

# ACCESS 2003

**DISCLAIMER:**

This reference guide is meant for experienced Microsoft Access users. It provides a list of quick tips and shortcuts for familiar features. This guide does **NOT** replace training or a comprehensive instruction manual.





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## OVERVIEW

***Access is a tool for viewing, organizing, and searching long lists.  
Lists may be stored within Access or linked to external data sources.***

| <b>Term</b>      | <b>Description</b>   |
|------------------|--|
| Database         | An organized collection of related information   |
| Control          | A graphic user interface object, such as a textbox, button or scroll bar that lets users control an item on a form, report or data access page |
| Data Access Page | An object to view or work with data from the Web, Excel or other external source   |
| Data type        | The characteristics of a field that determine the kind of information it can contain; for example: text, number, currency, or date             |
| Database window  | A window displaying a list of objects, including tables, forms, queries, and reports   |
| Design View      | A window to create or modify tables, queries, forms, reports and data pages  |
| Field            | A category of data, sharing common attributes, such as text, number or date  |
| Form             | An object used for viewing or entering data into a table   |
| Normalization    | A series of techniques to ensure a well-designed database  |
| Object           | A table, query, form, report, or data access page<br>A list of objects is displayed in the database window                                     |
| Properties       | The characteristics of a field;<br>for example, its source, size, and format   |
| Query            | A request for records with matching characteristics  |
| Record           | An entry in a table or form containing information in one or more fields   |
| Report           | An object for viewing or printing a formatted collection of records  |
| Table            | A collection of fields and records; the foundation of all other Access objects   |

## THE BASICS

| To accomplish this ↓                    | Use this menu ↓            | (Or) button ↓  | (Or) key combo ↓ |
|---|----------------------------|--|------------------|
| Create a new database                   | File > New > Database      |  | Ctrl N           |
| Open a database                         | File > Open                |  | Ctrl O           |
| View database window                    | Window > (Filename)        |  | F11              |
| Move between objects in database window | View > Database Objects    |  | Ctrl Tab         |
| Print the table design                  | File > Print Relationships | N/A  | N/A              |

## DATABASE DESIGN

Good database design ensures that your database is easy to maintain. You store data in tables and each table contains data about only one subject, such as customers. Therefore, you update a particular piece of data, such as an address, in just one place and that change automatically replicates throughout the database.

Each *table* should contain information about only one subject, such as customers. Only data about customers belongs in the Customer table. Other information, such as orders, should be stored in its own table.

Each *field* is a fact about a particular subject. For example, you might need to store the following facts about your customers: company name, address, city, state, and phone number. You need to create a separate field for each of these facts.

**Hint:** Don't add a field to a table if it will result in the same information appearing in multiple records in that table.

In order for Microsoft Access to connect information stored in separate tables — for example, to connect a customer with all the customer's orders — each table in your database must include a field or set of fields that uniquely identifies each individual record in the table. Such a field or set of fields is called a *primary key*.

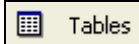
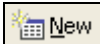
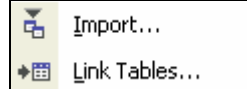





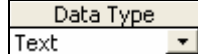








## RELATIONSHIPS

Once you've divided your information into tables and identified primary key fields, you need a way to tell Microsoft Access how to bring related information back together again in meaningful ways. To do this, you define *relationships* between tables.










Microsoft Access includes two tools that can help you refine the design of a Microsoft Access database.

- The **Table Analyzer** can analyze the design of one table at a time, can propose new table structures and relationships if appropriate, and can divide a table into new related tables if that makes sense.
- The **Performance Analyzer** can analyze your entire database and make recommendations and suggestions for improving it. The wizard can also implement these recommendations and suggestions.

## TABLES






| To accomplish this ↓  | Use this menu ↓  | (Or) button ↓   | (Or) key combo ↓               |
|---|--|---|--------------------------------|
| Create a new table  | Insert > Table   |  Tables  New                   | N/A                            |
| Create new table using data in another source   | File > Get External Data   |  Import...<br> Link Tables...   | N/A                            |
| Display design view   | View > Design  |  Design   | N/A                            |
| Create fields   | 1. Display design view<br>2. Type field name(s)<br>3. Select data type<br>4. Define properties | N/A   | N/A                            |
| Field <b>name</b> can be 64 characters<br>Maximum number of characters depends on data type |  |   |                                |
| Save a table, query, form, or report <b>design</b>  | File > Save  |   | Ctrl S                         |
| Modify a field name   | 1. Display design view<br>2. Change field name<br>3. Save changes                              |  Design   | N/A                            |
| Insert fields in a table  | Insert > Rows  |   | N/A                            |
| Define data type  | Type name of data type   |  Data Type<br>Text   | Alt ↓                          |
| Delete a field  | Edit > Delete Rows   |   | Select entire field row<br>Del |
| Properties  | 1. Select field in upper pane<br>2. Type properties or press F1 for Help                       | Use Build button when available<br>   | N/A                            |
| Print a table, query, form, or report   | File > Print   |   | Ctrl P                         |
| Quick sort records  | Records > Sort > Sort Ascending (or Descending)  |  (ascending)<br> (descending) | N/A                            |
| Quick filter records  | Select word(s) to match<br>Records > Filter > Filter by Selection                              |   | N/A                            |
| Remove filter   | Records > Remove Filter/Sort   |   | N/A                            |
| Create a primary key  | Design View<br>Edit > Primary Key  |   | N/A                            |

## DATA ENTRY

| To accomplish this ↓    | Use this menu ↓              | (Or) button ↓   | (Or) key combo ↓               |
|-------------------------|------------------------------|---|--------------------------------|
| Add a record            | Insert > New Record          |    | Ctrl +                         |
| Modify a record         | N/A                          | N/A   | F2                             |
| Undo                    | Edit > Undo                  |    | Ctrl Z                         |
| Delete a record         | Edit > Delete Record         |    | Del                            |
| Enter data entry mode   | Records > Data Entry         | N/A   | N/A                            |
| Exit data entry mode    | Records > Remove Filter/Sort | N/A   | N/A                            |
| Go to previous record   | Edit > Go To > Previous      |    | ↑                              |
| Go to next record       | Edit > Go To > Next          |    | ↓                              |
| Go to first record      | Edit > Go To > First         |    | Ctrl Home                      |
| Go to last record       | Edit > Go To > Last          |    | Ctrl End                       |
| Go to a specific record | N/A                          | N/A   | F5<br>Type record #<br>Enter ↵ |
| Find a record           | Edit > Find                  |    | Ctrl F                         |
| Enter current date      | N/A                          | N/A   | Ctrl ;                         |
| Copy from field above   | N/A                          | N/A   | Ctrl "                         |
| Save data in a table    | <b>(NOT File Save)</b>       |   | ↓ or<br>⇧ Shift Enter ↵        |
| Print a table           | File > Print                 |  | Ctrl P                         |







## QUERY BASICS

A query shows a subset of data, such as all customers in Ohio, or combinations of data from different tables, such as order information combined with customer information. **Note:** You may edit data directly in a query datasheet.

| To accomplish this ↓   | Use this menu ↓   | (Or) button ↓  | (Or) key combo ↓ |
|--|---|--|------------------|
| <b>Create a query</b><br>Select a table in the database window   | Insert > Query  |   | N/A              |
| <b>Select fields</b>   | N/A   | Drag desired fields from upper pane to lower pane<br>Or double-click fields in upper pane; Access adds them to the grid<br>Or double-click the asterisk to add all fields to the query grid<br><b>Note:</b> The fields will print in the same order as they appear in the query design |                  |
| Set sort order (optional)<br>In the lower pane of the query window, select a sort order for the field you want to sort | N/A   | <br><b>Note:</b> Fields are sorted from left to right if you sort by more than one field   | N/A              |
| Run a query<br>Selected fields and records appear in a datasheet window  | Query > Run   |   | N/A              |
| Set criteria<br><i>Criteria are limits you place on a query to identify specific records</i>                           | Open a query in design view<br>Click in the criteria row of the field containing data you want to identify<br>Type your criteria<br>Or right-click the Criteria cell and choose Build for the Expression Builder   |  |                  |
| <b>Multiple criteria in same field</b>   | To match <i>more than one</i> criterion in one field, separate the criteria with the word <b>AND</b><br>To match <i>one or more</i> criteria in one field, separate the criteria with the word <b>OR</b>  |  |                  |
| <b>Multiple criteria in different fields</b>   | To match criteria in two or more fields, type the criteria in fields on the <b>SAME ROW</b><br>To match criteria in one field or another, type the criteria on <b>CONSECUTIVES ROWS</b>   |  |                  |
| Mathematical calculations  | Sample: <b>Paycheck: [Hourly Rate] * [Hours Worked]</b><br>Click in a blank field in the query grid<br>Use the Expression Builder (right-click in the Criteria cell) <br>Or type a field name between brackets<br>Type an operator (+ - * / )<br>Type additional field names between brackets<br>Press <b>Enter ↵</b><br>Name the field. Be sure to leave : (a colon) between the name and the calculation |  |                  |
| Create a multiple-table query  | Add two or more tables to the query design view<br>Connect two tables at a time by dragging a field from one table to its matching field in a second table.<br><b>Note:</b> One of the fields must be a primary key in its table<br>Add fields to the query grid as described above   |  |                  |
| Delete a table from a query  | Select a table from the query design view.<br>Press <b>Del</b>  |  |                  |

## QUERY TYPES

By default, Access creates “select” queries; rows and records you specify are selected, then displayed or printed. However, Access can act upon data if you specify a different type of query.



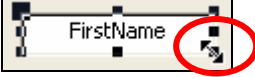


| Query type and purpose ↓  | Menu ↓                   | (Or) button ↓   | (Or) key combo ↓ |
|---|--------------------------|---|------------------|
| <b>Select</b><br>Displays or prints records with matching fields and/or records in a datasheet, form, or report | Query > Select Query     |    | N/A              |
| <b>Parameter</b><br>Requests user input   | Query > Parameter Query  | Type a question between [ ] in the criterion cell<br><b>Example:</b> [ What zip code? ]<br>Type the criterion when you run the query<br><b>Example:</b> 44114 |                  |
| <b>Crosstab</b><br>Calculates and restructures grouped data for easy analysis                                   | Query > Crosstab Query   |    | N/A              |
| <b>Make Table</b><br>Creates a new table  | Query > Make-Table Query |    | N/A              |
| <b>Update</b><br>Updates data in a table  | Query > Update Query     |    | N/A              |
| <b>Append</b><br>Adds data to from one table to another   | Query > Append Query     |   | N/A              |
| <b>Delete</b><br>Deletes matching records from a table  | Query > Delete Query     |    | N/A              |

## CONTROLS

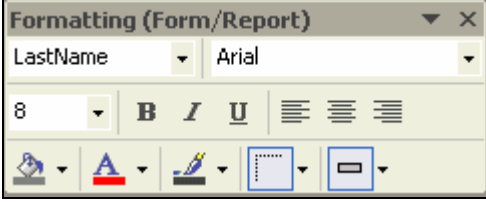


( USE THESE PROCEDURES ON FORMS, REPORTS AND DATA ACCESS PAGES )

**Controls** are objects on forms, reports, and data access pages.

**Objects** may be fields, labels, pictures, buttons, drop-down lists and more.

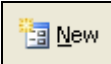










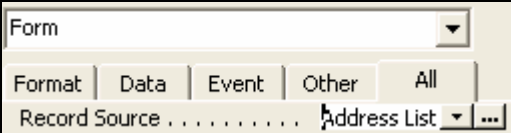



| To accomplish this ↓                           | Do this in Design view ↓   | Use this key combo ↓  |
|--|--|---|
| Add fields from a table or query               | View > Field List<br>Drag fields from the field list and drop them onto design object  | F8<br> |
| Add objects from a toolbox                     | View > Toolbox<br>Drag and drop object into design   |        |
| Resize an object                               | Drag a corner handle: Make sure the mouse pointer is a two-headed arrow<br>       |   |
| To increase the height of the selected control |  | ⇧ Shift ↑   |
| To increase the width of the selected control  |  | ⇧ Shift →   |
| To reduce the height of the selected control   |  | ⇧ Shift ↓   |
| To reduce the width of the selected control    |  | ⇧ Shift ←   |
| Move an object and its label                   | Drag a border line: Be sure the mouse pointer is an open hand<br>               |   |
| Move an object without its label               | Drag the large box in the upper left corner: The pointer is an index finger<br> |   |
| Move the selected control to the right         |  | Ctrl →  |
| Move the selected control to the left          |  | Ctrl ←  |
| Move the selected control up                   |  | Ctrl ↑  |
| Move the selected control down                 |  | Ctrl ↓  |

## CONTROLS (CONTINUED)

| To accomplish this ↓  | Do this in Design view ↓  | Use this key combo ↓  |
|---|---|---|
| Add text formatting   | Use the formatting toolbar<br>                | Ctrl B, Ctrl I, etc.  |
| Change properties of control  | Select the control<br>View > Properties<br>Or  | Alt Enter ↵ or F4   |
| Align objects horizontally  | Select controls to be aligned<br>Format > Align > (top, bottom, left or right)  | N/A   |
| Distribute controls with even amount of horizontal space between them | Select controls to be distributed<br>Format > Horizontal Spacing > Make Equal   | N/A   |
| Distribute controls with even amount of vertical space between them   | Select controls to be distributed<br>Format > Vertical Spacing > Make Equal   | N/A   |
| Delete an object  | Edit > Delete   |  |

## FORMS

Forms are used for data entry or display. Data typed in a form is stored in the underlying table.  
Forms are visually appealing and offer a variety of aids for user input, including drop-down lists and check boxes.  
Each item in a form is called an **object**.











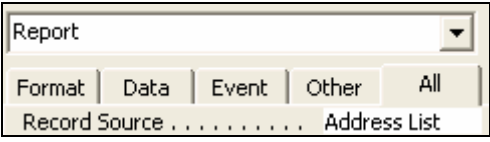
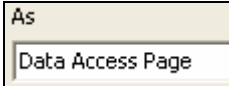



| To accomplish this ↓   | Use this menu ↓  | (Or) button ↓  | (Or) key combo ↓   |
|--|--|--|--|
| Create a form  | Select a table or query<br>Insert > Form   | Select a table or query ><br>  | N/A  |
| Add, modify, format, resize, move, delete controls on a form: See <a href="#">CONTROLS</a> |  |  |  |
| Types of controls  | Label <br>Text box <br>Radio button <br>Check box <br>Combo box <br>List box <br>Command button  | To display a name for a form field<br><br>To display data from a field<br><br>To choose one of a series<br><br>To choose one or more of a series<br><br>To choose from a list by clicking a drop-down arrow<br><br>To choose from a list by scrolling<br><br>To trigger an action when clicked |  |
| Save data in a form  | N/A  | N/A  |  <br>or  to the next record |
| Change data source<br>(to use same form for a different table or query)                    | View > Properties<br>Edit > Select Form ><br>Change Record Source  |    | N/A  |
| Print a form<br>(not recommended)  | File > Print   |    |    |

## REPORTS

A report displays records from a table or query in an orderly, formatted layout. Reports may include subtotals, grand totals and sub-reports.

Like forms, reports are composed of *objects*. Objects may be fields, labels, pictures or calculations.

The report displays sections: report header and footer, page header and footer, group header(s) and footer(s) and the detail (data) section. The section in which you place a control determines what data it prints.

| To accomplish this ↓   | Use this menu ↓   | (Or) button ↓   | (Or) key combo ↓  |
|--|---|---|---|
| Create a report  | Insert > Report   |    | N/A   |
| Add, modify, format, resize, move, delete controls on a report: See <a href="#">CONTROLS</a> |   |   |   |
| Sort records   | N/A   | <br>Choose field and its sort order  | N/A   |
| Group records  | N/A   | <br>Group on each value  | N/A   |
| Keep grouped records together on same page   | N/A   | <br>Keep together = Yes  | N/A   |
| Insert sub-totals  | Drag the field to be sub-totaled to the <i>group</i> footer<br>In the field properties, change the <i>control source</i> to a formula<br>Example: <b>=sum([Gross Pay])</b>  |   |   |
| Add grand totals   | Drag the field to be sub-totaled to the <i>report</i> footer<br>In the field properties, change the <i>control source</i> to a formula<br>Example: <b>=sum([Gross Pay])</b> |   |   |
| Insert a sub-report  | View > Toolbox  | <br>Place in report footer   | N/A   |
| Create / modify header   | Enlarge the page header section<br>View > Toolbox   | <br><br> inserts text<br> inserts picture | N/A   |
| Create / modify footer   | Enlarge the page footer<br>View > Toolbox   |  inserts text  | N/A   |
| Change data source<br>(to use same report for different table or query)                      | View > Properties<br>Edit > Select Report<br>Change Record Source   |   | N/A   |
| Change line spacing  | Enlarge the detail section  |   |   |
| Save for viewing in a Web browser  | File > Save As ...<br>Data Access Page  |   | N/A   |
| Print a report   | File > Print  |    |   |

## DATA ACCESS PAGES




A data access page is a web page, published from Access that has a connection to a database.

Use a data access page to view or modify data on an Intranet or the Internet.

Depending on the data source, the data displayed in the browser may be a snapshot of the original data or it may be live data.

Data access pages have the following advantages over printed reports:

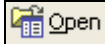
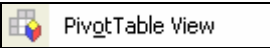
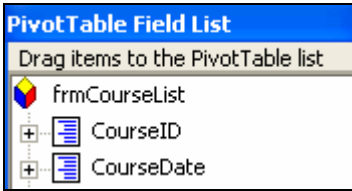
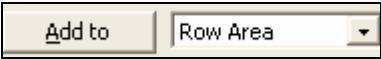
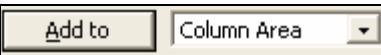


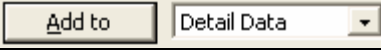
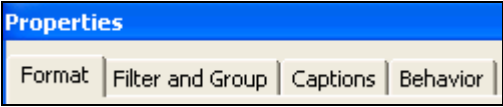
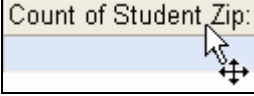



- Pages bound to data display **current** data because they are connected to a database.
- Pages are **interactive**. Users can filter, sort, and view just the records according to their individual needs.
- Pages can be distributed electronically by using **e-mail**. Recipients can see live or static data each time they open the message by viewing it in a Web browser such as Internet Explorer.

| To accomplish this ↓   | Use this menu ↓                                  | (Or) button ↓   | (Or) key combo ↓ |
|--|--|---|------------------|
| Create a data access page  | Select a table or query<br>Insert > Page         |    | N/A              |
| Add, modify, format, resize, move, delete controls on a data access page: See <a href="#">CONTROLS</a>   |  |   |                  |
| Add fields to a page   | Drag fields from the field list to the page      |   |                  |
| Save a data access page<br><b>Note:</b> The page is saved as an .htm file in the filing system, <b>not</b> in the database<br>A shortcut appears as a Page object in the database window | File > Save                                      |    | Ctrl S           |
| Save for viewing on an Intranet or Internet  | File > Save As ...<br>Specify the web server URL | N/A   | N/A              |
| Preview a data access page   | File > Web Page Preview                          | N/A   | N/A              |
| View a data access page in a browser   | Launch the browser<br>Type the URL               | N/A   | N/A              |
| Print a data access page   | File > Print                                     |  | Ctrl P           |
| E-mail a data access page  | File > Send To                                   | N/A   | N/A              |

## PIVOT TABLES AND PIVOT CHARTS

A **pivot table** is an interactive table used to quickly summarize, organize, analyze, and compare large amounts of data. The pivot table has its name because you can rotate (pivot) the row and column headings to rearrange the data and analyze it in different configurations.

A **pivot chart** is a graphic representation of data in a pivot table.

| To accomplish this ↓  | Use this menu ↓   | (Or) button ↓  | (Or) key combo ↓ |
|---|---|--|------------------|
| Open a table, query or form                                 | View > Database Objects   |    | Double-click     |
| View the PivotTable   | View > PivotTable View  |    | N/A              |
| Organize the data   | Select field(s)   | Drag fields to the one of the sections<br>   | N/A              |
| Row area:<br>Displays data vertically at left of table      |   |    | N/A              |
| Column area:<br>Displays data horizontally at top of table  |   |    | N/A              |
| Filter area:<br>Determines what data is displayed           |   |    | N/A              |
| Data area:<br>Determines what data is calculated            |   |    | N/A              |
| Detail area:<br>Displays all detail for each column and row |   |    | N/A              |
| Analyze the data  | Drag one or more numeric fields to the Detail area<br>These fields will be calculated |  |                  |
| Change formatting or other options                          | Select the object<br>View > Properties  |    | F4               |
| Reorganize layout   | Drag and drop one or more items to another section                                    | <br> | N/A              |
| Remove an item  | Drag the object away from the PivotTable  |    | Del              |
| View the PivotChart   | View > PivotChart View  |    | N/A              |

## REPORT SNAPSHOTS




A report snapshot is a file that contains the data and formatting of an Access report. Use snapshots to e-mail fully-formatted reports or display reports in a browser.

You can electronically distribute and publish snapshots using a combination of Snapshot Viewer (downloadable from the Microsoft Office Developer's Web site) and either a Web browser, Microsoft Windows Explorer or an e-mail application.

The Snapshot extension is .snp

| To accomplish this ↓                                   | Use this menu ↓  |
|--|--|
| Create and save a report snapshot                      | Select a report in the database window<br>File > Export ><br><div style="border: 1px solid black; padding: 2px; width: fit-content;">           Save as type: Snapshot Format (*.snp)         </div> Specify a drive and folder location |
| Save a snapshot for viewing on an Intranet or Internet | Save the snapshot as directed above<br>Specify the URL for a Intranet or web server instead of a drive and folder location<br>Create a link to the snapshot file on a web page   |
| Open a snapshot  | Open Windows Explorer or e-mail message<br>Double-click the snapshot file<br>Or click a link to a snapshot from a web page   |
| Distribute a snapshot                                  | Open the snapshot file<br>File > Send<br>Address the e-mail<br>The snapshot is attached  |
| Delete a snapshot                                      | Delete the snapshot file in Windows Explorer   |

## OFFICE LINKS

| To accomplish this ↓                      | Use this menu ↓   | (Or) button ↓  | (Or) key combo ↓ |
|---|---|--|------------------|
| Merge table with Word<br>(for mail merge) | Tools > Office Links ><br>Merge It with Microsoft Word    |  | N/A              |
| Publish with Word                         | Tools > Office Links ><br>Publish It with Microsoft Word  |  | N/A              |
| Analyze it with Excel                     | Tools > Office Links ><br>Analyze It with Microsoft Excel |  | N/A              |