field.
4. Select the next field.
5. Enter data into each of the remaining fields, as desired.
6. Press **[Enter]**.

PRINTING A QUERY




Discussion

You can print a query recordset. You can run the query and then print the recordset, or you can save time by printing the recordset directly from the Database window. If you print the recordset from the Database window, Access runs the query and sends the results directly to the printer, rather than to the screen.



Procedures

1. Select the **Queries** object list.
2. Select the query you want to print.
3. Click the **Print** button  on the **Database** toolbar.

LESSON 9 - USING OPERATORS IN QUERIES

In this lesson, you will learn how to:

- Use comparison operators
- Use an And condition
- Use an Or condition
- Use the Between And operator
- Use the Expression Builder
- Use a wildcard character

USING COMPARISON OPERATORS



Discussion

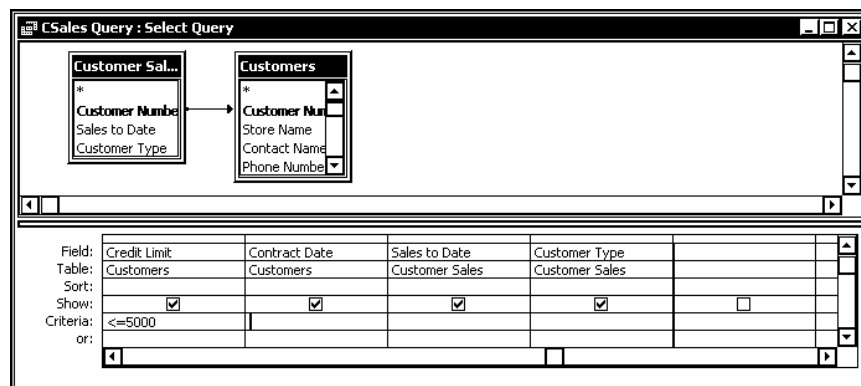
You can add criteria to a query in order to limit the number of records in the recordset. The simplest criterion is to find all records matching a single value.

You can also use comparison operators to limit the recordset to a group of records. Comparison operators are symbols that represent conditions recognized by Access. The following comparison operators are available in Access:

Operator	Description
<	less than
<=	less than or equal to
>	greater than
>=	greater than or equal to
=	equal to
<>	not equal to
Not	reverses logic

You can use one or more comparison operators to compare a specified value to all the values in a field. For example, you may want to find all customers with credit limits of less than \$1000 or all customers with a contract date on or before January 2001; you can use a combination of comparison operators and field values to write an expression defining the desired criteria (e.g., <1000 or <=1/1/01, respectively).

When you run the query, only those records with values meeting the specified criteria appear in the recordset.



Adding criteria to a query



Access automatically inserts number symbols (#) around date values and quotation marks (" ") around alphanumeric values. Access does not insert any symbols or characters around numeric values.



You can also use the Expression Builder to add criteria to a query. To open the Expression Builder, select the **Criteria** row in the field to which you want to add criteria and click the **Build** button on the **Query Design** toolbar or right-click the **Criteria** row and select the **Build** command.



Procedures

1. Open the desired query in **Design** view.
2. Select the **Criteria** row in the field to which you want to add criteria.
3. Type the desired comparison operator and value.
4. Press [**Enter**].

USING AN AND CONDITION



Discussion

Many times, a query requires more than one condition to obtain the desired result. If you want to find all customers in PA with sales to date of over \$10,000, for example, you need two conditions: State=PA and Sales to Date>10000. The records must meet both conditions in order to be included in the recordset. When two or more criteria must be met, you are creating an And condition. An And condition is created using the **And** logical operator.

You can create an And condition by adding multiple criteria to a single field. In order to do this, you must use the **And** operator to find records that fall within a range. For example, to find customers whose contract dates fall between 9/1/99 and 9/30/99, you would type both criteria on a single line in the **Criteria** row of the appropriate field (i.e., >=9/1/99 **And** <=9/30/99 in the **Contract Date** field).

An And condition is assumed when you enter conditions in the same **Criteria** row of two or more different fields; in this case, the **And** operator is unnecessary. For example, to find customers in PA with sales to date of over \$10,000, you would type each criterion in the same **Criteria** row of the appropriate fields (i.e., =PA in the first **Criteria** row of the **State/Province** field and >10000 in the first **Criteria** row of the **Sales to Date** field).



Criteria entered in the same row of the design grid create an And condition, and criteria entered in different rows create an Or condition.



You can also use the Expression Builder by selecting the desired **Criteria** row and clicking the **Build** button on the **Query Design** toolbar or by right-clicking the **Criteria** row and selecting the **Build** command.



Procedures

1. Open the desired query in **Design** view.
2. Select the **Criteria** row of the desired field.
3. Type the desired criterion.
4. Type the **And** operator and an additional criterion in the same **Criteria** row and field or type additional criteria in the same **Criteria** row of one or more other fields.
5. Press **[Enter]**.

USING AN OR CONDITION



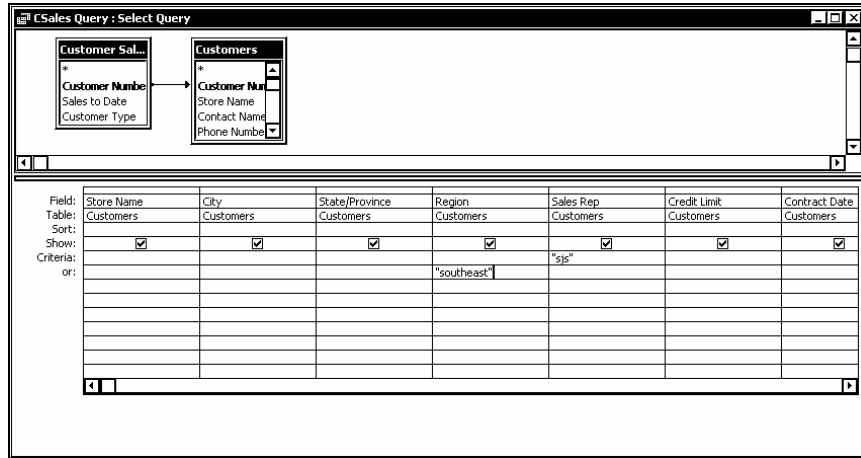
Discussion

There are times you may want to find records that meet only one of several specified conditions. This is called an Or condition. If you want to find all customers in PA or all customers with sales to date of over \$10,000, for example, you would need two conditions: State=PA and Sales to Date>10000. A record needs to meet only one of the conditions in order to be included in the recordset.

You can create an Or condition in a single field by entering criteria in different **Criteria** rows of that field. You can also create an Or condition by typing criteria in different **Criteria** rows of two or more fields. For example, to find all customers with contract dates on or before January 1, 2001 or all those with credit limits above \$3,000, you would type <=1/1/01 in the **Criteria** row of the **Contract Date** field and >3000 in the **or** row of the **Credit Limit** field.

You can create additional Or and And conditions by typing criteria into the **Criteria** row, the **or** row, or any row below the **or** row. Any criteria entered into the same

Criteria row creates an And condition, any criteria entered into different rows creates an Or condition, and you can even create a combination of And and Or conditions.



Creating an Or condition



Criteria entered in the same **Criteria** row across the design grid create an And condition, and criteria entered in different **Criteria** rows create an Or condition.



You can also add criteria using the Expression Builder by selecting the desired **Criteria** row and clicking the **Build** button on the **Query Design** toolbar or by right-clicking the **Criteria** row and selecting the **Build** command.



You can also create an Or condition for a single field in the **Criteria** row using the **Or** operator. Typing **Northeast Or Southeast Or Central** into the **Criteria** row of the **Region** field finds all records in any one of the three regions.



Procedures

1. Open the desired query in **Design** view.
2. Select the **Criteria** row of the desired field.
3. Type the desired criterion.
4. Select the **or** row under the same field.
5. Type the second criterion.
6. Press **[Enter]**.

USING THE BETWEEN AND OPERATOR



Discussion

You can use the **Between And** operator to find data that includes or falls between two stated values. To find all records of customers with credit limits between 1000 and 2000, for example, you would enter **Between 1000 And 2000** in the **Criteria** row of the **Credit Limit** field.

The **Between And** operator can be used in text, numeric, or date fields.



The **Between And** operator is inclusive; all records with values that include or fall between the stated criteria are included in the recordset.



You can also use the Expression Builder by selecting the desired **Criteria** row and clicking the **Build** button on the **Query Design** toolbar or by right-clicking in the **Criteria** row and selecting the **Build** command.



Spaces must be included between the criteria and the words **Between** and **And**. If you do not include the proper spacing, the **Data type mismatch in criteria expression** error message will appear.



Procedures

1. Open the desired query in **Design** view.
2. Select the **Criteria** row of the desired field.
3. Type **Between**, the first value in the range, **And**, and the last value in the range.
4. Press **[Enter]**.

USING THE EXPRESSION BUILDER

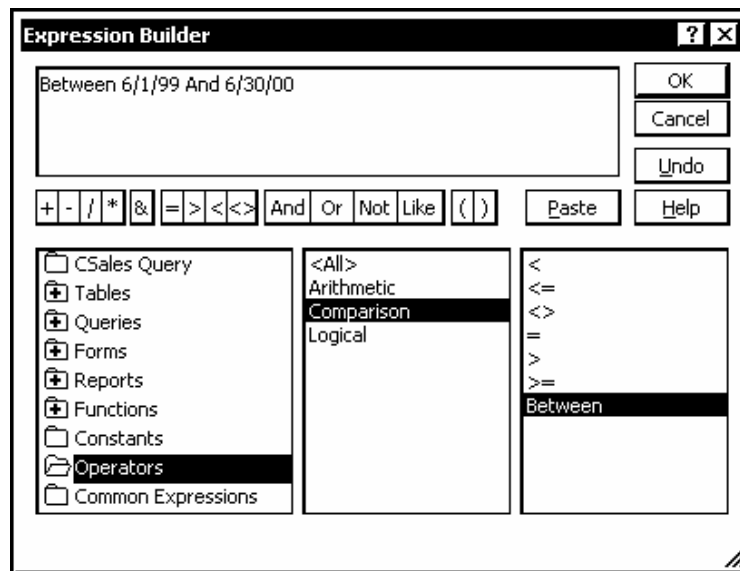
Discussion

When you enter criteria, you are actually creating an expression. Expressions are calculations and can include database objects, operators, and values. Objects range from table fields to controls in a form. Operators are standard mathematical operators used in calculations (such as +, -, *, /, (), <>). Values can be numbers, dates, text, and built-in functions, as well as field, control, and property identifiers.

You can create an expression by typing the expression elements, or you can use the Expression Builder. The Expression Builder is a tool that provides all the elements needed to build the expression.

The Expression Builder displays the **Expression** box in its top pane, a row of operator buttons below the **Expression** box, and three lower panes that display categories, subcategories, and values, respectively.

New expressions appear in the **Expression** box. You can use a combination of methods to build a new expression. You can type some elements of the expression and select others (such as operators, functions, and values) from the element panes. If you make a mistake, the **Undo** button allows you to undo previous actions, one at a time. Additionally, you can select and delete any elements you want to remove from the **Expression** box.



Using the Expression Builder



The Expression Builder is available in **Design** view for any database object for which you need to create an expression. For example, you can use the Expression Builder to create a validation rule for a table field.




You can insert an element from an element pane into the **Expression** box by double-clicking the element or by selecting it and clicking the **Paste** button in the Expression Builder.



Be careful to single-click when expanding a subcategory; double-clicking a subcategory inserts the first subcategory value.



Procedures

1. Open the desired query in **Design** view.
2. Select the **Criteria** row under the desired field.
3. Click the **Build** button  on the **Query Design** toolbar.
4. Expand categories in the lower, left pane as necessary, and then click any category to display its subcategories in the center pane.
5. Click the desired subcategory in the center pane.
6. Double-click a subcategory in the center pane or a value in the right pane to insert it into the **Expression** box.
7. To enter a value, select existing text or position the insertion point as needed in the **Expression** box.
8. Type the desired value.
9. Complete the expression.
10. Select **OK**.

USING A WILDCARD CHARACTER



Discussion

You can use a wildcard in a query in place of one or several characters. Wildcard characters are helpful when you want to find criteria with a pattern (such as all last names beginning with M), or if you are not sure exactly how values you want to find appear (such as the correct spelling—Kline or Klein).

The two most common wildcards are listed in the following table:

Wildcard	Used for	Example
?	Any single letter or number	Sm?th finds Smith and Smyth, whereas ?andy finds Sandy, Randy, etc.
*	One or more letters or numbers	M* finds all records that start with M; 8/*/00 finds all dates in August, 2000; and *ball* finds all records that have the word ball anywhere in the field



Wildcards are not case-sensitive (for example, ***ill** finds Bill and bill).



When you use wildcard characters (? and *), Access automatically inserts the word **Like** before the criteria and quotation marks (“”) around text.



You can also use the Expression Builder by selecting the desired **Criteria** row and clicking the **Build** button on the **Query Design** toolbar or by right-clicking the **Criteria** row and selecting the **Build** command.



Procedures

1. Open the desired query in **Design** view.
2. Select the **Criteria** row of the desired field.
3. Type the desired criteria, using wildcards as appropriate.

4. Press **[Enter]**.

LESSON 10 - USING ONLINE HELP

In this lesson, you will learn how to:

- Work with online Help
- View ScreenTips
- Use Help Contents
- Use Help window features
- Use the Help Answer Wizard
- Use the Help Index

WORKING WITH ONLINE HELP



Discussion

If you need assistance on any Access topic or task, you can use Access's extensive Help facility. There are several ways in which you can get help: the Office Assistant, Ask a Question, and the Microsoft Access Help dialog box.

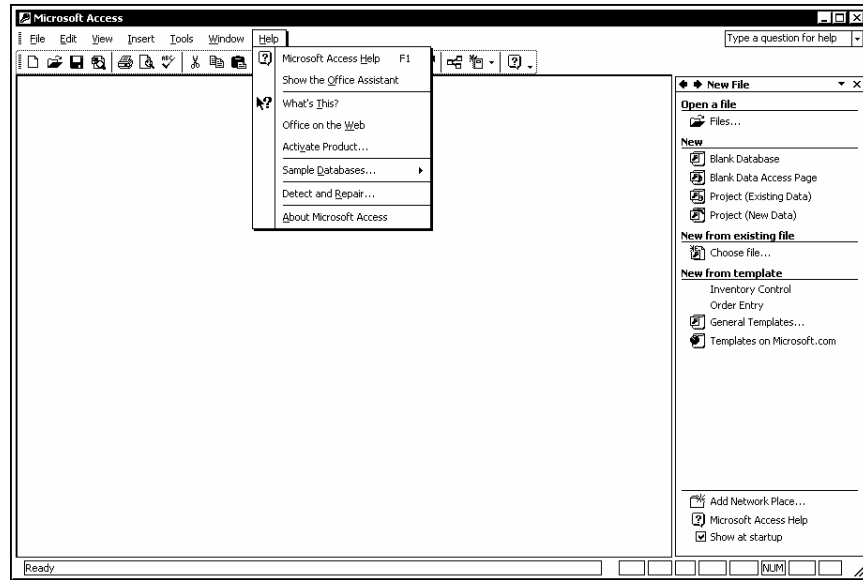
Access provides assistance through the **Microsoft Access Help** command, which launches the Office Assistant, if it is enabled. If the Office Assistant is disabled, you can directly access the Help window, which includes the Contents, Index, and Answer Wizard components. These components allow you to scroll through a table of contents, search for a specific word or phrase based on a keyword, or search based on a question you type, respectively.

The **What's This?** command can be used to display a ScreenTip. If you have access to the Internet, you can use the **Office on the Web** command to connect to the Microsoft Office web site, from where you can download free programs, access on-line support, and get the latest Microsoft product information. The **Activate Product** command provides an on-line method of purchasing and downloading Microsoft software and updates.

On the **Sample Databases** submenu, Access includes the Northwind sample database and sample project, which you can use as practice databases. You may need to install the sample databases.

The **Detect and Repair** command reviews the previous install process and finds and fixes problems that may have developed during or since the initial software installation. However, this feature cannot repair corrupted data files.

You can use the **About Microsoft Access** command to view copyright and licensing information about the program. The About Microsoft Access window contains a **System Info** button, which displays information about your computer, and a **Disabled Items** button, which displays any items that prevent Access from functioning properly. A **Tech Support** button provides help on getting product support.



The Access Help menu



If the Office Assistant is enabled, you can disable it by deselecting the **Use the Office Assistant** option on the **Options** page in the Office Assistant dialog box.



You can also open the Microsoft Access Help window by selecting the **Microsoft Access Help** link at the bottom of the **New File** task pane or by clicking the **Microsoft Access Help** button on the **Standard** toolbar.

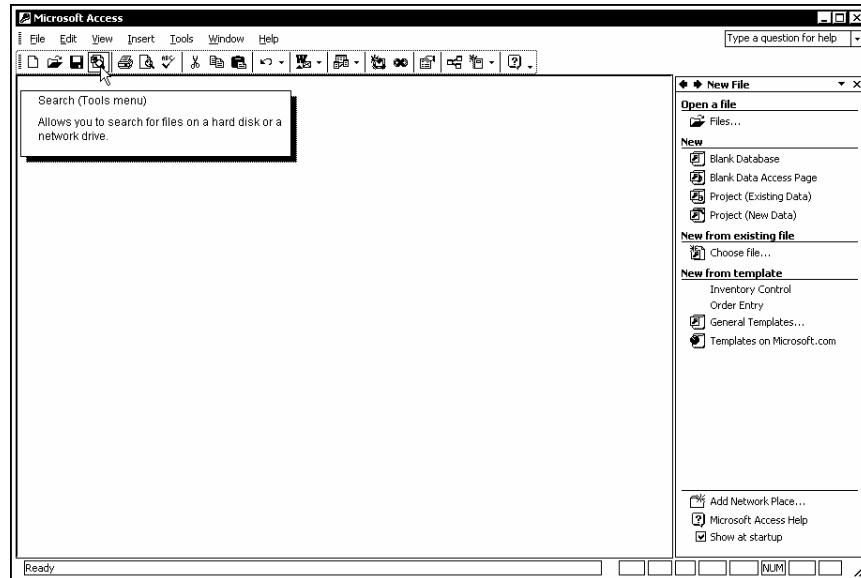
VIEWING SCREENTIPS



Discussion

If you are unsure of the name or function of a menu command or of any other object in a window, you can use a ScreenTip to view either the object name or a description of the object. Although the default ScreenTip only displays the name of an object, you select the **What's This?** command from the **Help** menu to access more information.

When the **What's This?** feature is activated, the mouse pointer appears with a question mark and the ScreenTip appears when you click an object.



The Search button ScreenTip



You can also access the **What's This?** feature by pressing the **[Shift+F1]** key combination and clicking the object for which you want help.



Procedures

1. Select the **Help** menu.
2. Select the **What's This?** command.
3. Click the button or object with which you want help.
4. Click anywhere in the slide to hide the **What's This?** ScreenTip.

USING HELP CONTENTS



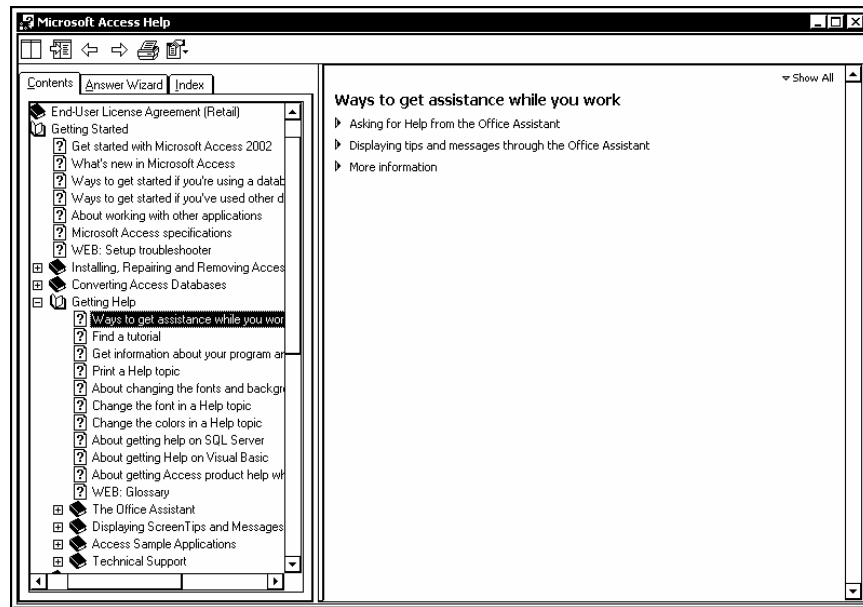
Discussion

The Microsoft Access Help window is composed of two panes. The pane on the left contains the three help tabs: **Contents**, **Answer Wizard**, and **Index**. The pane on the right contains the information pertaining to the selected help topic.

The **Contents** page displays a list of general help categories and topics. From this list, you can select the category for a particular group of features or functions or a specific help topic. This page is structured similar to a standard table of contents. The table is expandable; when you double-click a category, related categories and help topics appear.

When you select the help topic you want to view, it appears in the right pane of the help window. You can click underlined, colored text in the right pane to display additional help information. Many help topics include a **Show All** link at the top of the pane that you can use to display all the hidden information in the pane.

If you want a paper copy of the help topic, you can use the **Print** button in the help window to print the current topic.



Using Help Contents



You can also expand and collapse help categories on the **Contents** page by clicking the plus or minus sign next to the desired category.



The **Microsoft Access Help** command on the **Help** menu directly opens the help window only if the Office Assistant is disabled. Selecting a topic in the Office Assistant, however, always opens the corresponding help window.



You can resize the Microsoft Access Help window by dragging an edge or a corner or resize the individual panes within the window by dragging the vertical splitter bar between panes.



Procedures

1. Disable the Office Assistant on the **Options** page in the Office Assistant dialog box, if necessary.
2. Select the **Help** menu.
3. Select the **Microsoft Access Help** command.
4. Select the **Contents** tab.
5. Expand the **Microsoft Access Help** category, if necessary.
6. Expand categories as needed to find the desired help topic.
7. Select the desired help topic.

USING HELP WINDOW FEATURES



Discussion

The Microsoft Access Help window displays two panes: the categorized help contents appear in the left pane and the selected help topic appears in the right pane.

You can use the **Show** and **Hide** buttons at the top of the window to hide the tabs in the left pane or to show both panes. Hiding the left pane decreases the size of the window. This option allows you to continue working in the database window while you reference the selected help topic in the right pane of the Help window.

You may want to be able to view the help window and your database application window simultaneously, so that you can follow the help directions. When the help window opens, it overlays the database window. The **Auto Tile** button arranges the two windows side-by-side, so that both are visible. You can now type in the database window without hiding the help window, and you can use the horizontal and vertical scroll bars to view more text. When the windows are tiled, the help window displays the **Untile** button, which allows you to untile the windows.



You can also show or hide the help tabs by selecting the **Show Tabs** or **Hide Tabs** commands from the **Options** button in the Microsoft Access Help window.







Other buttons in the Microsoft Access Help window can be used to print help topics and to navigate forward and backward to previous topics.



Procedures

1. Open the Microsoft Access Help window.

2. Click the **Hide** button  or the **Show** button  at the top of the Microsoft Access Help window to hide or show the help tabs respectively.

3. Click the **Auto Tile** button  to tile the database and help windows or the **Untile** button  to untile the windows.

USING THE HELP ANSWER WIZARD



Discussion

You can use the **Answer Wizard** page in the Microsoft Access Help window to quickly locate help topics based on questions you ask. The **Answer Wizard** page functions in much the same way as the Office Assistant and the **Ask a Question** box on the menu bar. A list of the help topics pertaining to the typed question appears when you search using the Answer Wizard.

Questions entered into the Answer Wizard also appear in the **Ask a Question** list.

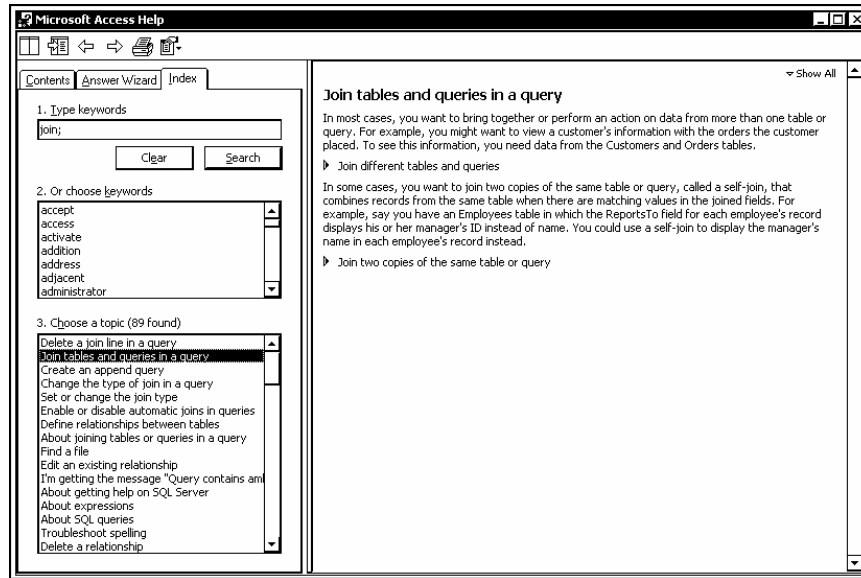
USING THE HELP INDEX



Discussion

The **Index** page in the Microsoft Access Help window provides an alphabetical index of available help topics.

The **Index** page enables you to search for a topic using a keyword. You can either type a keyword into the **Type keywords** box or pick a keyword from the alphabetical list under **Or choose keywords**. After typing or selecting a keyword and then selecting **Search**, an index of available help topics appears. You can then select the desired topic.



Using the Help Index



To perform a subsequent search on a different subject, select the **Clear** button to clear the previous search criteria, and then enter the new search criteria.



Procedures

1. Open the Microsoft Access Help window.
2. Select the **Index** tab.
3. Type the keyword for which you want to search in the **Type keywords** box or select it from the **Or choose keywords** list box.
4. Select **Search** to search for the keyword, or double-click a keyword in the **Or choose keywords** list box.
5. Click the desired topic from the **Choose a topic** list box.

LESSON 11 - CREATING BASIC FORMS

In this lesson, you will learn how to:

- Use forms
- Use the Form Wizard
- View records in a form
- Print records in a form
- Base a form on a query
- Use AutoForm
- Add a record using a form

USING FORMS



Discussion

Forms, like datasheets, can be used for viewing and editing data. However, they can also be used to present data in a more attractive format. Forms are usually designed to display all the fields for a single record within the form window, eliminating the need to scroll. You can also display data from related tables in one form.

Access provides six basic types of forms: columnar, tabular, datasheet, justified, PivotTable and PivotChart. In a columnar form, the field names are listed on the left side of the form and the field values appear in a column on the right. If space permits, there can be more than one column.

In a tabular form, the field names are listed across the top of the form and the values appear in the corresponding columns beneath them. A datasheet form appears similar to **Datasheet** view. Both the tabular and datasheet forms display data in a table layout.

In a justified form, the field names and values appear in alternate rows, evenly spaced across the page. Field values appear under the corresponding field names.

A PivotTable form allows you to quickly create a form by dragging fields as desired in **PivotTable** view. Similar to a PivotTable form, a PivotChart form allows you to create a chart or graph by dragging fields as desired in **PivotChart** view.

USING THE FORM WIZARD



Discussion

You can use the Form Wizard to quickly and easily create a form. The Form Wizard guides you through the process. First, you must choose the table or query on which you want to base the form, and then you can select the fields you want to include. Next, you select the desired type of form layout: columnar, tabular, datasheet, justified, PivotTable, or PivotChart. You can then select a style from a variety of predefined styles provided by Access. Finally, you must name the form.

Customer Number	1014	Note	Sent new brochure 6/10/93.
Store Name	Athletic Supplies Co.		
Contact Name	Alex Feodorov		
Phone Number	202-732-50	Region	Northeast
Fax Number	202-732-51	Sales Rep	GJS
Address	11692 J St. NW	Credit Limit	8000
City	Washington	Contract Date	6/8/1997
State/Province	DC		
Postal Code	20013		
Country	U.S.A.		

The Customer Data Entry form




If you base a form on multiple tables, the tables must all be related. In addition, the Form Wizard will prompt you to select how you want to group the fields on the form.



You can also activate the Form Wizard by double-clicking the **Create form by using wizard** option in the **Forms** object list in the Database window, by selecting the **Insert** menu and the **Form** command, or by clicking the **New Object** button on the **Database** toolbar and selecting the **Form** command.



Procedures

1. Display the **Forms** object list.
2. Select the  **New** button on the Database window toolbar.
3. Select **Form Wizard**.
4. Select **OK**.
5. Select the **Tables/Queries** list.
6. Select the table or query on which you want to base the form.
7. Add the desired fields to the **Selected Fields** list box, or add all the fields.
8. Select **Next >**.
9. Select the desired form layout.
10. Select **Next >**.

11. Select the desired form style.
12. Select **Next >**.
13. Type the desired form name.
14. Select **Finish**.

VIEWING RECORDS IN A FORM



Discussion

Navigating records in a form is similar to navigating records in **Datasheet** view. You can use the navigation buttons at the bottom of the window to display records in a form. The following navigation buttons are available in **Form** view:

Button	Description
	Displays the first record
	Displays the previous record
	Displays the next record
	Displays the last record



You can also press the **[Ctrl+Home]** key combination to display the first record, the **[Ctrl+End]** key combination to display the last record, and the **[Page Up]** and **[Page Down]** keys display the previous and next records, respectively.







You can also go directly to a record by selecting the number in the **Record** box (located within the navigation buttons at the bottom of the window), typing the number of the record you want to display, and pressing the **[Enter]** key.



Procedures

1. Display the **Forms** object list.
2. Open a form in **Form** view.

3. Click the **Last Record** button  at the bottom of the form window.
4. Click the **First Record** button  at the bottom of the form window.
5. Click the **Next Record** button  at the bottom of the form window.
6. Click the **Previous Record** button  at the bottom of the form window.

PRINTING RECORDS IN A FORM



Discussion

You can print an open form.

If you use the **Print** button to print all the data, Access fits as many whole forms as possible on each page; Access will not break a form in the middle. If a form is large and there are numerous records in it, you may be using a large amount of paper and printer time.

If you use the Print dialog box, you can print all records, only specified pages, or all selected records, thereby saving time and paper.



You can also open the Print dialog box by right-clicking an object in the Database window and selecting the **Print** command.



Procedures

1. Display the **Forms** object list.
2. Open a form in **Form** view.
3. Select the **File** menu.
4. Select the **Print** command.
5. Select the desired options.

6. Select **OK**.

BASING A FORM ON A QUERY



Discussion

Forms can extract information from a query as well as from a table.


If the query recordset cannot be updated, you will not be able to edit the form or add records to it. Nevertheless, a form can be used to present query data in a more attractive manner.



You can also activate the Form Wizard by double-clicking the **Create form by using wizard** option in the **Forms** object list in the Database window, by selecting the **Insert** menu and then selecting the **Form** command, or by clicking the **New Object** button on the **Database** toolbar and selecting the **Form** command.



Procedures

1. Display the **Forms** object list.
2. Select the  **New** button on the Database window toolbar.
3. Select **Form Wizard**.
4. Select **OK**.
5. Select the **Tables/Queries** list.
6. Select the query on which you want to base the form.
7. Add the desired fields to the **Selected Fields** list box, or add all the fields.
8. Select **Next >**.
9. Select the desired form layout.
10. Select **Next >**.
11. Select the desired form style.
12. Select **Next >**.

13. Type the desired form name.
14. Select **Finish**.

USING AUTOFORM



Discussion

The fastest way to create a form is to use AutoForm. AutoForm automatically creates a simple columnar, tabular, datasheet, PivotTable, or PivotChart form from the selected table or query, without needing any input. However, you must select a table or query before AutoForm can create the form. All fields in the table or query will appear on the form, and the title of the form is the name of the table or query.

AutoForm does not save the form for you automatically. When you close the form for the first time, Access prompts you to save it.



AutoForm creates a form using the defaults for the selected form type. After AutoForm has created a form, however, its formatting can be modified in **Design** view.




You can also use AutoForm to create a form based on the selected table or query by selecting the **Insert** menu and the **AutoForm** command or by clicking the **New Object** button on the **Database** toolbar and selecting the **AutoForm** command. When you use one of these methods, the form always appears in a standard columnar format.



AutoForm can also be used to produce a formatted columnar or tabular report.



Procedures

1. Select the **Forms** object list.
2. Select the  **New** button on the Database window toolbar.
3. Select the desired AutoForm option.
4. Select the **Choose the table or query where the object's data comes from** list.

5. Select the desired table or query.
6. Select **OK**.

ADDING A RECORD USING A FORM



Discussion

Forms are frequently used to add records to one or more tables. It can be easier to work in a well-designed form than in the underlying table because forms are usually designed to display all the fields for a single record within the form window, eliminating the need to scroll.

You can use the **[Enter]** key to move between fields as you enter data. If you want to skip one or more fields, you can press the **[Tab]** key until the insertion point appears in the desired field, or you can click in the field in which you want to enter data. When you press the **[Enter]** key after entering data in the last field in a record, Access automatically saves the record and displays a blank form for entering another record.




You can use the **[Shift+Tab]** key combination to move to the previous field.



You can also use the **New Record** button on the **Form View** toolbar to add a record to a form.



Procedures

1. Display the **Forms** object list.
2. Open the form in **Form** view.
3. Click the **New Record** button  at the bottom of the window.
4. Type the desired data into the first field of the new record.
5. Press **[Enter]**.
6. Enter data in additional data into the remaining fields as desired.

LESSON 12 - CREATING BASIC REPORTS

In this lesson, you will learn how to:

- Use reports
- Use the Report Wizard
- Use print preview - reports
- Print pages of a report
- Group and summarize report data
- Base a report on a query
- Use AutoReport

USING REPORTS



Discussion

Although you can print records from a table or form, a report provides more precise control over the final output. Reports can include page headers and footers, calculated totals and subtotals, and even graphics. In addition, reports can be used for invoices, orders, presentations, and mailing labels.

There are two basic types of reports: columnar and tabular. In a columnar report, the field names are listed on the left side of the page, and the field values are listed on the right. If space on the page permits, there can be more than one column. In a tabular report, the field names are listed across the top of the report, and the field values appear in the corresponding columns.

Reports can include data from a single table or related tables. Reports can also be based on queries.



You cannot edit data in a report.

USING THE REPORT WIZARD

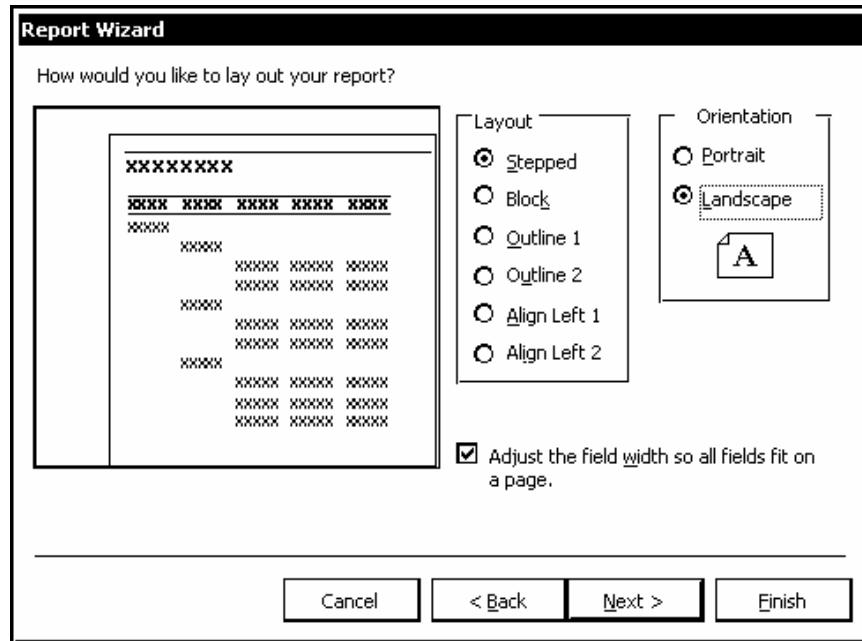


Discussion

You can use the Report Wizard to quickly and easily create a report. The basic steps needed to create a report using the Report Wizard are as follows:

1. Select the table(s) you want to use.
2. Select the fields you want to include.
3. Group the data.
4. Add grouping levels.
5. Sort the data.
6. Select a layout.
7. Select a style.
8. Name the report.

When you have finished creating a report, the Report Wizard displays it in print preview. Print preview allows you to view the report before you print it.



Using the Report Wizard



If you base a report on only one table, the Report Wizard does not ask you to specify a table on which to group the data.




If you include fields from unrelated tables in the report, Access closes the Report Wizard and opens the Relationships window so that you can create the necessary relationship.



You can also activate the Report Wizard by double-clicking the **Create report by using wizard** option in the **Reports** object list in the Database window, by selecting the **Insert** menu and the **Report** command, or by clicking the **New Object** button on the **Database** toolbar and selecting the **Report** command.



Procedures

1. Display the **Reports** object list.
2. Select the  **New** button on the Database window toolbar.

3. Select **Report Wizard**.
4. Select **OK**.
5. Select the **Tables/Queries** list.
6. Select the table or query on which you want to base the report.
7. Add the desired fields to the **Selected Fields** list box.
8. To add another table to the report, select the **Tables/Queries** list.
9. Select the desired table or query.
10. Add the desired fields to the **Selected Fields** list box.
11. Select **Next >**.
12. Select the desired option in the **How do you want to view your data?** list box.
13. Select **Next >**.
14. Select the desired grouping level in the **Do you want to add any grouping levels?** list box.
15. Select **Next >**.
16. To sort the records, select the **1** list.
17. Select the field by which you want to sort.
18. Select **Next >**.
19. Select the desired report layout.
20. Select the desired report orientation.
21. Select **Next >**.
22. Select the desired report style.
23. Select **Next >**.
24. Type the desired report name.
25. Select **Finish**.

USING PRINT PREVIEW - REPORTS

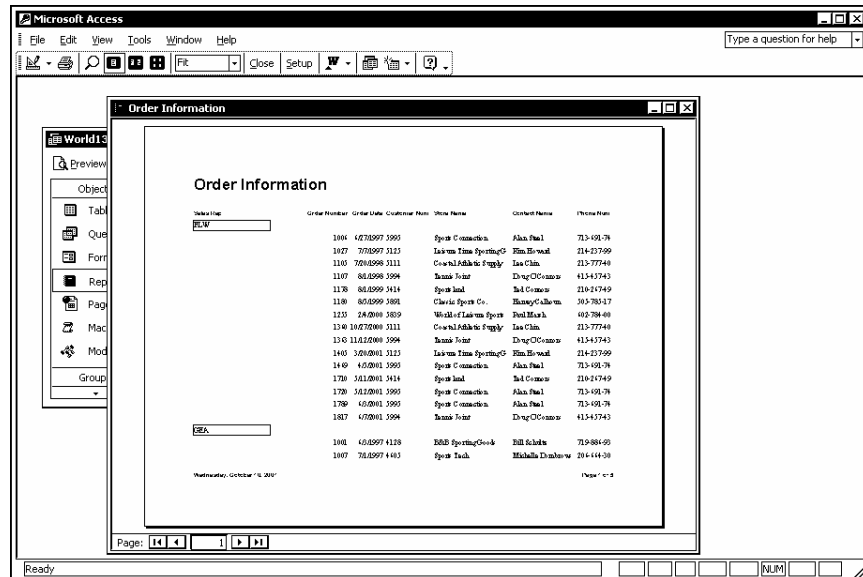


Discussion

When you open a report, it appears in print preview. Print preview allows you to see how the printed report will look before you print it.

Print preview provides options for viewing the report. By default, the report appears magnified at 100%, the same size as the printout. You can zoom out to see more of the report or zoom in to see a portion of the report in more detail. The **Zoom** list in print preview allows you to choose from several magnification options, from as small as 10% to as large as 500% or 1000%.

You can display a report in **One Page**, **Two Pages**, or **Multiple Pages** view. The buttons at the bottom of the window allow you to navigate pages, and the scroll bars allow you to view different areas of a page.



Using print preview




You can also access print preview by right-clicking a report in the Database window and selecting the **Print Preview** command.









You can also use the **Zoom** list on the **Print Preview** toolbar to switch the magnification between 100% and to fit the window.



Procedures

1. Display the **Reports** object list.
2. Select the report you want to preview.
3. Select the  **Preview** button on the Database window toolbar.

4. Click the area of the report page you want to magnify to 100%.
5. Click anywhere in the report page to change the magnification back to fit the window.
6. Click the **Two Pages** button  on the **Print Preview** toolbar to display two pages of the report.
7. Click the **One Page** button  on the **Print Preview** toolbar to display one page of the report.
8. Click the **Next Page** button  at the bottom of the report window to display the next page of the report.
9. Click the **Last Page** button  at the bottom of the report window to display the last page of the report.
10. Click the **Previous Page** button  at the bottom of the report window to display the previous page of the report.
11. Click the **First Page** button  at the bottom of the report window to display the first page of the report.

PRINTING PAGES OF A REPORT



Discussion

You can print specific pages of a report. This option is useful if the report contains numerous pages, and you only need information from one or more particular pages. The Print dialog box allows you to specify the pages you want to print.



You can print a report from the Database window or from print preview.



To print an entire report, select it and click the **Print** button on the **Database** toolbar.



You can also open the Print dialog box by right-clicking the report you want to print and selecting the **Print** command.



Procedures

1. Display the **Reports** object list.
2. Select the report you want to print.
3. Select the **File** menu.
4. Select the **Print** command.
5. Select the **Pages** option.
6. Type the number of the first page you want to print.
7. Select the **To** box.
8. Type the number of the last page you want to print.
9. Select **OK**.

GROUPING AND SUMMARIZING REPORT DATA

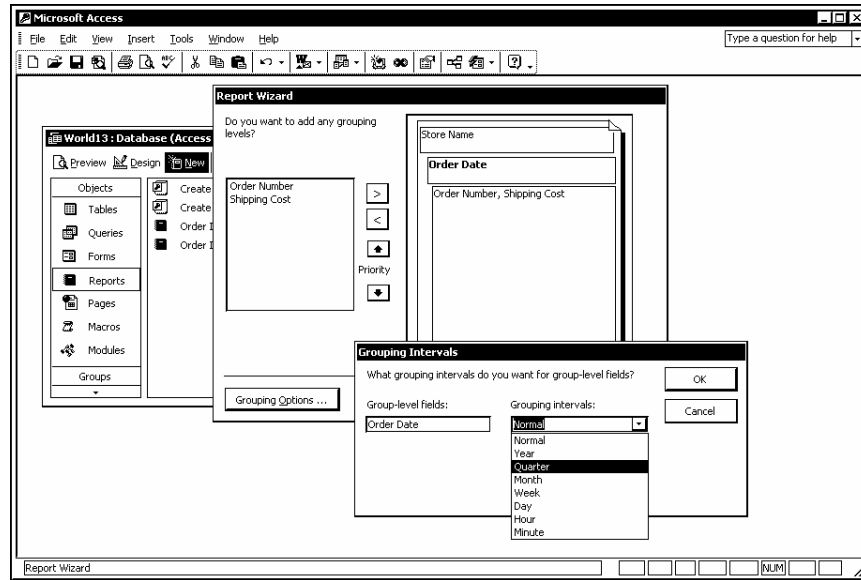


Discussion

The Report Wizard provides options for grouping and summarizing report data. You can organize your report by selecting the fields into which you want to group data. If you create more than one group, you can prioritize the groups into levels.

In addition to grouping data by a field, you can add grouping intervals. Grouping intervals vary, depending upon the selected field. For instance, a date field can be grouped by month, quarter, year, etc.; a numeric field can be grouped by numeric intervals of 10s, 50s, 100s, etc.; and a text field can be grouped by its first letter, second letter, etc.

If you have included a field with numeric data in your report, you can add summary calculations. Summary calculations include **Sum**, **Avg** (average), **Min** (minimum), and **Max** (maximum). If you select the **Sum** calculation, you can include a calculated percentage of the total for each group. You can also display just the summary calculations in the report or both the field data (details) and the summary calculations.



Adding a grouping interval



If you are grouping on multiple fields, you can use the up and down **Priority** buttons to change the order of the groups in the Report Wizard.




You can add a new field to a specific location in a report by first selecting the field in the **Selected Fields** list box below which you want to insert the new field.



You must use **Design** view to add grouping levels and summaries to an existing report.



Procedures

1. Display the **Reports** object list.
2. Select the  **New** button on the Database window toolbar.
3. Select **Report Wizard**.
4. Select **OK**.
5. Select the **Tables/Queries** list.
6. Select the table or query on which you want to base the report.
7. Add the fields you want to include in the report to the **Selected Fields** list box.

8. Select **Next** >.
9. Select the desired grouping option from the **How do you want to view your data?** list box.
10. Select **Next** >.
11. Select the desired grouping level from the **Do you want to add any grouping levels?** list box, if applicable.
12. Select **Grouping Options**.
13. Select the **Grouping intervals** list.
14. Select the desired interval.
15. Select **OK**.
16. Select **Next** >.
17. If you have included a **Number** data type field, select **Summary Options**.
18. Select the desired summary options.
19. Select **OK**.
20. When you have finished selecting options from the Report Wizard, select **Finish**.

BASING A REPORT ON A QUERY



Discussion


You can use a query as the basis for a report. The query recordset appears as the report data. The report is updated each time it is opened or printed to reflect changes made to queried data.



You can also activate the Report Wizard by double-clicking the **Create report by using wizard** option in the **Reports** object list in the Database window, by selecting the **Insert** menu and the **Report** command, or by clicking the **New Object** button on the **Database** toolbar and selecting the **Report** command.



Procedures

1. Display the **Reports** object list.
2. Select the  **New** button on the Database window toolbar.
3. Select **Report Wizard**.
4. Select **OK**.
5. Select the **Tables/Queries** list.
6. Select the query on which you want to base the report.
7. Add the desired fields to the **Selected Fields** list box, or add all fields.
8. Select **Next >**.
9. Select the desired grouping option from the **How do you want to view your data?** list box.
10. Select **Next >**.
11. Select the desired grouping level from the **Do you want to add any grouping levels?** list box, if applicable.
12. Select **Next >**.
13. Select the **1** field list.
14. Select the first field by which you want to sort.
15. Select additional sort fields, if desired.
16. Select **Next >**.
17. Select the desired report layout.
18. Select the desired report orientation.
19. Select **Next >**.
20. Select the desired report style.
21. Select **Next >**.
22. Type the desired report name in the **What title do you want for your report?** box.
23. Select **Finish**.

USING AUTOREPORT



Discussion

You can use AutoReport to create a report quickly. AutoReport automatically creates a simple columnar or tabular report from the selected table or query without displaying any dialog boxes or needing any input. You must, however, first select the table or query. All fields in the table or query will appear in the report, and the report title will be the same as the table or query name.

AutoReport does not automatically save a report; the first time you close the report, Access prompts you to save it.




The AutoReport Wizard creates the report using the most recently used report settings. You can switch to **Design** view to change the formatting of an existing report.



You can also activate the AutoReport Wizard by first selecting the table or query you want to use, and then selecting the **Insert** menu and the **AutoReport** command or clicking the **New Object** button on the **Database** toolbar and selecting the **AutoReport** command. When you use either of these methods, the report appears in a standard columnar format, with no formatting, headers, or footers.



Procedures

1. Select the **Reports** object list.
2. Select the  **New** button on the Database window toolbar.
3. Select the desired **AutoReport** option.
4. Select the **Choose the table or query where the object's data comes from** list.
5. Select the desired table or query.
6. Select **OK**.

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