Microsoft® Access 2007
Quick Reference Tutorial

RARE IT

Definitions

Switchboard	A form with direct links to objects/ commands.
Normalization	Splits your data into several tables so that it is stored more efficiently.
Referential Integrity	Establishes a relationship between tables to ensure data integrity.
Select Query	A query that finds data.
Action Query	A query that changes underlying data.
SQL	Structured Query Language, the code in which queries are constructed.
Foreign Key	A field present in a table that is the primary key of another table.
Macro	A group of commands combined with code, so that you can perform a whole series of actions with just one command.

Keyboard Shortcuts

F1	Open help pane.
F6	Switch panes.
F7	Check spelling of current object.
F11	Hide/show Navigation Pane.
F12	Open Save As window.
CTRL + O	Open a database file.
ALT+ F11	Open the Visual Basic Editor.
ALT+ENTER or F4	View the properties of the current database object
ALT+ENTER	Display the properties of the selected object
ALT+F4	Close the active item, or quit Access.

Common Form Controls

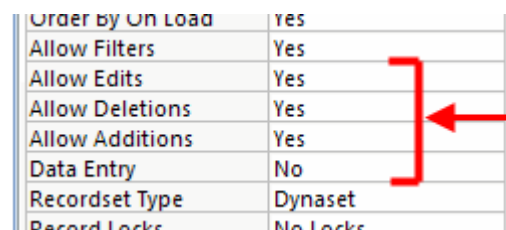| Control		Description
Combo Box		Use combo boxes to have the user pick an option out of a list of options by clicking the pull-down arrow.
List Box		A box that works similar to a combo box, but it can be expanded to show all of its contents. A user simply picks the option out of the list they want to use.
Subform/ Subreport		Lets you create a form inside a form or a report inside a report.
Line		Click and drag to draw a line in the form. Useful for dividing up the form components into groups so they are easier to read.
Rectangle		Draw rectangles in the form to help provide a visual group of related components.
Bound Object Frame		Allows you to enter and control various expressions and low-level operations that can be performed on the database.
Unbound Object Frame		Allows you to create a special window inside a frame that you can use to view some other document while looking at your form.
Option Group		Click and drag a box around a group of controls to group them together.
Check Box		When checked, the condition bound to the checkbox is true or active. When unchecked, the condition is false or inactive
Option Button		Used to select a certain option, and almost always in groups of two or more.
Toggle Buttons		A toggle button's command stays in effect when clicked and will remain so until it is clicked again.
Tab Control		Lets you create a series of tabs in your form, each with its own options. Useful if you have a large numbers of controls in a frame that can be categorized.
Image		Allows you to place a picture in your form.

Referential Integrity Rules

Referential Integrity is a set of rules and conditions that make data entry into databases safer. **Referential Integrity should be enforced whenever possible.** It insures that all related fields are valid when considered together in a database, and prevents accidental deletion of related data. To make referential integrity work, the following three conditions must be satisfied:

- The matching field from the parent table is a primary key **or** has a unique index
- The fields in the relationship have the same data type
- Both tables are stored in the same database file

Referential Integrity allows you to cascade database updates and deletions throughout the entire database.

Limit User Access to a Form

Many forms are used to both display and enter data. However, there may come a time when it is in the best interest of the database for users to not be allowed to make any modification via a form. Access allows limitations for both forms and subforms. Open the property sheet for the form and click the data tab:

Order By On Load	Yes
Allow Filters	Yes
Allow Edits	Yes
Allow Deletions	Yes
Allow Additions	Yes
Data Entry	No
Recordset Type	Dynaset
Record Locks	No Locks

Types of Table Relationships

Databases work because of the relationships specified during the construction phase. Having large amounts of data is not very useful unless the data somehow relates to each other. Databases can contain three types of relationships: One-to-One, One-to-Many, and Many-to-Many.

One-to-One	Each record in one table corresponds to one record in another table. For example, every employee has one office assigned to them. Usually the related data is based on primary keys.
One-to-Many	A record in one table can correspond to many records in another table. For example, each record in a Department table may relate to many records in the Employee table as more than one person can work in each department.
Many-to-Many	Though not often used in databases, they are useful if you wish to describe certain situations. For example, each employee can have no more than two jobs, and each job must have at least three employees working on it.

Normalization Steps

A key part of any database's integrity is normalization. This process splits your data into several tables so that it is stored more efficiently. It also reduces your database's size, meaning it will be faster, space will be saved, and the risk of corruption will be reduced.

To normalize your data, click the Analyze Table command in the Database Tools Ribbon. Here are the steps that the wizard will take you through:

Steps 1 and 2	Explain what the wizard will do and show you examples if you desire.
Step 3	Choose the table that you want to normalize.
Step 4	Choose the fields that you want to include, or let the wizard do it.
Step 5	Finalize how information is grouped.
Step 6	Verify primary key fields.
Step 7	Correct errors, if any were found, such as spelling errors.
Step 8	Choose whether or not you want to create a query.

Exporting to XML

Access allows most database objects to be exported to XML (Extensible Markup Language). Access allows any or all of the following data to be exported as well:

Data	Exporting only the data can be expanded to include dependant database objects. Depending on the application, data encoding can also be changed..
Schema	Including the schema saves information about how the data is saved by Access. Options include adding the schema information in the XML file or create a separate XSD file to hold the information.
Presentation	Access can export a full version of the object in a package similar in design to a Web page. Export to the local machine (HTML) or to a Microsoft-based server (ASP).

Importing Contacts from MS Outlook

Access can import an address book or contact list from Microsoft Outlook (if Outlook is the default mail client).

Step 1	Choose Outlook Folder from the More command in the Import ribbon.
Step 2	Choose to import the data, append to another table, or link to the data.
Step 3	Select the address book or contact file.
Step 4	Choose the field you want to use from the source data.
Step 5	Choose a primary key option (depending on choice in Step 2)
Step 6	Name the imported data (depending on choice in Step 2.

Basic Structured Query Language (SQL) Keywords

CREATE	The CREATE keyword is used to create a table in SQL `CREATE TABLE Employees (Employee_ID VARCHAR(3), Employee_Name VARCHAR(30));`
DELETE	The DELETE keyword is used to erase data in a table. `DELETE TABLE Employees WHERE [search criteria];`
DROP	The DROP keyword is used to erase a table structure from a database. `DROP TABLE Employees;`
INSERT	The INSERT keyword is used to add data to a table. `INSERT INTO Employees VALUES('G32', 'John Smith');`
SELECT	The SELECT keyword is used to retrieve information from one or more tables. `SELECT Employee_ID, Employee_Name FROM Employees WHERE Salary <30000;`
UPDATE	The UPDATE keyword is used to update data in a table. `UPDATE Employees SET Salary = Salary * 1.05 WHERE Position = 'Manager';`

PivotTable Fields

Row Fields	Indicates how data will be grouped horizontally.
Column Fields	Indicates how data will be grouped vertically.
Filter Fields	Filter data using this criteria.
Totals/Detail Fields	Add numeric fields here.

PivotChart Fields

Series Fields	Groups data in the chart.
Category Fields	Indicates how data will be grouped vertically.
Data Fields	Add numeric fields here.
Filter Fields	Filter data using these criteria.