Access 2003©

Introduction
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Product Code: MS ACCESS 2003-1  3.6
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATABASE BASICS</td>
<td>5</td>
</tr>
<tr>
<td>FIELD NAMES</td>
<td>6</td>
</tr>
<tr>
<td>RUNNING MICROSOFT ACCESS</td>
<td>7</td>
</tr>
<tr>
<td>THE ACCESS SCREEN</td>
<td>8</td>
</tr>
<tr>
<td>OPENING AN EXISTING DATABASE</td>
<td>11</td>
</tr>
<tr>
<td>VIEWING A TABLE</td>
<td>16</td>
</tr>
<tr>
<td>EDITING A TABLE</td>
<td>19</td>
</tr>
<tr>
<td>USING THE SPELL CHECKER</td>
<td>20</td>
</tr>
<tr>
<td>FORM VS TABLE VIEW</td>
<td>23</td>
</tr>
<tr>
<td>OPENING A FORM</td>
<td>23</td>
</tr>
<tr>
<td>SWITCHING VIEWS</td>
<td>24</td>
</tr>
<tr>
<td>CHANGING THE TABLE IMAGE</td>
<td>25</td>
</tr>
<tr>
<td>CHANGING COLUMN WIDTH</td>
<td>25</td>
</tr>
<tr>
<td>MOVING A COLUMN</td>
<td>26</td>
</tr>
<tr>
<td>HIDING COLUMNS</td>
<td>27</td>
</tr>
<tr>
<td>UNHIDING COLUMNS</td>
<td>28</td>
</tr>
<tr>
<td>FREEZING COLUMNS</td>
<td>29</td>
</tr>
<tr>
<td>UNFREEZING COLUMNS</td>
<td>29</td>
</tr>
<tr>
<td>CHANGING THE APPEARANCE OF TEXT</td>
<td>30</td>
</tr>
<tr>
<td>CHANGING ROW HEIGHT</td>
<td>31</td>
</tr>
<tr>
<td>FORMATTING THE DATASHEET</td>
<td>32</td>
</tr>
<tr>
<td>USING THE FORMAT DATASHEET TOOLBAR</td>
<td>33</td>
</tr>
<tr>
<td>SORTING THE DATA</td>
<td>35</td>
</tr>
<tr>
<td>SORTING ON MULTIPLE FIELDS</td>
<td>35</td>
</tr>
<tr>
<td>PRINT PREVIEWING</td>
<td>36</td>
</tr>
<tr>
<td>PAGE SETUP</td>
<td>38</td>
</tr>
<tr>
<td>CHANGING MARGINS</td>
<td>38</td>
</tr>
<tr>
<td>CHANGING PAPER SIZE</td>
<td>39</td>
</tr>
<tr>
<td>PRINTING THE TABLE</td>
<td>40</td>
</tr>
<tr>
<td>FINDING DATA</td>
<td>41</td>
</tr>
<tr>
<td>FILTERING RECORDS</td>
<td>43</td>
</tr>
<tr>
<td>THE SELECTION FILTER</td>
<td>43</td>
</tr>
<tr>
<td>FILTERING BY INPUT</td>
<td>44</td>
</tr>
<tr>
<td>THE FORM FILTER</td>
<td>45</td>
</tr>
<tr>
<td>QUERYING TABLES</td>
<td>48</td>
</tr>
<tr>
<td>SORTING THE QUERY</td>
<td>51</td>
</tr>
<tr>
<td>SORTING ON MULTIPLE FIELDS</td>
<td>51</td>
</tr>
<tr>
<td>ADDING CRITERIA</td>
<td>52</td>
</tr>
<tr>
<td>COMPOUND CRITERIA</td>
<td>53</td>
</tr>
<tr>
<td>CREATING AN &quot;AND&quot; QUERY</td>
<td>53</td>
</tr>
<tr>
<td>CREATING AN &quot;OR&quot; QUERY</td>
<td>54</td>
</tr>
<tr>
<td>MISCELLANEOUS OPERATORS</td>
<td>56</td>
</tr>
<tr>
<td>USING &quot;BETWEEN&quot;</td>
<td>56</td>
</tr>
<tr>
<td>FINDING EMPTY FIELDS</td>
<td>56</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Searching for the current date</td>
<td>57</td>
</tr>
<tr>
<td>Using a list</td>
<td>57</td>
</tr>
<tr>
<td>Modifying the query layout</td>
<td>58</td>
</tr>
<tr>
<td>Rearranging fields in the query</td>
<td>58</td>
</tr>
<tr>
<td>Adding fields to the query</td>
<td>58</td>
</tr>
<tr>
<td>Removing fields from the query</td>
<td>59</td>
</tr>
<tr>
<td>Changing column widths</td>
<td>59</td>
</tr>
<tr>
<td>Saving/opening a query</td>
<td>60</td>
</tr>
<tr>
<td>Opening a query</td>
<td>60</td>
</tr>
<tr>
<td>Modifying a query</td>
<td>61</td>
</tr>
<tr>
<td>Creating reports with the report wizard</td>
<td>62</td>
</tr>
<tr>
<td>Using the report wizard</td>
<td>62</td>
</tr>
<tr>
<td>Printing options</td>
<td>69</td>
</tr>
<tr>
<td>Changing margins</td>
<td>69</td>
</tr>
<tr>
<td>Changing paper size</td>
<td>70</td>
</tr>
<tr>
<td>Changing the column layout</td>
<td>71</td>
</tr>
<tr>
<td>Printing the report</td>
<td>72</td>
</tr>
</tbody>
</table>
DATABASE BASICS

A database is a collection of information, just as your address book is a collection of data. Whenever you access the database, whether it be to add new information, get information, change information, or sort the information into some meaningful order, you are managing the database.

A computer database management system, like Access, performs these types of operations on a database that is stored on a computer disk. It allows you to add, change, delete, look up and sort information. However, tasks that may take the computer only a few seconds to perform may take you several minutes, hours, or even days.

Paper databases are referred to as files. When using the computer, however, we refer to them as either files or tables, depending on the program. Access calls them tables. The term tables stems from the unique design that all databases use. Every table within a database is organized in columns and rows.

Suppose you have an address book. Each entry in the book contains the name, address and phone number of an individual. The entry contains four lines of information: (1) Name, (2) address, (3) city, state, zipcode, and (4) phone number, as illustrated in the example below:

<table>
<thead>
<tr>
<th>Samantha Stevens</th>
</tr>
</thead>
<tbody>
<tr>
<td>1640 Morning Glory Circle</td>
</tr>
<tr>
<td>Salem, MA 23555</td>
</tr>
<tr>
<td>(212)444-6666</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fred &amp; Wilma Flinstone</th>
</tr>
</thead>
<tbody>
<tr>
<td>33 Granite Grove</td>
</tr>
<tr>
<td>Bedrock, CA 92617</td>
</tr>
<tr>
<td>(714)777-8900</td>
</tr>
</tbody>
</table>

Each entry in the book would be listed in Access on a single line and would be called a record. Each unique piece of information within the record (name, address, city/state/zip, and phone) would be separated by column and referred to as a field.
Tables, then, consist of columns (fields) and rows (records).

Tables can be used to store any kind of information - inventory, book-keeping, accounts payable, receivables and just about anything else that might come to mind. When storing information within a database table, each piece of data must be stored under a unique field name.

FIELD NAMES

Field names can be up to 64 characters in length and may contain letters, numbers and spaces. Although you can use up to 64 characters, you should try to keep field names as short as possible since you will be referring to them quite often when creating forms, reports and other objects. However, don't make them too short so they can't be recognized.

FIELD TYPES

Once you have labeled a field with a name, you must identify the "type" of data that will be stored within the field. The following types of fields are available:

<table>
<thead>
<tr>
<th>Field Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text</td>
<td>Stores up to 255 characters (default 50).</td>
</tr>
<tr>
<td>Memo</td>
<td>Stores larger amounts of text - max 65,535.</td>
</tr>
<tr>
<td>Number</td>
<td>Used for numeric data.</td>
</tr>
<tr>
<td>Date/Time</td>
<td>Stores dates (between 100 and 9999) or times.</td>
</tr>
<tr>
<td>Currency</td>
<td>Numbers with dollar signs.</td>
</tr>
<tr>
<td>AutoNumber</td>
<td>Assigns a random or sequential number.</td>
</tr>
<tr>
<td>Yes/No</td>
<td>Contains only one of two values. Used for true/false, on/off and yes/no entries.</td>
</tr>
<tr>
<td>OLE Object</td>
<td>Used for storing objects, such as spreadsheets and graphics.</td>
</tr>
<tr>
<td>Hyperlink</td>
<td>Use this field type if you want to store links to web pages. When entering data for a hyperlink field, simply begin with http:// followed by the web address.</td>
</tr>
<tr>
<td>Lookup</td>
<td>Allows a value to be selected from another table or combo box.</td>
</tr>
</tbody>
</table>
RUNNING MICROSOFT ACCESS

Usage:
Access can be launched directly through the desktop or through the Start menu (located on the taskbar at the bottom of the screen).

If you have a shortcut on your desktop, double-click on the Microsoft Access icon to run the application.

Although the quickest way of running Access is through the desktop (shown above), you can also open the Start menu (located along the far left side of the taskbar at the bottom of the desktop) which allows you to locate any program available on your system.

Follow the steps shown below to run Access from the Start menu:

1. Click on this button (located on the far left side of the taskbar - at the bottom of the desktop) to access the Windows Start menu.

2. Select All Programs from the pop-up menu.

3. Select Microsoft Office Access 2003 from the sub-menu.
THE ACCESS SCREEN

After you start the program, you are taken into a blank screen where you may open an existing file or create a new database. You will notice that the program window includes many of the standard elements common to most Windows applications as well as a few items that are unique to Access. The screen can be quite intimidating the first time you see it as there are so many items displayed on it. However, if you take a few minutes to familiarize yourself with the various screen elements, the program will become easier to work with.

Across the top of the Access window is the **Title Bar** which displays the name of the current file (if you have one open) as well as the application. In the far left corner is a small Access icon (referred to as the “Control Icon”) which is used to access a pull-down menu containing selections for changing the window’s size and placement. In the upper right corner are the three standard Windows buttons for minimizing, maximizing/restoring the window, and closing the program.
The second line is referred to as the **Menu Bar** and contains all of the commands required to use this application. You can access any menu item by simply pointing to it and clicking the ![LEFT](LEFT) mouse button once. Notice that each menu item has one underlined letter which can be used in conjunction with the **A** key to access the menu directly through the keyboard. Once the menu is opened, you may notice icons to the left of some of the options. If a menu item could have been accessed via the tool bar, Access displays the tool bar icons along the left side of the opened menu to help you associate the menu item with the correct icon.

Some menus provide additional options which are not immediately displayed. To access these extra options, either click on the ![оворачивание](оворачивание) button (at the bottom of the menu) or double-click the menu.

To the right side of the menu bar is a help box where you may enter a quick question. Simply click in the **Ask a Question** box and type your question (such as “how do I print”) and press the **ENTER** key. Access will run its help feature and display the help topics most closely associated with the question you entered.

The very last item on the second line is the close button ![X](X), which is used to close the current database.

The standard **Tool Bar** is located on the third line and can be used to quickly perform functions without having to access the menu. If you point to a tool without clicking the mouse button, a brief description of the tool will appear.

Depending on your screen size, Access may only display the most commonly used tools but offers an additional button ![ Salman]( Salman) to access any hidden tools. Once you select a tool that was previously hidden, Access displays it directly on the tool bar for future use. This allows you to personalize the tool bar to display the tools you most often use.

If you click on the last button ![ Salman]( Salman) you will be able to customize the bar by adding or removing tools.
The middle portion of the screen (blank when you first access the program) is the working area. Once you open a file, the database window is placed in this section of the screen.

A separate window is placed directly to the right of the working area and is referred to as the **Task Pane**. This window is used to quickly access your most commonly used tasks (such as creating a new database or opening an existing file).

At the bottom of the screen is another bar called the **Status Bar**. This bar is used to display various information about the system and current database.

To make working with multiple object windows (such as tables or forms) easier to select, Access has included a feature which automatically displays each window as a separate item along the Windows taskbar.

Although you can still use the menu labeled **Window** to switch between these objects, it may be simpler to use your mouse and click on the name of the object you want to access directly on the taskbar. Once selected, that object becomes the active window.
OPENING AN EXISTING DATABASE

USAGE:

Before you can get started working, you will need to have a database open. A database contains all of the tables, forms, reports and other objects needed to work with your data.

If you do not already have a database open or you want to use a different file, use the mouse or menu, as shown below:

Click on the **Open** button (located on the tool bar).

**TIP:** If you look at the bottom of the “File” menu you will notice Access lists the last 4 files so you can quickly reopen them without going through the dialog box.

If you prefer accessing the menu:

**File**

**Open...**

The following dialog box will be displayed:

![Open dialog box](image)
Along the left side of the dialog box, Access displays the **Places Bar** which includes My Recent Documents, the Desktop, My Documents, My Computer, and My Network Places. Depending on which version of Windows you are using, you may see “Web Folders” instead of “My Network Places”. These “places” can be used to quickly access storage locations.

If you do not store your databases in one of these locations, you will need to switch to a different folder by clicking on the down arrow beside the box labeled **Look in** (located across the top of the dialog box) and select the location you want to display.

Across the top of the dialog box are a series of buttons, as described below:

- ![Click on this tool to display previously visited folders.](image)
  - This tool moves up one folder level at a time.

- ![Click on this tool to search the Web for a database location.](image)
  - This button is used to delete an existing file.

- ![Use this tool to create a new folder.](image)

- ![Click on the down arrow beside this button to select the type of view to use for displaying the databases.](image)
  - Use this tool to access a pull-down menu for advanced options (such as finding, deleting, renaming files and mapping network drives).
If you want to open a database that was originally created in another format (such as another database application), click on the down arrow beside the box labeled **Files of type** and select the format from the list provided.

When done, double-click on the name of the file you want to open or highlight the name and click on ![Open](image) to open the file.

If you click on the down arrow beside the ![Open](image) button, you can choose from a list of options (such as opening the file as read-only).

**TIP:** The shortcut key for opening files is **C+O**.

**TIP:** By default, Access lists the last four files used at the very bottom of the **File** menu for you to quickly reopen a file you have recently been working on.

You can increase the number of files displayed in the **File** menu to a maximum of nine by accessing the **Tools → Options** menu and then selecting the tab labeled “General”.

Access will open the database window containing all of the objects associated with the database, as shown below:

The items within the Object Bar (located along the left side of the database window) provide access to the following objects:

- **Tables**: Use this to display the available data tables.
- **Queries**: Displays a list of available queries. Queries are used to search tables for specific records.
- **Forms**: This represents available forms. Use forms to work with your data one record at a time.
- **Reports**: Use this to display the available reports. You will use reports to print the data stored in tables.
Displays shortcuts to data access pages which are used for accessing data via a Web page.

This icon lists existing macro files. Macros contain commands used to perform repetitive tasks.

Use this to list all available modules. Modules are small programs/procedures which perform specific functions.

The lower portion of the Object Bar (located along the left side of the database window) contains a category labeled **Groups** which can be used to organize different types of database objects (such as tables, reports, or forms) into groups.

These groups contain shortcuts to the objects within that group.

As you click on **Groups**, the button slides up to display any groups that you may have created. By default, only a group called “Favorites” is included.

At the bottom of the Object Bar (located along the left side of the database window) is a default folder that can be used for storing shortcuts to some of your most commonly used database objects.

To redisplay the standard objects, click on **Objects**.
VIEWING A TABLE

USAGE:

As mentioned, a table is a collection of information stored in columns and rows. To look at the contents of a table, you must open the table you want to view.

If the tables are not being displayed, click on this icon (located in the Object Bar along the left side of the database window).

Access displays a list of available tables as well as choices for creating a new table, as shown below:

Once you have a list of tables, you can open the one you need by double-clicking the table name, or you can highlight the table name and click on Open.
Access opens a new window for the table. This columnar view is referred to as the **Datasheet View**, as indicated in the left corner of the Status Bar.

<table>
<thead>
<tr>
<th>Cust Id</th>
<th>Firstname</th>
<th>Lastname</th>
<th>Address</th>
<th>City</th>
<th>ST</th>
<th>Zip</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>WILLY</td>
<td>CRUZ</td>
<td>1 SCHOOL ST</td>
<td>ANAHEIM</td>
<td>CA</td>
<td>92020</td>
</tr>
<tr>
<td>101</td>
<td>PATRICE</td>
<td>QUEEN</td>
<td>1336 SUNSET</td>
<td>HOLLYWOOD</td>
<td>CA</td>
<td>92262</td>
</tr>
<tr>
<td>102</td>
<td>NORA</td>
<td>PULASKI</td>
<td>195 MARIA VISTA</td>
<td>SAN JOSE</td>
<td>CA</td>
<td>92262</td>
</tr>
<tr>
<td>103</td>
<td>ALAN</td>
<td>FOX</td>
<td>999 PIERHURST N</td>
<td>SAN DIEGO</td>
<td>CA</td>
<td>99462</td>
</tr>
<tr>
<td>104</td>
<td>YVONNE</td>
<td>ANDERES</td>
<td>61 E ORANGE</td>
<td>ANAHEIM</td>
<td>CA</td>
<td>92020</td>
</tr>
<tr>
<td>105</td>
<td>CATLIN</td>
<td>MAY</td>
<td>6033 W PUTNAM</td>
<td>SAN JOSE</td>
<td>CA</td>
<td>92262</td>
</tr>
<tr>
<td>106</td>
<td>GEORGE</td>
<td>COMO</td>
<td>3737 S COLONIAL AVE</td>
<td>SAN DIEGO</td>
<td>CA</td>
<td>92020</td>
</tr>
<tr>
<td>107</td>
<td>JO</td>
<td>ELSTON</td>
<td>3 JEFFERSON</td>
<td>LAGUNA BEACH</td>
<td>CA</td>
<td>92641</td>
</tr>
<tr>
<td>108</td>
<td>RAYMOND</td>
<td>BLUE</td>
<td>13 V MILLER</td>
<td>COSTA MESA</td>
<td>CA</td>
<td>92262</td>
</tr>
<tr>
<td>109</td>
<td>PACO</td>
<td>HARRIS</td>
<td>19 PCH</td>
<td>HOLLYWOOD</td>
<td>CA</td>
<td>92265</td>
</tr>
<tr>
<td>110</td>
<td>ALONZO</td>
<td>OILUS</td>
<td>893 WESTERN #61</td>
<td>SANTA ANA</td>
<td>CA</td>
<td>92262</td>
</tr>
<tr>
<td>111</td>
<td>FELICIA</td>
<td>THOMAS</td>
<td>38 INSALLS AVE</td>
<td>LOS ANGELES</td>
<td>CA</td>
<td>90604</td>
</tr>
<tr>
<td>112</td>
<td>PETE</td>
<td>RUSH</td>
<td>1333 OLENTERRACE LA</td>
<td>COSTA MESA</td>
<td>CA</td>
<td>92262</td>
</tr>
<tr>
<td>113</td>
<td>NORA</td>
<td>ALBERT</td>
<td>193 LA JOLLA</td>
<td>HOLLYWOOD</td>
<td>CA</td>
<td>92262</td>
</tr>
<tr>
<td>114</td>
<td>HEATHER</td>
<td>PLACE</td>
<td>3133 W FARRIS</td>
<td>LAGUNA NIGUEL</td>
<td>CA</td>
<td>92668</td>
</tr>
<tr>
<td>115</td>
<td>TOM</td>
<td>SNIDER</td>
<td>102 NALOAHA</td>
<td>SAN FRANCISCO</td>
<td>CA</td>
<td>92032</td>
</tr>
<tr>
<td>116</td>
<td>H. R.</td>
<td>BAKER</td>
<td>331 HARBOUR SE</td>
<td>LAGUNA NIGUEL</td>
<td>CA</td>
<td>92668</td>
</tr>
<tr>
<td>117</td>
<td>JAY</td>
<td>STONE</td>
<td>308 OHIO</td>
<td>LAGUNA BEACH</td>
<td>CA</td>
<td>92623</td>
</tr>
</tbody>
</table>

Notice the tool bar has changed and new icons have been added.

In addition, a second item appears on the Windows taskbar which represents the opened table. You can quickly switch between the two opened items by selecting the desired one on the taskbar.

The status bar (located at the very bottom of the window) displays the current record and the total number of records within the table.

You may want to use the **Maximize** button (in the upper right corner of the table’s window) to view more records.

If there are more fields (columns) than can fit across the window, you will see a scroll bar along the bottom right side of the window. Use this scroll bar to scroll to the right (or left) for additional fields.

**NOTE:**

If you are using Microsoft’s IntelliMouse, you can use the Wheel to scroll through the datasheet or a form. Simply point your mouse in the window and press the Wheel while moving the mouse forward or back.

If you want to move a few lines at a time, simply roll the Wheel up or down to scroll.
You can also use the navigation buttons located in the lower left corner of the table.

- Moves to the **next** record
- Moves to the **previous** record
- Moves to the **first** record
- Moves to the **last** record
- Moves to the end of the form or datasheet and adds a new record.

If you click in the record number box, you can type a record number you want to go to.

This is the **Vertical Scroll Bar** (located along the right side of the window) which can be used to move through the table records when you cannot see all of the records within the table.

If you drag the scroll box up/down, Access will display the current record number. This is useful for navigating through very large tables.
EDITING A TABLE

USAGE:

When you first open a table, Access places your cursor in the first field and highlights the data. If you begin typing, the highlighted data is replaced by the characters you type. Be sure to move the cursor before typing or all of the highlighted information will be replaced by your typing.

To edit another field, click once in the field you want to edit.

NOTE: If you do move to another record, immediately use the tool to undo the last action. Remember that the UNDO feature only undoes the last action within Access and not all actions can be reversed!

While working in the table, you may see the following icons located in the left-most column (called the record selector column):

- Indicates the current record.
- Indicates you are editing the record.
- Indicates a new record.
- Indicates the record is locked by another user.

NOTE: You cannot edit counter fields, calculated fields, locked/disabled fields, or fields in locked records.

There are also two buttons which are used to add/remove a record, as shown below:

- Adds a new record. You will be taken to a blank record at the end of the table.
- Deletes a record. You will be asked to confirm the record deletion.
USING THE SPELL CHECKER

USAGE:

Access also has a built-in spell checker that should be used on a periodic basis to check the spelling in your tables to avoid any embarrassing mistakes! Although it can be used anytime, the most important time is before you print the table or show it to others!

To start the spell checker, click on this tool.

If you prefer accessing the menu:

Tools
Spelling...

Access stops at the first unrecognized word and highlights it. The spell checker will try to find words that come close to the unrecognized word and list them in the Suggestions section. If you don’t see the correct word right away, you may be able to scroll through the list using the scroll bar, as shown below:
The following spell options are available within the dialog box:

- **Ignore 'Address' Field**: Click on this button to ignore the entire field during the spell check. This is useful for fields containing addresses, terms and other data that might not be appropriate for spell checking.

- **Ignore**
- **Ignore All**

  If the word should remain as it is, select **Ignore**. Access also offers the option of **Ignore All** if the word in question appears throughout the database.

- **Change**
- **Change All**

  If one of the suggestions is correct, double-click on the correct spelling or highlight the word and choose **Change**. If you think that you have consistently misspelled a word throughout the table, click on **Change All**.

  If both the word and suggestions are incorrect, move to the **Change to**: box and type the correct spelling in yourself. Afterwards, press **E** or select **Change**.

- **Add**

  If the word should be added to the custom dictionary, click on this button.

- **AutoCorrect**

  Use this button to add the word to the AutoCorrect list. In the future, when you misspell this word while typing, Access will automatically correct it - without you having to access the spell checker.

- **Undo Last**

  Reverses the last change made.

**NOTE:** By default, Access does not check words that are in all uppercase (due to acronyms). If you tend to type in uppercase, you will need to change the setting in **Options** and remove the checkmark from the option "Ignore words in UPPERCASE".
Click on **Options...** to access the following dialog box:

**Spelling**

**Dictionary Language**
- English (U.S.)

**Add words to**
- CUSTOM.DIC

- Suggest from main dictionary only
- Ignore words in uppercase
- Ignore words with numbers
- Ignore Internet and file addresses

**Language-specific**
- German: Use post-reform rules
- Korean: Combine aux verb/adj.
- Korean: Use auto-change list
- Korean: Process compound nouns

**Hebrew modes:**
- Full

**Arabic modes:**
- Both strict

**AutoCorrect Options...**

**Dictionary Language**
Click on the down arrow beside this option to specify the language you want to use while spell checking.

The right section of the box allows you to set language-specific options.

**Add words to**
Use this section to specify the file to be used as your custom dictionary.

Towards the bottom of the dialog box are a series of checkboxes which allows you to set such options as which dictionary to suggest from and which words should be ignored.

When done setting the options, click on **OK**.

When the spell check is complete, a confirmation box appears:

The spelling check is complete.

- **OK**

Click on **OK** to close the spell checker.
FORM VS TABLE VIEW

USAGE:

You can work with forms in Access as well as tables. While a table shows a screenful of records, a form displays all of the information for one record at a time. A form record is equivalent to one row of information in a table. You may find it easier while editing to view only one record at a time rather than viewing the entire table listing. Forms can be customized to show totals, graphics, and other specialized features. You can easily design a form to approximate an existing paper form, making data entry more familiar to users.

Forms consist of "controls" that represent fields, labels, lines, rectangles and other design objects.

OPENING A FORM

To open an existing form, click on the Forms button (which is located along the left side of the database window). Access will display all available forms.

From the list of forms, highlight the form you want to work with and click on Open.

The following diagram is a sample form:

```
<table>
<thead>
<tr>
<th>CLIENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Id: 115</td>
</tr>
<tr>
<td>Firstname: NORI</td>
</tr>
<tr>
<td>Lastname: ALBERT</td>
</tr>
<tr>
<td>Address: 193 LA JOLLA</td>
</tr>
<tr>
<td>City: HOLLYWOOD</td>
</tr>
<tr>
<td>ST: CA</td>
</tr>
<tr>
<td>Zip: 92282</td>
</tr>
</tbody>
</table>
```
SWITCHING VIEWS

If you want to see multiple records on the screen, you can always switch to the Datasheet view.

Click on the down arrow to the right of the View button and select **Datasheet View**.

<table>
<thead>
<tr>
<th>Customer Id</th>
<th>Firstname</th>
<th>Lastname</th>
<th>Address</th>
<th>City</th>
<th>ST</th>
<th>Zip</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>WILLY</td>
<td>CRUZ</td>
<td>1 SCHOOL ST</td>
<td>ANAHEIM</td>
<td>CA</td>
<td>9220</td>
</tr>
<tr>
<td>101</td>
<td>PATRICE</td>
<td>QUEEN</td>
<td>1335 SUNSET #1</td>
<td>HOLLYWOOD</td>
<td>CA</td>
<td>92262</td>
</tr>
<tr>
<td>102</td>
<td>NORA</td>
<td>PULASKI</td>
<td>199 MARIA VISTA</td>
<td>SAN JOSE</td>
<td>CA</td>
<td>92262</td>
</tr>
<tr>
<td>103</td>
<td>ALAN</td>
<td>FINK</td>
<td>999 MEURHIST N</td>
<td>SAN DIEGO</td>
<td>CA</td>
<td>94462</td>
</tr>
<tr>
<td>104</td>
<td>ANDREA</td>
<td>ANDERS</td>
<td>101 E ORANGE</td>
<td>ANAHEIM</td>
<td>CA</td>
<td>92262</td>
</tr>
<tr>
<td>105</td>
<td>MAY</td>
<td>CAITLIN</td>
<td>9925 W PUTNUM</td>
<td>SAN JOSE</td>
<td>CA</td>
<td>92262</td>
</tr>
<tr>
<td>106</td>
<td>GEORGE</td>
<td>COMO</td>
<td>3735 S COLONIAL AVE</td>
<td>SAN DIEGO</td>
<td>CA</td>
<td>92262</td>
</tr>
<tr>
<td>107</td>
<td>JO</td>
<td>ELLISON</td>
<td>3 JEFFERSON</td>
<td>LAGUNA BEACH</td>
<td>CA</td>
<td>92671</td>
</tr>
<tr>
<td>108</td>
<td>RAYMOND</td>
<td>BLUE</td>
<td>10 W MILLER</td>
<td>COSTA MESA</td>
<td>CA</td>
<td>92672</td>
</tr>
<tr>
<td>109</td>
<td>PAOLI</td>
<td>HARRIS</td>
<td>10 PCH</td>
<td>HOLLYWOOD</td>
<td>CA</td>
<td>92262</td>
</tr>
<tr>
<td>110</td>
<td>ALONZO</td>
<td>GILLIS</td>
<td>599 WESTERN #1</td>
<td>SANTA ANA</td>
<td>CA</td>
<td>92262</td>
</tr>
</tbody>
</table>

To switch back to the form view:

Click on the down arrow to the right of the View button and select **Form View**.

**TIP:** You can also switch views by pointing to the Title Bar of the current view and clicking the [RIGHT] mouse button. Select the view from the pop-up menu.
**CHANGING THE TABLE IMAGE**

**USAGE:**
When working in the datasheet view, you have several options for customizing the view to suit your needs.

**CHANGING COLUMN WIDTH**

You may at some point be viewing a table that has too many fields to fit on the screen at once. While editing or viewing, switching back and forth between the columns can become irritating. Access allows you to change the column size while viewing a table so that you can fit more columns on the screen. Of course, changing column size may also be needed if a column is too narrow or wide.

Point to the right of the column header to be changed. The mouse changes to a two-sided arrow. Click and drag the column to the desired width. Remember you are only changing the column size while viewing the table, you are not changing the actual field size.

**TIP:** *Double-click* when you see the double-arrow to adjust the size to fit the longest column entry!
MOVING A COLUMN

There might be a time when you are editing two or three fields only and would like to see the fields side-by-side during the editing process. Access allows you to easily move a column from one location to another within a table by following the steps below:

1. Click on the title (field name) of the column to be moved. The entire column should become highlighted. To select multiple columns, drag across each column title.

2. Click on the title again and hold the column's title while dragging the column to its new location.

   The mouse pointer will change shape as you begin dragging the column.

   You should also notice that as you drag the column left or right, a dark vertical line indicates where the column will be placed when you release the mouse button.

3. Drag the column(s) to the new location.

4. When done, release the mouse button.
HIDING COLUMNS

If a table has too many columns to fit on the screen, you can choose to hide certain columns that are currently not needed. This feature is also useful for hiding columns that you don't want to print.

To hide a column or group of columns, follow the steps below:

1. To hide a single column, point to the column heading (the field name) and click the [RIGHT] mouse button once.

   To hide multiple columns, select each column and then click within one of the selected columns (not on any of the column headings) and click the [RIGHT] mouse button once.

2. From the pop-up menu, select **Hide Columns**.

The selected column or group of columns will be removed from view, but not removed from the table.

**TIP:** You can also hide a column by changing its size to zero by dragging the column margin to the left.
UNHIDING COLUMNS

To show a hidden column access the following menu:

**F**ormat
**U**nhide Columns...

The following dialog box will be displayed:

Field names with checkmarks are currently displayed. Those without a checkmark are hidden columns. Check each of the fields you want to unhide. **Note that you can also use this box to hide columns by removing the checkmark of the column(s) to hide.**

As you mark or unmark the columns, you will see them displayed or hidden in the table (behind the dialog box).

When done, click on Close.

**TIP:** Although not as convenient as the menu shown above, if you know where a hidden column was originally located, you can unhide it by pointing just past the right border of the column on its left. For example, if a column labeled “Last Name” is located to the left of a hidden column labeled “Address”, point just past the right border of “Last Name” and drag the column margin to the right to unhide “Address”. If after dragging the column margin “Last Name” becomes wider, you did not point far enough to the right.
FREEZING COLUMNS

If you have a really wide table and find that as you scroll to the right, the columns on the left side disappear, you can "freeze" some of the columns along the left. By "freezing" these columns, you can easily scroll to the right and still see the company names (as an example) along the left.

To freeze a column, follow the steps outlined below:

1. Arrange the columns in the order you want to have them along the left edge (through moving and hiding).
2. Select the column(s) you want to freeze.
3. Access the following menu:

MENU:

Format
A
Font...
Datasheet...
Row Height...
Column Width...
Rename Column
Hide Columns
Unhide Columns...
Freeze Columns
Unfreeze All Columns
Subdatasheet

FOrmat
FreeZe Columns

Once frozen, when you scroll to the right the selected columns will stay on the left edge of the screen.

UNFREEZING COLUMNS

If you no longer need columns to be frozen, you can "unfreeze" them so that all columns will scroll again, as shown below:

MENU:

Format
A
Font...
Datasheet...
Row Height...
Column Width...
Rename Column
Hide Columns
Unhide Columns...
Freeze Columns
Unfreeze All Columns
Subdatasheet

FOrmat
Unfreeze All Columns

You cannot unfreeze just a few columns. You must unfreeze all the columns and then freeze the one or two columns you want frozen again.
CHANGING THE APPEARANCE OF TEXT

The appearance of the text within fields can be adjusted in a variety of ways. Access allows you to change the typeface, size and style of the datasheet text.

To change the appearance of text, access the following menu:

**MENU:**

- Format
  - Font...
  - DataSheet...
  - Row Height...
  - Column Width...
  - Rename Column
  - Hide Columns
  - Unhide Columns...
  - Freeze Columns
  - Unfreeze Columns
  - Unfreeze All Columns

The following dialog box will be displayed:

- **Font:** Arial
- **Font style:** Regular
- **Size:** 10

[Font face and style options]

Select the font face, style and point size you want to use for the datasheet. You can also adjust the color of the font.

When done, click on **OK**.
CHANGING ROW HEIGHT

If the columns are too narrow to display an entire field, you can widen the column (shown previously). However, if you don't want to widen the column(s) you can, instead, choose to increase the row height which will cause the data to wrap to additional lines. The initial row height is set to fit the height of the current font.

If a field doesn't fit within the displayed column width, it is simply truncated (cut-off) to the edge of the column. You don't actually lose any data, you just can't see it until you widen the column. However, if you increase the height of the row to fit two lines of text, any extra data wraps to the next line similar to a paragraph.

To change the row height, follow the steps outlined below:

1. Position the mouse pointer on the bottom margin line (all the way to the left) of any row. The pointer changes to a black up/down arrow, as illustrated below:

   ![Drag the row separator](image)

<table>
<thead>
<tr>
<th>Customer Id</th>
<th>Firstname</th>
<th>Lastname</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>WILLY</td>
<td>CRUZ</td>
</tr>
<tr>
<td>101</td>
<td>PATRICE</td>
<td>QUEEN</td>
</tr>
<tr>
<td>102</td>
<td>NORA</td>
<td>PULASKI</td>
</tr>
<tr>
<td>103</td>
<td>ALAN</td>
<td>FUXX</td>
</tr>
</tbody>
</table>

2. Click and hold the [LEFT] mouse button while dragging the separator line up or down to increase/decrease the row height as needed.

3. Once you have the height you want, let go of the mouse. All rows of the datasheet will change to the new row height.
FORMATTING THE DATASHEET

To hide/display the grid (lines between columns and rows), change its colors and cell effects access the following menu:

FOrmat
DatashEet...

<table>
<thead>
<tr>
<th>Cell Effect</th>
<th>Gridlines Shown</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ Flat</td>
<td>☑ Horizontal</td>
</tr>
<tr>
<td>☐ Raised</td>
<td>☑ Vertical</td>
</tr>
<tr>
<td>☐ Sunken</td>
<td></td>
</tr>
</tbody>
</table>

Background Color: White

Gridline Color: Silver

Sample:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Border and Line Styles

Datasheet Border: Solid

Direction

Left-to-right

Select what effect to apply to the cells (flat, raised or sunken).

Check whether you would like to have horizontal and/or vertical gridlines.

Select the background (cell) color.

Select the color for the gridlines.

Sets the border and line style to use.

Set the display direction for new objects.

A sample is provided to preview selections before saving changes.

When done, choose OK.
USING THE FORMAT DATASHEET TOOLBAR

Many of the formatting options from the Format menu can be easily selected from the Formatting Datasheet Toolbar shown below.

To turn on the toolbar, select View, Toolbars Formatting (Datasheet) from the pull-down menu.

The font and font size can be selected from the toolbar, and text can be bolded, italicized and underlined. Fill, text and border colors can be selected, and line styles and special effects can be set.

Selecting the background color for the datasheet
Selecting the font color for the datasheet

Selecting the border line color for the datasheet

Selecting the border line style for the datasheet

Selecting special effects for the datasheet
SORTING THE DATA

USAGE:
As you work with your data, you may find that the records are not in any particular order. As a result, reading or finding a specific record may be difficult, especially if you have hundreds or thousands of records. Access has an easy way of rearranging/sorting data so that you can print/view the records in the order needed.

Before you sort, click anywhere in the field you want to sort. For example, if you want to sort alphabetically by last names, make sure your cursor is somewhere in that field.

Once you have selected the field on which to sort, click on one of the following buttons:

Click on this button to sort the records in ascending (alphabetical/lowest to highest) sequence.

Click on this button to sort the records in descending (reverse-alphabetical/highest to lowest) sequence.

NOTE: You can also sort a column by clicking the [RIGHT] mouse button within the column to be sorted and choosing your sort method from the pop-up menu.

SORTING ON MULTIPLE FIELDS
To sort on more than one field at a time, you must select all the fields (columns) on which to sort by. Access will sort by the leftmost column first, then by the other selected fields in order from left to right.

You may need to move the columns around to get them in the order needed. For example, to sort employees by last name and then by first names, you will need to rearrange the columns so that the first name column comes after the last name column.
PRINT PREVIEWING

USAGE:

Although Access has an extensive report generator (discussed in the last module of this manual), you may find yourself from time to time having to print a quick list of your records without any special formatting features. Before you print your table, you should preview the printout to make sure that it will print to your satisfaction.

Click on this button located on the tool bar to preview.

If you prefer accessing the menu:

File
Print Preview
Access displays an approximation of what the final output will look like when printed. As you move your mouse over the page, your mouse pointer will change to a small magnifying glass. Use this pointer to click on the sample printout to "zoom" in on the preview to get a more detailed look.

The following tools are available while working in Print Preview:

- Click on the down arrow \( \square \) to select a new view.
- Click on this button to print the current document.
- Click on this button to zoom in/out of the preview.
- Click on this button to view one page at a time.
- Click on this page to view two pages at a time.
- Displays multiple pages during the preview. Click on the number of pages you want to display.

- Click on the down arrow \( \square \) to select a zoom factor.
- Click on this button to close the preview window.
- Click on this button to access the Setup dialog box where you can define margins and page settings.
- Click on this button to merge or publish the data within Word or to analyze the data with Excel.
- Click on this button to display the database window.
- Click on this button to create a new object (such as a table, form or report).
- Click on this button to access help.
PAGE SETUP

USAGE:

If you need to change the paper size, page orientation, margins, or other features that affect the page layout, you will need to access the Page Setup menu, as shown below:

MENU:

File
    New...
    Open...
    Get External Data
    Close

Save
    Save As...
    Back Up Database...
    Export...

File Search...
    Page Setup...
    Print Preview
    Print...

Send To
    Database Properties

1 SAMPLE.MDB
    Exit

The following dialog box will be displayed:

CHANGING MARGINS

Be sure that the first tab labeled Margins has been selected at the top of the screen. As mentioned, you can adjust the top, bottom, left or right margins. A preview box is provided on the right side of this dialog box to see how your new margin settings will change the document. This box also allows you to display/hide headings.
CHANGING PAPER SIZE

To change the paper size and/or page orientation, select the second tab at the top of the screen, labeled Page.

Orientation  The page orientation (portrait or landscape) can be changed by clicking on the appropriate radio button.

Page  Click on the down arrow to the right of the "Paper Size" section to select from one of many predefined sizes. You may also select the source (tray) for the paper.

Printer  Allows you to specify the printer to be used. Click on to choose a printer other than the default.

Once settings have been changed, select .
PRINTING THE TABLE

USAGE:

Although Access has an extensive report generator (discussed in the last module of this manual), you may find yourself from time to time having to print a quick list of your records without any special formatting features. When you print a table within Access, the program defaults to a tabular report and uses the table's name as a header along with the current date and page number.

Click on the **print** button from the tool bar to immediately begin printing without being asked what you want printed.

If you would rather access the menu for additional options:

**File**

**Print..**

Select the printer, enter the number of copies desired, and select which pages (or records) you want printed.

When done, select **OK**.
FINDING DATA

Access has a handy feature that works like a search/find option in a wordprocessor. You simply enter the text/data you are looking for and Access can search the current column or all columns for a match. You can be in any field column when you want to find something, but if you plan on searching within just one field, you should make sure your cursor is somewhere in the field column you will be searching. This will speed up the search.

Follow the steps outlined below to find data:

1. Click on this tool and select the tab labeled Find.

2. Use the Find What text box to enter the text/data to find. Click on the down arrow beside the Look In section to select the field to use for the search.

3. (OPTIONAL) In the section labeled Match, define whether the text must match just part of a field, that the whole field must match, or that the text must be found at the start/beginning of a field.

4. (OPTIONAL) Click on the down arrow beside the Search box to select the direction in which the search should proceed. Choose “Up” to search from the current position to the beginning of the table or “Down” to search to the end of the table. Select “All” to search all records - regardless of which record you are currently viewing.
Check the box labeled **Match Case** to ensure all upper and lowercase characters match exactly as you entered them.

**Search fields as formatted** should be checked to search a field exactly the way it is displayed in the table. For example, a date is stored as 3/1/01 but may be displayed as 03-Mar-01.

Once you have made your selections, click on **Find Next** to find the first and additional occurrences of the text.

Access allows you to search for a "pattern" of characters using the asterisk (*) as a "wildcard" symbol.

Examples include the following:

**This pattern...**

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Example</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S*</td>
<td>Smith, sugar</td>
<td></td>
</tr>
<tr>
<td>g*t</td>
<td>Giant, gross weight</td>
<td></td>
</tr>
<tr>
<td>*D</td>
<td>Grand, Elm Road</td>
<td></td>
</tr>
<tr>
<td>7*5</td>
<td>7485, 735</td>
<td></td>
</tr>
<tr>
<td>6/*/99</td>
<td>All dates in June of 1999.</td>
<td></td>
</tr>
</tbody>
</table>

There are a few other wildcard characters, as described below:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Example</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>?</td>
<td>b?ll</td>
<td>Matches any single character.</td>
</tr>
<tr>
<td>#</td>
<td>1#3</td>
<td>Matches a single digit.</td>
</tr>
<tr>
<td>[]</td>
<td>b[ui]ll</td>
<td>Matches any single character within the brackets.</td>
</tr>
<tr>
<td>!</td>
<td>b[ui]ll</td>
<td>Matches any character not in list.</td>
</tr>
<tr>
<td>-</td>
<td>b[a-c]d</td>
<td>Matches any of a range of characters.</td>
</tr>
</tbody>
</table>
FILTERING RECORDS

USAGE:

Since a table can be quite large, there may be times when you need to extract records based on specific conditions. Asking Access to list a specific group of records is called **filtering**. After you create a filter, the program hides all the records that do not match your filter criteria. Although you can use simple filters, you can also use the filter to create more complex sorting options.

There are two simple filters that can be used immediately, the **selection** filter and the **form** filter.

THE SELECTION FILTER

Use this feature to list only those records that match the text you currently have selected. Follow the steps outlined below:

1. Select the field or part of the field that represents the data you want to display. For example, you could select a city and only those rows containing that city would be displayed.

2. Once you have selected the field or data you want to work with, click on this button to display only the rows that match the data you selected.

3. Click on this button to remove the filter and display all records again. If you click on this button a second time, the last filter is repeated.

**NOTE:** Every time you use this feature, the new selection is added to the previous filter criteria. It is designed to be able to easily select sub-sets, but can also cause a filter not to work at all. Be sure to clear the previous filter before using a new set of criteria.
FILTERING BY INPUT

You can also select records by manually entering the exact value (criteria) you want to search for. This is accessed through use of the [RIGHT] mouse button, as shown in the steps below:

1. Point to the column containing the field you want to filter and click the [RIGHT] mouse button once.

2. From the pop-up menu, click in the blank text box (to the right of Filter For: item)

3. Enter the value or expression to use as the filter.

4. When done, press ENTER or click in the datasheet to activate the filter.

5. Click on this button to remove the filter and display all records again. If you click on this button a second time, the last filter is repeated.
THE FORM FILTER

This feature displays a form from which you can select the data that you want to display based on more advanced criteria. Follow the steps outlined below:

1. Click on this button to create the filter form. The datasheet view will be replaced with one row similar to the one shown below:

<table>
<thead>
<tr>
<th>Cust Id</th>
<th>Firstname</th>
<th>Lastname</th>
<th>Address</th>
<th>City</th>
<th>ST</th>
<th>Zip</th>
</tr>
</thead>
</table>

2. Select the field containing the data you want to search for. A small pull-down arrow will appear.

3. Click on the down arrow. A list of unique values for that field will be displayed. Simply select the data that represents the rows to be displayed.

If you want to be more precise, you can select more fields of data which will narrow the records. For example, you could select a state and then a city within the state.

To search for more than one group of records, there is a set of tabs located at the bottom of the filter, as shown below:

Look for \ Or \ Or

Click on the first \ Or \ tab to select another set of criteria to filter. The rows matching this set of criteria will be displayed in addition to those that match your first tab (or any additional \ Or \ tabs). For example, you might want to search for more than one city at a time.

You can also use operators in your criteria for a comparative search. The following operators may be used for a filter:

=    >    <    >=    <=    <>
If you want to clear the current set of criteria and define a new filter, click on \( \times \).

You should see a \( \text{Close} \) button on the tool bar that can be used to close the Filter Form and return to the datasheet view.

Once you have defined all your criteria for the filter, click on this button to actually display the records that match your selected data.

Click on this button again to remove the filter and display all records from the table. You can also use this button later to reuse the last filter.

**NOTE:** Whenever a data table is filtered, you will see \( \text{FLTR} \) displayed to the right of the status bar. You will also see \( \text{(Filtered)} \) displayed to the right of the record number in the lower left of the window.
Access also the use of wildcards such as the asterisk (*). This is especially useful when you are unsure how to spell the field contents or you wish to filter using only a portion of the field contents.

Examples using the asterisk:

**This pattern...**

...**would find these:**

<table>
<thead>
<tr>
<th>S*</th>
<th>Smith, sugar</th>
</tr>
</thead>
<tbody>
<tr>
<td>g*t</td>
<td>Giant, gross weight</td>
</tr>
<tr>
<td>*D</td>
<td>Grand, Elm Road</td>
</tr>
<tr>
<td><em>e</em>s*</td>
<td>Phillip Edward Wilson, roses</td>
</tr>
<tr>
<td>7*5</td>
<td>7485, 70005</td>
</tr>
<tr>
<td>6/*04</td>
<td>All dates in June of 2004</td>
</tr>
</tbody>
</table>

In addition to the asterisk, there are a few other wildcard characters that can be used during a filter, as described below:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Example</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>?</td>
<td>b?ll</td>
<td>Matches any single character. Use with text fields.</td>
</tr>
<tr>
<td>#</td>
<td>1#3</td>
<td>Matches single digit. Use with numeric fields.</td>
</tr>
<tr>
<td>[ ]</td>
<td>b[uil]ll</td>
<td>Matches any single character within the brackets.</td>
</tr>
<tr>
<td>[!]</td>
<td>b[lui]ll</td>
<td>Matches any character not within the brackets.</td>
</tr>
<tr>
<td>[-]</td>
<td>b[a-c]d</td>
<td>Matches any one of a range of characters within the brackets.</td>
</tr>
</tbody>
</table>
QUERYING TABLES

Usage:

Database programs in general are used to enter huge amounts of information. Once the information has been entered, however, the program must have the capacity to narrow listings down based on criteria that you, the user, provide. Access refers to the process of questioning, selecting and manipulating data as **querying**. For example, if you have a table consisting of thousands of company employees you may at some point want to view only those employees working in a given department. The query would then consist of Access pulling out all records where the department is equal to the one you specify.

It is also possible to have Access select only specific fields to view. Using the example above, perhaps your table consists of fifteen fields but you are only interested in seeing the employee names and phone number. You can instruct Access to list only those two fields for all records meeting the department criteria.

**Important!**
The results of the query are stored in a recordset. A recordset is a view of the actual table or tables that the query is based on. **It is not a “copy”**. This means that any changes you make to the data in a query recordset affect the actual table(s) from which the records were selected. Any records you delete from a recordset are deleted from the table. When you save a query, you are saving the design of the query, not the recordset.

To build a simple query, follow the steps outlined below:

1. **Click on the Queries icon.** The database window will display any existing queries as well as options for creating new queries.

2. **Click on Create query in Design view.**

3. The Query design screen will be displayed, including the Show Table dialog box.
Select the table(s) and or queries that you wish to use for the Query, clicking the Add button after each. When you have selected all that you wish to use, click the Close button (you will be unable to do anything else unless you have closed the Show Table box.)
The top half of the query window contains a list of available tables and their associated fields. The bottom half of the query window, often called the Query by Example or QBE grid, is where you will place each field that will be included in the query.

The following rows are included in the query grid:

**Field**
- Used to enter the field name you want to query. To add a field, click in this section and choose from the pull-down list. You can also drag the field name using the mouse from the table list.

To create a query that contains all of the fields, double-click on the title bar of the table. This highlights all fields, which you can then drag to this section. Access will place each field in a separate column. The asterisk (*) includes all current and future fields in the query. Use this to ensure you always have all the latest fields when the query is run.

**Table**
- If there is more than one table, use this section to specify the table from which the field will be derived.

**Sort**
- Use this to sort in ascending or descending order.

**Show**
- Check this box to actually show the data of the field in the final list. Fields can be used for criteria but do not have to be shown in the resulting dynaset.

**Criteria**
- This is where you actually type in what you are searching for. Be sure to place your criteria in the column of the field that would contain the data.

**Or**
- If you are looking for more than one item within the same column, place your criteria on multiple lines.

Add the fields you will use for this query to the query grid. You may add fields in one of the following ways:

- Double click the field in the field list. It will automatically be placed in the next available column on the grid.

- Drag the field name (from the top half of the window) to a blank column (in the bottom half of the window).
Click in the first row of a column on the grid. A list box arrow will appear. Click the arrow to display a list of fields and select a field from the list.

The asterisk (*) can be used to indicate that all fields of a table should be included in the query.

SORTING THE QUERY

Viewing the data in the resulting recordset will usually be easier if you have it sorted by at least one of the fields. You can sort in ascending (alphabetically A-Z or numerical order 0-9) or descending (Z-A or 9-0) order.

To sort the query, click in the Sort row under the column containing the field you want to sort. A small down arrow will appear to the right of the field.

Click on the down arrow to access a pull-down menu, as shown in the diagram below:

```
<table>
<thead>
<tr>
<th>City</th>
</tr>
</thead>
</table>

  Ascending
  Descending
  [not sorted]
```

Select Ascending or Descending as needed. If you no longer want to sort on that field, choose (not sorted).

SORTING ON MULTIPLE FIELDS

Although you can sort on more than one field, you do need to take a couple of things into consideration. First, Access sorts from left to right. In other words, if you select more than one field for sorting, Access will sort on the leftmost field you selected first, followed by the next selected sort field to the right.

If you have the fields City and State in your query (in that order) and decide to sort on both the city and the state, Access will sort by the city first and duplicate cities will then be sorted by state.

If you want to sort by state first, then by city, you will have to move the state field to the left of the city field in the query. Make sure
your fields are arranged from left to right in the order in which they should be sorted.

**ADDING CRITERIA**

Once you have added the fields to view/search, your next step is to specify what condition(s) must be met for records to be displayed.

Move to the field where the condition is to be set and enter the criteria. The following operators may be used during a query:

<table>
<thead>
<tr>
<th>Operator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>=</td>
<td>Must be exactly equal to</td>
</tr>
<tr>
<td>&lt;</td>
<td>Must be less than</td>
</tr>
<tr>
<td>&gt;</td>
<td>Must be greater than</td>
</tr>
<tr>
<td>&gt;=</td>
<td>Greater than or equal to</td>
</tr>
<tr>
<td>&lt;=</td>
<td>Must be less than or equal to</td>
</tr>
<tr>
<td>&lt;&gt;</td>
<td>Must NOT be equal to</td>
</tr>
</tbody>
</table>
Example: If you were searching for those employees making more than $40,000.00 you would move to the salary field and enter the following condition:

\[>40000\]

Once you have entered all your criteria:

Click on this button to actually run the query.

COMPOUND CRITERIA

 USAGE: Access allows you to combine your criteria to form more complex queries. These combinations can be used to narrow the search to the exact information you need. They can also be used to make your searches more flexible and include more options than a simple query.

CREATING AN "AND" QUERY

If you want more than one condition in different fields to be true, you may enter conditions in more than one field on the same row.

This specifies that all the conditions on that row must be true at the same time for a record to be selected and placed in the recordset.

To create an "AND" condition, you enter the criteria on one line but within different fields. For example, perhaps you want to find all hotels costing more than $500.00 in the city of San Francisco, as illustrated in the diagram shown below:

<table>
<thead>
<tr>
<th>Field:</th>
<th>Hotel</th>
<th>City</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table:</td>
<td>Hotels</td>
<td>Hotels</td>
<td>Hotels</td>
</tr>
<tr>
<td>Sort:</td>
<td></td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Show:</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Criteria:</td>
<td>&quot;San Francisco&quot;</td>
<td>&gt;500</td>
<td></td>
</tr>
<tr>
<td>or:</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

This would result in Access listing all records where the cost is greater than 500 and the city matches San Francisco.
Because the two conditions are located on the same criteria line, Access assumes both conditions must be met. When both must be met, it is considered to be an AND query!

If you want to look for a range of values within the same field, use the **And** operator. Since you need to specify two criteria for the same field, this is entered a bit differently. For example, to display records for only those employees who make between $30,000 and $40,000 per year, move to the salary field and enter:

In the scenario above, only records consisting of employees making more than $30,000 but less than $40,000 would be extracted. This would not include anybody making exactly 30,000 or exactly 40,000. To include those values, use >= and <=.

**CREATING AN "OR" QUERY**

This type of query is performed when you want to locate records meeting either one condition or another. It allows you to specify several different options at once. If a record satisfies any one of these conditions, the record will be selected.

To create multiple conditions, place each condition on a separate line. Each line specifies a different condition. You can mix AND/OR conditions as much as you need.

If you want multiple choices from within the same field, the **OR** operator is used. The **OR** tells Access that only one of the specified criteria needs to be met in order for a record to be extracted. For example, to find employees who work in the Admin or Accounting departments move to the "Dept" field and enter:
This would result in Access listing employees working in either the Admin or Accounting departments.

If you want to extract records based on an OR existing between different fields, you must use two lines for the query.

For example, if you are searching for employees working in the Admin department or those employees making more than $30,000 regardless of their department you would enter the criteria as shown below:

If both conditions are on the same row, Access assumes you want both conditions to be true. In other words, this is considered an AND statement whereas two separate lines are considered an OR statement.

You can be as selective as you want by using several lines to include several OR conditions.
MISCELLANEOUS OPERATORS

USAGE:
Access has many different operators that can be used in queries. Here are some of the more useful ones:

USING "BETWEEN"

If you want another way to search for a range of records, Access has a separate operator called Between which is used to search for records between two values.

For example, to search for records between two dates, you would enter Between 10/1/2003 And 10/15/2003.

The example above would select all records between (and including) October 1, 2003 and October 15, 2003.

You could have also entered >=10/1/2003 And <=10/15/2003

NOTE: When working with dates, pound signs (#) are used around date fields (e.g., #9/9/99#) when setting criteria. However, you can enter dates normally (e.g., 9/9/99) and Access will usually add the pound signs to the criteria statement. If Access does not add the pound signs automatically, you should add them yourself to avoid any errors.

FINDING EMPTY FIELDS

There may be times when you will want to look for records that do not have data in a certain field. This can be useful for finding missing information such a social security numbers, phone numbers or other important data that should be available.

Empty fields are said to have a null or no value.

To search for empty fields, enter Is Null as the criteria for the field.

To select all records that are not empty in a field, enter Is Not Null.
SEARCHING FOR THE CURRENT DATE

You can easily search for records that match today's date. This can be useful for running daily reports, printing daily receipts or other such functions that require records from the current date.

To find all records that match today's date, use the criteria `Date()`. This function would automatically retrieve the current date from your computer and use that date as the criteria for the query.

*Note*: You can also use the `>` and `<` symbols to locate all records before or after the current date.

USING A LIST

If you plan on searching for records that will match one of many different items, you can use the **OR** operator as mentioned earlier. For example, to find all clients living in California, Texas, Arizona or Nevada, you could write the following in the state field column:

```
CA OR TX OR AZ OR NV
```

Using the OR operator is fine if you only have a few items to search for, but can become tedious if the list becomes longer.

As an alternative, Access has a different function that can be used for searching for many different items within the same field.

This function is called `In()` and tells Access to search for any items that are in the list within the parentheses.

The above example could be written as follows:

```
In(CA,TX,AZ,NV)
```

Notice how each item is separated by a comma.

You would enter that command in the criteria section under the State field column.
MODIFYING THE QUERY LAYOUT

REARRANGING FIELDS IN THE QUERY

Once you begin working with your queries, you may find that you want to rearrange the order in which the fields are displayed.

You can move fields by dragging the field column, as illustrated in the diagram below:

1. Click once to select the field column.
2. Click again and drag the field.

To move a field, click once on the column selector (the small gray bar at the top of the field column) to select the column.

Next, click on the column selector again and drag the column to the new location. As you drag the column left/right, a black vertical line will show up between the columns, indicating where the field will be placed once you let go of the mouse button.

ADDING FIELDS TO THE QUERY

If you want to quickly add a field to the query, simply double-click on the field name from the list. Access will add the field as the last column in the query. You could also move to the next blank column and click in the Field row. Next, click on the down arrow to select your field from the pull-down list.

If you want to place a new field in a specific column location other than at the end, you will need to insert the field. To insert a field into your query, click on the field name you want and drag the field name to the column where you want the field to be displayed. Access will place the new field in that location and shift the existing field to the right to make room.
REMOVING FIELDS FROM THE QUERY

Deleting a field column is easy - click on the column selector of the field that you want to remove from the query and press `=`. You will not be asked to confirm the deletion.

CHANGING COLUMN WIDTHS

If you need more room in a column to show all of your criteria or other information, you will need to adjust the width of the column.

**NOTE:** Changing the width of a field column while in the design mode does not adjust the width of the field when you view the data table.

To change the width of a field column, move the mouse pointer to the right border of the column you want to adjust. The mouse pointer must be on the right side of the gray column selector.

The mouse pointer will change to a two-way arrow, as shown in the diagram below:

```
Place mouse pointer here to change the width of First Name.
```

Once the pointer has changed to a two-sided arrow, click and drag the column border left or right as needed.

**TIP:** If you double-click when the pointer changes to the two-way arrow, Access will automatically adjust the width to fit the widest entry in the column.
SAVING/OPENING A QUERY

USAGE:

Once you have designed a query, you will want to save the query for future use. Once a query has been saved, you can "open" the query and use it whenever you need to list those same records again.

You may save your query at any time by clicking the Save button on the toolbar.

Click on the close button to close the query.

If you haven't saved the query, the following warning will appear:

Click on Yes to save the query. You will be prompted with a Save As dialog box to name your query.

OPENING A QUERY

Once you have saved your queries, you can use them repeatedly as needed without having to recreate the conditions of the queries.
To use a previously saved query, you must **Open** the query - which is done the same way you open tables - from the database window.

Click on the **Queries** icon to list the queries.

To open a query, simply double-click on its name or highlight it and click on the **Open** button to view the query results.

**MODIFYING A QUERY**

Display the design view of the query:

If you are viewing the recordset, click on the design view **button on the toolbar**

OR

From the database window, highlight the query name and click on the **Design** button.
CREATING REPORTS WITH THE REPORT WIZARD

USAGE:
Access contains a Report Wizard tool by which a standard tabular report can be created for the active table. Once the report has been created, you can easily edit the format of the report.

USING THE REPORT WIZARD
You can use one of these two methods to create a report:

If you are viewing the database window, select the Reports icon and click on the New option.

If you are viewing a table or have a table name highlighted in the database window, click on the down arrow to the right of the New Object button.

If you just want to create a very basic report, choose AutoReport from the pull-down list. To use one of the built-in Report Wizards, choose Report.

If the table name is not already displayed in the bottom text box, click on the down arrow located to the right of this box and select the table you want to use.

The easiest method of creating a report is to use the Report Wizard. This feature is an automated process that guides you through the basic steps of creating a report.
From the dialog box select **Report Wizard** to start the process of creating a report.

The first dialog box is where you select which fields you want to have included in the report, as shown below:

If you need to change the Table or Query that is being used for the report, use the pull-down list under **Tables/Queries**.

Access shows you the available fields in the left column and the fields currently selected for your report in the right column.

To add all the fields to your new report, click on **>>**.

If you only want some of the fields, highlight each field and click on **>** to add one field at a time.

If you accidentally added a wrong field, or decide to remove fields from your new report, use **<<** to remove all the fields, or use **<** to remove one field at a time.

When you are ready to continue, click on **Next >**.
The next screen is used to break your report down into groups or categories of records. This is useful for large groups of data and can make your report easier to read. For example, a list of customers could be broken down by state and then by city. The state would be the first group and then cities would be sub-groups under each state.

Use the left column of fields to choose what groups of records should be created. As you add a field for grouping, you will see the sample on the right adjust to show how the records will be displayed.

If you add more than one field for grouping, you can use the Priority arrows to rearrange the order in which the records will be grouped.

Most users will not need to make additional changes, but if you only want the groups to be determined by the first few characters of a field, access Grouping Options ... and select the number of initial characters to scan before determining its group.

Once you are ready to continue, click on Next >.

Now you get to choose how the report should be sorted, as shown in the diagram below:
You can select up to four fields on which to sort your data. Use the pull-down arrows to define which fields to sort the records on and in what order to sort them.

Click on this button next to each field to define whether that field should be sorted in ascending or descending sequence.

If you selected a field to group in the previous step, Access will automatically sort by that field first.

Clicking on the option allows you to select which calculation functions should be applied to numeric fields.

When you are ready to continue, click on the "Next" button.
Now you can choose the layout of the report, as shown below:

As you make a selection from the **Layout** column, you will see an example of the layout in the left window. This will help you decide which layout best fits your report.

You can also change the page **Orientation** to match the type of report you want. Landscape is good if you are trying to fit a lot of columns across one page. Portrait is useful if you don't have many columns, but want to fit as many records as you can on a page.

Use the checkbox at the bottom to automatically adjust the field lengths so that all your fields fit on the page. However, if you select this option, some of the fields may be truncated in order to make room for the others.

When you have made a choice, click on **Next >**
Next, choose the type of look that the report should have, as shown in the diagram below:

You can choose from several different styles.

As you select each style, the report sample in the left window reflects what that style will look like.

When you have made a choice, click on Next >.
The final step is to name the report, as shown below:

Use the text box at the top to enter a title for your report.

Once the report is done, choose whether you want to Preview the final report or to go to the design mode and Modify it.

You can choose to have the help option displayed while you are working on the report by marking the checkbox at the bottom.

When you are done, click on Finish.

Access will now create the report and display the results.
PRINTING OPTIONS

If you need to change the paper size, page orientation, margins, or other features that affect the page layout, you will need to access the following menu:

**File**

**Page SetUp...**

The following dialog box will be displayed:

![Margins Dialog Box](image)

**CHANGING MARGINS**

Be sure that the first tab labeled **Margins** has been selected at the top of the screen. As mentioned, you can adjust the top, bottom, left or right margins. A preview box is provided on the right side of this dialog box to see how your new margin settings will change the document. This box also allows you to display only the data which eliminates any borders, labels, or gridlines.
CHANGING PAPER SIZE

To change the paper size and/or page orientation, select the second tab at the top of the screen, labeled Page.

Orientation

The page orientation (portrait or landscape) can be changed by clicking on the appropriate radio button.

Paper

Click on the down arrow to the right of the "Paper Size" section to select from one of many predefined sizes. In addition, if your printer has more than one paper tray, you can select the source tray to use.

Printer

This section specifies the printer to be used.
CHANGING THE COLUMN LAYOUT

The last tab of the page setup box is used to modify the layout of the columns on the report, as shown below:

Grid settings
Use the top section of this tab to specify the number of columns to print on one page and the spacing between rows and/or columns.

Column size
Use the middle section to specify the width/height of each column.

Column layout
Use this section to specify if the columns will be printed across then down, or down then across the page.

Once all settings have been changed, select OK.
PRINTING THE REPORT

Once you have made all your changes and are ready to print:

- Click on the print button from the tool bar to immediately begin printing without being asked what you want printed.

If you need to define the number of copies or select which pages to print, you will need to access the following menu:

**File**

**Print..**

The following dialog box will be displayed:

Select the printer, enter the number of copies desired, and select which pages you want printed.

When done, select **OK**.