

# Microsoft Access 2007 Overview

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## What is Microsoft Access?

Microsoft Access is a powerful relational database tool. A database is a collection of information that's related to a particular subject or purpose, such as tracking student information or tracking customers and orders. A relational database allows you to assign relationships among data and tables for analysis and reporting.

Using Microsoft Access, you can manage all your information from a single database file. Within that file, you can divide your data into tables; view, add, and update table data by using online forms; search for just the data you need by using filters and queries; and analyze or print data in a specific layout by using reports. The most efficient databases contain different tables for each type of information that needs to be tracked. The information from multiple tables can be brought together by a query, form, or report.

## The Big Picture

Access is made up of multiple components. For instance, a company might just have one database to contain all of its information. However, within that database, there would be multiple tables. Tables can be displayed in datasheet format or using forms. Reports can be created from the data entered in the tables.

### Tables

The main organizational structure of every database is the tables used within it. Using the example mentioned above, a company might have tables with employee information, customer information, invoices, products, and shipping.

### Fields

Each table is comprised of fields. For instance, a table about employees might contain the following fields: First name, Last name, Phone, Address, Social Security Number, Hire Date, Salary, etc.

### Records

Also within each table, there are elements referred to as records. In the table about employees, all the information about one specific employee would be a record.

## Starting Access

Follow these steps to start Access. Initially, to become familiar with a database and tables, we will use the Access Practice database file. This is available in the classroom and from the web page, [www.carlsonschool.umn.edu/oitcourses](http://www.carlsonschool.umn.edu/oitcourses) (click the Access course description).

1. Click the **Start** button on the lower-left portion of the Windows taskbar.
2. Select **P**rograms, Microsoft Access. (This may be in a slightly different location, depending upon the configuration of your computer.)

or

Double-click the Access shortcut icon on your desktop if one is available. The following window displays.



This window provides options to:

- Create a blank database
- Use one of Microsoft's templates.
- Connect to Microsoft online to download templates or get help.
- View a list of recently opened databases the right side of the screen.

## Using Help

From all screens in Access, click the Help button  in the upper-right corner for assistance with any topic.

## What is Different about Access 2007?

The primary difference for Access 2007 is the significant change to the user interface. For people with prior experience in Access, it can be a challenge to find familiar features. However, for those new to Access, the interface is intuitive and easy to manage. There are also changes to file format and users who do not have Access 2007 will not be able to open your database unless you save it to an earlier version.

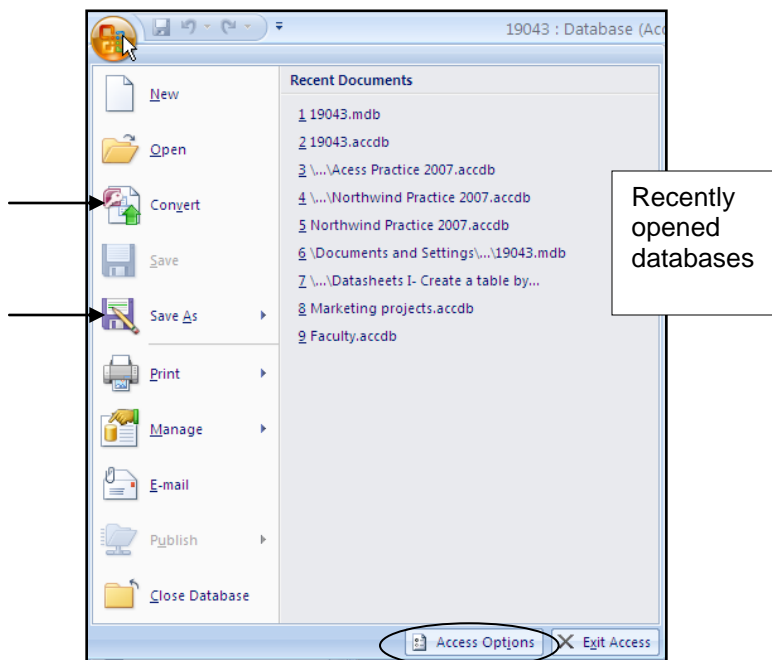
### Microsoft Office Button



The Microsoft Office Button, located in the upper-left corner of the Access screen allows you to view many options that were previously available from the File menu, such as Open, Save As, and Print. It also provides an option to convert databases from earlier versions of Access (.mdb format) to the new (.accdb) format. This Convert option is available when you open a database from an earlier version.

### File Compatibility with Earlier Versions of Access

The file format for Access 2007 cannot be opened with earlier versions of Access. If you must share your database with those using earlier versions, you should save down to a lower version. If you have an older database that you would like to convert to Access 2007, you can do so from the Office button, either through the Save As option or by selecting Convert.



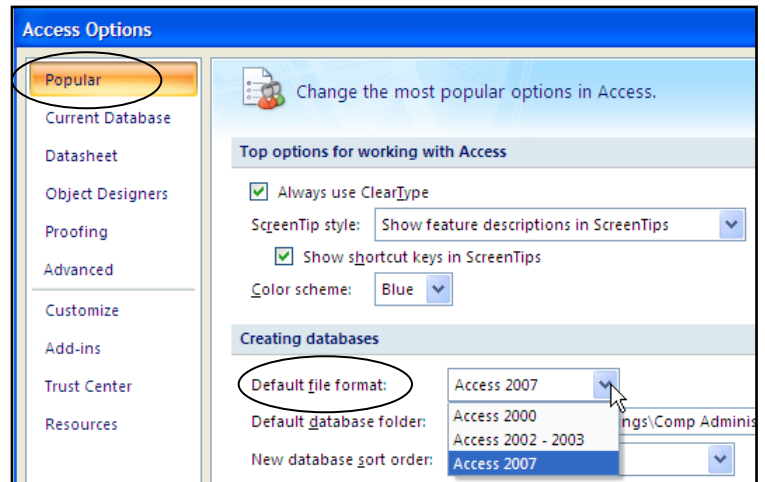
To modify options for Access, click the Access Options button. See information on changing default file format which follows.

**Note:** New features of Access 2007 include allowing multi-value fields and attachments.

## Changing the Default File Format

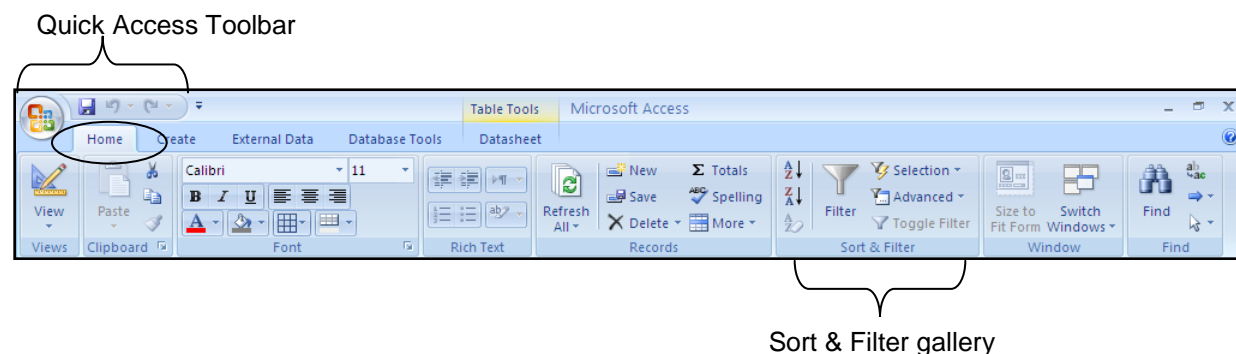
You can change the default file format, if desired. Click the Access Options button; then in the Popular options, select the desired format.

**Note:** For this class, we will use the Access 2007 (.accdb) format. Check Microsoft Help for further information.



## The Ribbon

As with other Office 2007 applications, Access uses the new Ribbon interface. The Ribbon replaces the menu bar with which most users are familiar. Tasks are grouped together on different command tabs. Each tab has a group or “gallery” of related tasks.



## Minimizing the Ribbon

You can double-click any Ribbon tab to minimize the Ribbon and display more of the Access screen if desired. Single-click any tab to temporarily display all options for that tab. Double-clicking again, displays the full Ribbon.

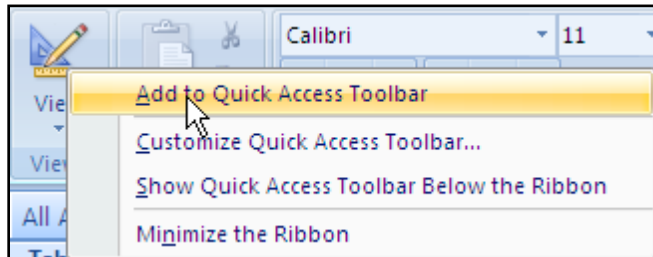
You can also minimize the ribbon from the Quick Access Toolbar.



## Quick Access Toolbar


The Quick Access Toolbar can be modified to include tools you frequently use. This eliminates the necessity to navigate to another tab to perform a task. To add a tool:

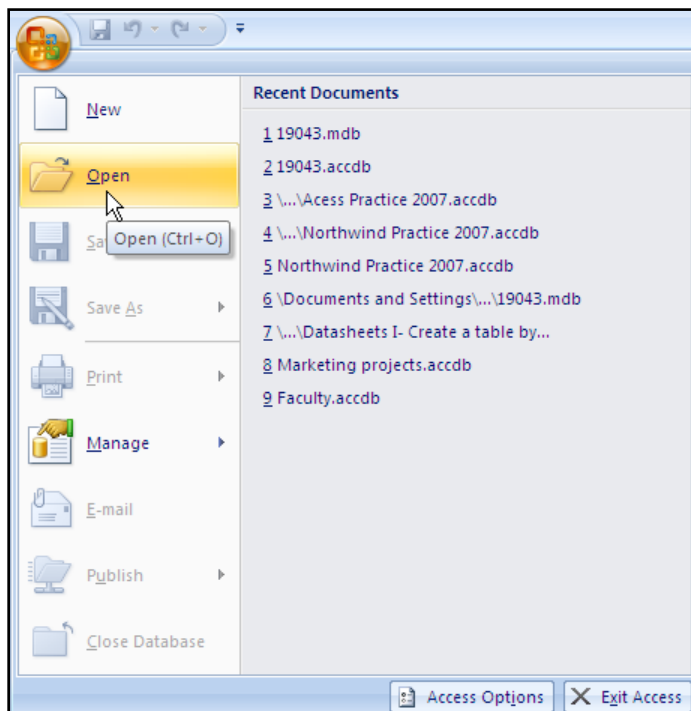
Click the  from the toolbar  and select from the options available.  
OR  
Right-click a tool, and select Add to Quick Access Toolbar.



## Opening an Existing Database

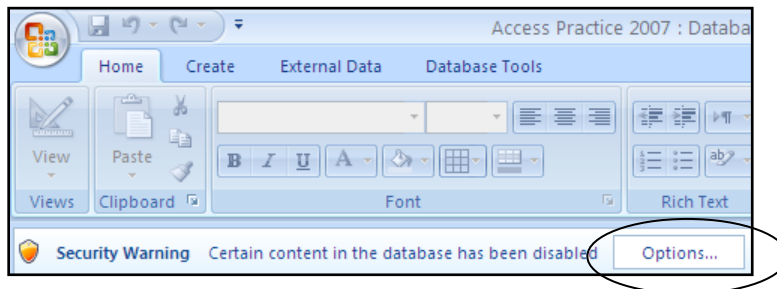
We will explore an existing database to become familiar with the various components of Access. Follow these steps to open an existing database.

1. Click the Microsoft Office button  from the upper-left corner of the Access window.

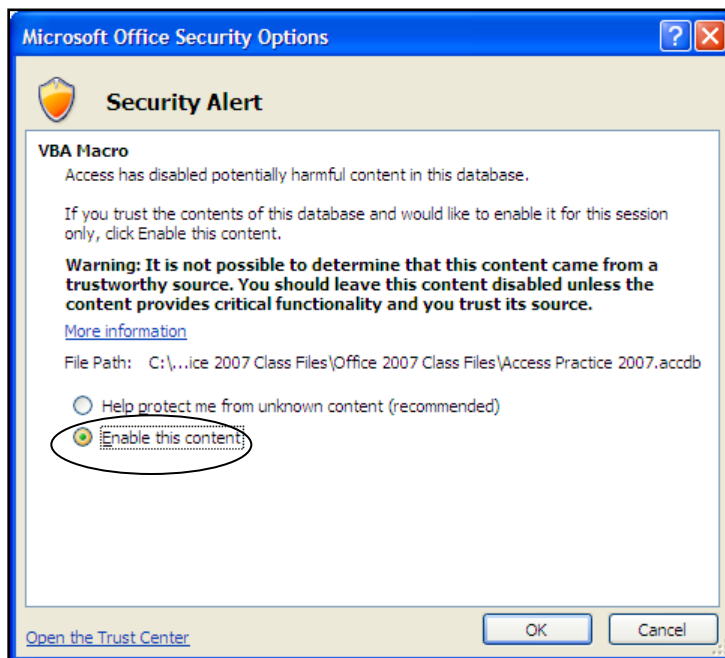


2. Select from the Recent Documents, if available, or click **Open** and navigate to the drive or folder to locate the database you want to open.

- When security levels are set to the default and/or if the database contains macros, the following Security Warning displays.



- Click **Options**



- If you trust the owner of the database, select Enable this content, and click **OK**.

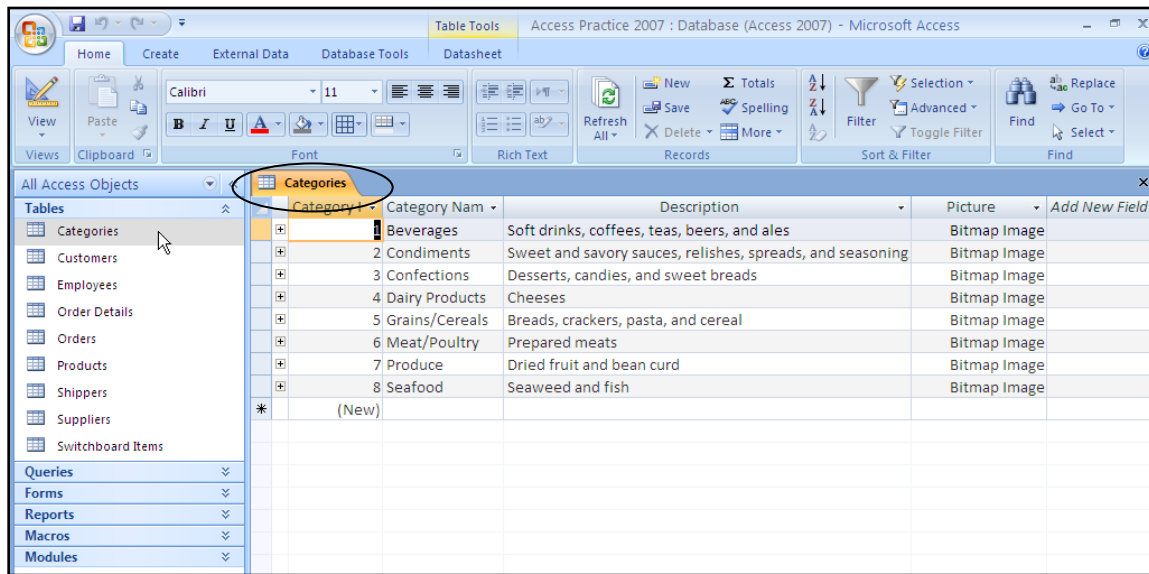
**Note:** This Security Alert message displays if the database contains macros, modules, or action queries. The practice database we use in class is located at the IT Training website: <http://www.carlsonschool.umn.edu/oitcourses>. Select the Microsoft Access 2007 course description to download the practice file. The practice file contains macros; however, macros and modules are outside of the scope of this class.

## Exploring a Database

We will explore components of an existing database to help you become familiar with the features of Access.

## Database Window

The screen below displays the Tables object expanded, and the Categories table open.



## Opening an Object

To open an object, locate it in the Navigation pane; then double-click to open. A tab displays for the open object of Access as the above example shows.

## Database Objects

The Navigation Pane displays the various database objects. You can expand or collapse the views of these objects to display the information you need.

**Tables** As mentioned earlier, tables are the main component of a database. Tables can be viewed either as a datasheet or in design view. Pivot tables and charts are also available, but are outside the scope of this course.

**Queries** You must create queries yourself. For instance, you might want to perform a query to find out if there were any expenses for meals that exceeded \$50.00.

**Forms** Forms are closely associated with tables. When you use a form, you view one record at a time. When you use a table in datasheet view, you view as many records as can fit on your screen.


**Reports** You can create reports to display the information you specify. Reports are typically used for printing.

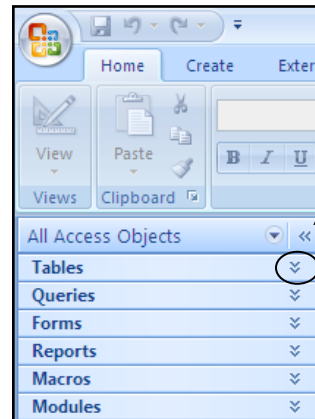
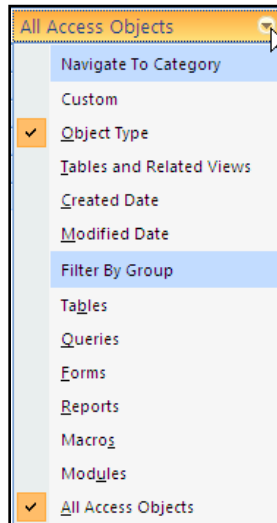
**Macro** A macro lets you perform a series of tasks by issuing one command.

**Module** Modules are similar to macros, but more complicated, and require some programming knowledge. (Macros and modules are outside the scope of this course.)

## Using the Navigation Pane

Many viewing options are available from the Navigation Pane and can be somewhat confusing to those new to Access 2007. Two suggestions are provided below.

Click the drop-down button and select Object Type and All Access Objects to display a view like the one below. You can use the expand buttons to view all the objects of a certain type. To expand an object, e.g., to view all tables in the database, click the expand button  next to that object type. You can also collapse the Navigation pane, if desired.

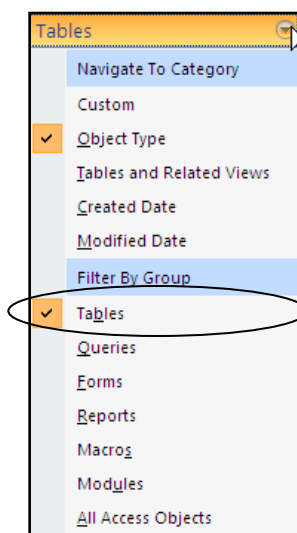


Click to collapse the Navigation pane

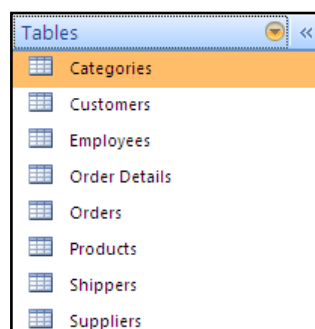
Expand button to view all tables in database

OR

Under the Filter By Group option, select the object type you want to view to display a view like the example below. The Table object is selected and changes the view to display all tables in the database.



to view



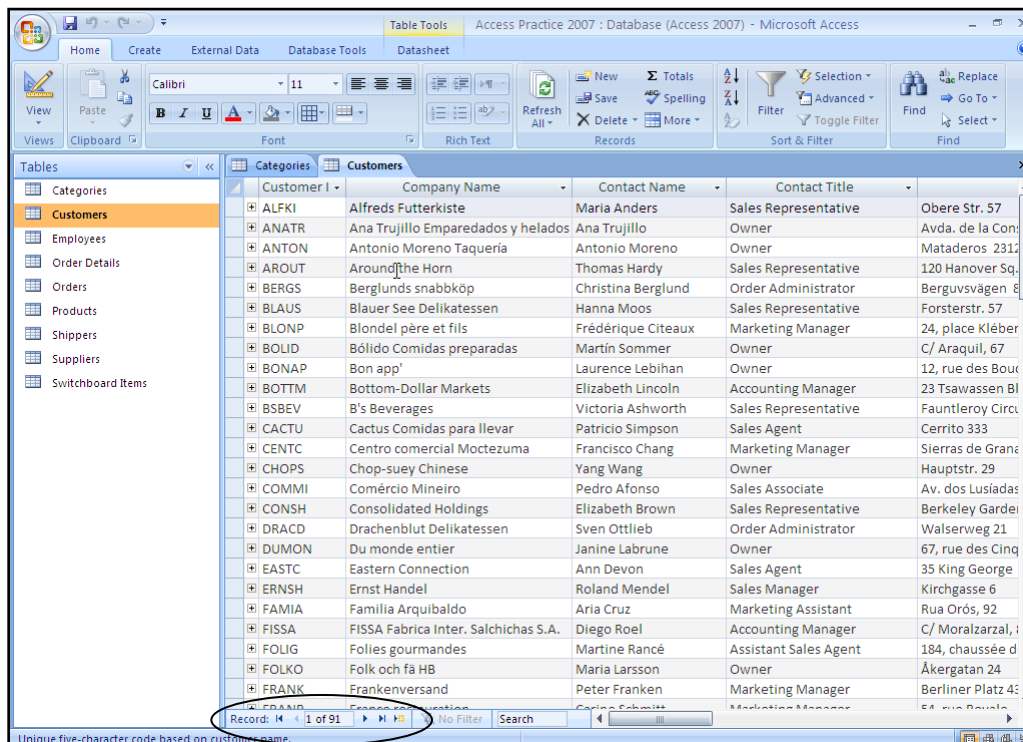
## Working with Existing Tables

Many people who use Access never create a database. One or two people may create a database; then others enter data, perform filters and queries, and create reports. It is important, however, to understand how a database works. For this reason, we are going to begin by studying an existing database to see how the tables were set up.






### Opening a Table

Follow these steps to open a table in an existing database.

1. Open the appropriate database.
2. Select **Tables** from the objects available on from the Navigation pane. A list of tables in this database display on the right side of the window.
3. Double-click the table you want to open. Access opens a new “tab” and the table displays in Datasheet view, similar to an Excel spreadsheet.



- Each record displays in a row in the table.
- The field names display at the top of each column as a heading
- The record number of the selected record displays in the lower-left corner.
- Navigation buttons display in the lower-left corner to assist you in locating other records.
  - To move to the last record, click .
  - To move to the first record, click . (See next page for more navigation)



- To move forward one record at a time, click .
- To move backward one record at a time, click .
- To move to a specific record, type the record number in the field, and press **Enter**.
- To add a new record, click .
- Use the scroll bars to view additional fields or records.
- To view information in related tables, click the expand button  to the left of the record. Click  to collapse the information. (See page 13 for information on relationships.)

## Working with Records in an Existing Table

You can easily add records, delete records, and sort records in an existing table.

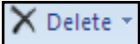
### Adding a Record

Use any of the following methods to add a record to the table.

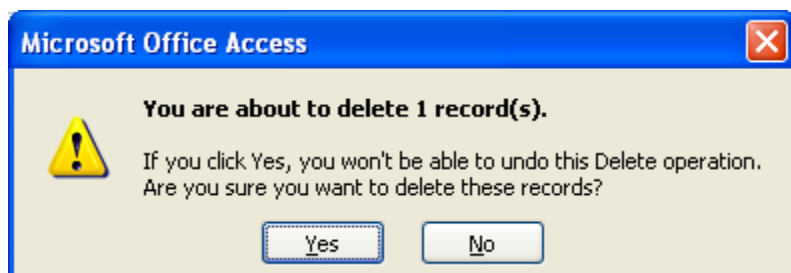
- From the buttons on the lower-left corner of the table window, click .
- From the **Home** tab of the Ribbon, click the **New Record** button .
- Right-click in the shaded area on the far-left side of the table window to select a row or record, and select New Record.
- From the last field of the last record, press **Tab**.

### Deleting a Record

To delete a record, select the record(s) you want to delete by selecting the record(s) in the far left shaded column. The selected record(s) is highlighted. Then perform any of the following procedures.

- Press the **Delete** key.
- From the **Home** tab, click the **Delete Record** button .
- Right-click in the left shaded column and select Delete Record.

The **Microsoft Access** dialog box displays.



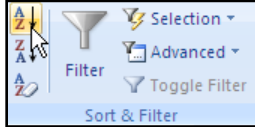
Click **Yes** to delete the record(s).

**Note:** If the record you want to delete is related to records in another table, a screen displays to indicate that this record cannot be deleted.

## Sorting Records

You can easily sort records in a table by one column using the buttons on the **Home** tab.

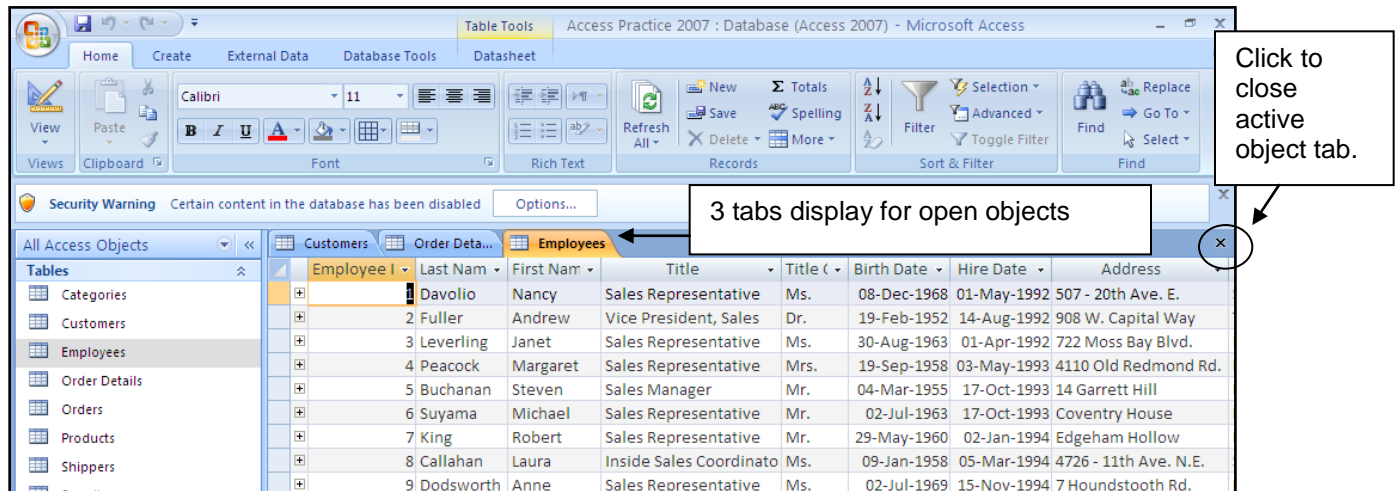
Simply click in the column by which you want to sort, and click the appropriate Sort button. Sorting by more than one column must be done in a query. See page 44.



To remove a sort, click the **Remove all Sorts** button .

## Tabbed Viewing

A new feature in Access 2007 is tabbed viewing. If you open more than one object in your database, multiple tabs display for each open object. Multiple objects open are shown in the example below. You can move from one object to another by simply clicking the tab.




## Closing a Tab

Right-click on the tab you want to close and select **Close** or select **Close All** to close all open tabs in your database.

OR

Click the **Close** button  for the selected object.

## Changing Column Widths


You can adjust the width of a column by clicking the border of a column heading. When your mouse displays as a , click and drag to the appropriate width.


## Viewing a Table in Design View


You can view a table in the Datasheet view or you can use the Design view. The Design view allows you to see how the fields were set up in the table. Follow these steps to view a table in Design view. We will discuss more information about table design beginning on page 19.


1. Open the database and table you want to view.




2. From the **Home** tab, click the **View** button or click  and select Design View.

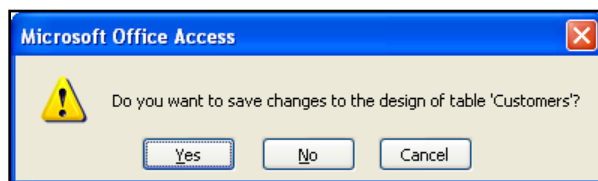
The design view for the selected table displays. Note the  Primary key symbol. Primary keys are a vital part of an Access database and will be discussed beginning on page 17.

Customers		
Field Name	Data Type	Description
 CustomerID	Text	Unique five-character code based on customer name.
CompanyName	Text	
ContactName	Text	

3. To return to the datasheet view, click the **View** button again or click  and select Datasheet View.

## Saving Changes to a Table

Whenever you add or delete records in a table, those changes save automatically when you close your table. However, if you have made other changes to the display that you want to save, such as sort order, or column width, or added new fields, you will need to save those changes. Click the **Save** button  on the QuickAccess toolbar. If you close your table without saving, the following screen displays. Click **Yes** if you want to save those changes.



## Closing a Table

Right-click on the tab for the table you want to close and select **Close** or select **Close All** to close all open tabs in your database.

OR

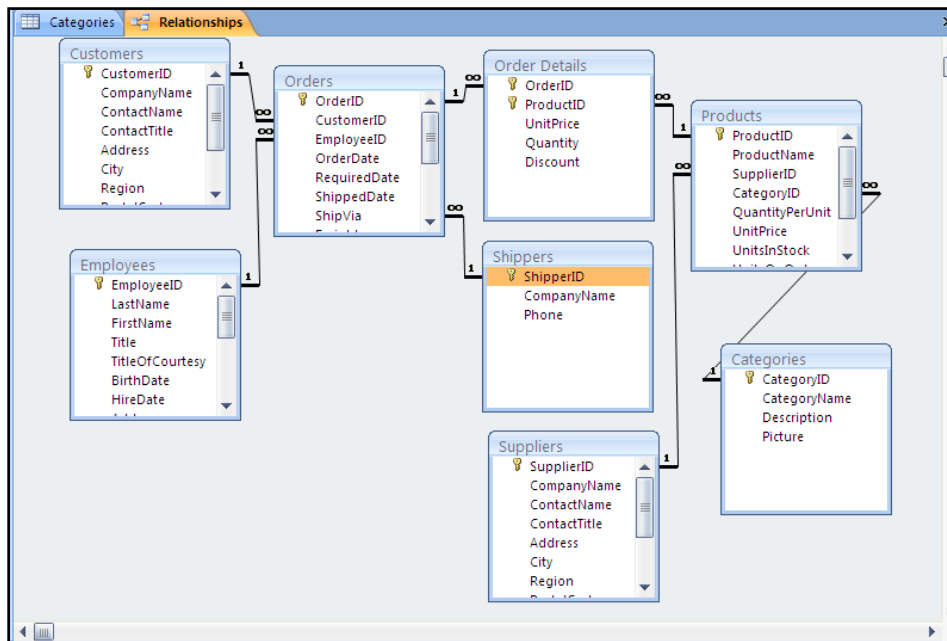
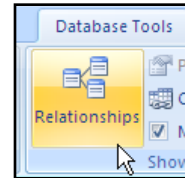
Click the **Close** button  for the selected object.



## Introducing Relationships

The most efficient databases contain multiple tables. Those tables can then be related to each other. When you create a database using the database templates (see page 14), Access automatically creates relationships for you. You can also modify relationships yourself. (See page 30.)

For now, we want to explore relationships and what they mean. To view the relationships in a database, click the **Database Tools** tab, and click the **Relationships** button. A screen displays indicating the relationships between the tables.



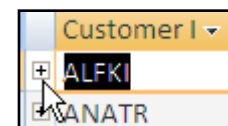
In the example above, the tables are related through the primary keys. (See page 17 for information on primary keys.) The line from one table to another shows the field that is used to relate the tables. The “1” and “∞” indicate that these relationships are “one to many.” This means, for instance, that one customer could place many orders, etc. Relationships will be discussed in more detail later in this class. (See page 30.)



When finished viewing relationships, click the **Close** button.

## Viewing Relationship Information from a Table

When viewing a table, you can click the Expand (+) and Collapse (-) buttons to view related records in other tables.



## Closing a Database



Click the Microsoft Office button and click Close Database.

## Creating a Database

You can create a database from scratch or use a Database template. If you create a database from scratch, you can include only the components you need. Access can also create a database for you with the Database templates. This creates tables, forms, and reports for some typical kinds of databases, such as asset tracking, contact management, expenses, etc.

## Good Database Design

There are some basic concepts that should be used when designing your own database. Now that you are somewhat familiar with some of the components, we can cover these.

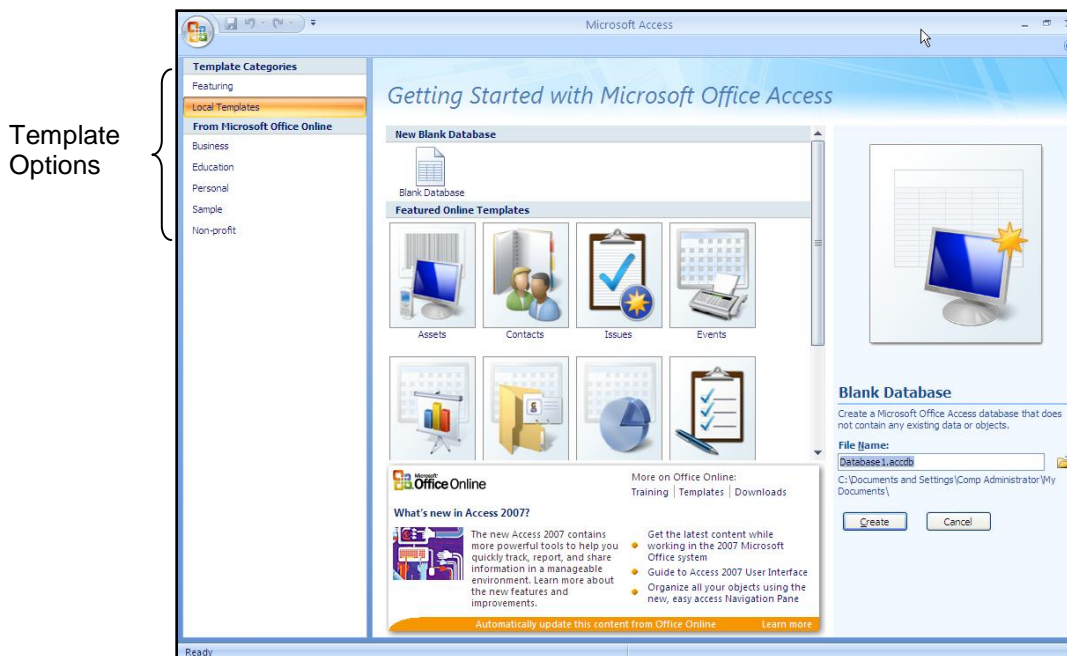
- Lay out a draft of the tables and fields you will need on paper (similar to a flow chart) before constructing your database. This is the most important suggestion. This will help you to see what information relates to other information, and will assist you in creating relationships and determining primary keys.
- You should have a unique primary key. Primary keys help keep records in order and enable you to form relationships.

## Creating a Database with an Access Template

**Note:** This information is provided for reference only. Access has a number of templates available to help you get quickly started. However, it is important to understand the basics of database design so that you can modify the template to suit your needs. For this reason, we will focus on designing your own database so that you will have a clearer understanding of how modifications can be made.

To use an Access template:

1. Click the Microsoft Office button, and select New. The following screen displays.




2. Select the desired option:

- To download a “featured” template from Microsoft, select Featuring from the left-hand **Navigation** bar and select the desired option from the main area of the screen. Click the **Download** button on the right side of the screen.
- To create a database from one of the templates installed on your computer, select Local Templates and select the desired option.
- To view and download additional templates available from Microsoft, select From Microsoft Office Online. Click the **Download** button on the right side of the screen.

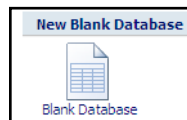
A new database will be created and saved in the default location on your computer. This new database may contain forms, reports, and queries, as well as relationships.

## Creating a New Blank Database

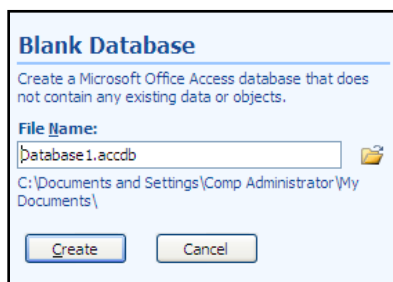
To help you have a clearer understanding of the components of an Access database, we will create a blank database in class so that we can customize fields and create our own primary keys and relationships.


1. Click the Microsoft Office button , and select **New**.


2. Click **Blank Database**.



3. The right side of your screen displays a field to enter the new database name, as well as navigate to the location where you would like to save your new database.



4. Enter the database name in the File Name: field. For our class exercises name the database **Carlson School**.
5. If you want to save the database in an alternate location, click the  and navigate to a different drive and/or folder to select the desired location.

**Note:** Clicking  allows you the option to save in an alternate format, such as Access 2000, which may be desirable if sharing your file with others

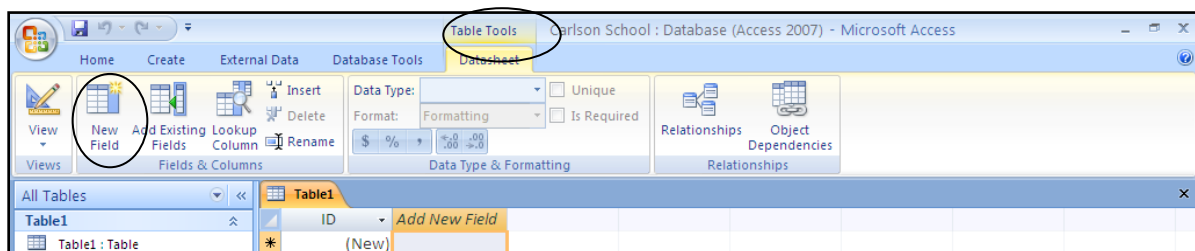
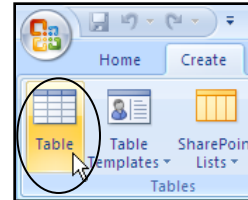
6. Click the **Create** button.

7. A new database is created and opens with a table with no fields or records.

## Creating Tables

Access 2007 has made it easier to create basic tables. Using the Design view (see page 19) allows you additional options. To create a table:

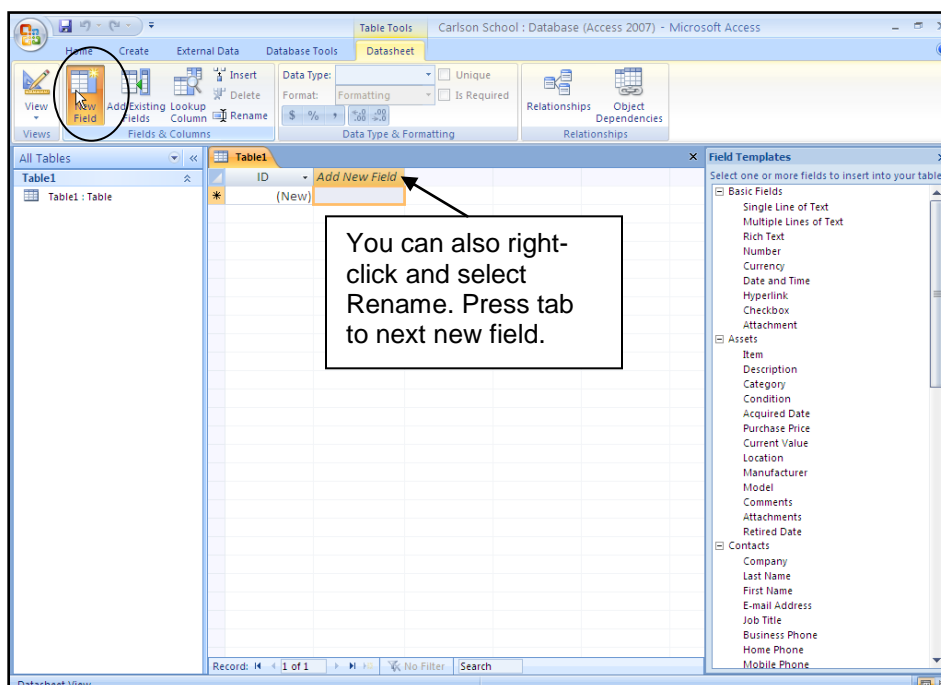
1. Activate the **Create** tab and click the **Table** button.
2. A new table displays with no fields or records. A “**Table Tools**” tab displays at the top of the Access screen with tools available for customizing and creating your tables.



## Creating Tables by Adding Fields from Templates

You can use the above view and add new fields that have been custom-designed by Microsoft.

1. Click the **New Field** button. A new pane displays on the right side of the screen with a variety of table field templates from which to choose.



- The Basic Fields category has general field types as are available when working in the Design view of your table.
- The other categories have customized field types that you can easily add as appropriate for the type of data you want to track. You can combine fields from any of the options available.

2. Double-click the fields you want to add. The new fields display at the top of your table.

### Renaming a Field

If you added a field such as “Single Line of Text” you can rename the field by right-clicking the field name and selecting **Rename**. Type the new name in the high-lighted field area.

### Field Names

Field names can consist of up to 64 characters, including letters, numbers, spaces, and any special characters except a period, exclamation point, accent grave (`), or brackets. Spaces are allowed but not as the first character.


**Note:** Access allows you to use spaces and many of their new customized table templates also use spaces in their field names. However, we recommend that you do not do so. Use an underscore or upper and lower-case letters to define your field names, such as First\_Name or FirstName. Anyone wishing to use VBA code will be more successful using these field naming suggestions.

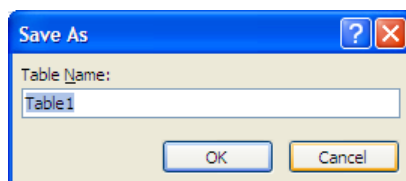
**Tip:** If you want your field names to appear as though they have spaces, you can modify the “Caption” in Design view. This will be covered on page 22 .

### Primary Keys

A primary key is not necessary in a single table, but is important when relating tables to each other. A primary key should be a field that contains unique information that could not be the same for more than one record in that table. Some possible examples for a primary key are Student IDs, corporate employee numbers, social security numbers, customer numbers, purchase order numbers, etc. Only one record could have these unique numbers. Primary keys that MIGHT work would be phone numbers or addresses. Fields that would NOT work are names, birth dates, product numbers, etc. as multiple records could have the same information. By default, Access creates a primary key for you as the first field in your table as an auto numbered field. You can set your own primary key from the Design view. This will be covered on page 20 .

### Saving a Table

When finished adding fields to your new table, click the Save button  on the Quick Access toolbar. The following dialog box displays.



Enter the desired table name and click **OK**.

**\*\*Exercise 1**

Create and save a table called “Departments.” Allow Access to use the ID field as a primary key. Use the “Single line of text” field type and rename each field as below. Save your table; then enter the following data into your table.

DepartmentID	Description
HRIR	Human Resources and Industrial Relations
IDSC	Information and Decision Sciences
MBA	Masters of Business Administration
MBT	Masters of Business Taxation
FINA	Finance

**\*\*Exercise 2**

Create another table to track benefactor information. You can use the **Contacts** template for some of the field types. Create your table with the following fields:

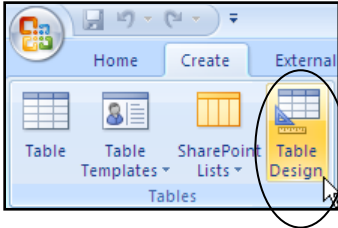
FirstName	LastName	Company	ContributionDate	Amount	ThankYouSent (Yes/No)	Website
-----------	----------	---------	------------------	--------	--------------------------	---------

Save your table as “Benefactors.” After saving your table, enter a fictitious contact for a company, and enter a real website to test how that field responds.

## Creating a Table in Design View

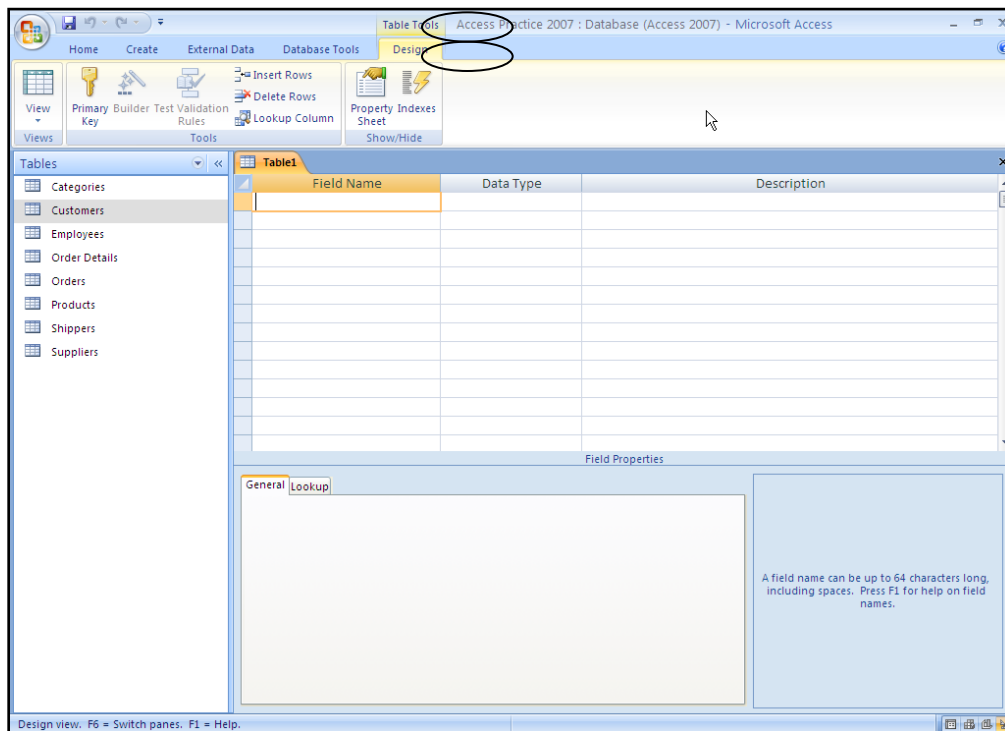
When you create a table in design view, you have the most control for customizing the table, and therefore customizing your database. In this class we will look at some of the features you can customize in design view. Follow these steps to create a table in design view.

1. Click the **Create** tab, then click **Table Design**.



(**Note:** You can also click Table; then switch to design view by clicking the View button.)

The **Design** tab opens and the **Table Tools** tab displays at the top of your screen.



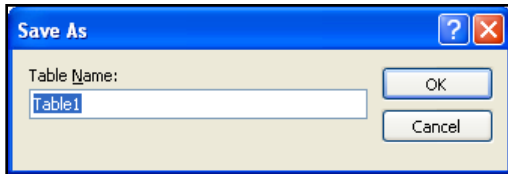
2. In the Field Name column, type a field name. (Example: LastName) Field naming tips are available on page 17.
3. Press **Tab** to the Data Type column. A drop-down box provides a variety of data type options. We will practice a few of these in this class. See page 22 for explanation of field types.

**Optional:** In the Description area, enter a description. This information displays on the Status bar at the bottom of the Access screen when entering information into the table, or when using a form.

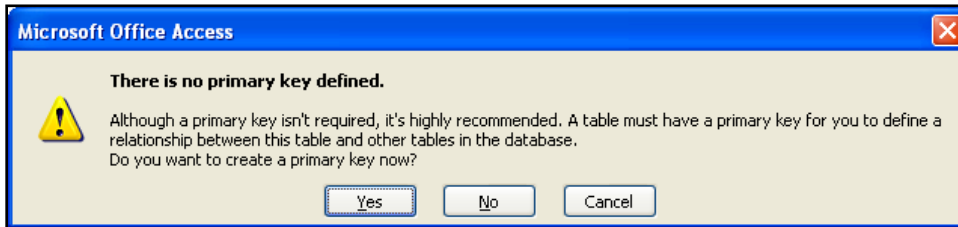
4. Press **Tab** again to return to the Field Name column to enter another field.

5. Repeat steps 2 and 3 until all fields are entered. (You can modify and/or add more fields later.)

6. Click the Save button  on the Quick Access toolbar. The following dialog box displays.





7. Type a name for your new table and click **OK**. If you have not designated a primary key, the following dialog box displays.



8. To have Access designate a primary key, click Yes. Your table is saved.  
*or*  
 To designate your own primary key, click Cancel and proceed as instructed on below to set your primary key. Your table won't be saved until you designate a primary key and follow the steps to save again.  
*or*  
 To have no primary key at this time, click No. Your table saves without a primary key.

## Specifying a Primary Key

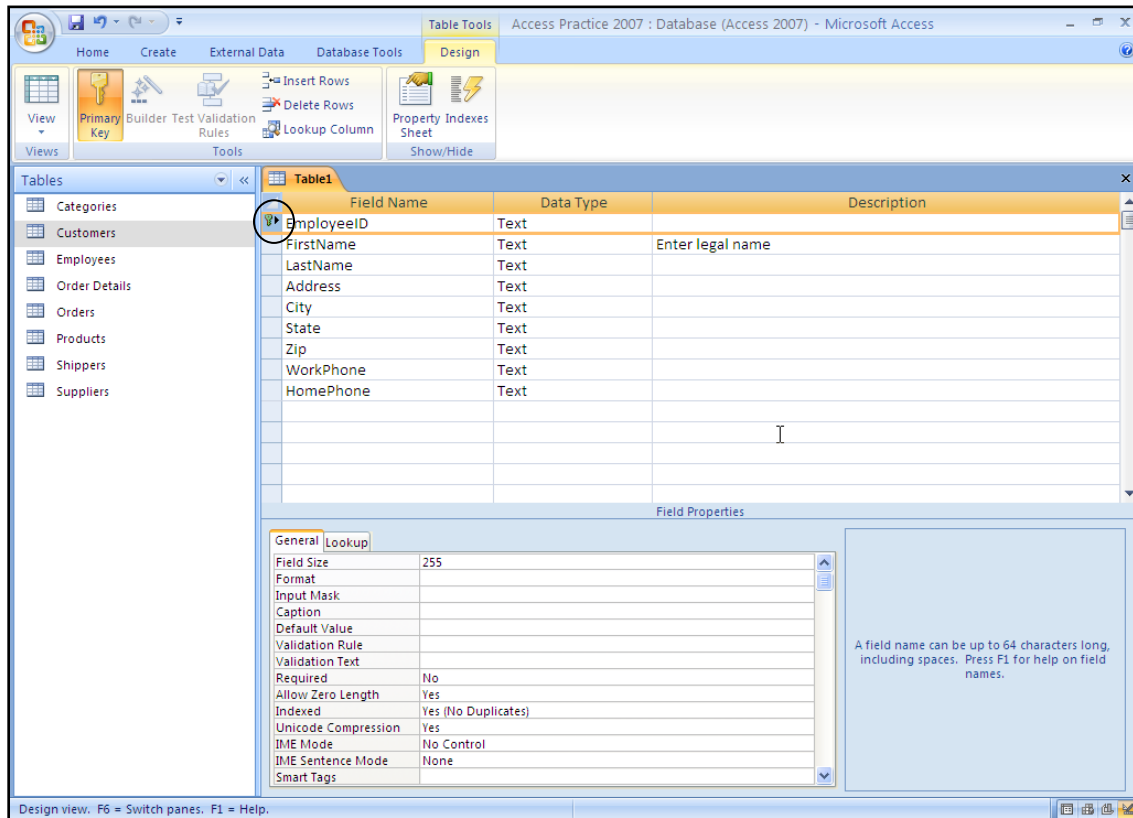
As mentioned earlier, a primary key must be a field that contains unique information that could not be the same for more than one record. Some possible examples for a primary key are Student IDs, corporate employee numbers, social security numbers, purchase order numbers, etc. Only one record could have these unique numbers. When you create a table using templates as described on page 16, Access creates an auto numbered primary key. However, when you have an internal option for your organization, such as an employee number or a customer ID, you may want to specify that as your primary key. Follow these steps to assign a primary key.


1. Open or create the table for which you want to specify a primary key.
2. If necessary, From the **Home** tab, click the View button   
 or click  and select Design View. The design view for the selected table displays.
3. From the left side of the design view screen, click the shaded area next to the field you want to designate as the primary key.
4. Select the field you want for your primary key by clicking the shaded area next to the field.





5. Click the Primary Key button from the ribbon.



Note the  Primary key symbol next to EmployeeID in the example above, indicating that this is the primary key for this table and no duplicates will be allowed for this field.

**Note:** This button acts like a toggle switch. You can change the primary key by selecting a different field, then clicking the button again. You cannot change a primary key once a relationship has been created. Remember, primary keys must be unique.

6. Save your table as described previously.

## Customizing Data Types for a Table

When working in the Design view, there are many things you can do to customize the type of data entered into the fields. We will look at some of these options in this class. Click the ▼ in the Data Type field to select the desired option.

Data Type:	Description:
Text	Used for any field that won't be used for calculations. General entries up to 255 characters.
Memo	Used for 255 – 64,000 characters.
Number	Used when needed to perform math and when you don't need currency. For other numbers such as telephone or social security numbers use Text. Formatting can be done via Input Masks (bottom of the screen). Sometimes used to enforce number input.
Date/Time	Used for entering dates.
Currency	Used for entering currency. Can also be used in calculation.
AutoNumber	Used when you want Access to number records for you. Often used as the Primary Key.
Yes/No	Used as a check box to indicate when something has been done.
OLE	Used for pictures, sound files, etc.
Attachment	New to Office Access 2007 .accdb files. You can attach images, spreadsheet files, documents, charts, and other types of supported files to the records in your database, much like you attach files to e-mail messages. This is only available in the .accdb file format.
Hyperlink	Used for web sites or "mail to" email addresses.
Lookup Wizard	Used to select from a "pick list" you create in the table or to select from another table. Follow the steps on the wizard to create your pick list. See page 27 for instructions.

Additional formatting of fields can be done in Field Properties area at the bottom of the design view. This is outside the scope of this class. Press F1 for assistance with formatting options.

**Note:** If you want a field name, such as FirstName, to display as First Name (with a space), enter the text as you want it to display in the **Caption** field of the Field Properties area when in Design view.

## **\*\*Exercise 3**

### **Create a Table in Design View**

Create and save another table called “Majors.” Set the Primary Key as Major. No “auto-numbered” field is needed as there will be no duplicates in this table.

<b>Major</b>
Accounting
Finance
Human Resources and Industrial Relations
Marketing
Supply Chain Management

## **\*\*Exercise 4**

### **Changing the Primary Key**

Open your Carlson School database. Open the Departments table in design view. Change the primary key to DepartmentID. Delete the auto number ID field. Save the table.

**Note:** You cannot change a primary key for tables that are already in relationships. You may need to remove the relationship, change the primary key, and then re-establish a relationship.

## **\*\*Exercise 5**

### **Create a Table in Design View**

Create another table called Courses. Make the Course Number the Primary Key. Make the Credits field a “number” field.

<b>CourseNo</b>	<b>CourseName</b>	<b>Credits</b>
MBA6030	Introduction to Principles of Accounting	4
MBA6315	Ethical Environment of Business	3
IDSC6441	Introduction to Electronic Commerce	4
ACCT3001	Managerial Accounting	4
HRIR3021	Human Resource Management and Industrial Relations	4

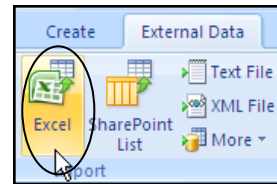
## **Creating a Table Using Excel Data**

You can import Excel data to a new table in Access. For instance, if we already had an Excel file listing the student data, we could import that table into our Carlson School database.

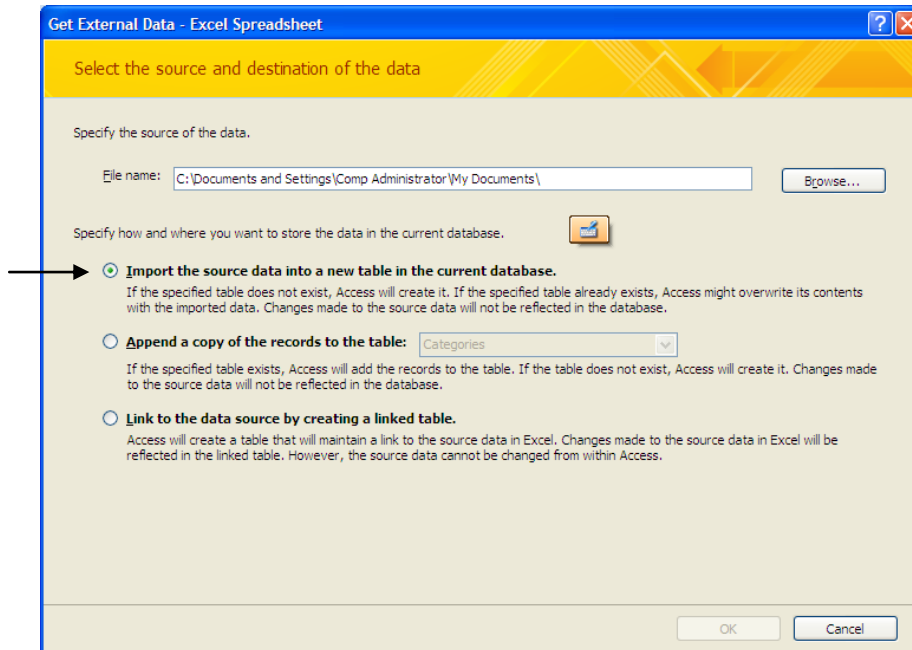
### **Importing the Data**

1. Open the Access database to which you want to add data.

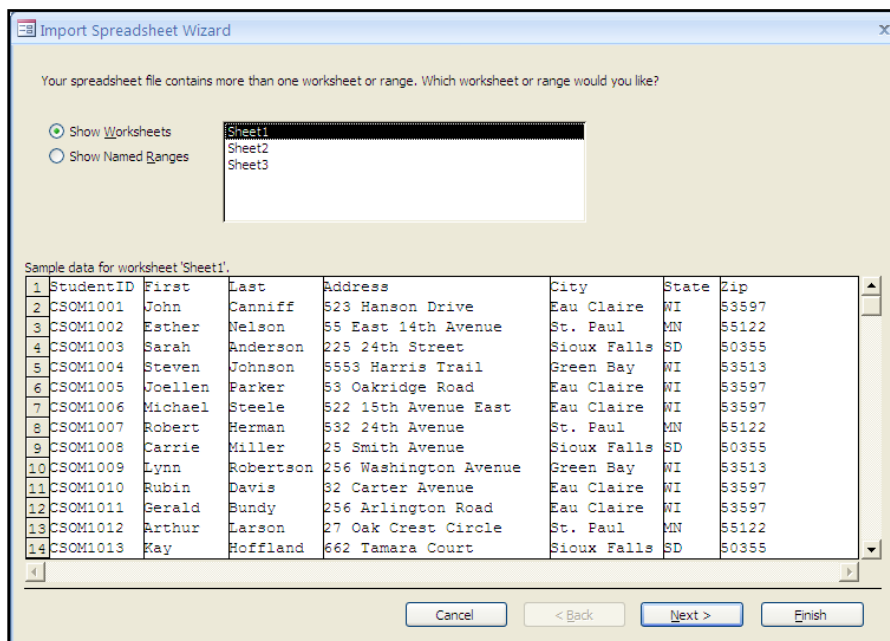
- Click the **External Data** tab; then click Excel.



The following dialog box displays. For this class we will select **Import the source data into a new table** in the current database. Other options are available.



- Click **Browse** to locate the file you want to import into your database; then click Open. (For this class, import the Students table.)
- Click **OK**. The **Import Spreadsheet Wizard** displays.



5. If necessary, select a different worksheet or named range and click **Next**.

Import Spreadsheet Wizard

Microsoft Access can use your column headings as field names for your table. Does the first row specified contain column headings?

☒ First Row Contains Column Headings

	StudentID	First	Last	Address	City	State	Zip
1	CSOM1001	John	Canniff	523 Hanson Drive	Eau Claire	WI	53597
2	CSOM1002	Esther	Nelson	55 East 14th Avenue	St. Paul	MN	55122
3	CSOM1003	Sarah	Anderson	225 24th Street	Sioux Falls	SD	50355
4	CSOM1004	Steven	Johnson	5553 Harris Trail	Green Bay	WI	53513
5	CSOM1005	Joellen	Parker	53 Oakridge Road	Eau Claire	WI	53597
6	CSOM1006	Michael	Steele	522 15th Avenue East	Eau Claire	WI	53597
7	CSOM1007	Robert	Herman	532 24th Avenue	St. Paul	MN	55122
8	CSOM1008	Carrie	Miller	25 Smith Avenue	Sioux Falls	SD	50355
9	CSOM1009	Lynn	Robertson	256 Washington Avenue	Green Bay	WI	53513
10	CSOM1010	Rubin	Davis	32 Carter Avenue	Eau Claire	WI	53597
11	CSOM1011	Gerald	Bundy	256 Arlington Road	Eau Claire	WI	53597
12	CSOM1012	Arthur	Larson	27 Oak Crest Circle	St. Paul	MN	55122
13	CSOM1013	Kay	Hoffland	662 Tamara Court	Sioux Falls	SD	50355
14	CSOM1014	Gretchen	Howard	5567 Boutwell Road	Green Bay	WI	53513

Cancel < Back Next > Finish

6. Indicate whether the first row contains column headings, and click **Next**.

Import Spreadsheet Wizard

You can specify information about each of the fields you are importing. Select fields in the area below. You can then modify field information in the 'Field Options' area.

Field Options

Field Name:  Data Type:

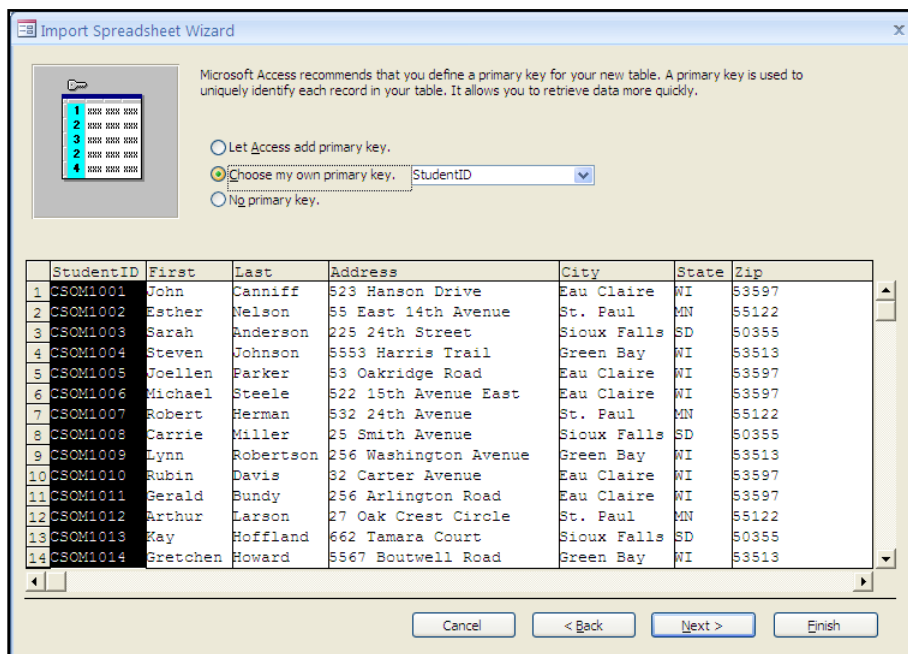
Indexed: ☒ Yes (Duplicates OK) ☐ Do not import field (Skip)

	StudentID	First	Last	Address	City	State	Zip
1	CSOM1001	John	Canniff	523 Hanson Drive	Eau Claire	WI	53597
2	CSOM1002	Esther	Nelson	55 East 14th Avenue	St. Paul	MN	55122
3	CSOM1003	Sarah	Anderson	225 24th Street	Sioux Falls	SD	50355
4	CSOM1004	Steven	Johnson	5553 Harris Trail	Green Bay	WI	53513
5	CSOM1005	Joellen	Parker	53 Oakridge Road	Eau Claire	WI	53597
6	CSOM1006	Michael	Steele	522 15th Avenue East	Eau Claire	WI	53597
7	CSOM1007	Robert	Herman	532 24th Avenue	St. Paul	MN	55122
8	CSOM1008	Carrie	Miller	25 Smith Avenue	Sioux Falls	SD	50355
9	CSOM1009	Lynn	Robertson	256 Washington Avenue	Green Bay	WI	53513
10	CSOM1010	Rubin	Davis	32 Carter Avenue	Eau Claire	WI	53597
11	CSOM1011	Gerald	Bundy	256 Arlington Road	Eau Claire	WI	53597
12	CSOM1012	Arthur	Larson	27 Oak Crest Circle	St. Paul	MN	55122
13	CSOM1013	Kay	Hoffland	662 Tamara Court	Sioux Falls	SD	50355
14	CSOM1014	Gretchen	Howard	5567 Boutwell Road	Green Bay	WI	53513

Cancel < Back Next > Finish

7. If desired, modify field names; then click **Next**.

8. Indicate your preference regarding a primary key; then click **Next**.



Microsoft Access recommends that you define a primary key for your new table. A primary key is used to uniquely identify each record in your table. It allows you to retrieve data more quickly.

☐ Let Access add primary key.

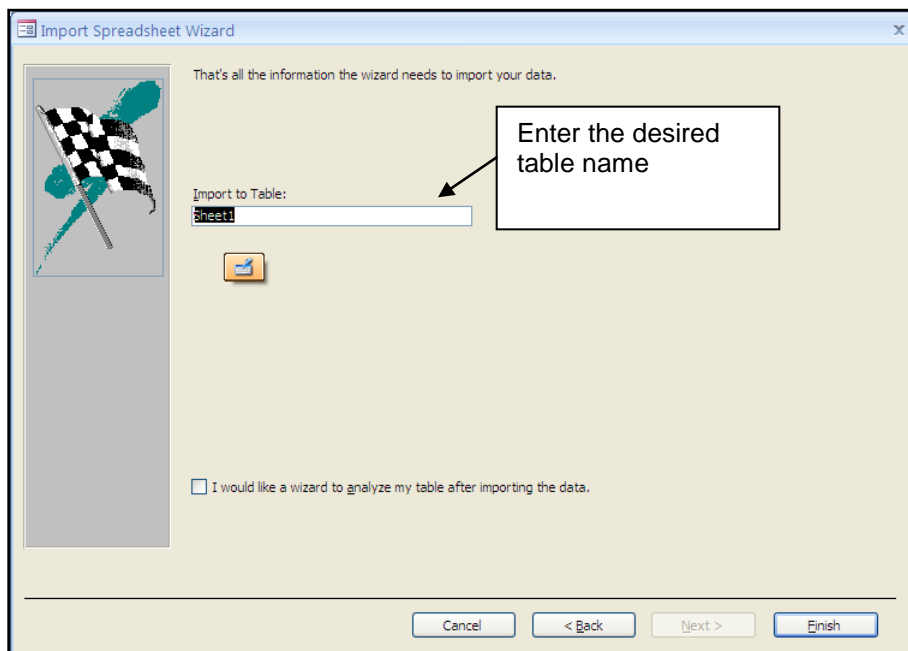
☒ Choose my own primary key. StudentID

☐ No primary key.

	StudentID	First	Last	Address	City	State	Zip
1	CSOM1001	John	Canniff	523 Hanson Drive	Eau Claire	WI	53597
2	CSOM1002	Esther	Nelson	55 East 14th Avenue	St. Paul	MN	55122
3	CSOM1003	Sarah	Anderson	225 24th Street	Sioux Falls	SD	50355
4	CSOM1004	Steven	Johnson	5553 Harris Trail	Green Bay	WI	53513
5	CSOM1005	Joellen	Parker	53 Oakridge Road	Eau Claire	WI	53597
6	CSOM1006	Michael	Steele	522 15th Avenue East	Eau Claire	WI	53597
7	CSOM1007	Robert	Herman	532 24th Avenue	St. Paul	MN	55122
8	CSOM1008	Carrie	Miller	25 Smith Avenue	Sioux Falls	SD	50355
9	CSOM1009	Lynn	Robertson	256 Washington Avenue	Green Bay	WI	53513
10	CSOM1010	Rubin	Davis	32 Carter Avenue	Eau Claire	WI	53597
11	CSOM1011	Gerald	Bundy	256 Arlington Road	Eau Claire	WI	53597
12	CSOM1012	Arthur	Larson	27 Oak Crest Circle	St. Paul	MN	55122
13	CSOM1013	Kay	Hoffland	662 Tamara Court	Sioux Falls	SD	50355
14	CSOM1014	Gretchen	Howard	5567 Boutwell Road	Green Bay	WI	53513

Cancel < Back Next > Finish

9. Enter a name for your imported table, and click **Finish**.



That's all the information the wizard needs to import your data.

Import to Table: Sheet1

☐ I would like a wizard to analyze my table after importing the data.

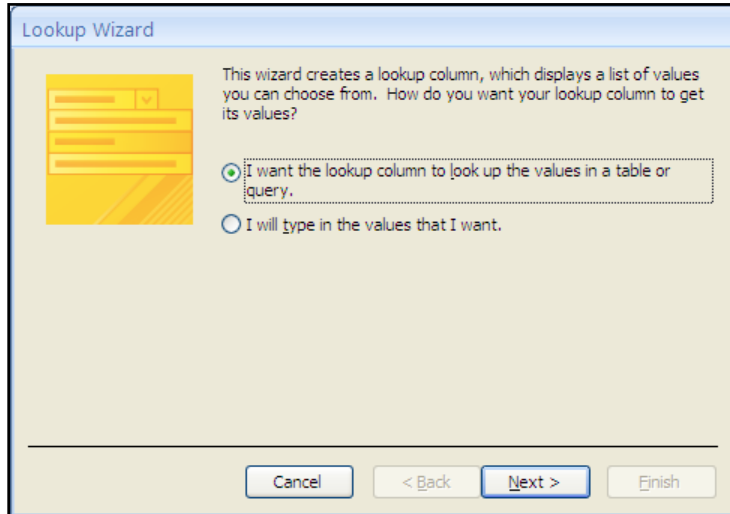
Cancel < Back Next > Finish

**Note:** If desired, you can save your import steps if you frequently import the same type of data. This will eliminate using the steps in the wizard.

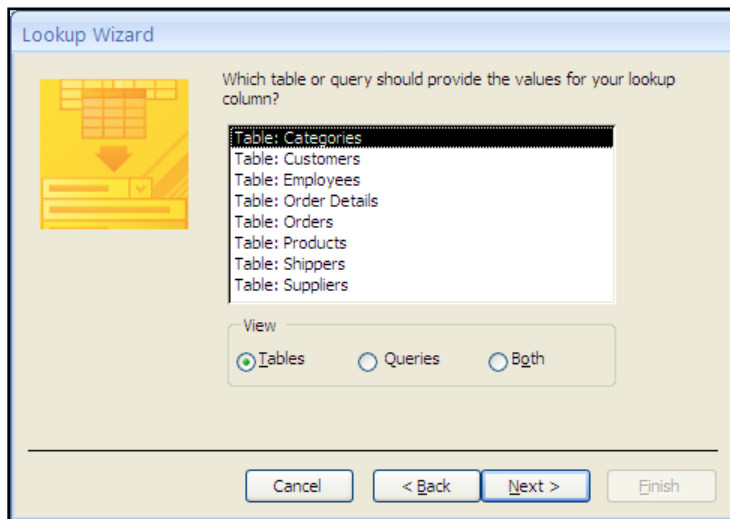
## Using the Lookup Wizard

You can use the Lookup Wizard when you want to provide a drop-down list for people to use when entering data. This can be done using an existing table or by entering data directly. To create a field using the lookup wizard:

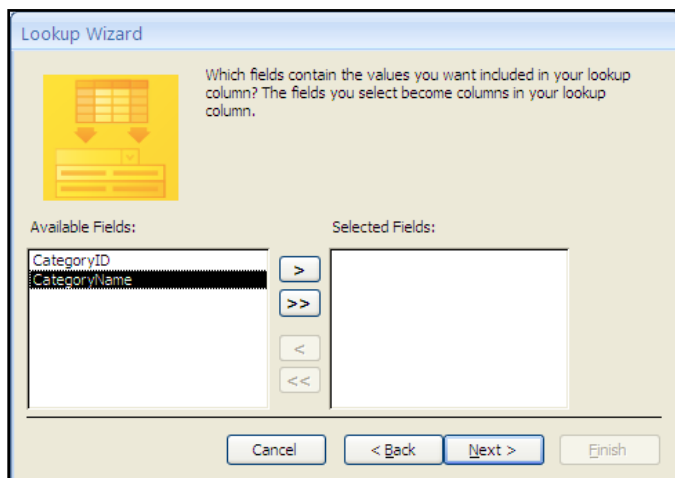
1. Create your table in design view.
2. In the **Data Type** field, select **Lookup Wizard**. The following screen displays.




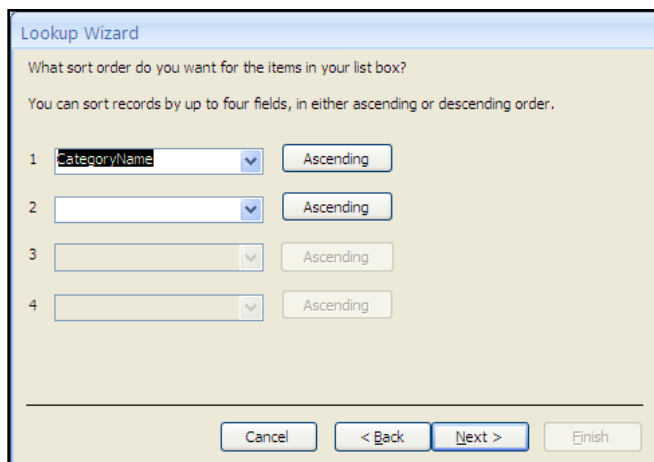
3. For this exercise, select **I want the lookup column to look up the values in a table or query**; then click **Next**. The following screen displays.



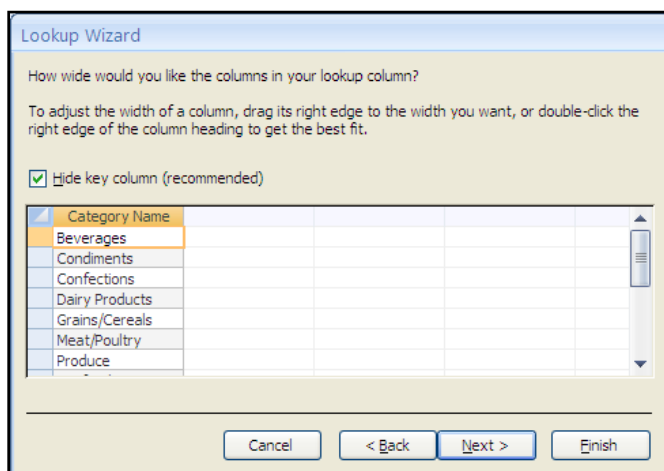
4. Select the desired table; then click **Next**. The following screen displays.



5. Select the field you want to display in your drop-down list, click  to add the field to the Selected Fields area, and then click **Next**. The following screen displays.



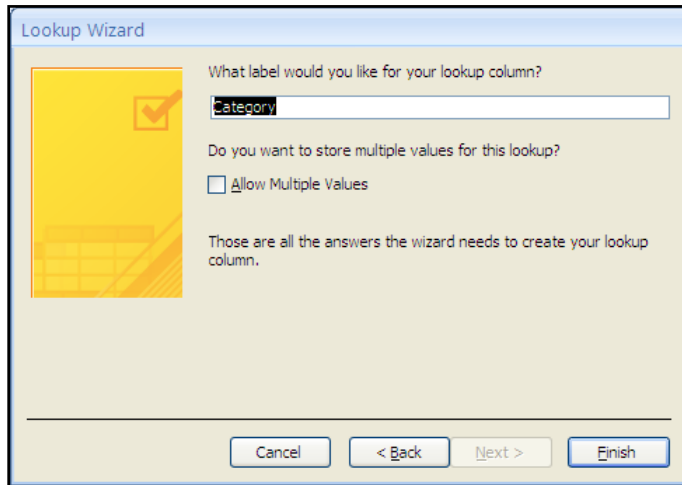
6. Set a Sort order, if desired; then click **Next**. The following screen displays.



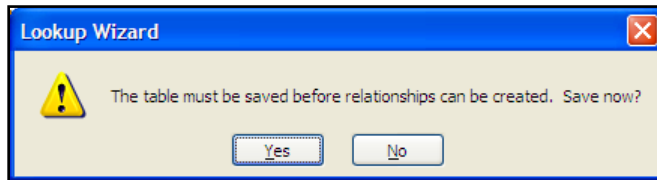
**Note:** Although Access recommends to Hide the key column, this may not be appropriate for data such as employee ID or student ID, etc.



7. Click **Next**. The following screen displays.



8. If desired, change the label for the lookup column.  
 9. If desired, select Allow Multiple Values (for instance, students could have a double major).  
 10. Click **Finish**. The following dialog box displays.



11. Click **Yes** to create the relationship. Relationships will be covered in more detail beginning on page 30.

## **\*\*Exercise 6**

### **Modifying Tables – Students Table and Courses Table**

You can modify your tables to add existing fields or change field types (if no data has yet been entered). As indicated by Exercise 4, you can change the primary key of a table IF it doesn't destroy existing relationships. Using Access 2007 you can add new fields from either the table view as instructed on page 16 or from the design view as instructed on page 19.

1. Open the Students table in Design View
2. Add the field "Major."
3. Use the Lookup Wizard to add this field, allowing you to select from the list of majors in the Majors table.
4. Open the Courses table in Design View.
5. Add a field called "Department."

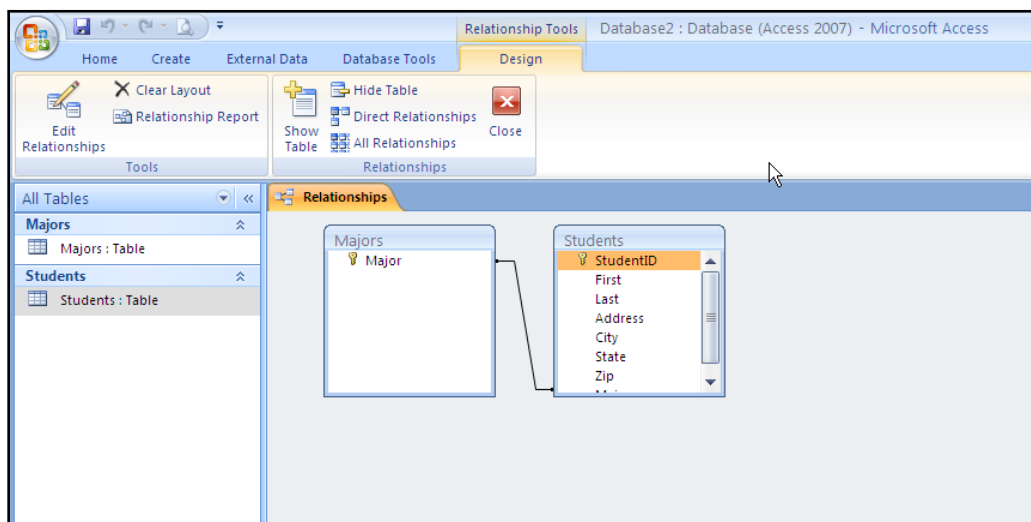
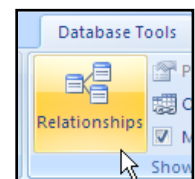
## Creating Relationships

A good database has multiple tables, and those tables relate to each other. If you use the database wizard to create a database, relationships are automatically formed. Also, when we used the Lookup Wizard to fill in information in our Students table, a relationship was automatically formed. Most relationships are “one to many.” In our exercises, for instance, one student can take many courses. One course can have many students enrolled, etc. It is also possible to have “one to one” relationships and “many to many” relationships, but those are outside the scope of this class.

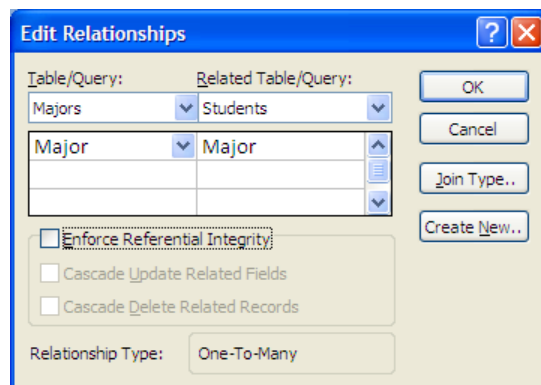
## Viewing / Modifying Relationships

Follow these steps to view the existing relationships in a database.

1. Open the database you want to view.
2. To view the relationships in a database, click the **Database Tools** tab, and click the **Relationships** button. A screen displays indicating the relationships between the tables. You can view the relationships in your database and also create or modify relationships.



3. To edit an existing relationship, simply double-click the connecting line. The **Edit Relationships** dialog box displays.

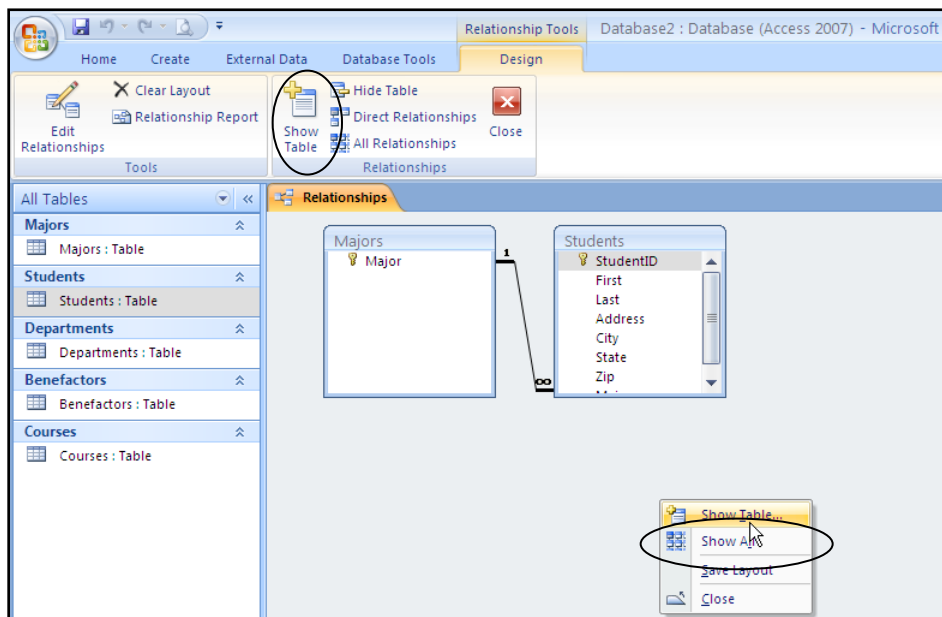
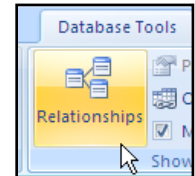


4. If desired, select Enforce Referential Integrity. This prevents deleting a record that is related to a record in another table.
5. Click **OK**.

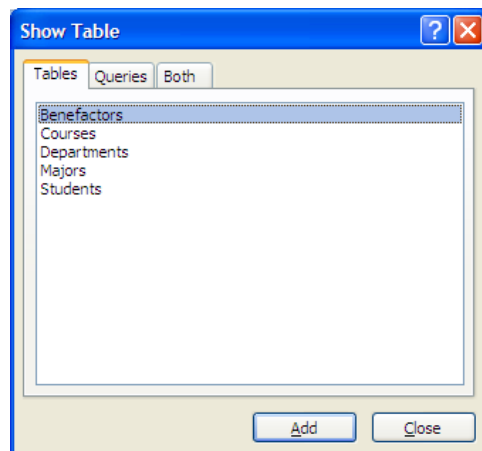
## Creating New Relationships

When you want to create a relationship between tables, you must first show the tables in the Relationship window.

1. Open the database you want to view.
2. To view the relationships in a database, click the **Database Tools** tab, and click the **Relationships** button to view the Relationship window
3. Click the Show Table button  
or  
Right-click in the Relationship window and select Show Table.



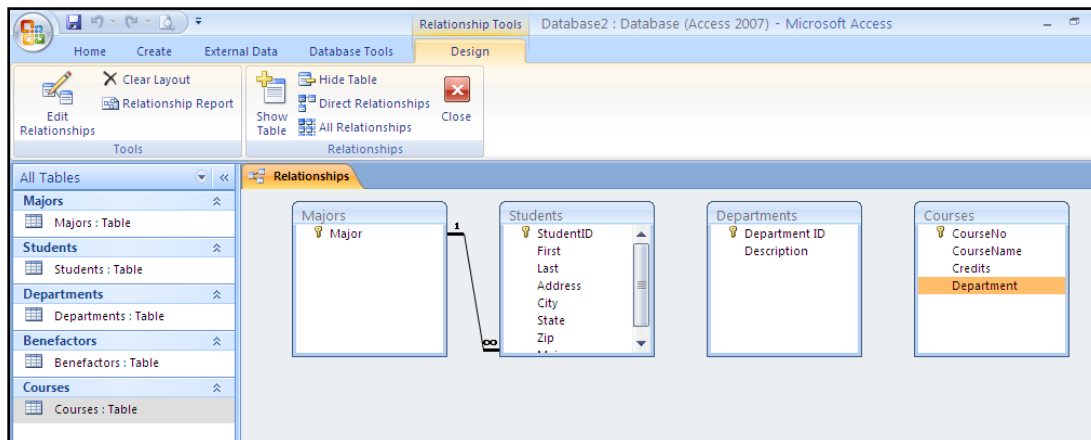
4. The Show Table dialog box displays.



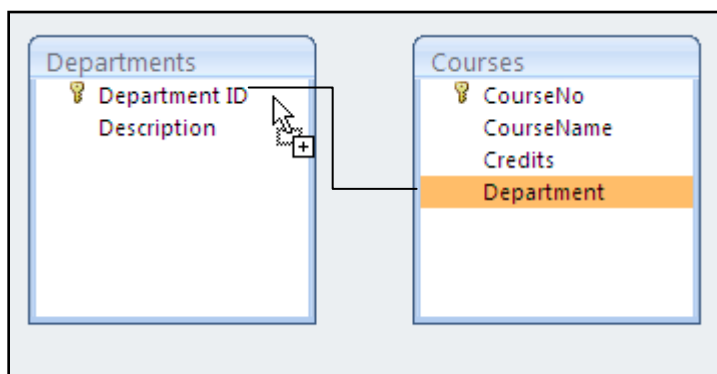
5. Select the tables you want to relate; then click Add.

OR

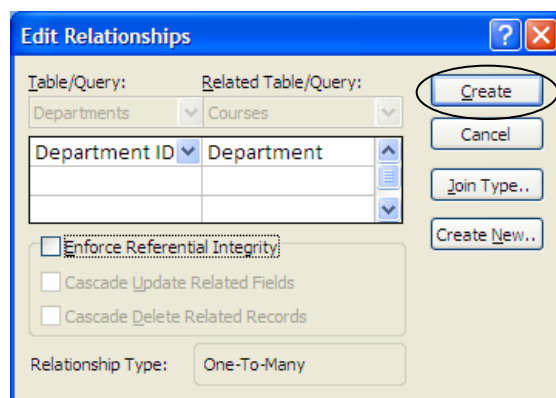
Double-click the tables you want to add. The tables are added to the Relationships window.



6. Click and drag the field from one table that you want to relate to another table. See example below. Remember that one of the fields needs to be a primary key.



The **Edit Relationships** dialog box displays.

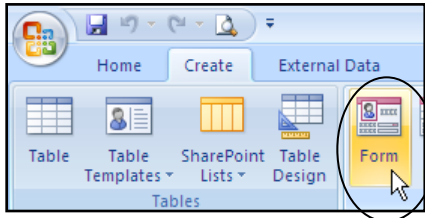


7. If desired, click Enforce Referential Integrity.
8. Click **Create**.
9. When finished, close the Relationship window.

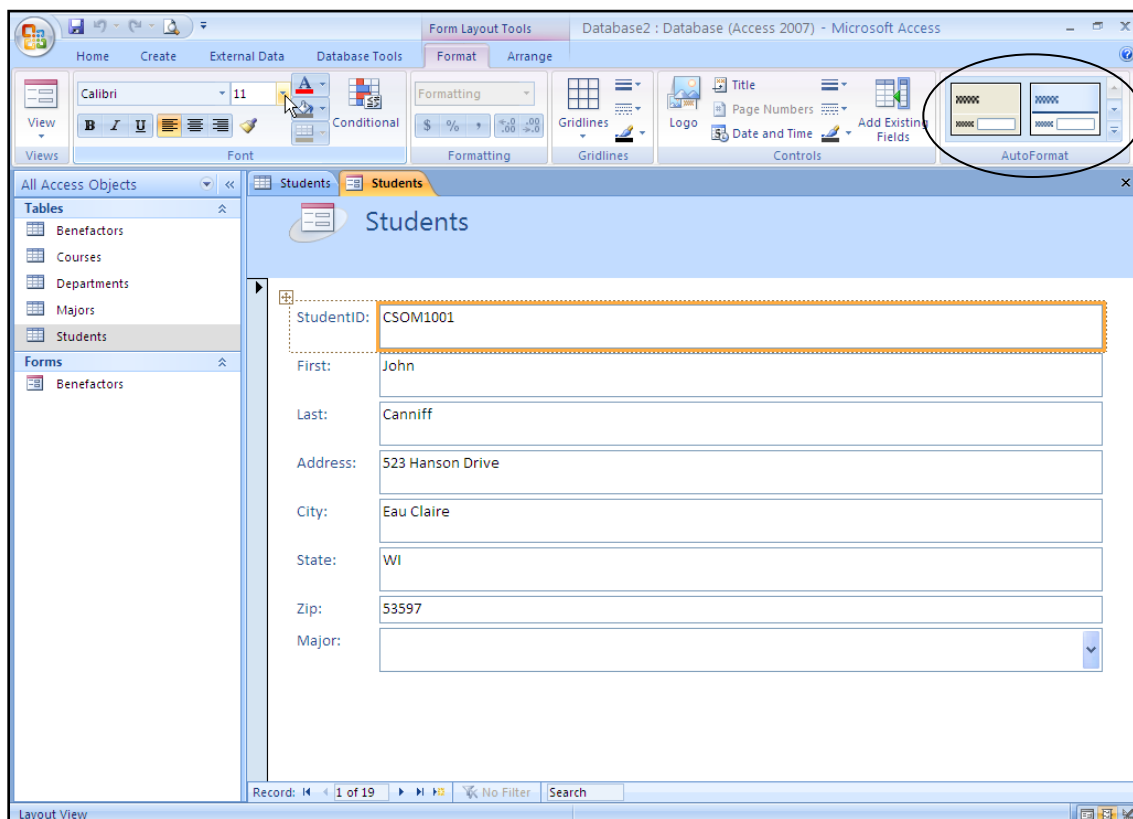
## Creating a Form

Forms make it easy to enter information into your database. If you create your own table, you will probably also want to create a form. There are several ways to create forms. We will use the easiest way in this class. Forms allow easy data entry and viewing one record at a time.

1. Open the table for which you would like a form.
2. From the **Create** tab, select Form.



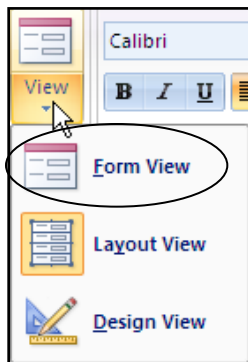
A new form displays in Layout view.



3. If desired, click an alternate format from the AutoFormat buttons.

**Note:** When in Layout view, you can adjust column widths, and add a custom logo, if desired.

4. When finished making adjustments, click the View button and select Form View.



The new form displays. New records can be added or edited.

A screenshot of the Microsoft Access 2007 interface. The title bar reads 'Database2 : Database (Access 2007) - Microsoft Access'. The ribbon shows 'Home', 'Create', 'External Data', and 'Database Tools'. The 'Students' table is selected in the 'All Access Objects' pane on the left. The main window displays the 'Students' form in 'Form View'. The form has a light blue header with the title 'Students'. Below the header, there are text boxes for the following fields: StudentID (CSOM1001), First (John), Last (Canniff), Address (523 Hanson Drive), City (Eau Claire), State (WI), Zip (53597), and Major (empty). At the bottom of the form, there is a status bar with navigation buttons (Record, Previous, Next, First, Last), a '1 of 19' indicator, a 'No Filter' status, and a 'Search' button.

Navigation buttons and a Search feature are available from the Status bar at the bottom of the form.

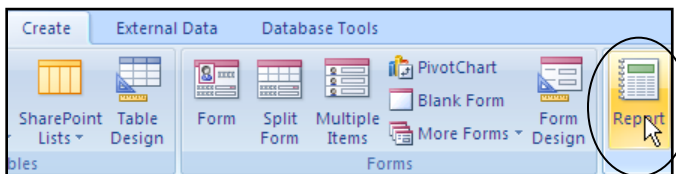
## Creating Reports

A report provides a more professional display of the information contained in the tables. Reports display current data at the time they are run. There are several ways to create reports. One way just creates a report from one table or query. A great new feature of Access 2007 is the ability to create a report in Layout view. Using the Report wizard allows you to combine fields from multiple tables and applies a specific format. The Design view of reports allows additional options, but is outside the scope of this course.

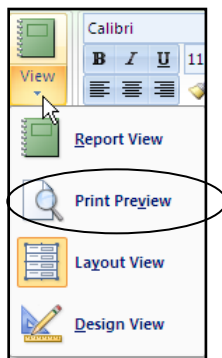
### Creating a Report from a Table

Follow these steps to create a report from a table. All fields in the selected table will display in the report. If necessary you can remove or resize fields in Layout view (see page 36).

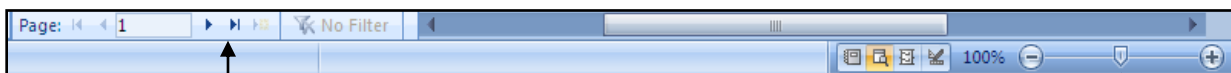
1. Open the database for which you want to create a report.
2. Select or open the desired table; then from the **Create** tab, select Report.



3. Access immediately creates an attractive report from your selected table. The report displays in the new "Layout" view.
4. To view the report as it will print, click the **View** button (from the **Home** tab); then select Print Preview. **Tip:** Add Print Preview to your Quick Access toolbar. (See page 5.)



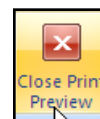
Using Print Preview, you can move from page to page, or use the new Zoom feature to see how your report will print.



Navigate from page to page

Use new "zoom" button to zoom in or out.

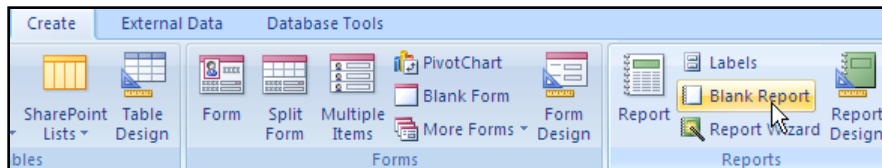
When finished with Print Preview, click the Close Print Preview button from the right side of the **Print Preview** tab.



## Creating a Report in Layout View

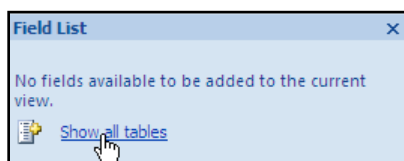
A new feature in Access 2007 is the layout view for reports. This is an easy-to-use view and allows you to select specific fields to display in your report, rather than include all fields as the previous option displayed. You can even select fields from related tables.

1. From the **Create** tab, select Blank Report.

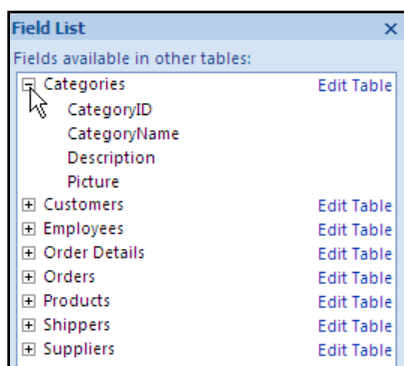


A blank report displays.

2. From the right side of the screen, in the Field List area, select Show all tables.



3. Click the **+** to expand table fields.



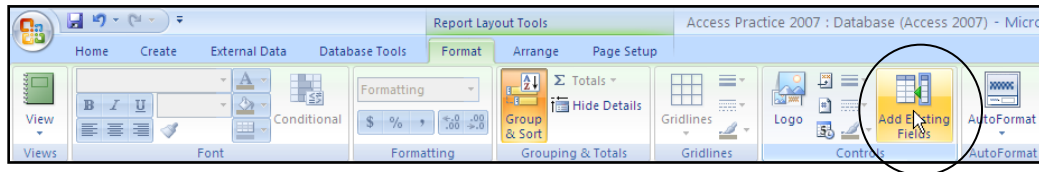
4. Double-click the fields you want to add to your report. If you want to add fields from a related table, expand that table to display additional fields.
5. When finished, click the **X** to close the Field List.
6. If desired, click and drag the column borders to resize them on your report.

Category Name	Product Name	Unit Price	Units In Stock
Beverages	Chai	\$18.00	39
Beverages	Chang	\$19.00	17
Beverages	Guaraná Fantástica	\$4.50	20

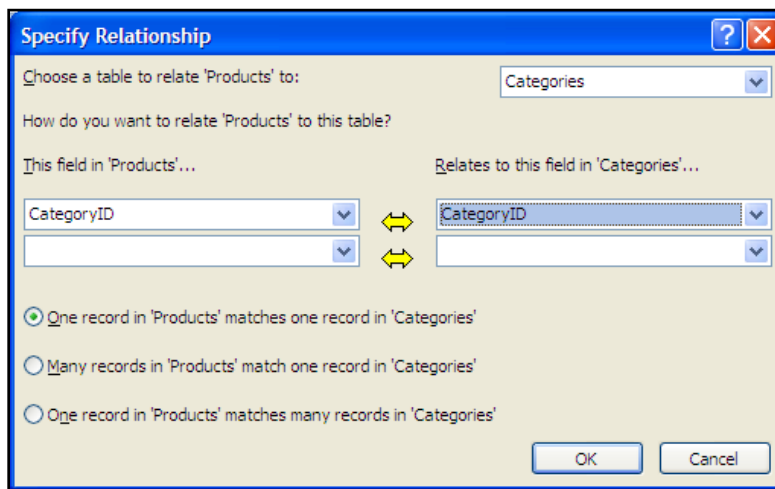


## Combining Creating a Report from a Table and Layout View

When you create a report from a table, Access creates a header, but not when you create a table in Layout View. Although this could be added in Design view, an easier option is to create your report from the “main” table that contains the fields you want. Then, click Add Existing Fields (from the **Format** tab of the **Report Layout Tools** tab). You can then add additional fields from other related tables.



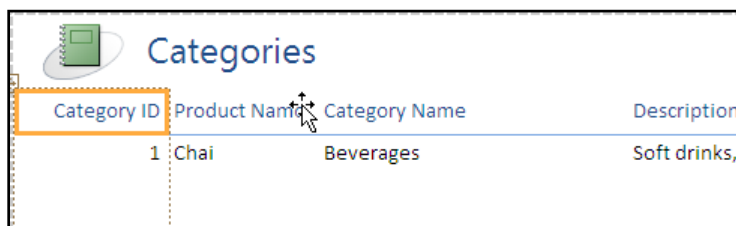
You may be prompted to create a relationship.



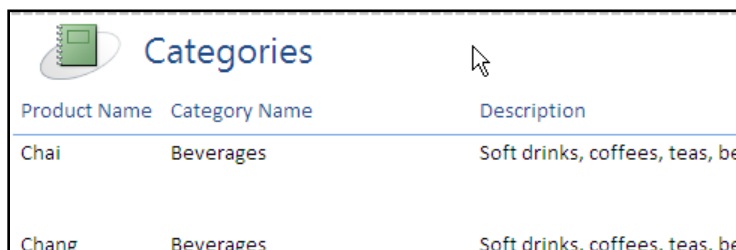
Select the appropriate fields and relationship type, and click **OK**.

## Delete a Report Field from Layout View

If desired, you can delete a field from the report in Layout View, if it is not necessary. Below, the Category ID field is selected. By pressing the **Delete** key, it will be removed from the report.



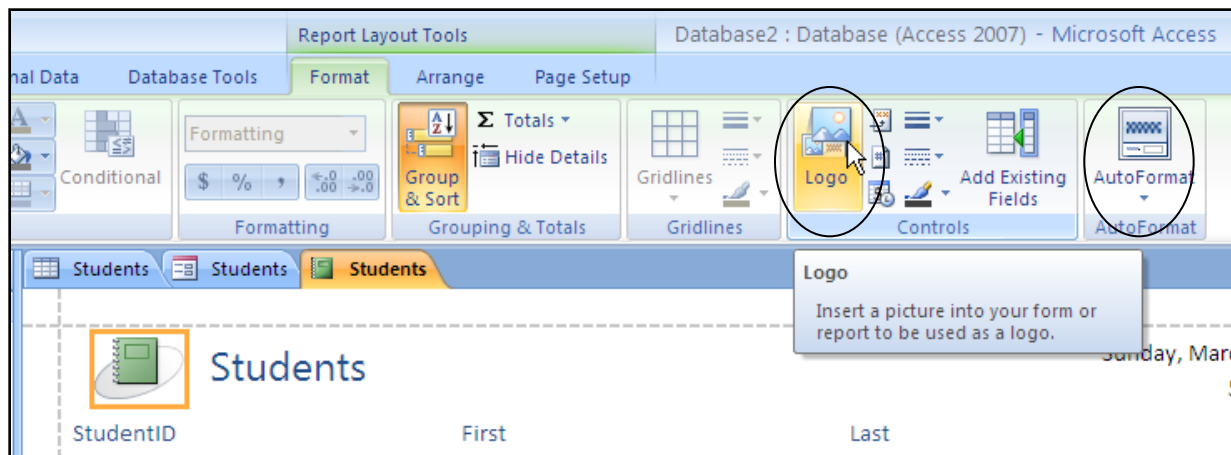
Below is the new report view without Category ID.



## Modifying the Design – Customizing the Logo

Creating a report in this way displays a default design and default logo. If desired, you can add your own logo or select a different format.

While in Layout view, click the Logo button from the Ribbon and select a logo file from your computer.



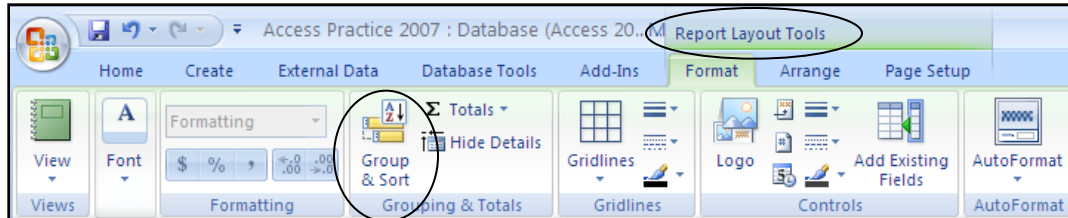
Switch to Print Preview to view your design changes.

Students		
StudentID	First	Last
CSOM1001	John	Canniff
CSOM1002	Esther	Nelson
CSOM1003	Sarah	Anderson
CSOM1004	Steven	Johnson

## Grouping Options in Layout View

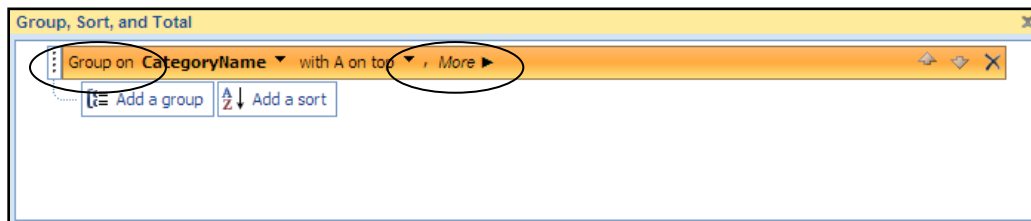
Access 2007 has made it easy to group your report.

1. Create your report from a table or using the Layout View as described above.
2. Activate the **Report Layout Tools** tab; then select Group & Sort.

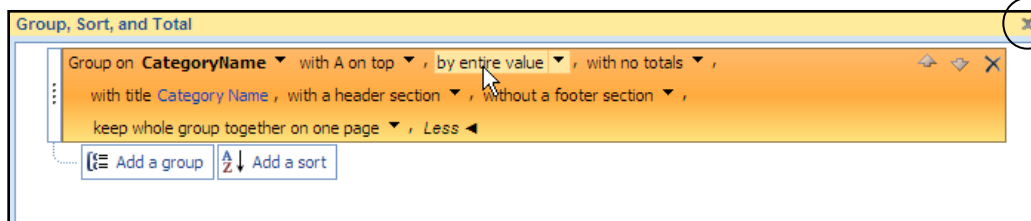


A **Group, Sort, and Total** area displays at the bottom of your report to add grouping options.

3. In the Group on area, select the desired field from the drop-down list.



4. For additional options, such as grouping items of the same category on one page, select **More**, to display additional grouping options.

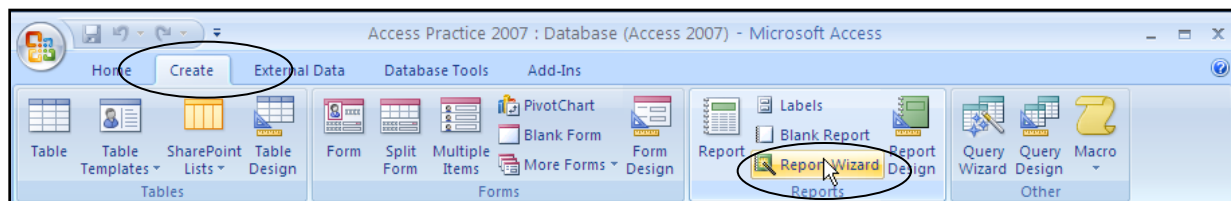


Click to close grouping options

5. When finished making changes, click the Closing Grouping Dialog Box button **X** in the upper right corner of the Group Sort, and Total area of the report screen.
6. If desired, click the **View** button and select **Print Preview**.

## Creating a Report Using the Report Wizard

You can also create a report using the report wizard. Click the **Create** tab, and select Report Wizard. You can select from several related tables or queries.




Run through the wizard selecting the desired options to create your report.

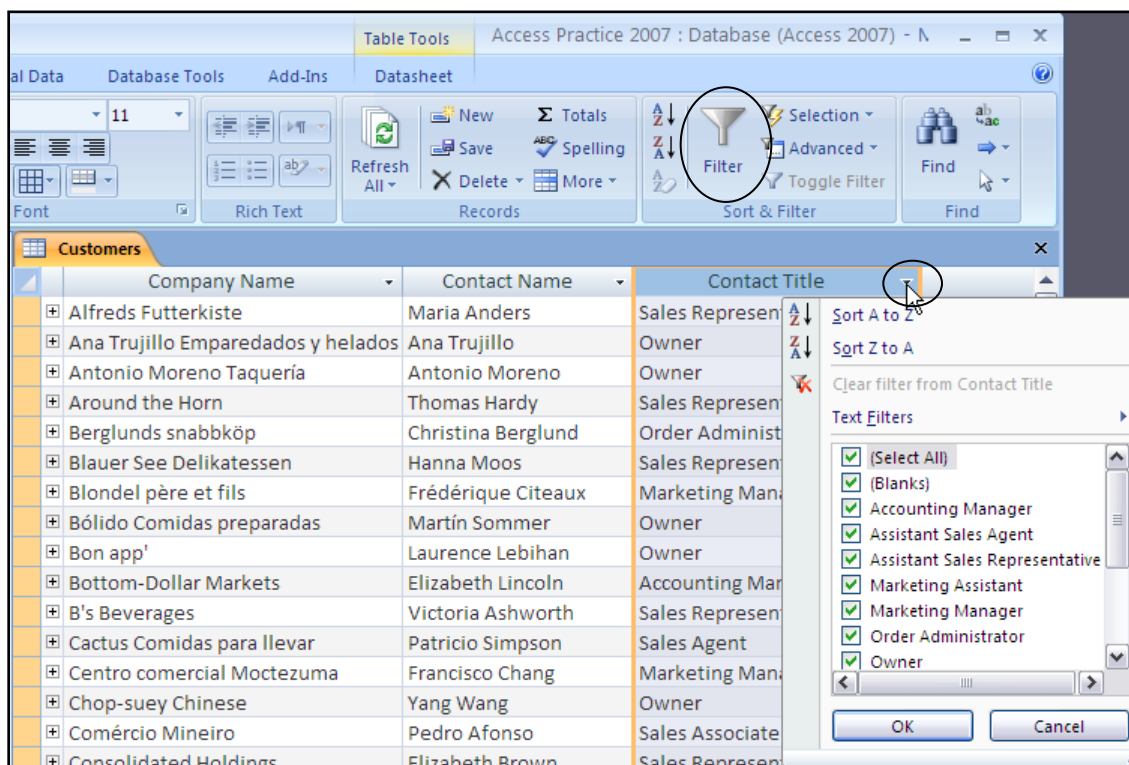
## Queries and Filters

You can use filters or queries to locate records and information. Filters are temporary. Queries are saved so that they can be performed repeatedly. You may want to create a query, and then use that query to create a report for a more attractive option.

### Filtering Records

Access provides some simple ways to filter one table. You can use buttons on the ribbon to filter information.

1. Open the table you want to filter.
2. Click in the field containing the information by which you want to filter.
3. From the **Home** tab, click the **Filter** button or click the Filter button  above any field list. A drop-down list displays the filtering options for that field.



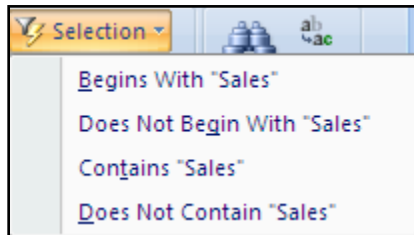
4. Select the desired options, and click **OK** to display your filtered results.
5. To filter by additional fields, click in the field by which you want to filter and apply additional filters, as described above.

**Note:** Filtered fields display with a  button next to the field name. The Status bar at the bottom of the screen also displays a  button when filters have been applied.

## Filtering by Selection

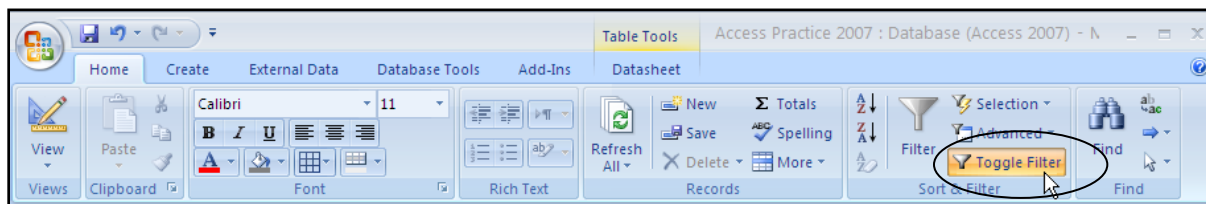
If you want to filter by a portion of a field, e.g., Sales to display all Sales Representatives, Sales, Agents, Sales Managers, etc. follow these steps.

1. Select the text by which you want to filter.
2. Click the **Selection** button, and select the desired filtering options.




## Toggling Filters

After applying a filter(s), you can toggle the results to again display the entire list. Click the **Toggle Filter** button. OR, click the **Filtered** button from the Status bar at the bottom of the screen.

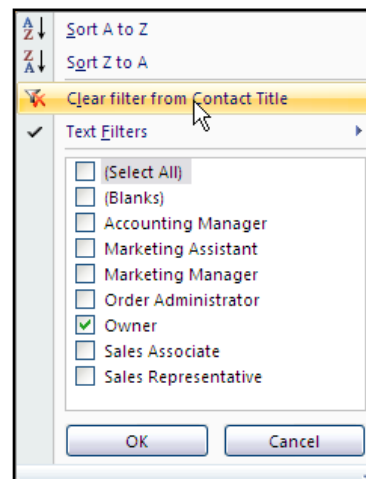
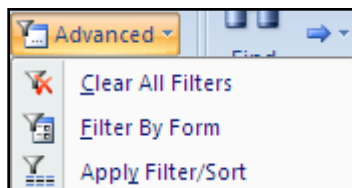


## Removing a Filter

When you no longer need a filter, you can remove it.

1. Click in the field where the filter is applied.
2. Click the Filter button .
3. Click **Clear filter from field name**.

**Note:** You can also click the **Advanced** button and select Clear All Filters.



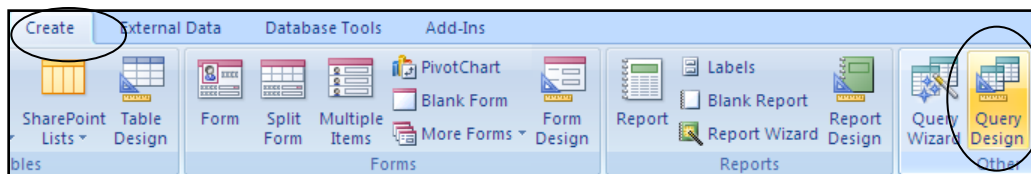
## Creating Basic Queries

You may also want to perform queries to locate specific records. For instance, you may want to find out students who have not yet paid their tuition. When you create a query, you can save it and perform it again. Saving a query saves the question – not the answer. We can assume that the results of the student tuition query would have different results nearly every day. There are many types of queries – this class covers a few of them.

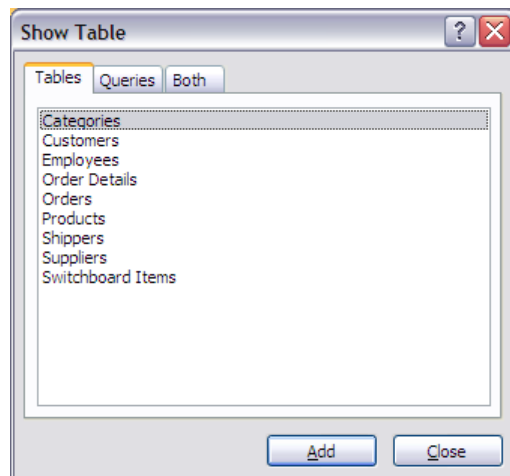
### Creating a Query in Design View

A query selects records based upon select criteria. Follow these steps to create a query in design view.

1. From the **Create** tab, select **Query Design**.

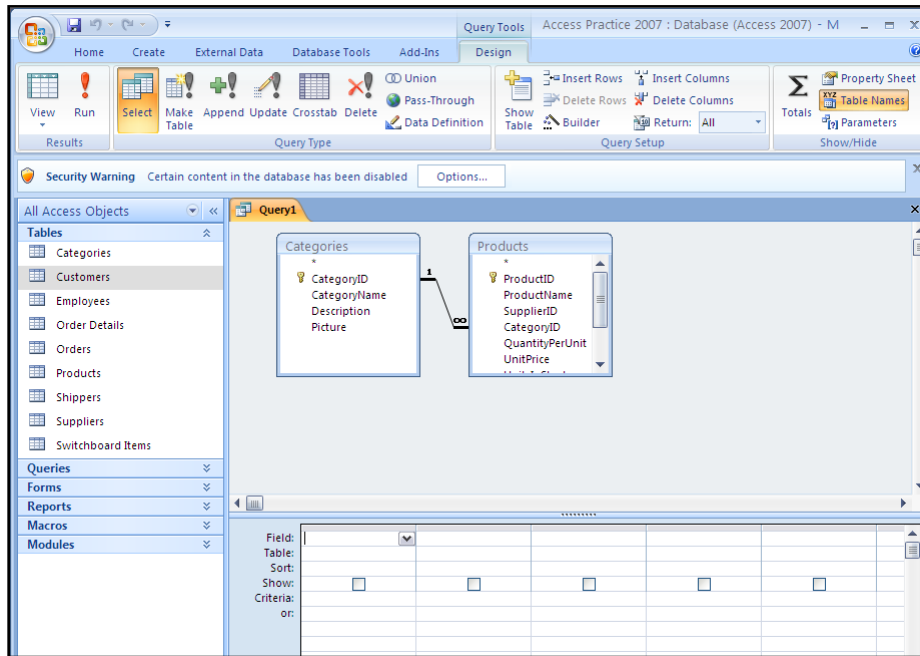


The **Show Table** dialog box displays.

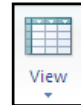


2. Double-click each table you want to include in the query (or select the tables, and click the **Add** button).

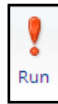
3. Click **Close**, the Query screen displays.



4. To add the fields you want to use in the query, double-click them to display them in the query grid area. (Note: You can also click and drag them to the desired area of the grid.)



5. To view the query results, click the **View** button.



**Note:** You could also click the **Run** button for a basic query. However, the Run button will perform an “action” for some queries, such as deleting records, appending records, making a table, etc. We will not create any action queries in this class.



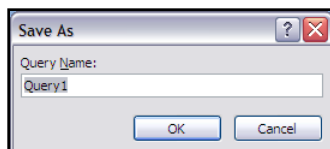
6. If necessary, click the View button or click View and select Design View to modify your query.



## Saving the Query

Once you have completed the query, you should save it for future use.

1. Right-click the tab above your query, and click **Save** (or click the Save button.) The **Save As** dialog box displays.

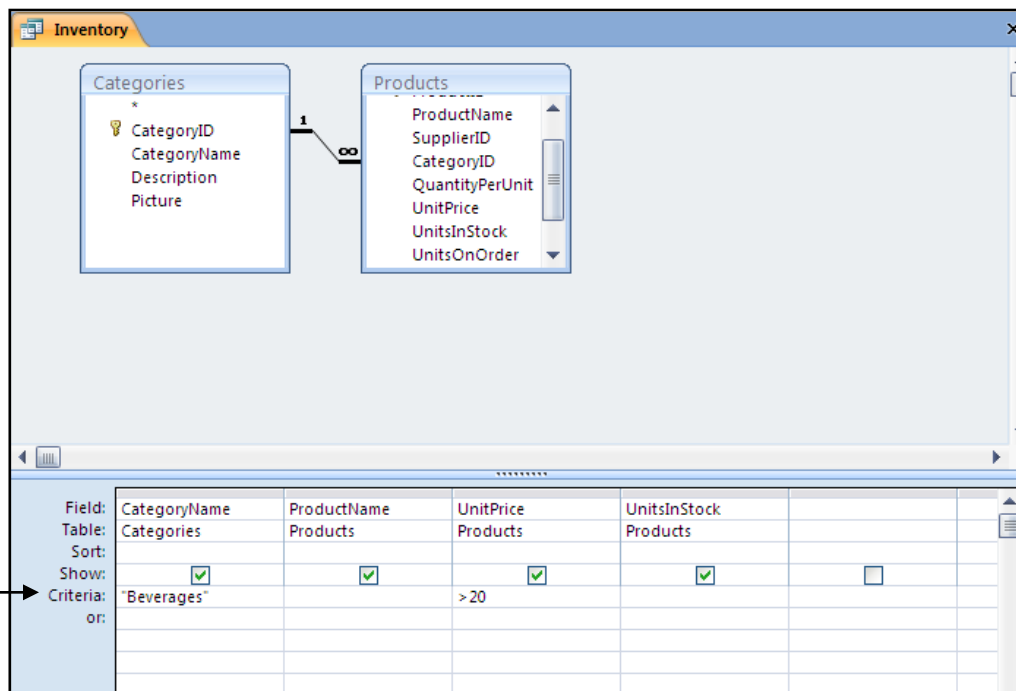


2. Enter the desired query name, and click **OK**. **Tip:** Name queries with QRY as a prefix to distinguish them from tables when creating additional queries from queries.

## Adding Criteria to a Query

If you want your query to only show specific records, you can either apply filters (which do not save) or apply criteria to your queries so that the query is saved to display exactly the results you want.

1. Create a query as previously described.
2. In the **Criteria** area of the query grid, enter the desired criteria. In the example below, the results would only display the inventory for Beverages where the Unit Price is greater than 20. **Note:** It is NOT necessary to apply quotes as displayed around Beverages below. Access applies the punctuation for you when you move to a new area of the grid. Also, although prices display with currency symbols, Access requires only numbers be entered for the query below.



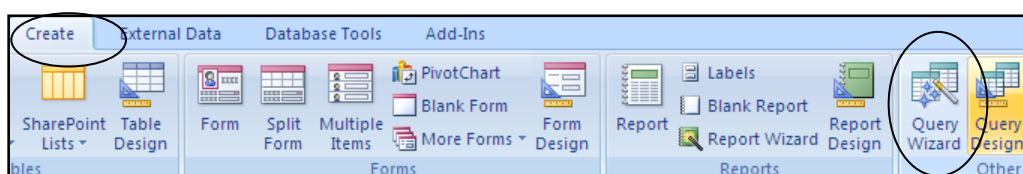
## Sorting in a Query

If you want to sort by more than one field, apply criteria in the Sort field. Sorting occurs left to right, so you should add fields in the order by which you want to sort.

## Using the Query Wizard

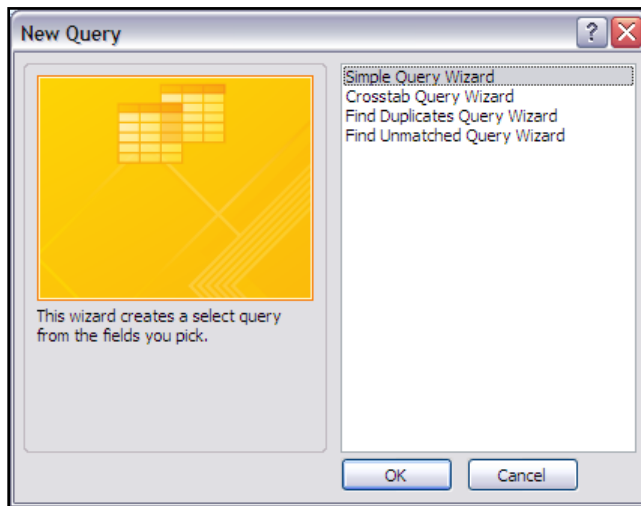
You can also use the Query Wizard. However, if you want to apply specific criteria, you will need to use the Design view.

1. From the **Create** tab, select **Query Wizard**.

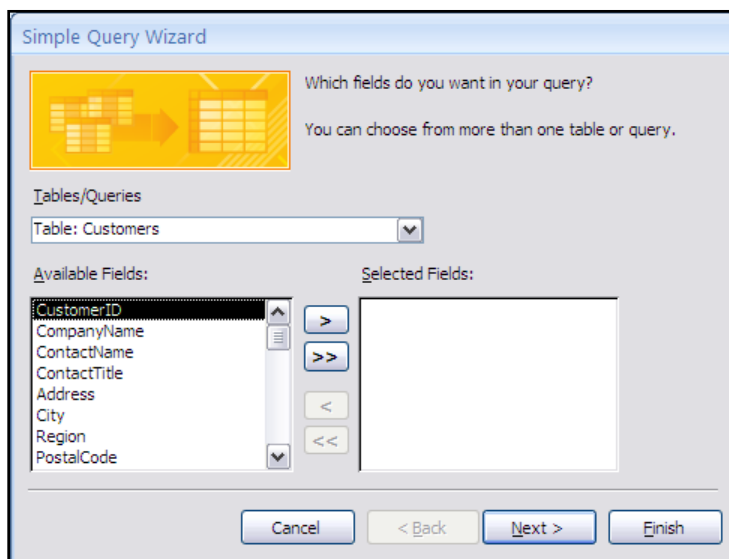




The **New Query** dialog box displays.

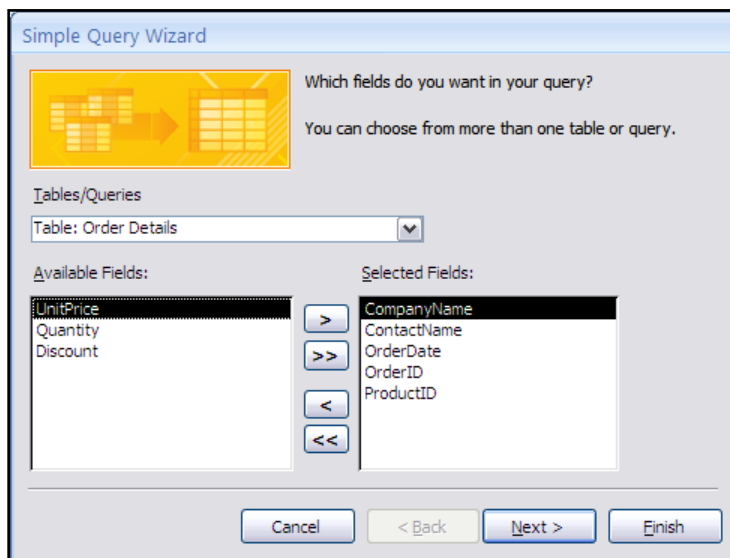


2. Select the desired query type. For this class, select Simple Query Wizard, and click **OK**. If you select other options, you will have different views than those below when completing the wizard.
3. In the **Tables/Queries** field, select the table or query you want to use.

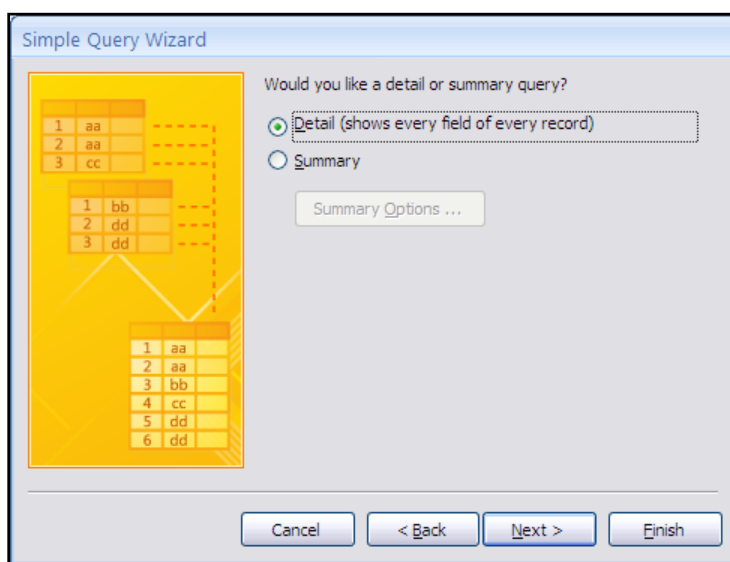


4. In the **Available Fields:** area, select the fields you want to use and click the appropriate button to add those fields to the **Selected Fields:** list.
5. To add fields from other tables or queries, select another table or query and add additional fields to the **Selected Fields**.

6. Click **Next**. The following screen displays.



7. Click **Next**. The following screen may display.



**Note:** If you select Summary, select Summary Options and select the values you want calculated; then click **OK**. Note: See Crosstab Queries and Calculating Queries below for more effective options.

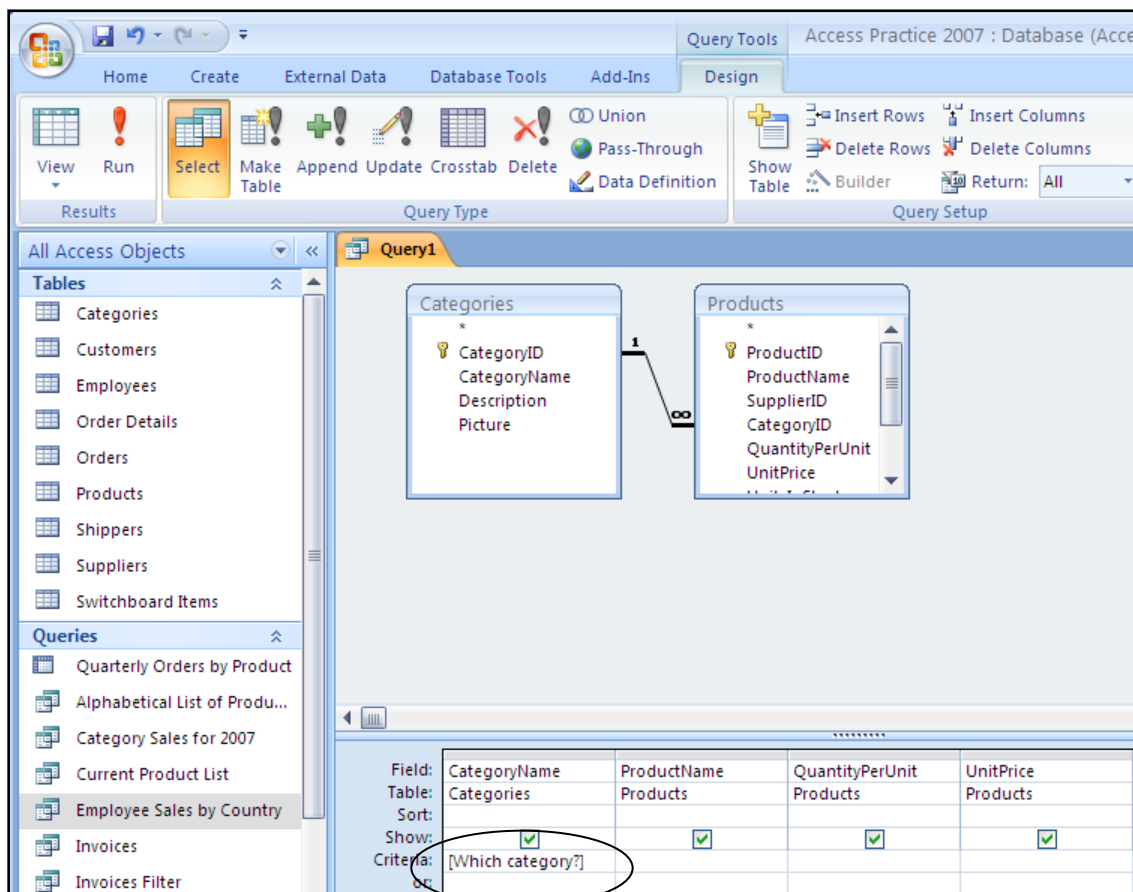
8. Click **Next**.
9. Enter a title for your query; then click **Finish**.

**Note:** To add criteria to your query, such as only customers from a specific country, you must go into the Design view.

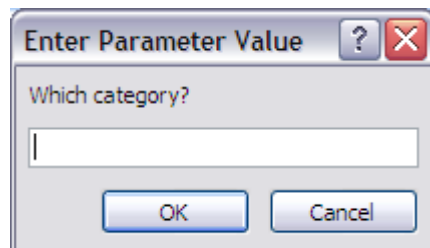
## Parameter Queries


You can use parameter queries to prompt the user to enter criteria for selecting records. You could, for example, create a query that prompts the users to specify certain dates or perhaps certain countries. This allows you to create one query with “parameters” rather than multiple queries. You can create a parameter for a new or existing query.

1. From the **Create** tab, select Query Design.  
OR,  
If using an existing query, open the query; then click the View button to display the design view of the query.
2. Place your cursor in the Criteria are for the field you want to use as a parameter (e.g., Category) Type a question or message to prompt the user. The question must be enclosed in square brackets (e.g., **[Which category?]** or **[Enter category]**)



3. Click the View button (or save and open your query) to view the prompt.



4. Enter the desired category, e.g., Beverages, and click **OK** to view the results of your query.
5. If necessary switch to design view to make changes. When satisfied, right-click the Query tab (or click the Save button ) and save your query as described earlier.

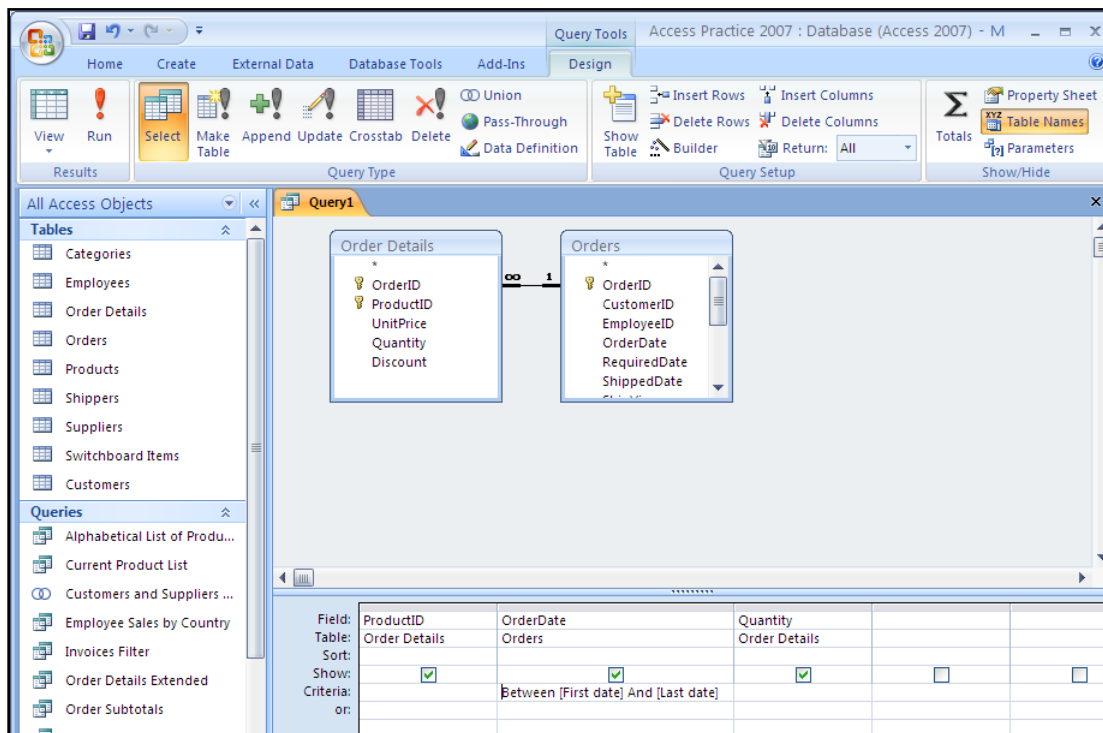
Whenever you open this query in the future, you will be prompted for the appropriate parameter. This means that it is important to know the data in your tables.

## Creating a Range Parameter Query

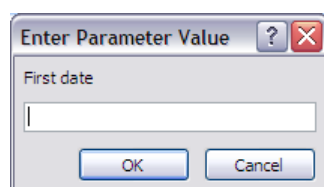
You can create a parameter query that specifies a range of numerical information such as quantities or dates.

1. Create a new query or open an existing query in Design view.
2. Position your cursor in the Criteria area of the field you want to use as a parameter, e.g., Order Date.
3. Type **BETWEEN [prompt message] AND [prompt message]**. Using order date for example, type:

**BETWEEN [First date] AND [Last date].**



4. Click the **View** button to preview the prompts. The first **Enter Parameter Value** dialog box displays.



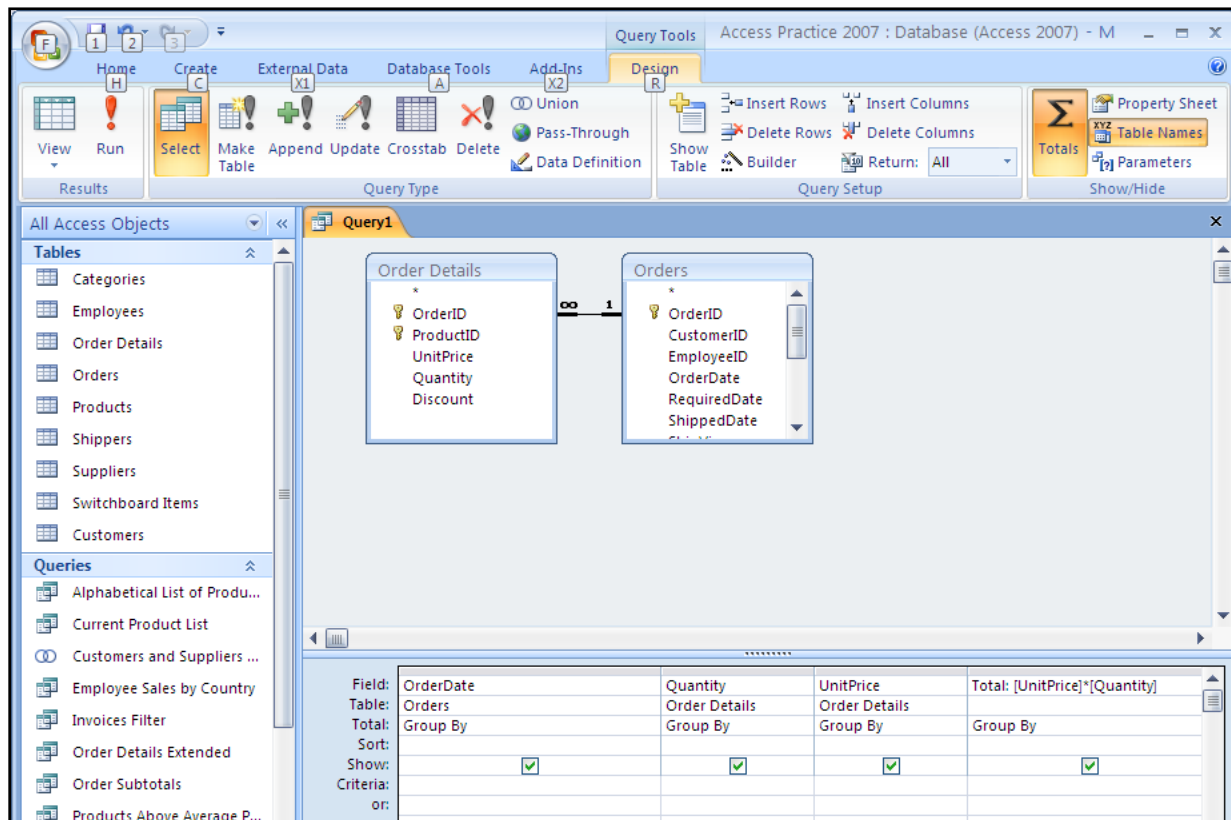
5. Type the appropriate information and click **OK** to display the second **Enter Parameter Value** dialog box.
6. Enter the appropriate information for the second prompt box and click **OK**.
7. If desired, save the query as described previously.

## Creating a Formula in a Query

You can perform simple calculations in a query to calculate values from different fields. For instance, you can display the total amount due for the number of items ordered.

1. From the Query Design view, type the name for your field, e.g., Total, then a colon, then the field name you want to use in your calculation in square brackets, enter your operator, (e.g., +, -, \*, etc.) then the next field name in square brackets. For example:  
**Total: [UnitPrice]\*[Quantity]**

The example below would give you the total amount due for the number of items ordered.



## Totaling a Column

Access now provides a tool to total a column in a table or query. Click the **Totals** button in the Records gallery. A new row displays at the bottom of the table view.

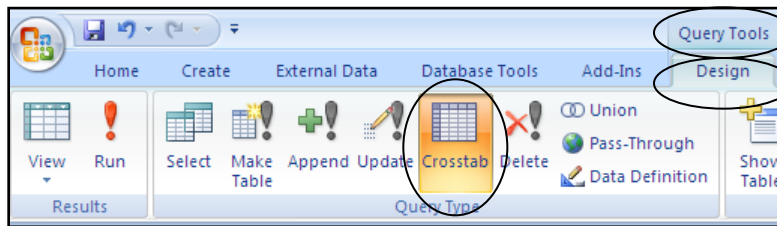
Click the drop-down field to select the desired function.



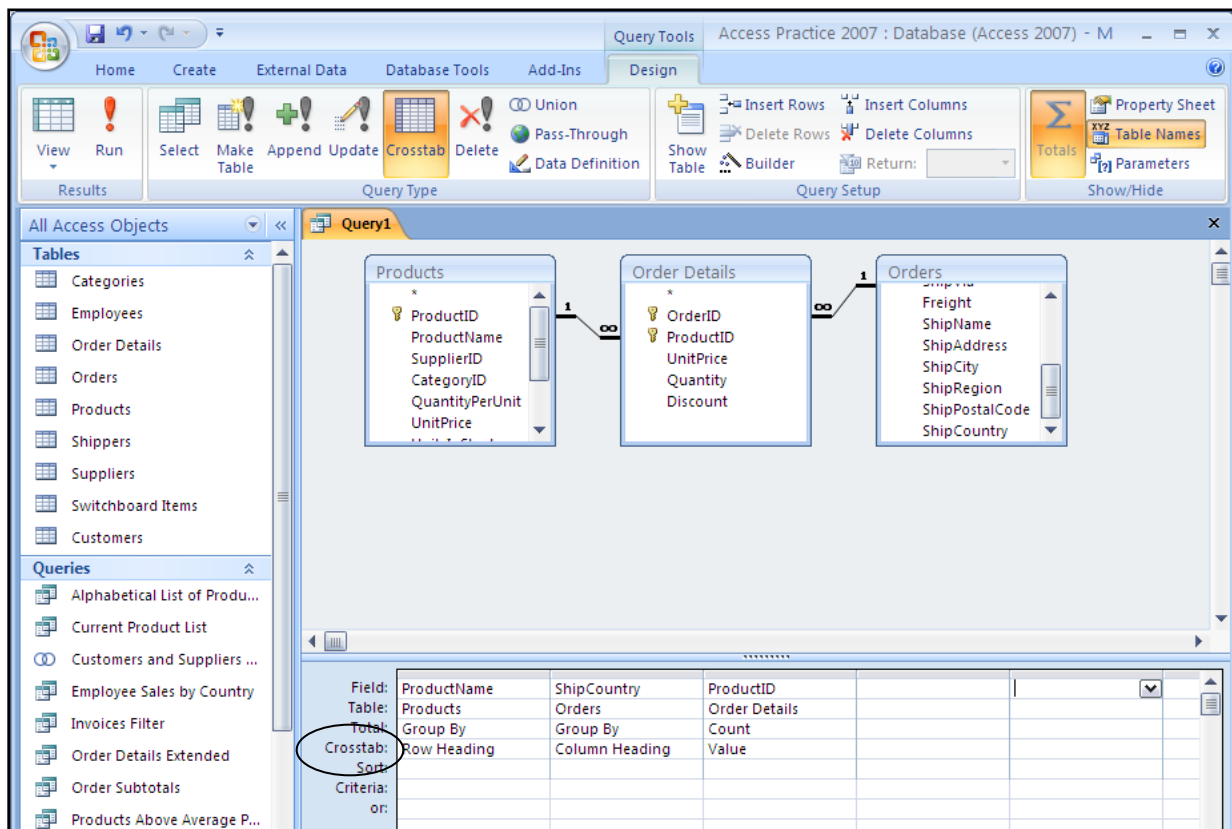
## Crosstab Queries

You can build crosstab queries to summarize data in a more compact format, making it easier to read. The format displays with summary values, similar to a pivot table in Excel.

1. Create a query in Design view by adding the tables you want to summarize. For this exercise, use Products, Orders, and Order Details.
2. Add the necessary fields to the design grid. (ProductName, ShipCountry, Quantity)
3. From the **Query Tools** tab, **Design** tab, select **Crosstab**.



The design grid displays the Crosstab field.



4. In the **Crosstab**: fields for each table, click the ▼ and select the appropriate option.
  - Where you selected **Row Heading** or **Column Heading**, select **Group By**.
  - Where you selected **Value**, select the appropriate option (e.g. **Count**, Sum, etc.)
5. Click the **View** button to view the results of the Crosstab query.

### Specifying Criteria for a Crosstab Query

You can view all records, as in the example above, or you can specify criteria for each field. For example, perhaps you only want to see orders for particular countries.

1. Open the Crosstab query in Design view.
2. Place the cursor in the Criteria: area for the field for which you want to specify criteria (e.g., ShipCountry).
3. Enter the desired criteria. (To enter more than one criterion for the same field, use the arrow keys to enter other criteria, e.g. US **OR** Canada **OR** Mexico.)

Field:	ProductName	ShipCountry	ProductID
Table:	Products	Orders	Order Details
Total:	Group By	Group By	Count
Crosstab:	Row Heading	Column Heading	Value
Sort:			
Criteria:		"USA"	
or:		"Canada"	
		"Mexico"	

4. Click the **View** button to view the results of the Crosstab Query with the criteria applied.

Product Name	Canada	Mexico	USA
Alice Mutton	3	3	11
Aniseed Syrup	1		1
Boston Crab Meat	1	2	5
Camembert Pierrot	3	2	7
Carnarvon Tigers	1	1	5
Chai	2	2	7
Chang		1	9
Chartreuse verte		1	3

### Exercise 6 – Create a Query

Create a Query to display the following information from the Access Practice Database:

- a. Customer Company Name (sorted Ascending)
- b. Orders placed in 2007 (sorted Ascending)
- c. Product Name
- d. Shipped to USA

You should have 170 records.

## Access and Excel

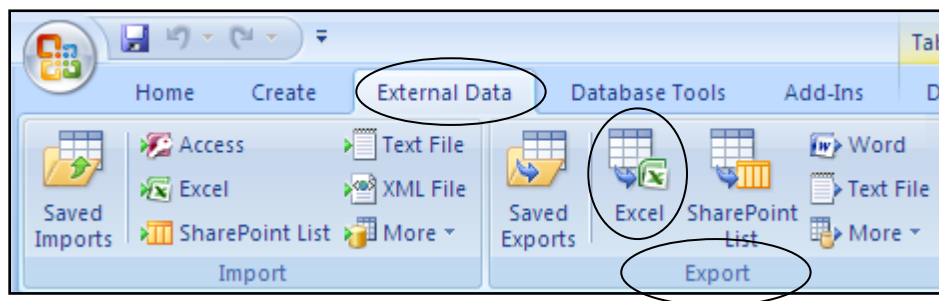
You may want to export Access data to Excel where you can have more options to manage numerical data. You may also, at times, want to import Excel data into an Access database.

## Excel to Access

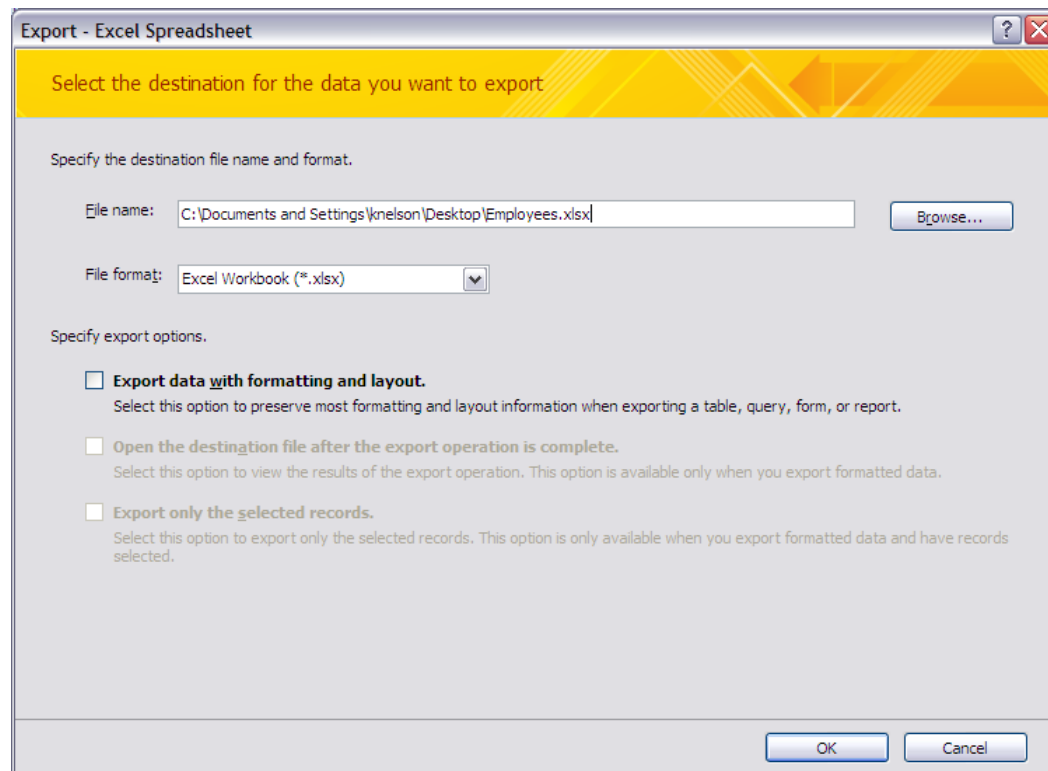
Earlier in this class we imported an Excel file into Access (see page 23).

## Access to Excel

You can send tables, reports, and queries to Excel.



From the **External Data** tab, select or open the item you want to Export. Click the **Excel** button from the Export gallery. The following screen displays.

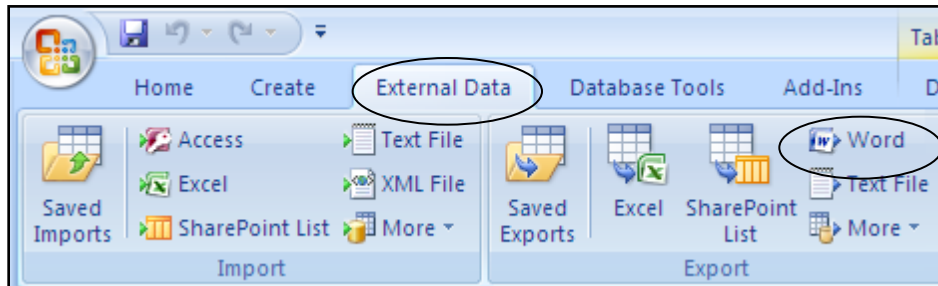




5. Click **Browse** to select the location where you want to export the file.
6. If desired, change the file format.
7. Select any other options, and click **OK**.
8. Navigate to the drive and folder where you saved the exported file to open it.

## Access to Word

You can also export Access tables, queries, or reports to **Word**.



Select or open the object you want to export, click Word, and specify the location as described above.

## Importing Excel Data to an Existing Access Table

If you have data in Excel you want to add to an existing table in Access, follow the steps below. Column and field names must match exactly to add Excel data to an existing Access table. If you have a primary key, take care to ensure that no primary key numbers are duplicated, or your data will not import.

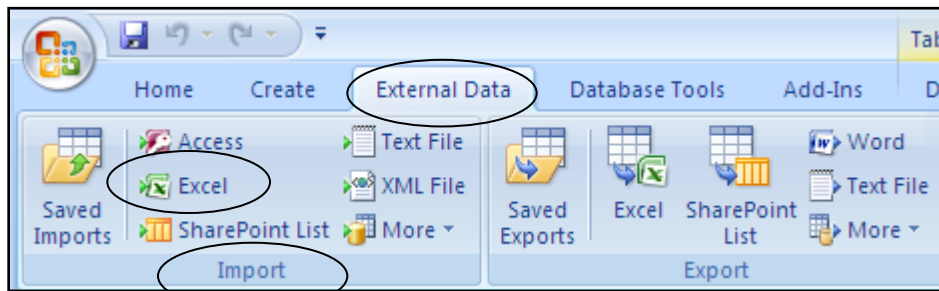
### Preparing the Excel File

1. Open the Access database to which you want to add data.
2. Open the table to which you want to add records.
3. Verify the field names in the table; then close the table.
  1. Open the Excel file and change field names as appropriate. If necessary, delete unnecessary fields and save your file.

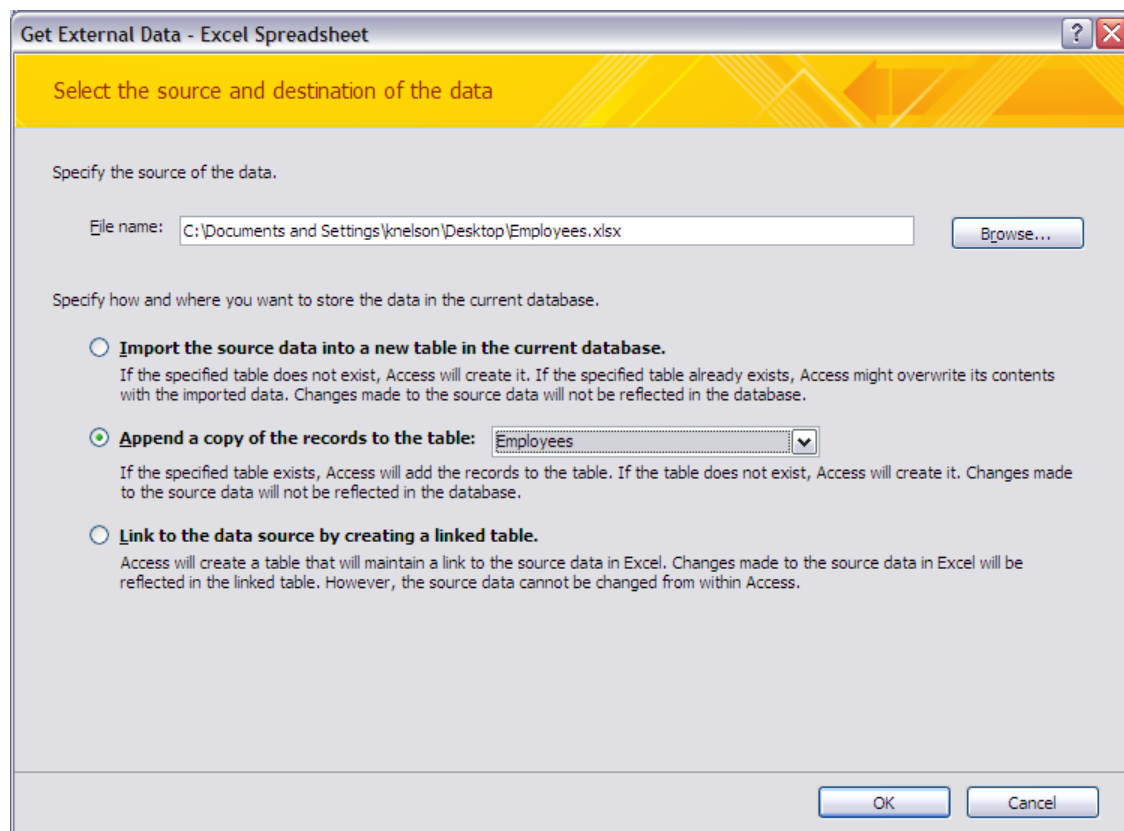
**Tip:** You can name a range of cells to import new data to an existing table. Naming ranges is covered in the Excel Intermediate class.

## Importing the Data

1. Open the Access database to which you want to add data.



2. From the **External Data** tab, in the Import gallery, click **Excel**.
3. Click Browse to specify the file location.
4. Indicate the table into which you want to import the data and click **OK**.



5. Proceed through the wizard steps as described beginning on page 23.