

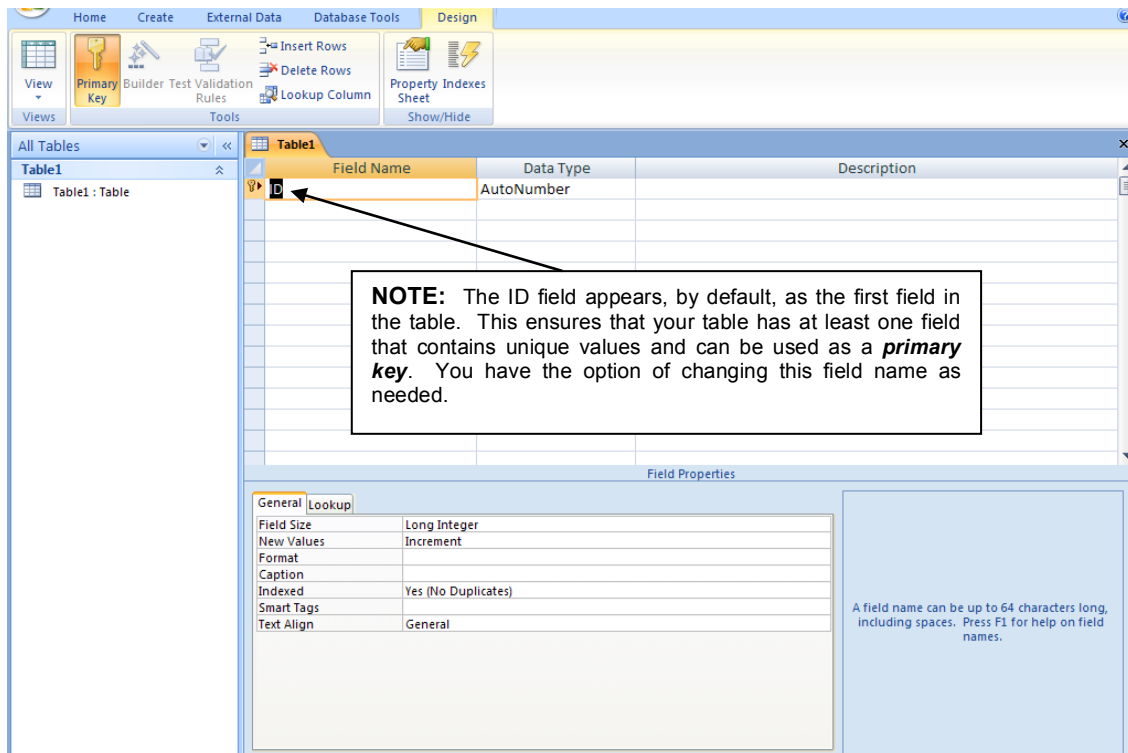
Microsoft Access: Quick Guide to Tables, Queries, Forms, and Reports

With Microsoft Access, I Can:

<input type="checkbox"/> Enter/Edit data quickly and easily	Form (custom data entry screen)
<input type="checkbox"/> Organize records in different ways	Sort/Filter
<input type="checkbox"/> Locate specific records quickly	Query
<input type="checkbox"/> Eliminate duplicate data	Primary Key/Tables
<input type="checkbox"/> Create relationships among tables in database	Relational Database
<input type="checkbox"/> Print data in various forms	Reports
<input type="checkbox"/> Change the appearance of information	Enhancement Features
<input type="checkbox"/> Interact with Other Microsoft Office components	Import/Export
<input type="checkbox"/> Automate frequently-used Access tasks	Macros
<input type="checkbox"/> Store data efficiently	Up to 2GB
<input type="checkbox"/> Provide enhanced security	Get to only needed fields
<input type="checkbox"/> Provide multiuser capabilities	Simultaneous entry and update

Tables

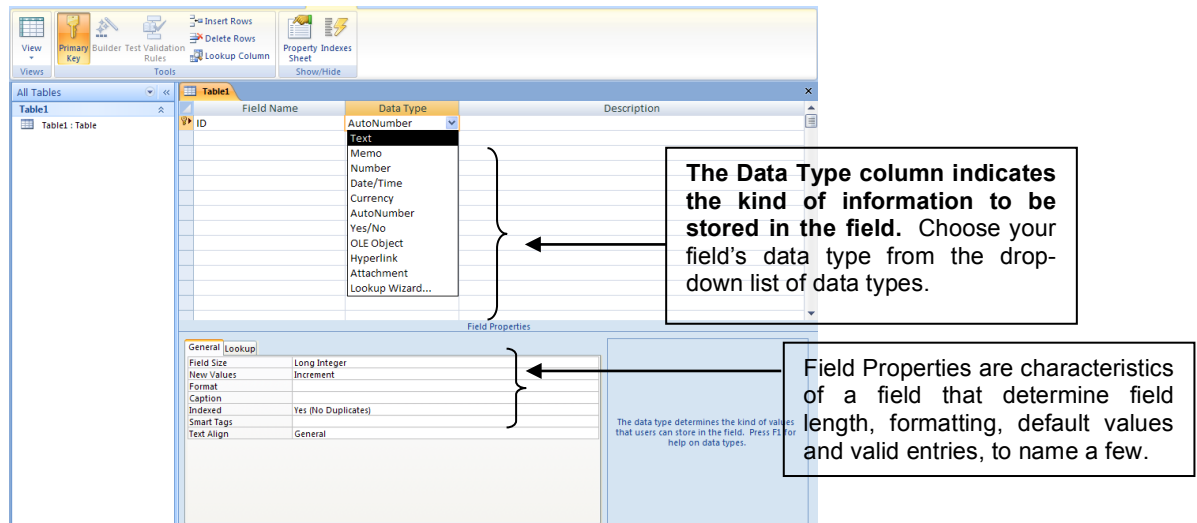
A **TABLE** contains all of the raw data within the database. You can view this data in spreadsheet-like view or in form-like view. Linking multiple tables via a common field or **KEY** minimizes data redundancy.



Create a table in either of three ways:

1. Use **Table Design View**. This is the more complex, but more powerful method.
2. Use a **table template**.
3. Enter data in a **new datasheet**.

Data Type Considerations

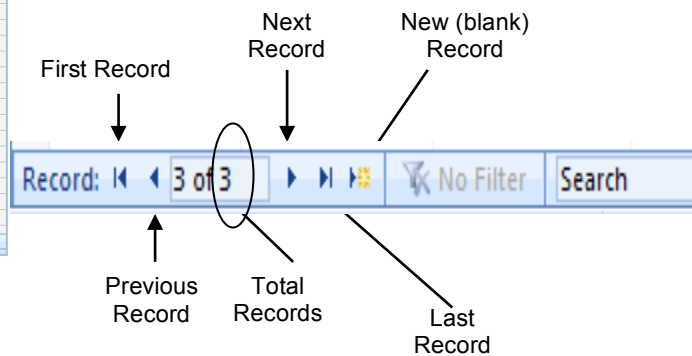
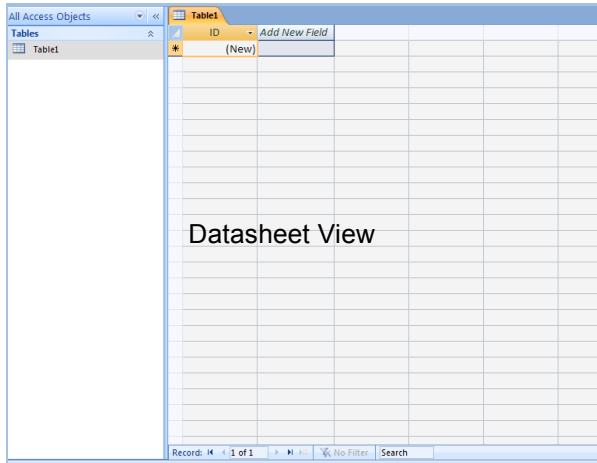


Data Types Available in Access

Data Type	Type of Data Stored	Storage Size
Text	Alphanumeric characters	0 - 255 characters
Memo	Alphanumeric characters	0 – 65,536 characters
Number	Numeric values	1, 2, 4, or 8 bytes; 16 bytes for Replication ID
Date/Time	Date and time data	1 bit (0 or -1)
Currency	Monetary data	8 bytes
AutoNumber	Automatic number increments	4 bytes; 16 bytes for Replication ID
Yes/No	Logical values; Yes/No, True/False	
OLE Object	Pictures, graphs, sound, video	
Hyperlink	Link to an Internet source	
Attachment	A special field (new in Access 2010) that enables you to attach external files to an Access database	Varies by attachment
Calculated	A special field (new in Access 2010) that allows you to create a pre-calculated formula.	
Lookup Wizard	Displays data from another table	Generally 4 bytes

Datasheet View


The Navigation Keys for the Datasheet view are located at the bottom left corner of the table window. See the figure below for instructions for moving between records in a table.



Entering Data

1. Click in the field in which you wish to enter data and begin typing.

Deleting Records

1. Click the record you want to delete.
2. Click **Delete Record**  on the toolbar.

Sort (Ascending/Descending)

SORTING rearranges records in order by one or more fields (parameters). You can sort in ascending or descending order. Before sorting, move the insertion point to the field you want to sort.

You can sort in Datasheet or Form view, although it is easier to see the sort results in Datasheet view.

Datasheet View

Filtering

FILTERING allows you to see a subset of your total database records. The total number of records that match the filter appears to the right of the navigation buttons at the bottom of the datasheet or form. Use these options to filter your records:

Filter by Selection

Choose only records that match the current field.

Filter Excluding Selection

Choose all records that don't match the current field.

Filter by Form

Choose records whose field matches what you type.

Advanced Filter/Sort

Create more complicated filters in conjunction with sort

Queries

A **QUERY** is a set of restrictions placed on database tables by specifying criteria to retrieve qualifying records from the tables. A query allows you to answer questions about your data, to see the data in the order you want it and to change selected data in various ways. Query results can be saved for future use as sources of data for forms, reports, charts, tables and other queries. Query results display only specified fields rather than all table fields. Also, you can use certain fields in the query as filters without including those fields in the query output.

The most commonly used query is the **SELECT QUERY**, in which records are collected, viewed and can be modified later. Select Queries allow you to:

- Query more than one table
- Create new calculated fields
- Summarize and group data
- Choose which fields to show or hide

The **CROSSTAB QUERY** groups data into categories and displays values in a spreadsheet-like format with summary totals. Crosstab Queries can be used to:

- Compare values and see trends in your data
- View summary data
- Answer questions such as “Who has ordered how many of what?”
- Form the basis for reports or charts

Other types of queries are as follows:

- Make Table Query
- Update Query
- Append Query
- Delete Query

Queries may be created “from scratch” or by using the **QUERY WIZARD**.

Forms

FORMS offer alternative ways to view and work with data in tables. A form can display data in just about any format you desire. Perhaps the most common use of a form is to create a fill-in-the-blanks view of your data that resembles a paper form used by your organization.

With **FORM WIZARDS** you can create data entry forms in about two seconds! You can use almost any Wizard-created form to enter data into tables.

Just as it is very important to plan your database before actually beginning the creation process, it is very important to plan and organize your form before attempting to create it. A well-designed and properly organized form makes a tremendous difference in the productivity of the user of the form. Since forms are often the primary objects used to enter and edit data, time spent in planning a form is time well spent.

- Determine the overall purpose of the form
- Determine the underlying record source(s)
- Gather the source documents used to design your form or sketch the form by hand if a paper sample does not exist
- Determine the best type of *control* to use for each element on the form

Planning A Form

Forms are often designed to match a source document to facilitate fast and accurate data entry. Since typing directly into the database (rather than first recording on paper) is becoming more and more common, form design considerations are very important.

Name	Used To	Bound/Unbound
Label	Provide consistent descriptive text as you navigate through records	Unbound
Text Box	Display, edit or enter data for each record from underlying data source	Bound
List Box	Display a list of possible data entries	Bound
Combo Box	Display a list of possible data entries for a field. Provide text box for a keyboard entry. A “combination” of list box and text box controls.	Bound
Tab Control	Create a 3-dimensional aspect to a form so that controls can be organized and displayed by clicking the “tabs”	Unbound
Check Box	Display “yes” or “no” answers for a field. If the box is checked, it displays “yes” information.	Bound
Toggle Button	Display “yes” or “no” answers for a field. If the button is “pressed”, it displays “yes” information.	Bound
Option Button	Display a limited list of possible choices for a field	Bound
Bound Image Control	Display OLE data, such as a picture.	Bound
Unbound Image Control	Display picture or clip art that doesn't change as you navigate through the records.	Unbound
Line and Rectangle Controls	Draw lines and rectangles on the form	Unbound
Command Button	Provide an easy way to initiate a command or run a macro.	Unbound

Reports

A **REPORT** is an Access object used to create printouts. Although data displayed in a report can be viewed on the screen, it is usually sent to the printer. Reports in Access can be based on the fields and records of either a table or a query and can include extensive enhancements and formatting. Reports can also include calculations, subtotals and totals.

The **Report Wizard** can help you create an initial report which can be later modified or enhanced. However, it is very important to plan your report before beginning the actual create process. The planning process helps to ensure that your report(s) will meet the intended objectives.

Report sections are as follows:

- Report Header At top of first page of report
- Page Header At top of every page (but below the report header on page 1)
- Group Header Before every group of records
- Detail Once for every record
- Group Footer After every group of records
- Page Footer At the bottom of every page
- Report Footer At the end of the entire report

You can create a report in Report Design View or you can use the Report Wizard to get you started. In addition to asking you questions about which objects your report will be based on, the Report Wizard also asks you how you want your report records to be grouped and sorted.

HELPFUL HINT

It is often easier to base a report on a query than on fields from different tables. You can use the query to collect the fields that you want to use in one object, then use that one object (the query) as the basis for your report. If after creating a report you decide later to add more fields or limit the number of records in the table, you will find it easier to add fields or criteria to an underlying query object to meet the new needs. Otherwise, you would have to change properties of the report itself.

Planning A Report

Hard copy reports are often the primary tool used to communicate database information. The Report Wizard can help you create an initial report object that you can later modify or customize to meet your specific needs.

Section	Where This Section Prints	Controls Most Commonly Placed There
Report Header	At the top of the first page of the report	Label controls containing the report title. Can also include clip art, a logo image, or a line separating the title from the rest of the report
Page Header	At the top of every page (but below the report header on page 1)	Descriptive label controls often acting as column headings for text box controls in the Detail section
Group Header	Before every group of records	Text box control for the field by which the records are grouped
Detail	Once for every record	Text box controls for the rest of the fields
Group Footer	After every group of records	Text box controls containing calculated expressions, such as subtotals or counts, for the records in that group
Page Footer	At the bottom of every page	Text box controls containing page number or date expression
Report Footer	At the end of the entire report	Text box controls containing expressions such as grand totals or counts that calculate an answer for all of the records in the report