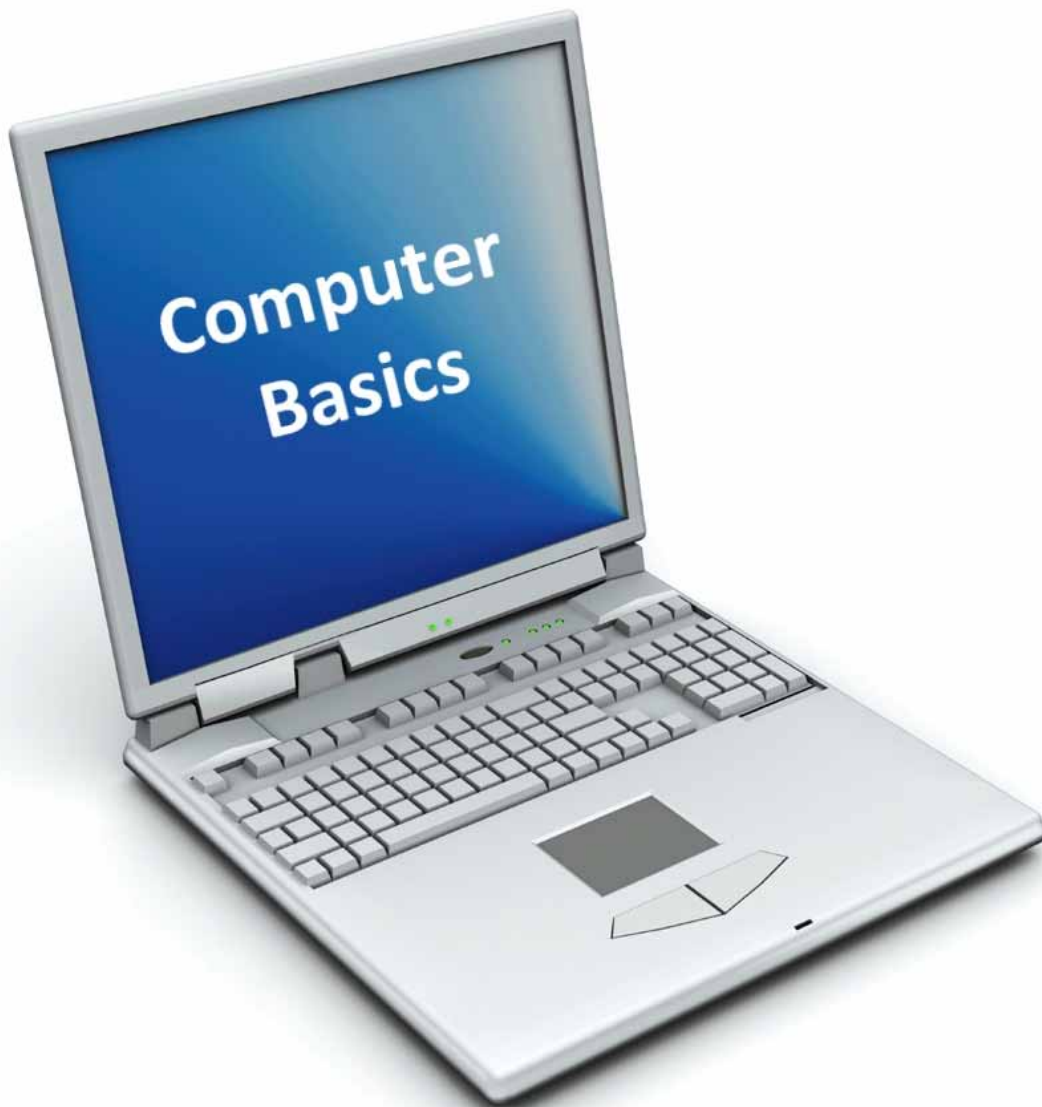


Access 2010 Basics



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Tutor Setup Information

- Copy the sample files folder, called **Access 2010 Basics** to the **Documents** folder on the PC.
- At the end of the course, remove all files modified or created during the course, prior to re-running the course.
- At the end of the course, reset all program and operating system defaults that may have been modified during the course, prior to re-running the course.

Database Concepts

What is a database?

- A database is defined as an organized collection of data (information). In raw form, a sheet of paper divided into columns and rows or a table in Microsoft Word or Excel would previously have been considered a simple database. Single table databases are very limited in their uses and would not be considered as a business solution.
- These days, a database is defined as a collection of objects, such as tables, forms, queries and reports. A database will be able to store data in a structured manner across multiple tables, use queries to locate specific information according to given criteria, produce detailed (on-screen or printed) reports, perform calculations and much more.

Database Examples

- Databases are used to group and format data and then extract information from that data. Examples of databases usages include:
 - A phone directory
 - Criminal databases used by the police to keep track of known criminals
 - Patient records are kept on a database within the health system
 - Tax details are kept on a government database

What is a relational database?

- Unlike a single table database, a relational database is able to store and manipulate data across multiple tables.
- By utilizing multiple tables, a relational database reduces unnecessary duplication of data. For example, when using a large database to store customer information, including addresses, it is likely many individuals will live in the same street and share other common parts of the address. Rather than storing the same **street name, county, state, etc.**, over and over, this information can be stored in a separate table. As each new customer is added to the database, only the unique **house number** needs to be recorded.

What is a table?

- Tables are used to store the data in a structured and organized format. As previously mentioned, tables are similar to those of Word and Excel, in that they contain rows (*records*) and columns (*fields*).

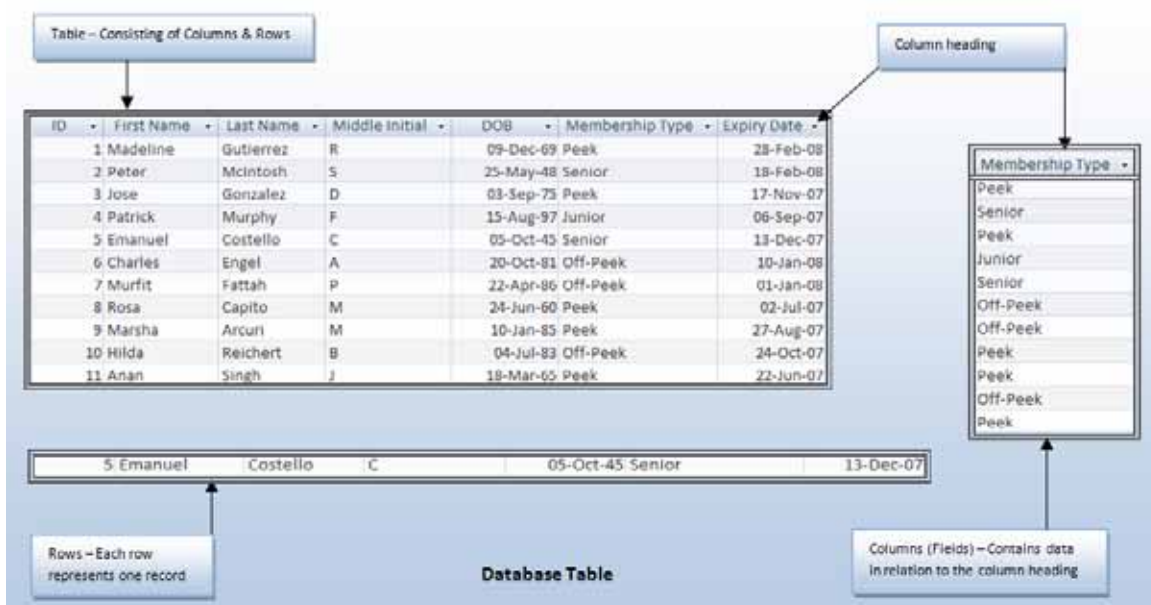
ID	First Name	Last Name	Middle Initial	DOB	Membership Type	Expiry Date
1	Madeline	Gutierrez	R	09-Dec-69	Peek	28-Feb-08
2	Peter	McIntosh	S	25-May-48	Senior	18-Feb-08
3	Jose	Gonzalez	D	03-Sep-75	Peek	17-Nov-07
4	Patrick	Murphy	F	15-Aug-97	Junior	06-Sep-07
5	Emanuel	Costello	C	05-Oct-45	Senior	13-Dec-07
6	Charles	Engel	A	20-Oct-81	Off-Peek	10-Jan-08
7	Murfit	Fattah	P	22-Apr-86	Off-Peek	01-Jan-08
8	Rosa	Capito	M	24-Jun-60	Peek	02-Jul-07
9	Marsha	Arcuri	M	10-Jan-85	Peek	27-Aug-07
10	Hilda	Reichert	B	04-Jul-83	Off-Peek	24-Oct-07
11	Anan	Singh	J	18-Mar-65	Peek	22-Jun-07

What is a record (row)?

- A record applies to data entered into a single row of a table. All data in that row would belong to an individual or item. A record would normally include a unique ID number, Name, Description, plus other relevant information. With each new record, a new row is created.

What is a field (column)?

Each column (previously known as a 'field') is used to define what specific information is to be entered into that particular column. A column titled '**Street**' for example would signify this to be the point in a record to enter in the Street name when creating each new record.



What is data?

- Data is the information entered into tables within the database. Databases are used daily by large corporations, small businesses and individuals, often without people realizing they are using a database. Even something as simple as entering contact details into the 'Contact' or 'Address Book' section of an email program such as Microsoft Outlook / Outlook Express, involves entering *data* into a database.
- Data entered will generally be alphabetical (names / addresses) or numerical (Dates / Currency), however Access is also able to store other forms of data, such as links to websites, documents created in other packages (OLE) as well as file attachments (files & images).
- Data can be entered into the database manually, via the keyboard, imported from or linked to external sources or even collected through email.

The difference between data and information

- **Data:**
 - Facts, statistics used for reference or analysis.
 - Numbers, characters, symbols, images etc., which can be processed by a computer
 - Data must be interpreted, by a human or machine, to derive meaning
- **Information:**
 - Information is interpreted data
 - Data that has been processed to produce meaning.

Data types

- Data types define what type of data will be entered into each 'field' (column) in a table. If however the data type is set to a currency or date 'Data Type', numeric data entered will automatically format to the appropriate currency or data/time format.

There are a number of specific reasons for selecting the correct data types when creating Tables within a database. Setting a 'Date' Data Type for example will format and store all entries in the manner configured. This in turn means that queries created to locate information according to a 'Date' criteria will have consistent data to work with. In the same way, Numeric data must be of a numeric type, otherwise query searches, reports and calculations will fail to provide the desired information.

NOTE: Field Properties must also be configured to format the appropriate currency symbol, date format and to limit the data entry to specific characters, symbols and spacing.

Common uses of large-scale databases

- These include:

Airline booking systems:

These systems maintain a database of all the seats on all the available flight, allowing passengers to be quickly booked onto flights to their destination.

Government records:

Governments all over the world rely on multiple large databases in order to function. Tax records, criminal records and social security all require sophisticated database systems.

Bank account records:

Banks require extremely reliable databases in order to keep track of all their customer account & log transactions.

Hospital patient details:

Medical records are being moved onto a database system. This system should allow your medical history to be instantly available wherever you require treatment.

Keeping data discrete

- A database can have many tables. A table should only contain records related to a particular subject. For example you may have a table called customers containing information about your customers with a separate table called orders. You can then link the tables by creating a relationship, connecting each customer with their associated orders.

Each field should contain only one item

- Each field should contain the smallest data element. For instance if you are storing a person's name, use one field for the first name and another field for the second name. This means that at a later date you could manipulate the data to sort by the second name. For the same reason split the details of an address into as many smaller parts as possible so that later you could search by state/region, by post code/zip code or even by country if you are maintaining an international list.

Database designers, database administrators and database users

- Different groups of people design, maintain and use large scale databases.

Database designers:

These are highly skilled database professionals with an in-depth knowledge of

exactly how the database works, including its overall function and details of the programming.

Database administrators:

This group administer the day to day operation of the database and make sure that the data is kept secure. These provide technical backup to users of the database. They provide access to specific data for appropriate users. In the event of a computer crash the database administrator will be responsible for restoring normal computer operations.

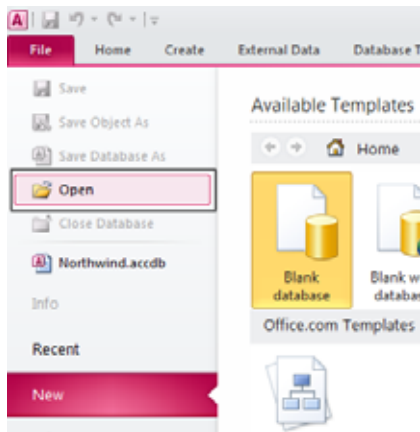
Database Users:

The users are responsible for routine, day to day data entry, data maintenance and information retrieval.

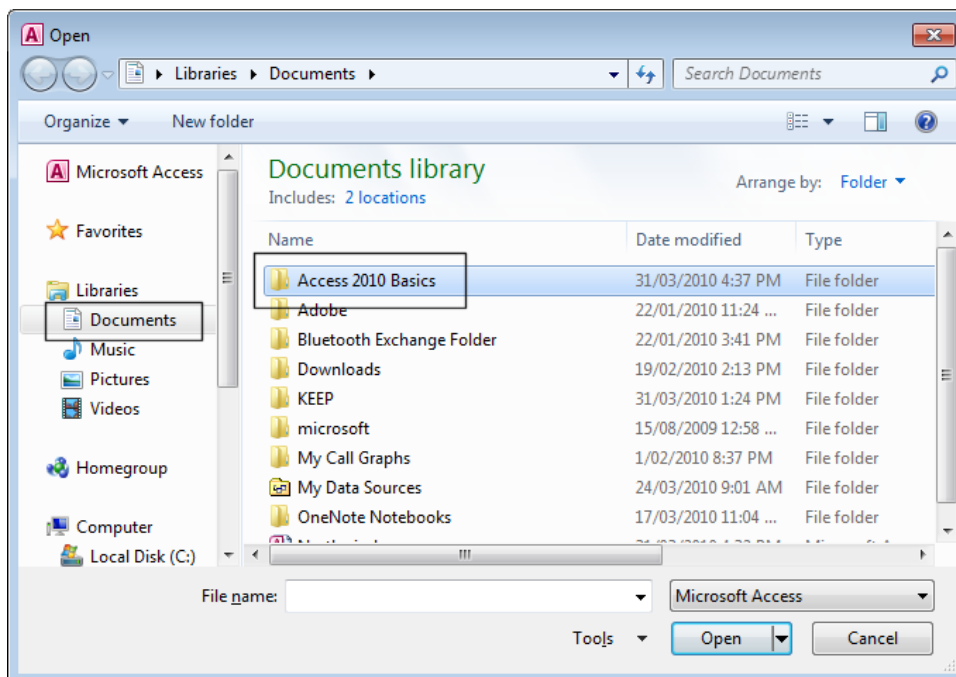
Opening a Database & Security Issues

Opening a database within your samples folder

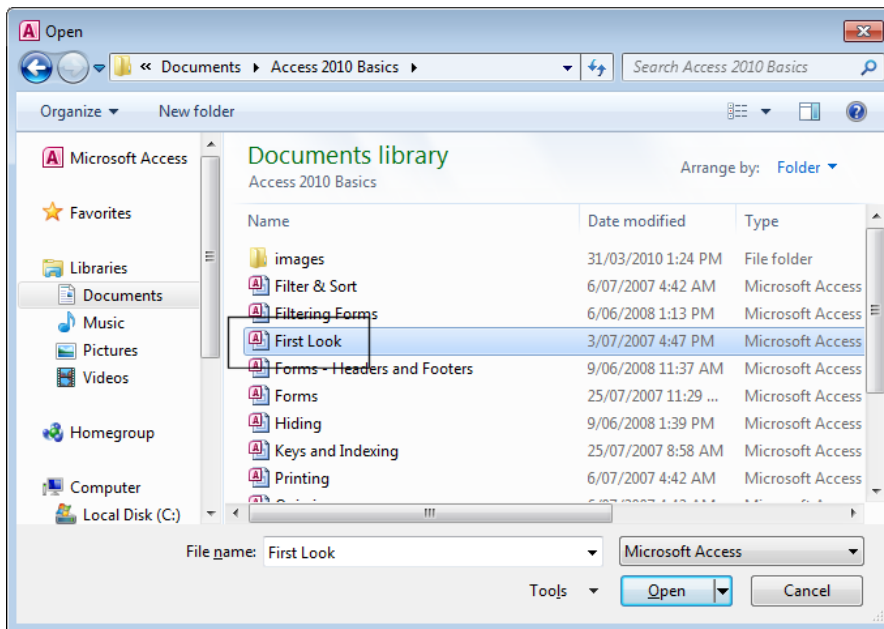
- The sample files for this course are stored in a folder called **Access 2010 Basics**, which in turn is stored under the **Documents** folder. You will now open a database file called **First Look**. To do this, click on the **Open** button, which you will find under the **File** tab.



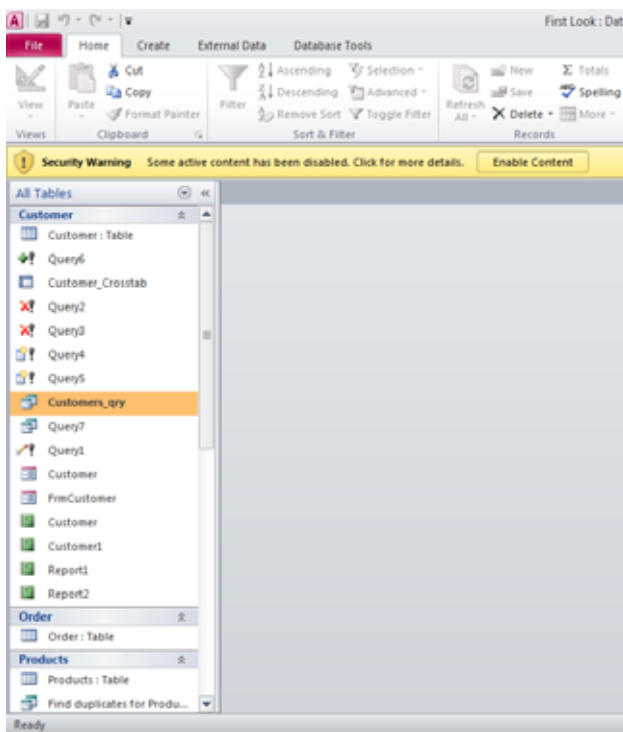
- This will display the **Open** dialog box.



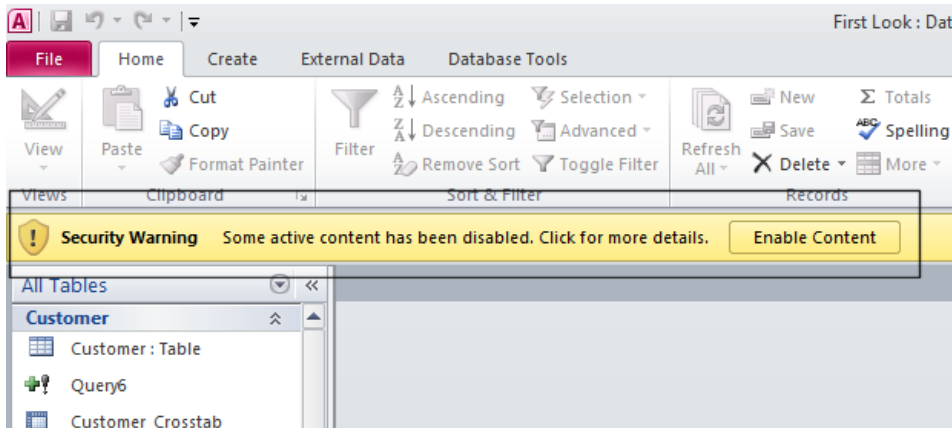
- If necessary select the **Documents** folder within the left section and within the right section of the window, select the **Access 2010 Basics** folder. Double click on the **Access 2010 Basics** folder to see the sample files.



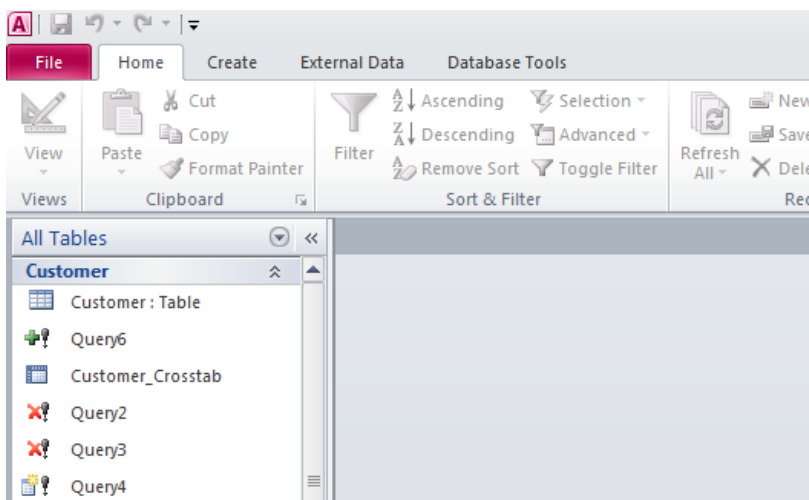
- Double click on the file called **First Look** to open the database file within the Access program. You will see the database displayed.



- You may see a warning displayed under the ribbon. If you see this message, do not worry, we will talk more about this later, for now, when you see this message displayed, click on the **Enable Content** button.



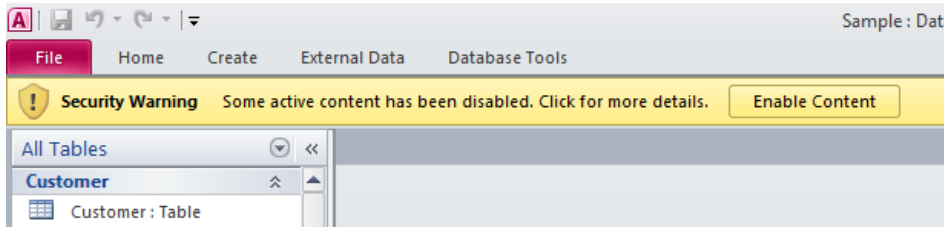
- You will then see the window displayed, without the warning.



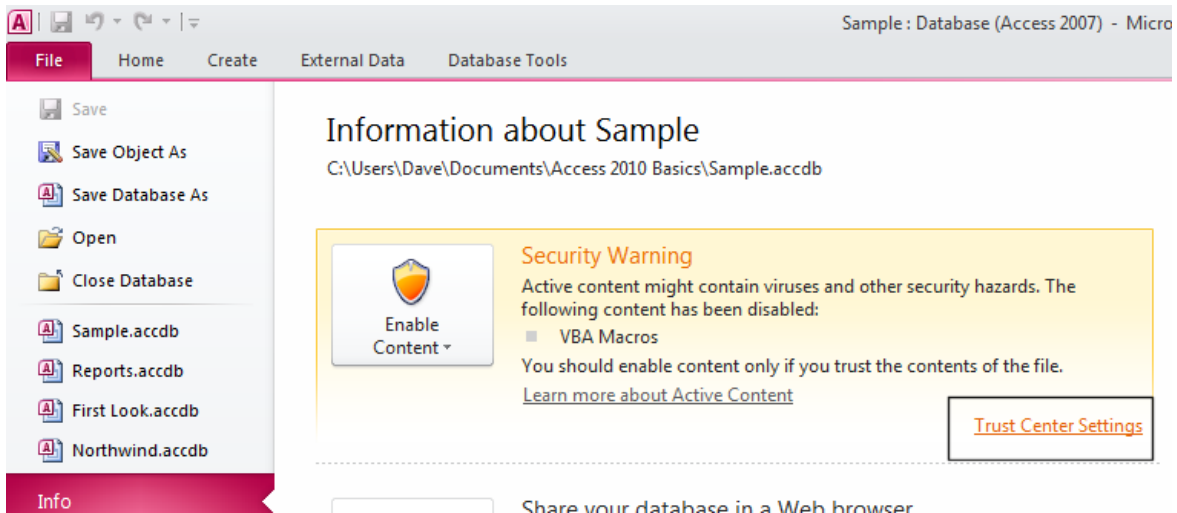
- Similar to other Microsoft Office applications, Access 2010 warns users of potential security threats when they arise and relate to macros within the application. Macros contain code written to perform a task within the application and are used widely in Excel and Word as well as Access. Because macros use code designed to allow advanced users the opportunity to create their own functions to enhance the functionality of a database, others can also write malicious code intended to have the opposite effect.
- An alternative to enabling macros every time a database is opened is to select and add a trusted folder within the Trust Centre. We shall do this in the next section.
- Close the database and close Access.

Trusted Locations – Using the Trust Centre

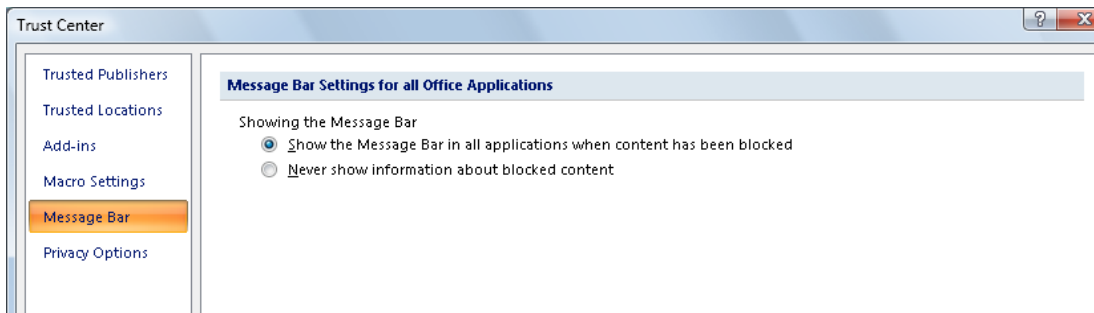
- Re-open Access and open a database file called **Sample**. As you can see the warning message is displayed.



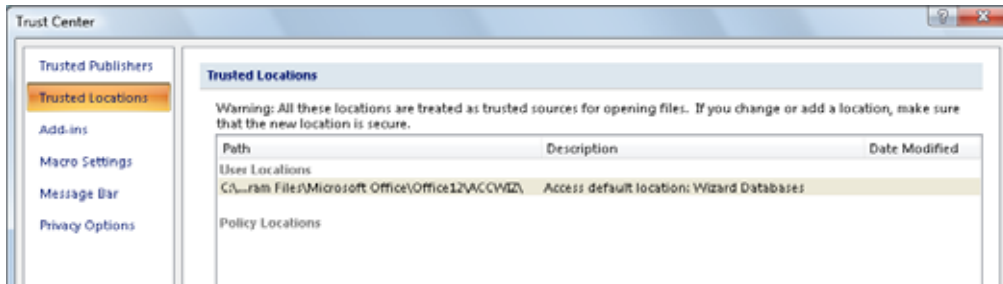
- Now we will make the sample folder a trusted location, permanently!
- Click on the **File** tab and then the **Info** side tab, within the side pane displayed, click on the **Trust Center Settings** link.



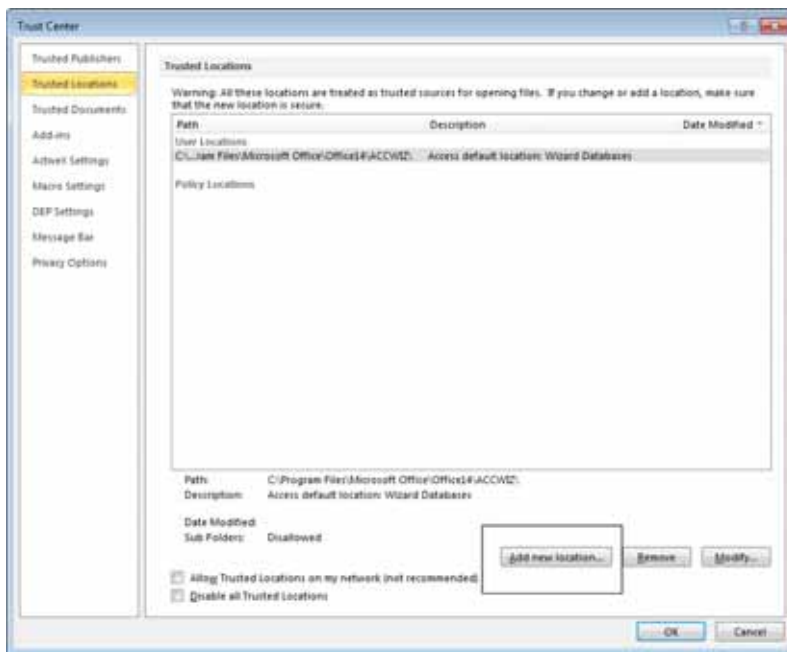
- The **Trust Center** window will be displayed.



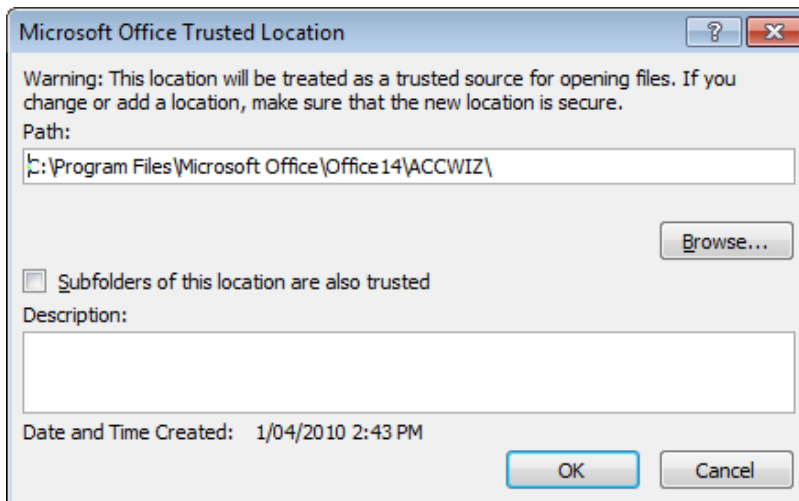
- Select the **Trusted Locations** button from the left pane of the window.



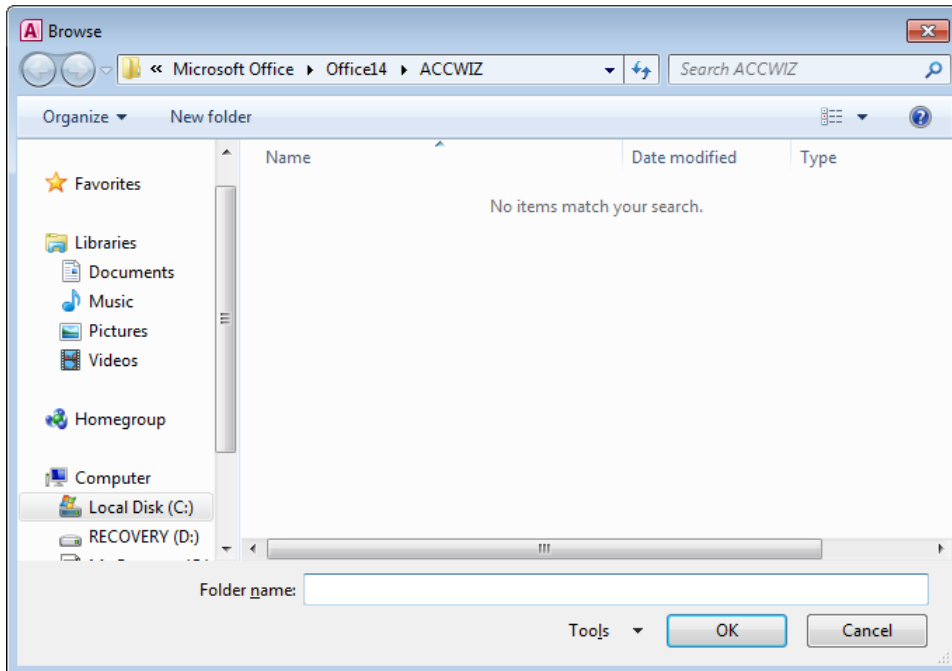
- Click on the **Add new location** button.



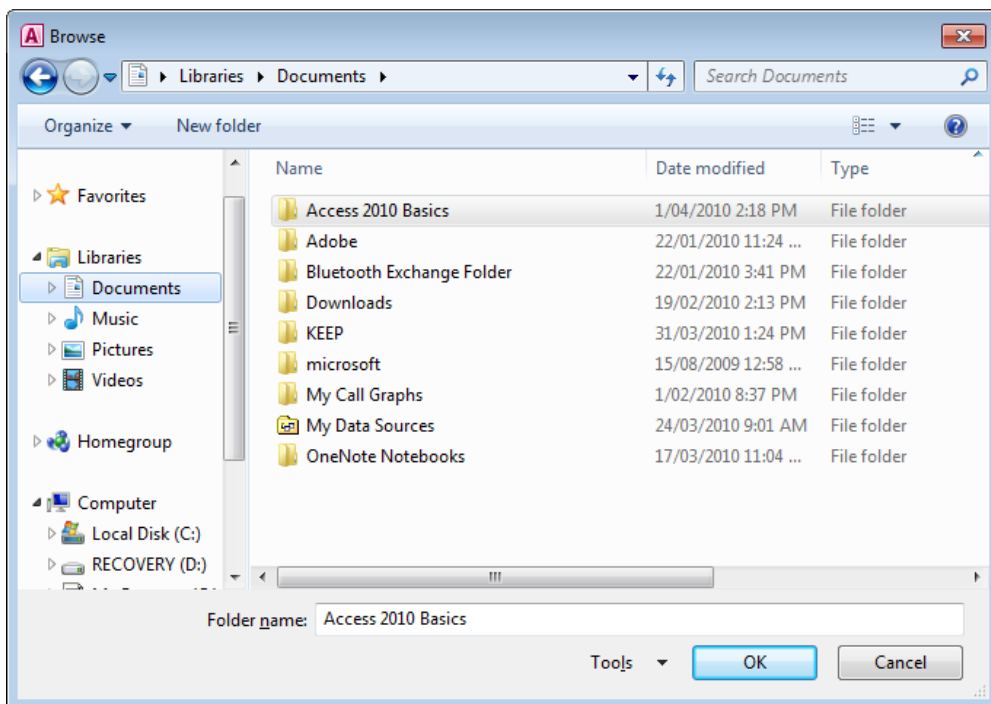
- You will see a dialog box displayed.



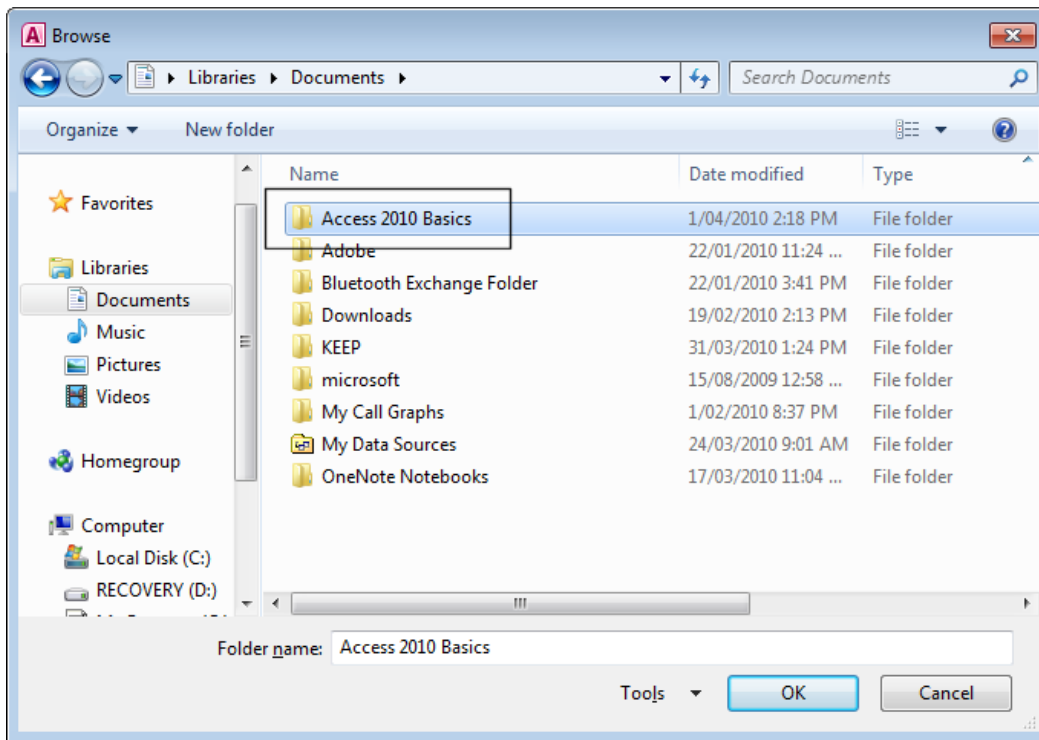
- Click on the **Browse** button and you will see a dialog box displayed.



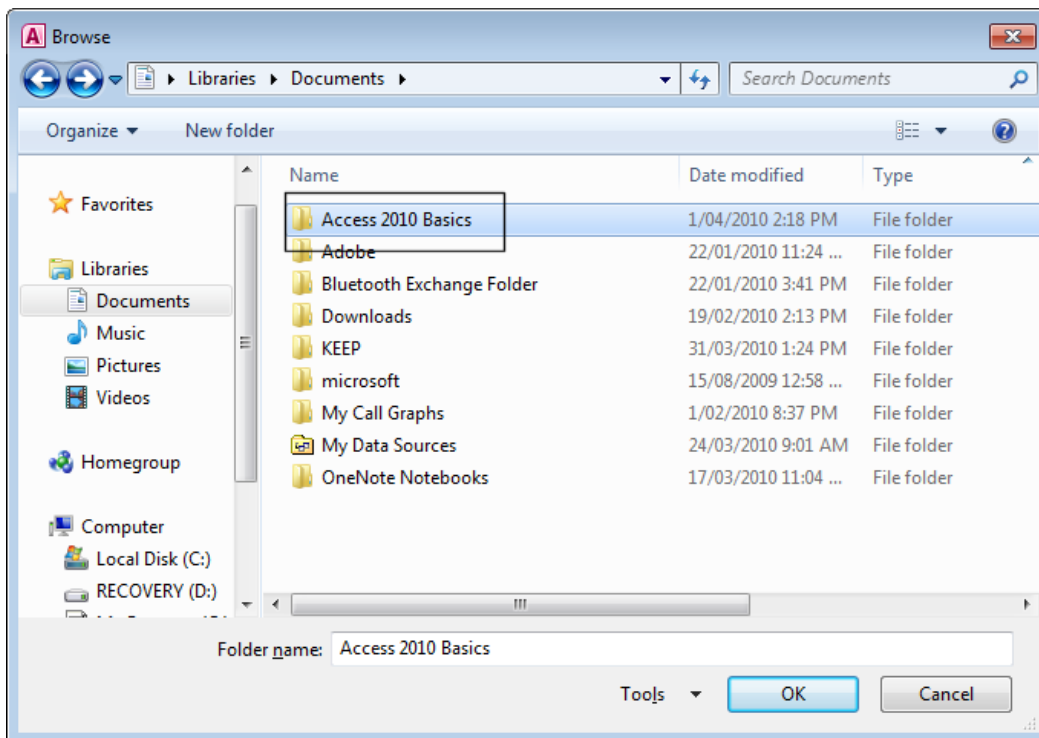
- You need to click on the **Documents** (or **My Documents**) folder, which should be listed down the left side of the dialog box, as illustrated.



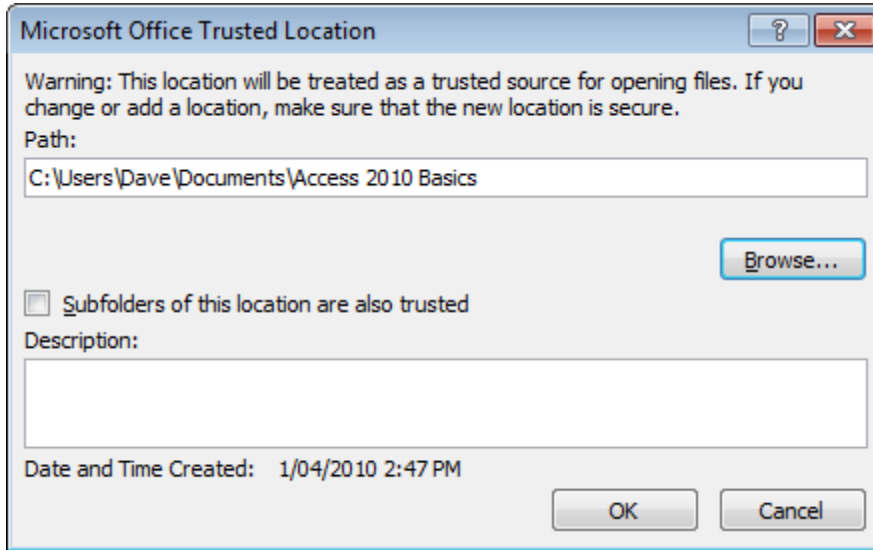
- Once you have clicked on this folder you should see the **Access 2010 Basics** folder displayed.



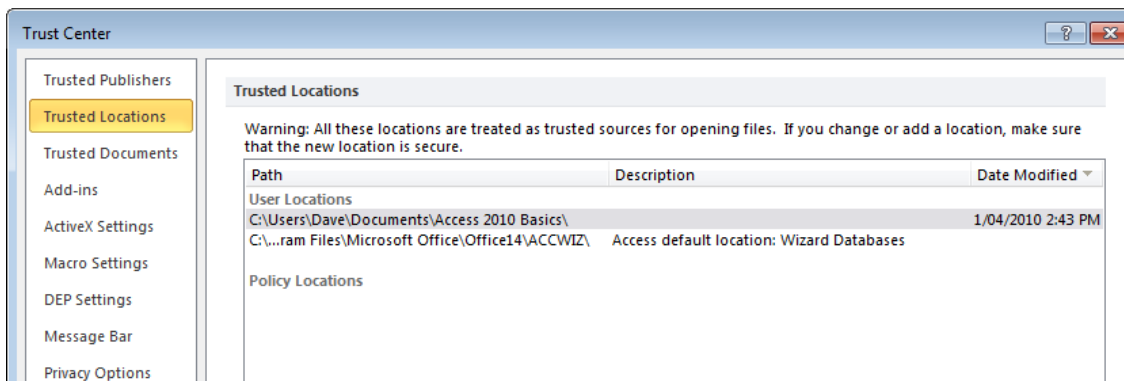
- Select the **Access 2010 Basics** folder, as illustrated.



- Click on the **OK** button and you will see the following.



- Click on the **OK** button and the **Access 2010 Basics** folder will now be permanently trusted.



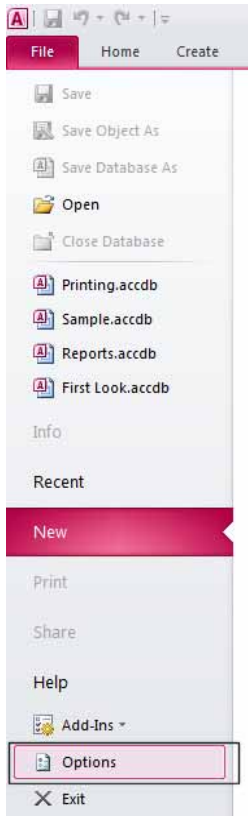
- Click on the **OK** button on any remaining dialog boxes to close them.
- Close the Access program and then reopen it.
- Reopen the **Sample** database. You should no longer see the warning displayed.

NOTE: If other database files are stored in different folders, these will need to be added to Trusted Locations. Alternatively it may be worth considering centralizing database files.

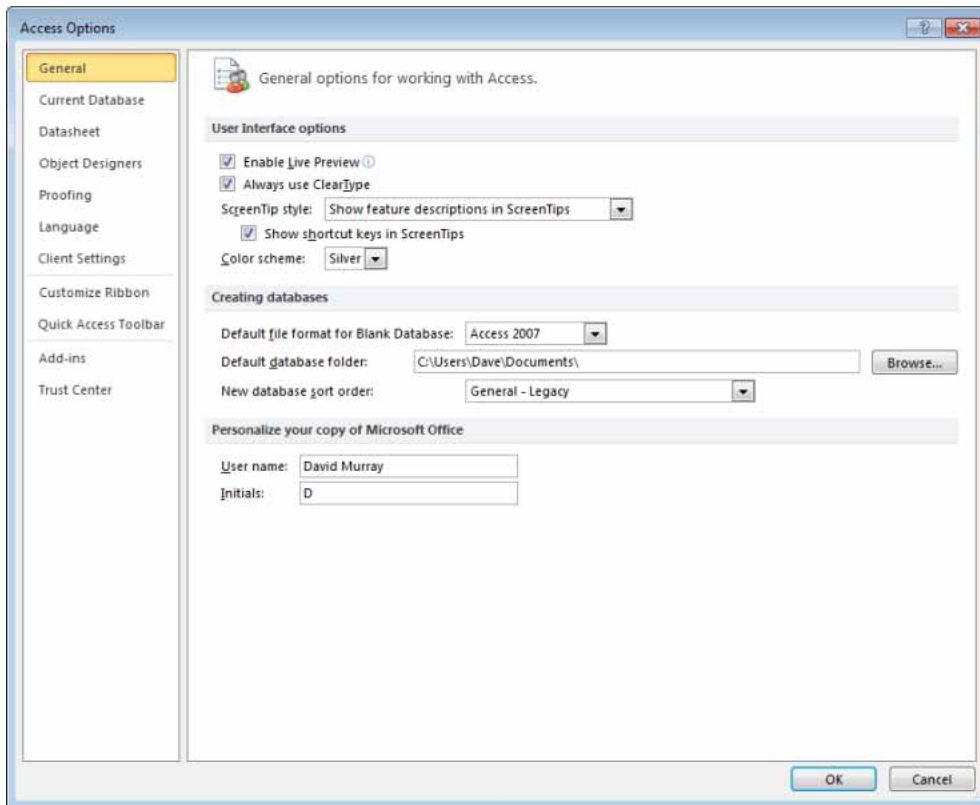
- Close the Access program.

Setting the default folder location within Access

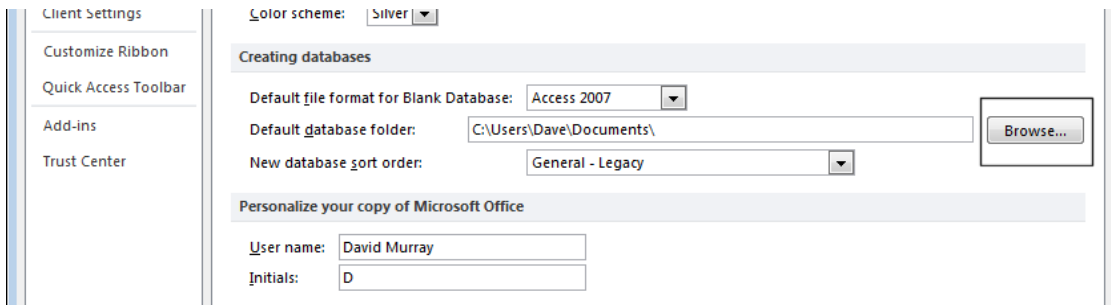
- We can set a default folder for opening files within Access. This means that when you display the **Open** dialog box, it always displays files in the folder that you set as default.
- To set a default folder, re-open the Access program and then click on the **File** tab (top-left). You will see the following.



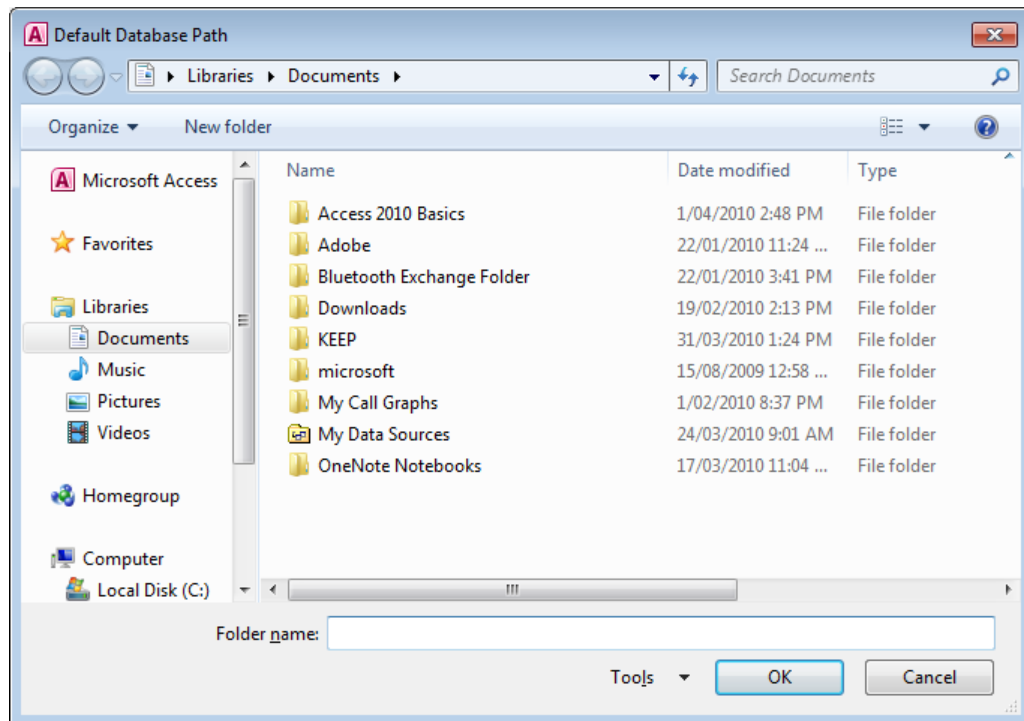
- Click on the **Options** button (displayed towards the bottom of the list). This will display the **Access Options** dialog box.



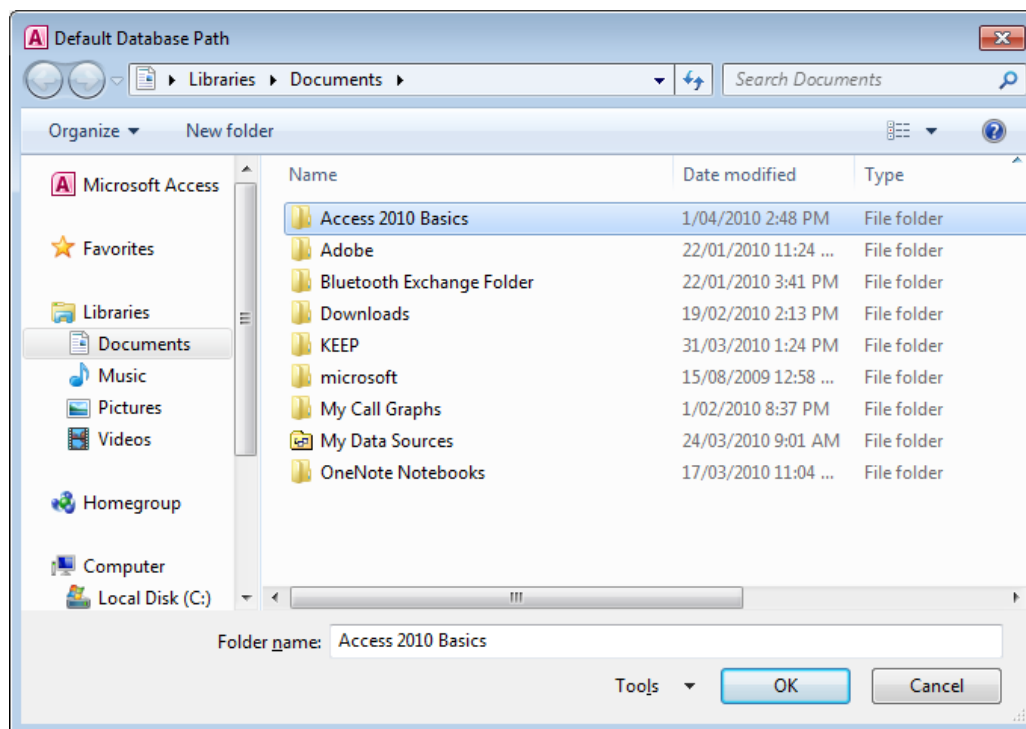
- Within the **Creating databases** section of the dialog box, click on the **Browse** button to the right of the **Default database folder**.



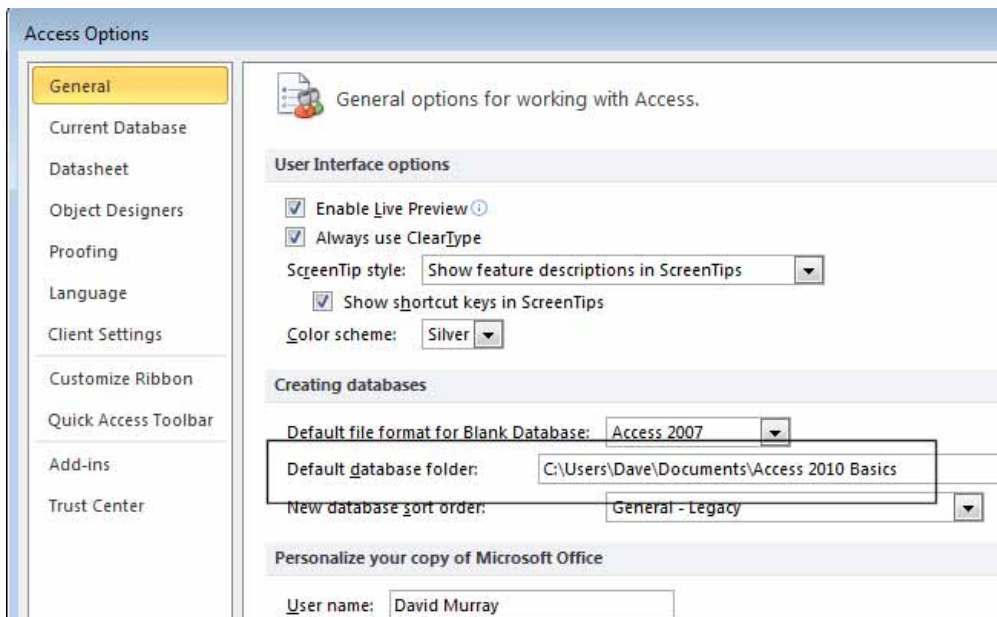
- This will display a dialog box.



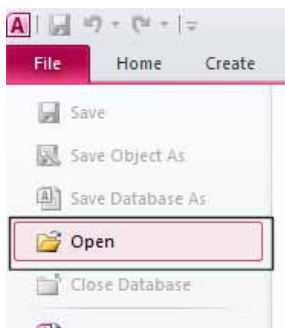
- Select the **Documents** folder within the left side of the dialog box.
- In the right side of the dialog box select the **Access 2010 Basics** folder.



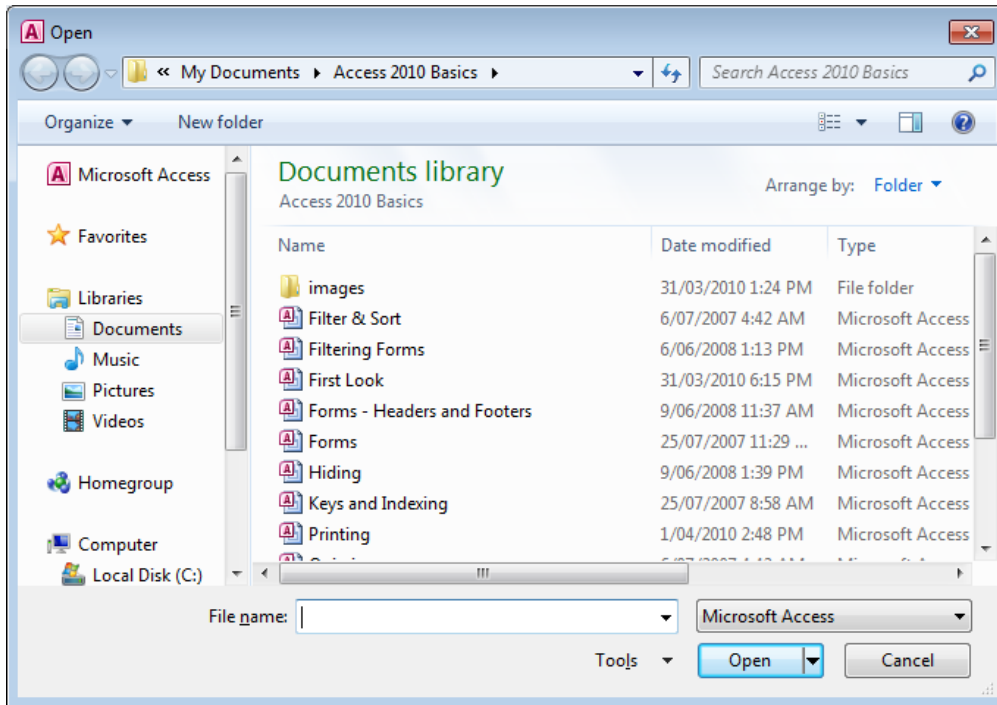
- Click on the **OK** button and you will see the **Access 2010 Basics** folder listed as the default folder, as illustrated.



- Click on the **OK** button to close the dialog box.
- Close Access.
- Reopen the Access program and click on the **File** tab. Then select the **Open** button.



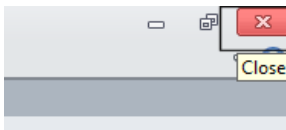
- You should see that the contents of your samples folder, i.e. **Access 2010 Basics**, is displayed automatically for you, as illustrated.



- Close the dialog box.

Closing the Access program

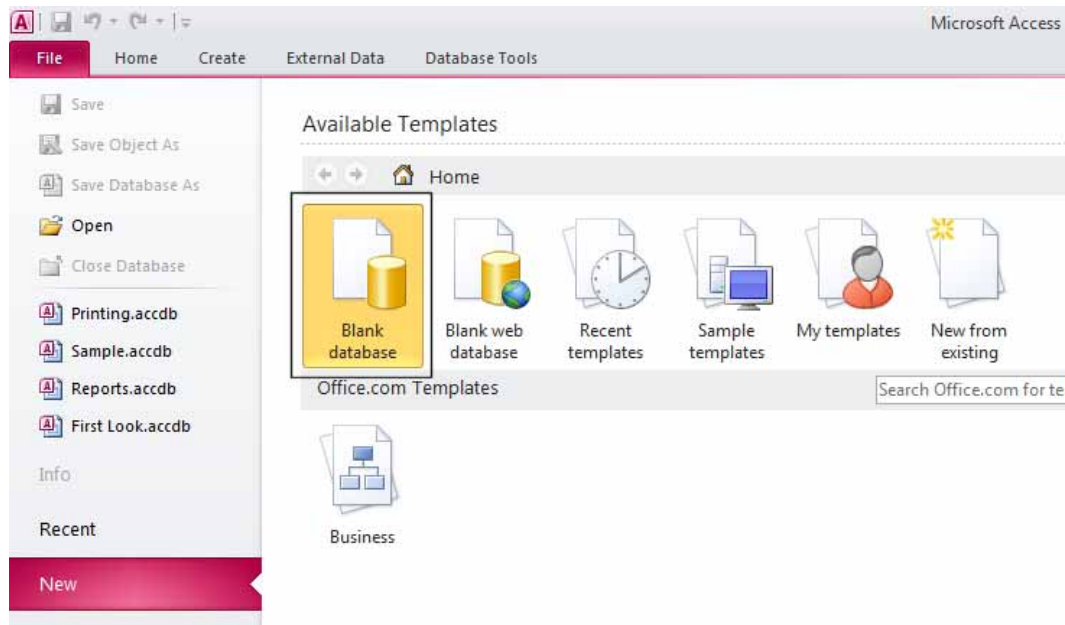
To close the Access program click on the **Close** button to the top-right of the Access screen.



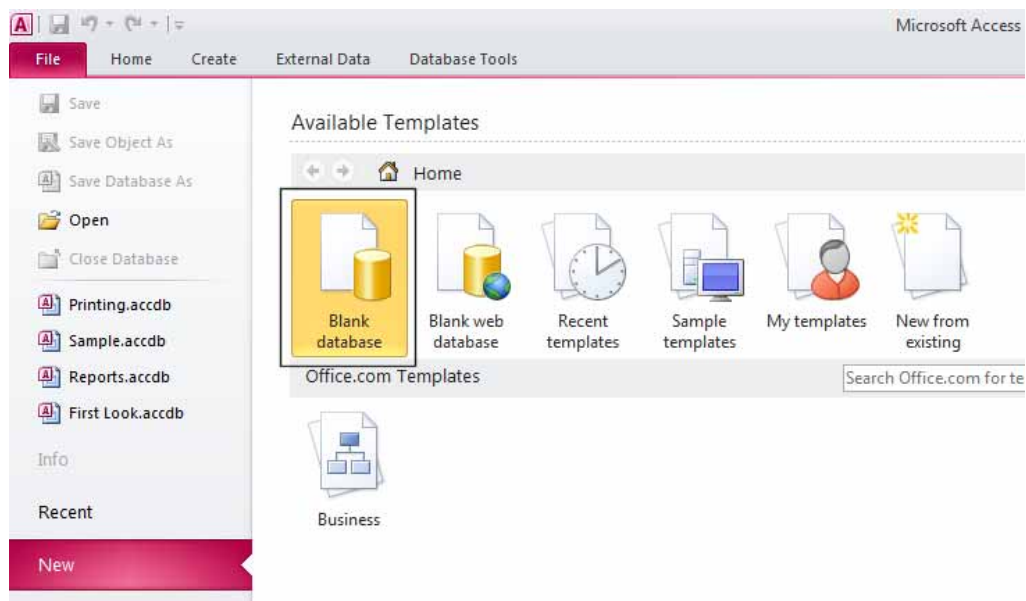
Tables, Fields and Field Types

Creating a new blank database

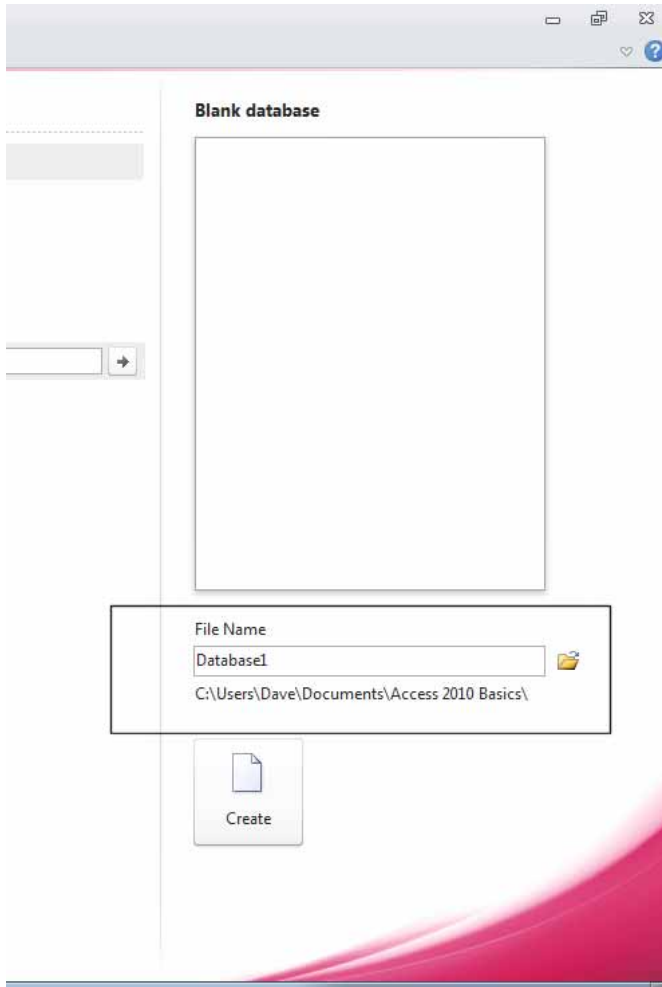
- Start Access. This will display the **File** tab contents.



- Select the **Blank database** icon.

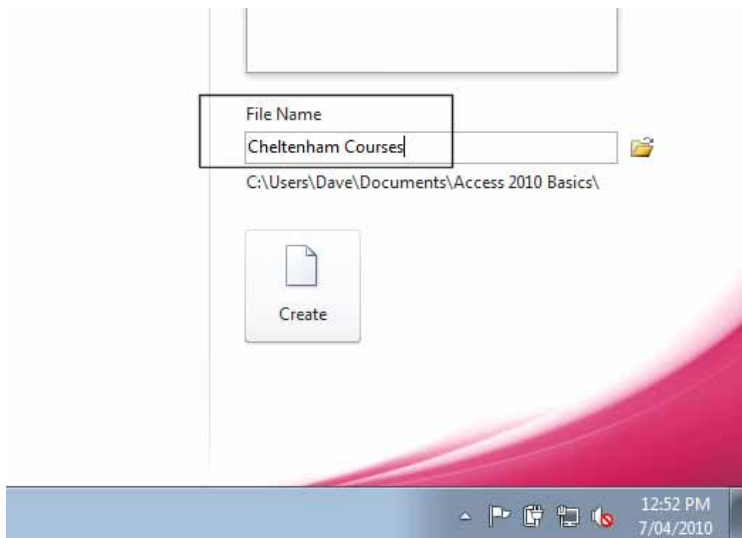


- You need to give the new database a name and also set a folder location to store it in. In this case we previously set the default folder to point to our **Access 2010 Basics** folder, and if you look carefully at the right side of the screen you will notice that this default folder has been used.

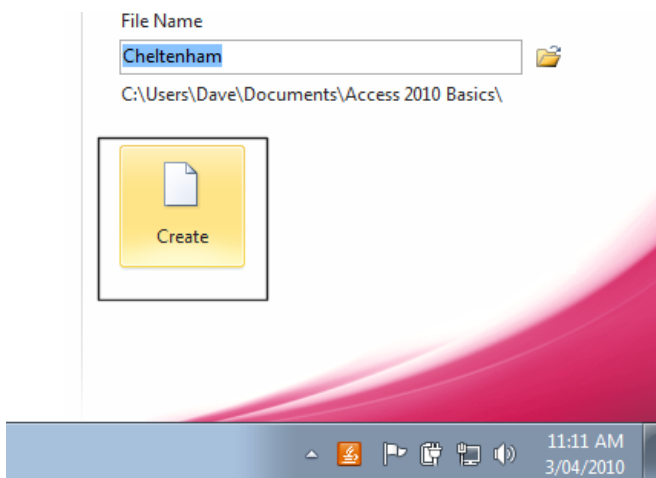


NOTE: If you had wanted to create a new database in a different folder, then you would have clicked on the small folder icon to the right of the **File Name** section and navigated to the desired folder. In this case however we will be using the default folder location.

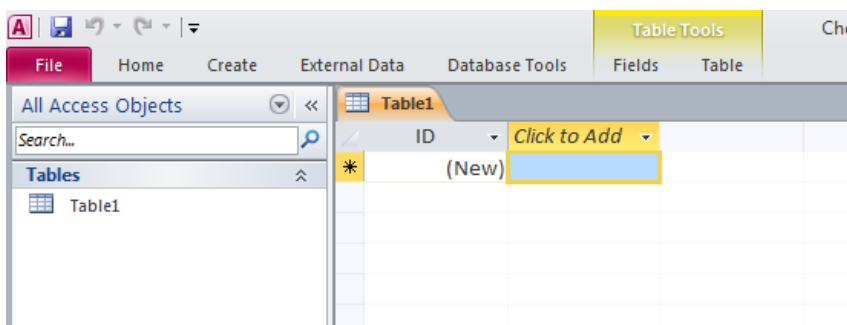
- Replace the default database file name with the name **Cheltenham Courses**.



- Click on the **Create** button.

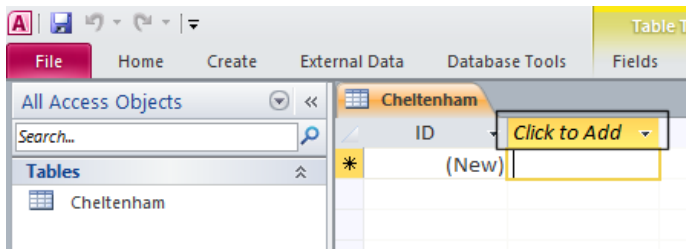


- The Access window opens and displays a new table. Until one or more tables have been created, given fields and properties set, Access can do little at this stage.

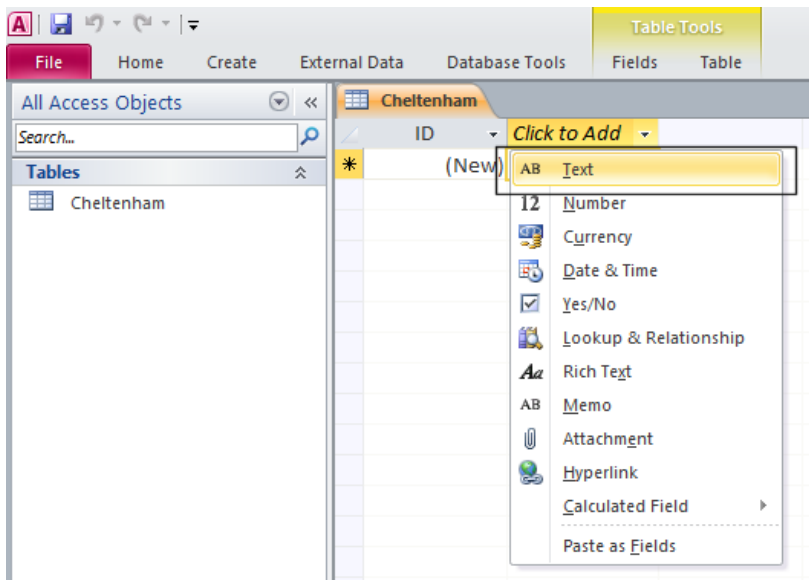


Adding fields and setting the field type

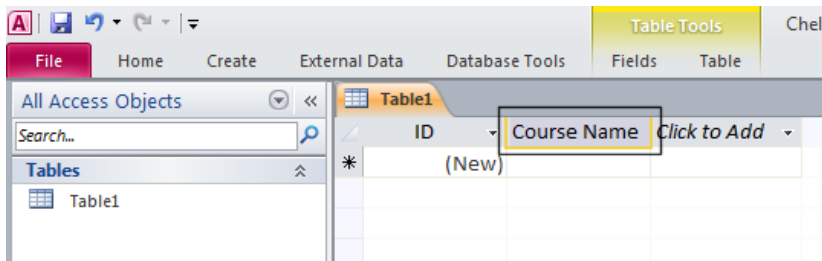
- Click on the down arrow in the **Click to Add** section to the right of the **ID** field.



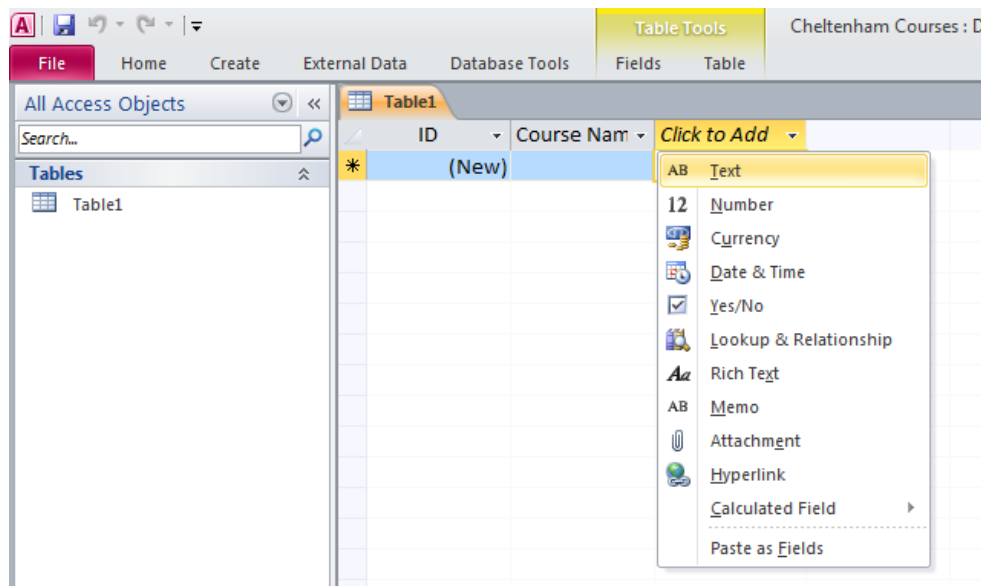
- From the drop down list displayed, select **Text**.



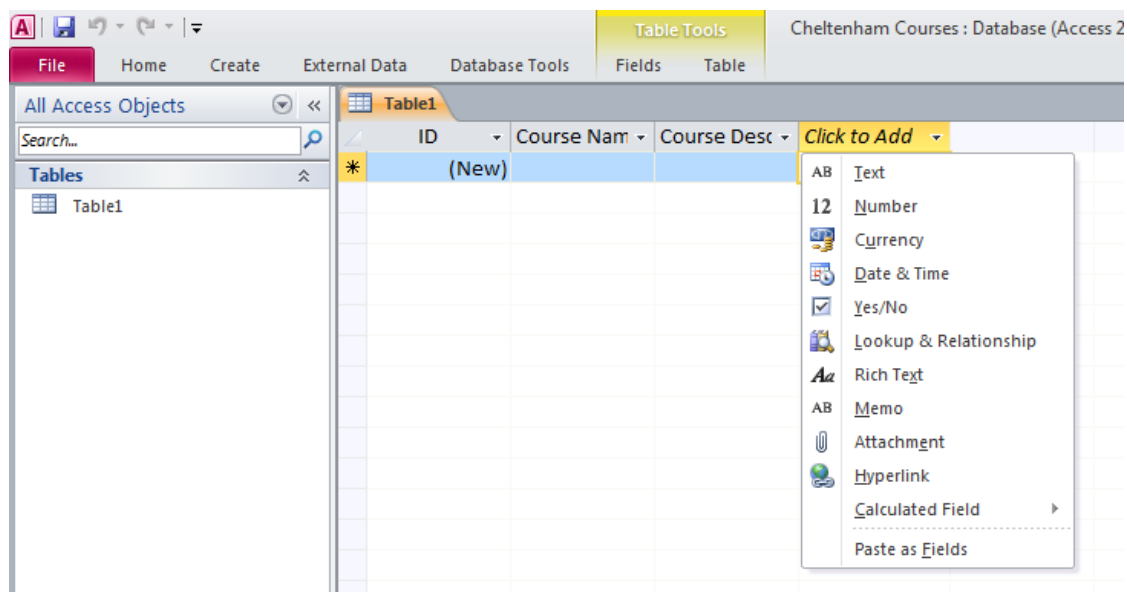
- Type in **Course Name** and the screen will look like this.



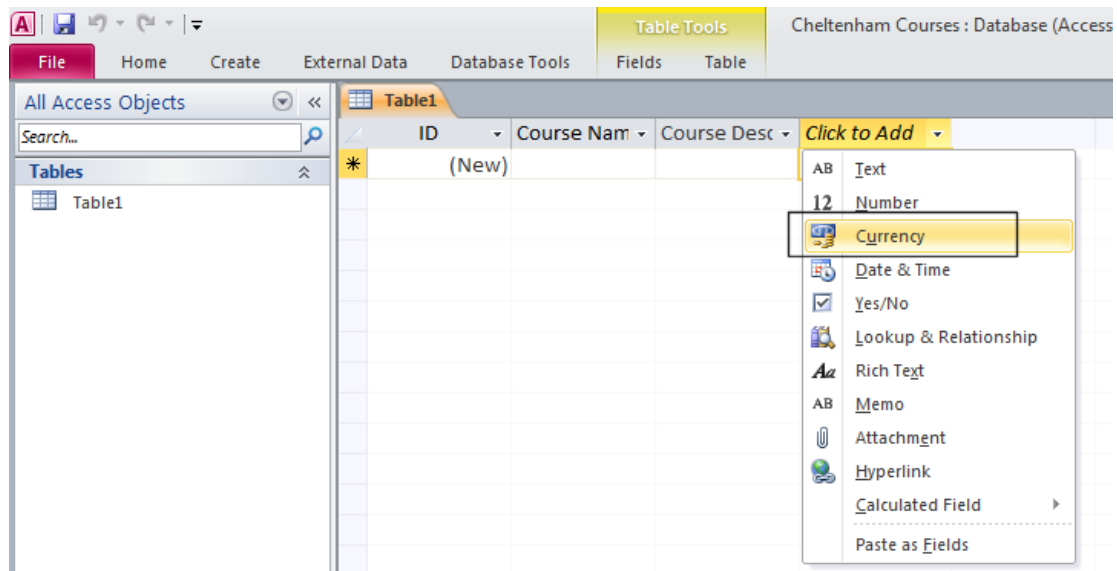
- Press the **Enter** key. The pointer moves to the right, to the next cell ready to accept another field name input.



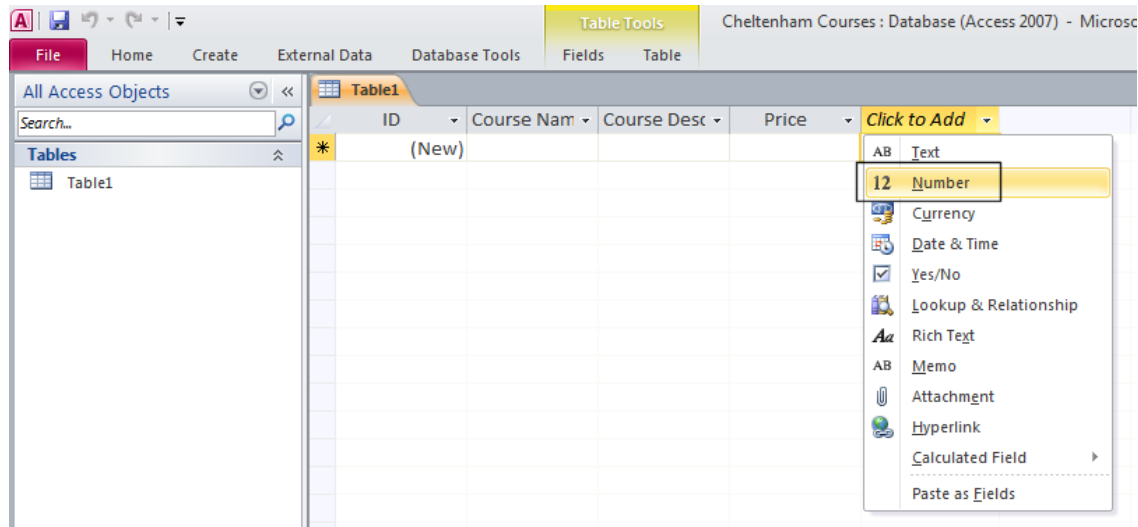
- Use the same technique to type in **Course Description** in the next cell along, as illustrated. Press the **Enter** key.



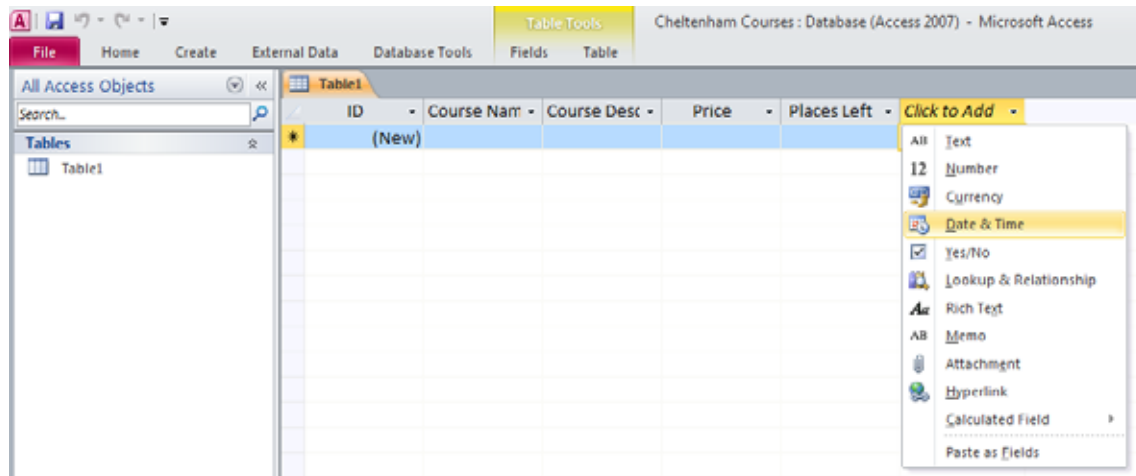
- Click on the **down arrow** (next to the **Click to Add** section). This time from the drop down list displayed, select **Currency**.



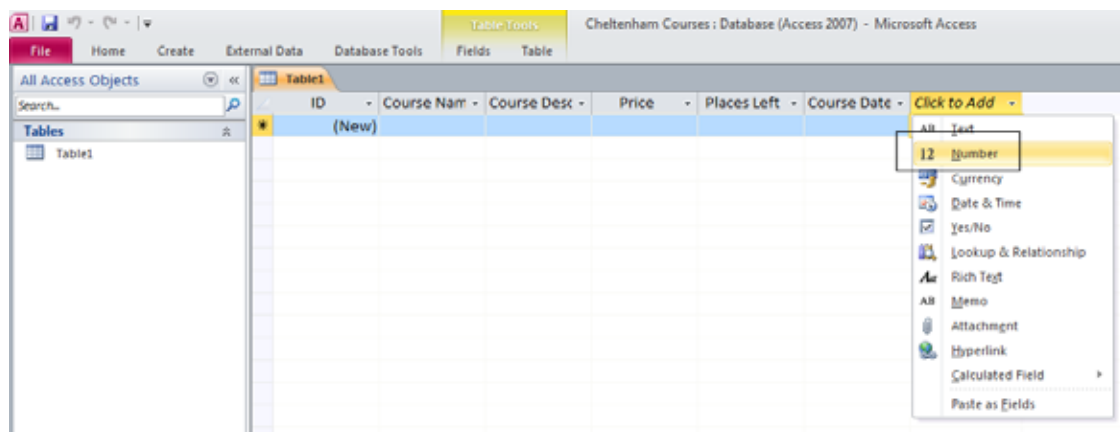
- Type in the word **Price** and press the **Enter** key.
- Click on the **down arrow** (next to the **Click to Add** section). This time from the drop down list displayed, select **Number**.



- Type in the words **Places Left** and press the **Enter** key.
- Click on the **down arrow** (next to the **Click to Add** section). This time from the drop down list displayed, select **Date & Time**.



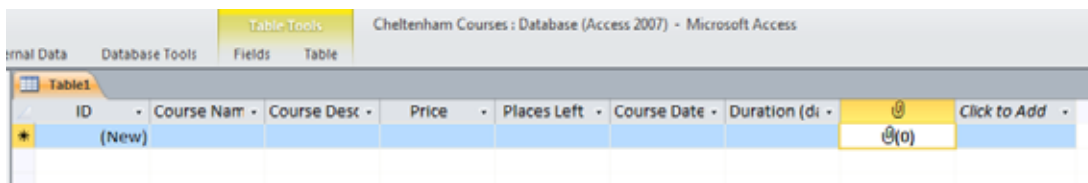
- Type in the words **Course Date** and press the **Enter** key.
- Click on the **down arrow** (next to the **Click to Add** section). This time from the drop down list displayed, select **Number**.



- Type in the word **Duration (days)** and press the **Enter** key.
- Click on the **down arrow** (next to the **Click to Add** section). This time from the drop down list displayed, select **Attachment**.



- Your field information will now look like this.



- So far you have opened Access, and created and saved a blank database. You then inserted fields into a table within your database, and you have given each field a field type.

About Access Data Types

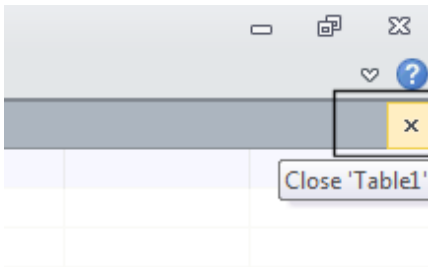
- There are several data types to choose from and one or two, i.e. **Text** has the ability to accept and store most data input, however data output, searching, producing reports, calculating value, etc., will present a problem.

The following Data Type table provides a description of the types of data each Data Type can store, format and perform searches and calculations on.

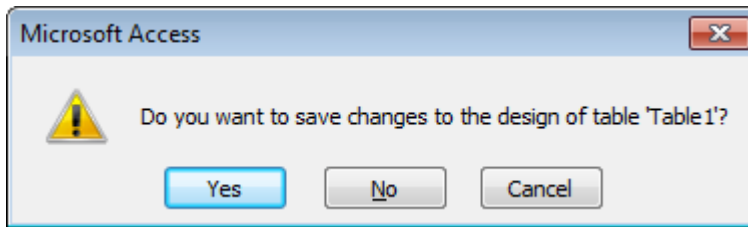
Data Type	Description
Text	Alphanumeric characters up to 255 characters in length. Can be used for text, or text and numbers that are not used in calculations
Memo	Alphanumeric characters (maximum of 65,535 characters) and can store text with rich text formatting (.rft)
Number	Numeric values including fractional or integers. Used for numbers likely to be used in calculations but should not be used in place of the Currency Data Type
Date/Time	Dates and times values. Stores both a date component and a time component even when only displaying one or the other.
Currency	Monetary values, (with or without a currency symbol)
AutoNumber	A unique and sequential number inserted automatically each time a new record is added
Yes/No	Yes/No, True/False value (ticked is Yes, un-ticked equals No)
OLE Object	Used for storing OLE objects from other Microsoft Windows applications
Hyperlink	Used for storing hyperlinks to provide access to Web pages or files using a single-click
Attachment	Pictures, Images, Binary files, Office files. Storage size limited to 700kb
Lookup Wizard...	Starts a Lookup Wizard to create a Combo box to look up values

Closing and naming a table

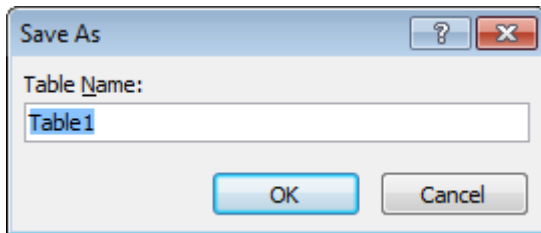
- To close the table click on the **Close Table** button, displayed towards the top-right of the screen. Take care to click on the correct close button. The top **Close** button will close the entire Access program, while the lower **Close** button will simply close the table that is open within the Access program.



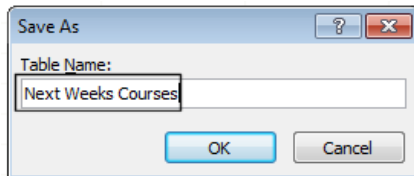
- Once you click on the lower **Close** button you will see a dialog box displayed. Notice that the Access program has called the table **Table1**.



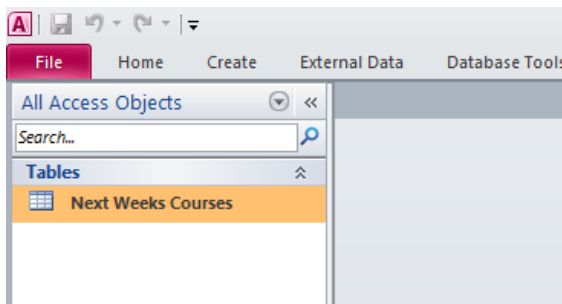
- Click on the **Yes** button. You will see the following dialog box displayed allowing you to save the table using a more friendly name.



- Type in a name for the table, such as **Next Weeks Courses**.



- Click on the **OK** button. Your screen will now look like this. You can see the table that you created displayed within the left section of the window.



- Click on the **Close** button to the top-right of the Access screen.

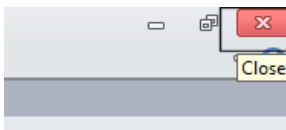
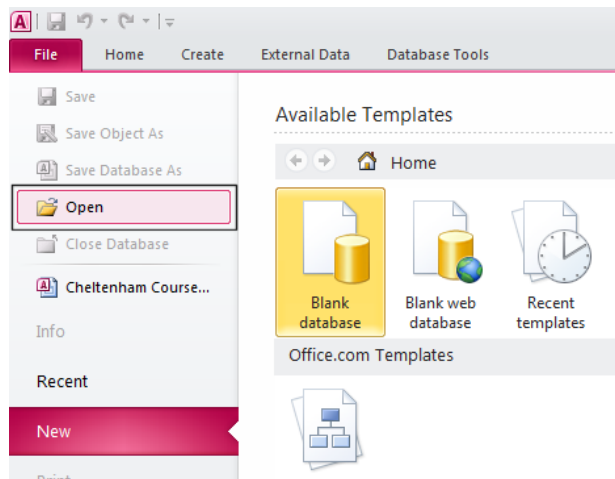


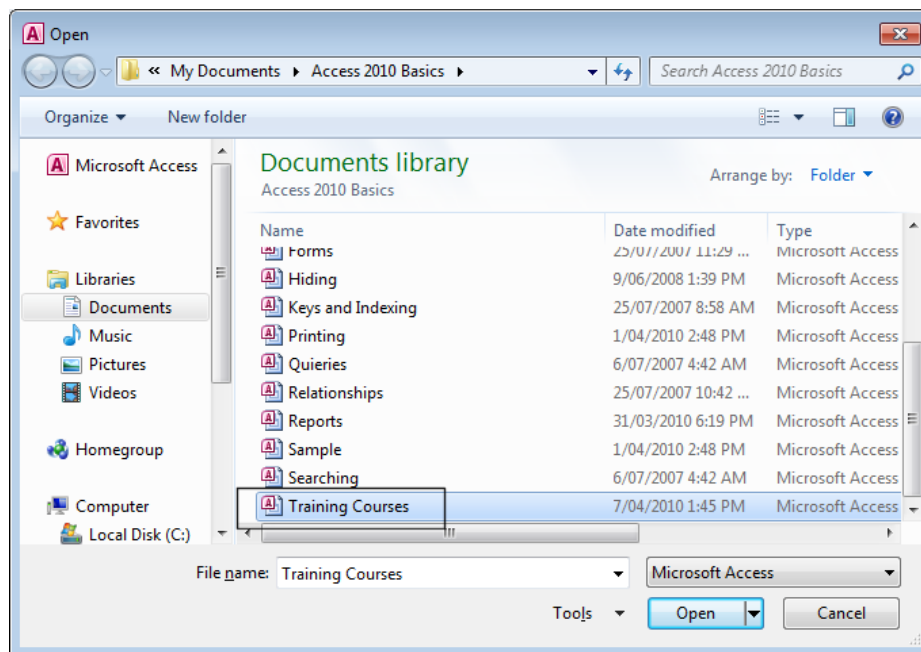
Table Navigation & Modification

Opening a table within a database

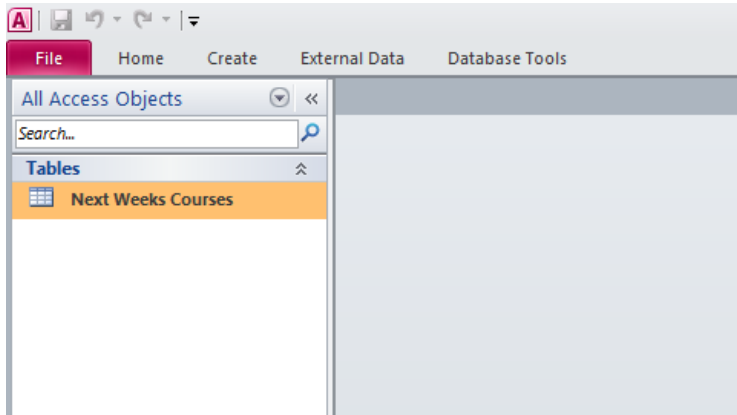
- Restart the Access program.
- Click on the **Open** button.



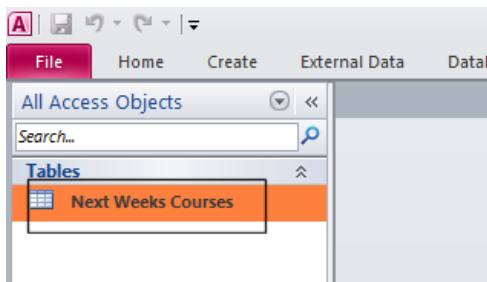
- Select a file called **Training Courses** (you may have to scroll down the list to see this file).



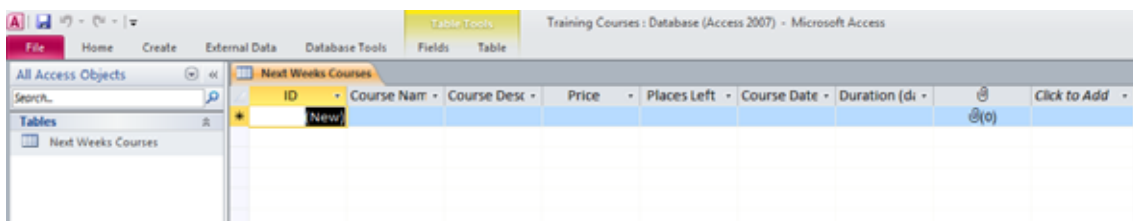
- Click on the **Open** button, and you will see the following screen displayed.



- As you will see this is a copy of the table that you created in the last section. To open the table, called **Next Weeks Courses**, double click on the table.

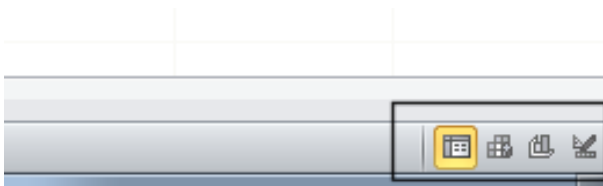


- Your screen will now look like this.

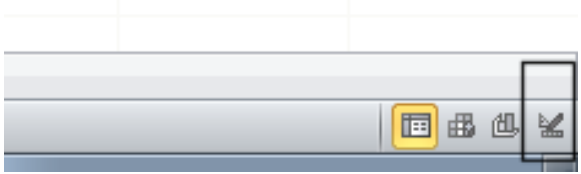


Switching between 'Datasheet View' and 'Design View'

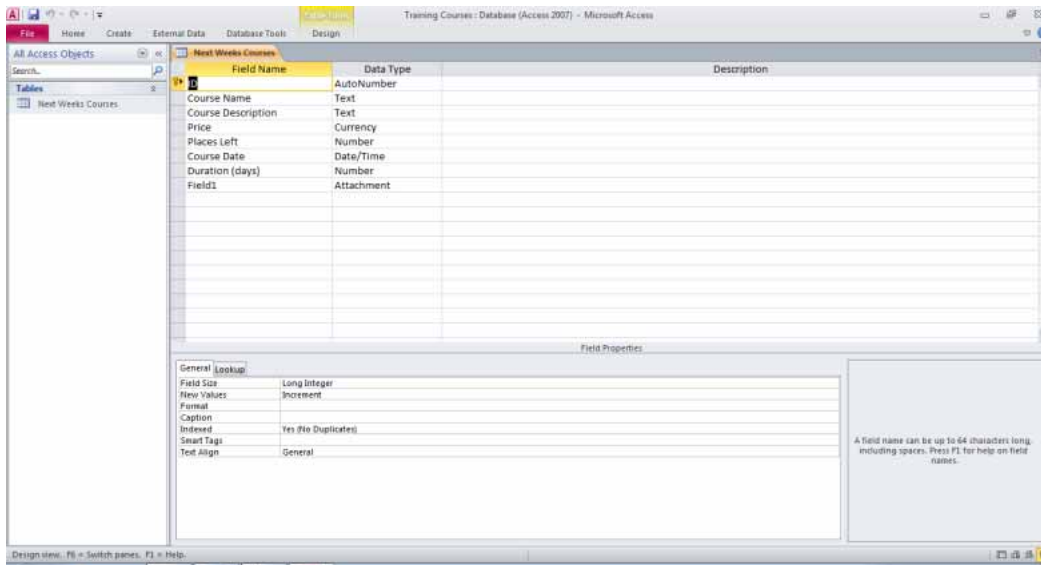
- If you look at the bottom-right of the Access screen you will see the **View** buttons.



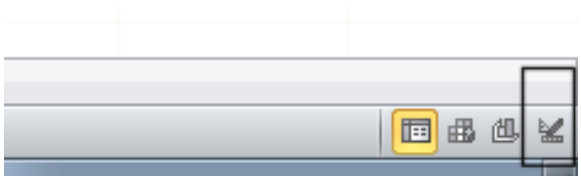
- Click on the **Design View** button.



- Your screen will now look like this.



- Click on the **Datasheet View** button and the Access screen will look as it did originally.
- Click on the **Design View** button again.



- In the Design view you have an upper and lower section. The upper section looks like this.

Next Weeks Courses		
Field Name	Data Type	
ID	AutoNumber	
Course Name	Text	
Course Description	Text	
Price	Currency	
Places Left	Number	
Course Date	Date/Time	
Duration (days)	Number	
Field1	Attachment	

- You can use the upper section to change field names and to modify the field data type.
- The lower section, displaying the '**Field Properties**' looks like this.

General	
Field Size	Long Integer
New Values	Increment
Format	
Caption	
Indexed	Yes (No Duplicates)
Smart Tags	
Text Align	General

- The lower section allows you to specify more information about each field, such as the field size or format. We will use some of these features later in the course.

Adding records to a table

- Display the table in **Datasheet view**, so that it looks like this.

Next Weeks Courses									
ID	Course Name	Course Desc	Price	Places Left	Course Date	Duration (di			Click to Add
* [New]									

- Click in the cell directly under the **Course Name** header, and you will see the following.

ID	Course Name	Course Desc	Price
(New)			

- Enter a course name, in this case **Word 2010**.

ID	Course Name	Course Desc
1	Word 2010	
(New)		

- Press the **Enter** key and the next field will be selected, as illustrated.

ID	Course Name	Course Desc	Price
1	Word 2010		
(New)			

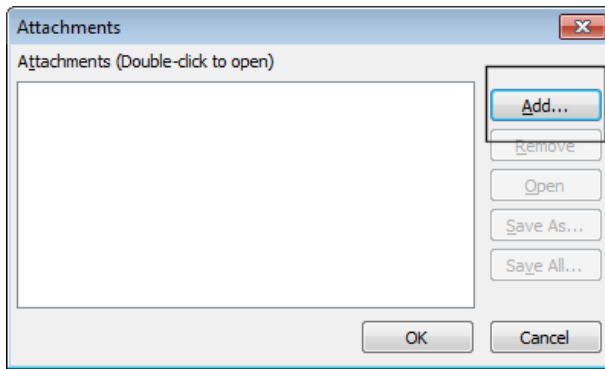
- Within the **Course Description** field, enter **Basics**. Press the **Enter** key and your screen will look like this.

ID	Course Name	Course Desc	Price	Places Left
1	Word 2010	Basics		
(New)				

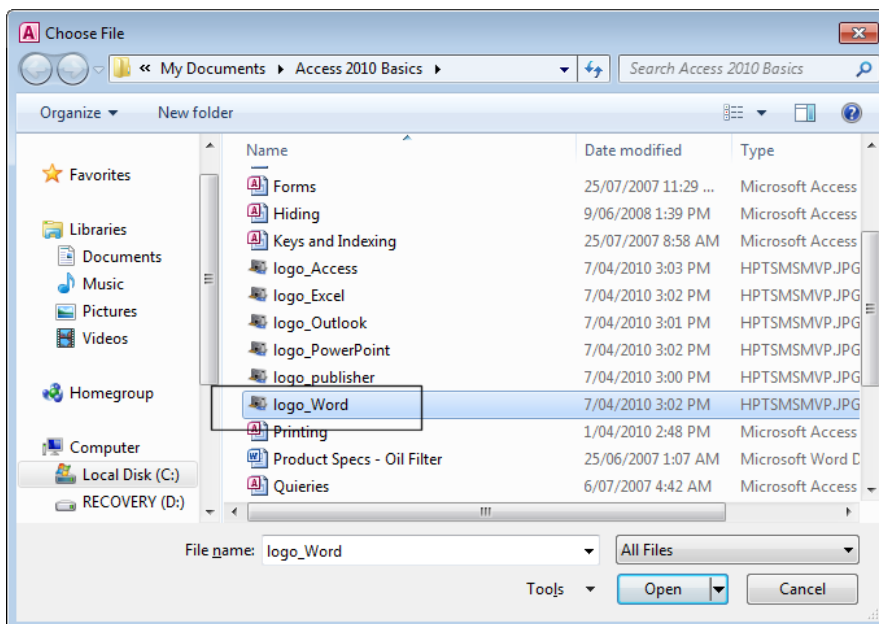
- Within the **Price** field enter **200** and press the **Enter** key.
- Within the **Places Left** field enter **5** and press the **Enter** key.
- Within the **Course Date** field enter **3/3/2010** and press the **Enter** key.
- Within the **Duration (days)** field enter **1** and press the **Enter** key.
- Double click on the **Attachment** field.

ID	Course Name	Course Desc	Price	Places Left	Course Date	Duration (days)	Attachment
1	Word 2010	Basics	\$200.00	5	3/03/2010	1	
(New)							

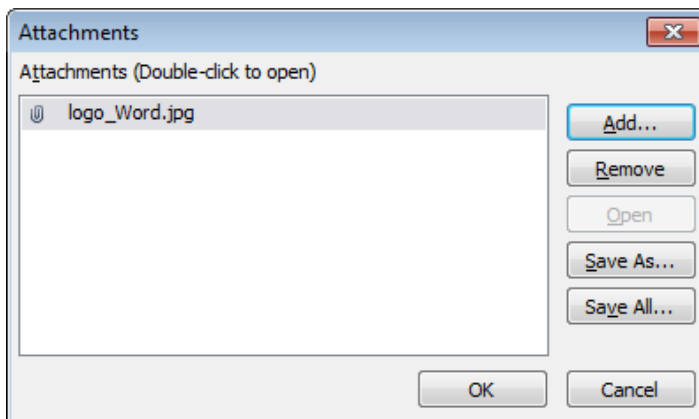
- You will see a dialog box displayed.



- Click on the **Add** button. Scroll down and select the **logo_Word** file.



- Click on the **Open** button and you will see the following dialog box.



- Click on the **OK** button. If you look carefully, you will notice that the number **1**, is displayed in brackets, within the **attachment** field.

base (Access 2007) - Microsoft Access

Places Left	Course Date	Duration (days)	Attachment	Click to Add
5	3/03/2010	1	Ⓜ(1)	
			Ⓜ(0)	

- Within the next row, down click within the **Course Name** field.

Next Weeks Courses

ID	Course Name	Course Desc	Price	Places Left
1	Word 2010	Basics	\$200.00	
*	(New)			

- In the **Course Name** field, enter a course called **Excel 2010** and press **Enter**.
- In the **Course Description** field, enter **Advanced** and press **Enter**.
- In the **Price** field, enter **400** and press **Enter**.
- In the **Places Left** field, enter **2** and press **Enter**.
- In the **Course Date** field, enter **3/3/2010** and press **Enter**.
- In the **Duration (days)** field, enter **2** and press **Enter**.
- In the **attachment** field, attach the **Excel** logo file.
- Your screen will now look like this.

Training Courses : Database (Access 2007) - Microsoft Access

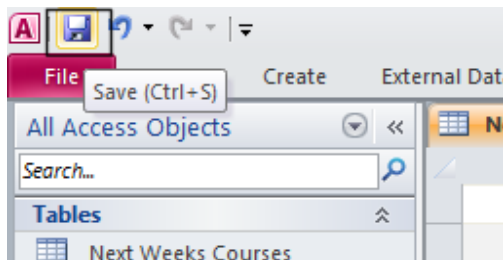
ID	Course Name	Course Desc	Price	Places Left	Course Date	Duration (days)	Attachment	Click to Add
1	Word 2010	Basics	\$200.00	5	3/03/2010	1	Ⓜ(1)	
2	Excel 2010	Advanced	\$400.00	2	3/03/2010	2	Ⓜ(1)	
*	(New)						Ⓜ(0)	

- Add the following data to the table.

s Courses							
	Course Nam	Course Desc	Price	Places Left	Course Date	Duration (d	
1	Word 2010	Basics	\$200.00	5	3/03/2010	1	①(1)
2	Excel 2010	Advanced	\$400.00	2	3/03/2010	2	①(1)
3	PowerPoint 20	Basics	\$200.00	4	3/03/2010	1	①(1)
4	PowerPoint 20	Advanced	\$400.00	1	3/03/2010	2	①(1)
5	Outlook 2010	Basics	\$200.00	4	3/03/2010	1	①(1)
6	Access 2010	Basics	\$200.00	3	3/03/2010	1	①(1)
7	Access 2010	Advanced	\$400.00	1	3/03/2010	2	①(1)

Saving changes made to a table

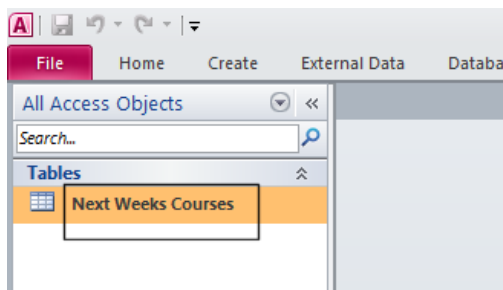
- To save your changes click on the **Save** button displayed at the top-left of the Access window.



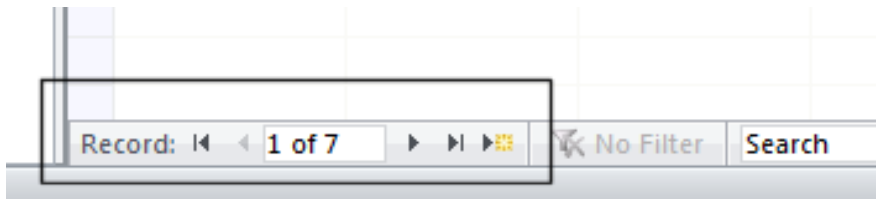
- Close the Access program.

Navigating through records within a table

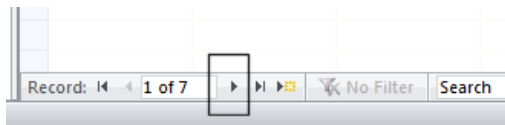
- Start the access program and open the database called **Manipulating Tables**.
- Double click on the table called **Next Weeks Courses**.



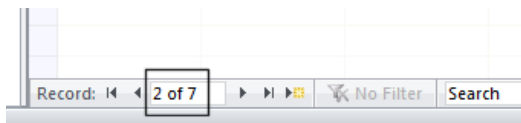
- The record navigation bar is located at the bottom-left of your screen, once you have opened a table.



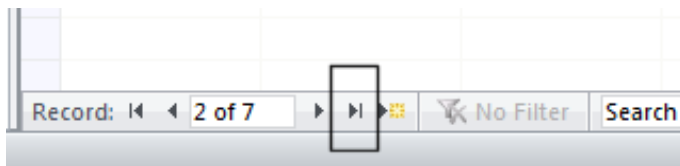
- As tables grow, navigating records becomes more difficult, therefore Access has the record navigation bar to help locate records more easily. As you can see currently record **1 of 7** is selected.
- To select the next record, click on the single, right-pointing arrow.



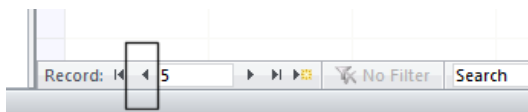
- This will display record **2 of 7**, as illustrated.



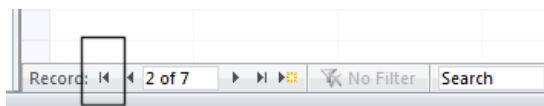
- To select the last record, click on the control as illustrated below.



- To select the previous record, click on the control as illustrated below.



- To select the first record, click on the control as illustrated below.



- To jump to a record, such as record number 5, enter the record number as illustrated and press the **Enter** key.



Adjusting column width

- Columns can be adjusted by placing the pointer over the thin dividing line between two field names as illustrated. In this case, you cannot see all of the Course names displayed properly.

ID	Course Name	Course Desc
1	Word 2010	Basics
2	Excel 2010	Advanced
3	PowerPoint 20	Basics
4	PowerPoint 20	Advanced
5	Outlook 2010	Basics

- The pointer changes to an arrow shape, as illustrated.



- Once the pointer has changed to the arrow shape, click and drag the field left to decrease or right to increase the size.
- Before continuing, make the first column narrower, so that the contents cannot be displayed properly.

Automatically resizing a column width to fit contents

- The first column should look something like this.

ID	Cour	Course Desc	Price	Places Lef
1	Word 20	Basics	\$200.00	
2	Excel 20	Advanced	\$400.00	
3	PowerP	Basics	\$200.00	
4	PowerP	Advanced	\$400.00	
5	Outlook	Basics	\$200.00	
6	Access 2	Basics	\$200.00	
7	Access 2	Advanced	\$400.00	
*	(New)			

- To automatically resize a field width, position the pointer over the thin dividing line separating the first and second column heading, until the double arrow is displayed, and then double click to see the fields automatically resize to fit the (longest) line of

text within the field.

Next Weeks Courses				
ID	Course Name	Course Desc	Price	P
1	Word 2010	Basics	\$200.00	
2	Excel 2010	Advanced	\$400.00	
3	PowerPoint 2010	Basics	\$200.00	
4	PowerPoint 2010	Advanced	\$400.00	
5	Outlook 2010	Basics	\$200.00	
6	Access 2010	Basics	\$200.00	
7	Access 2010	Advanced	\$400.00	
*	(New)			

Moving a column to rearrange the column order

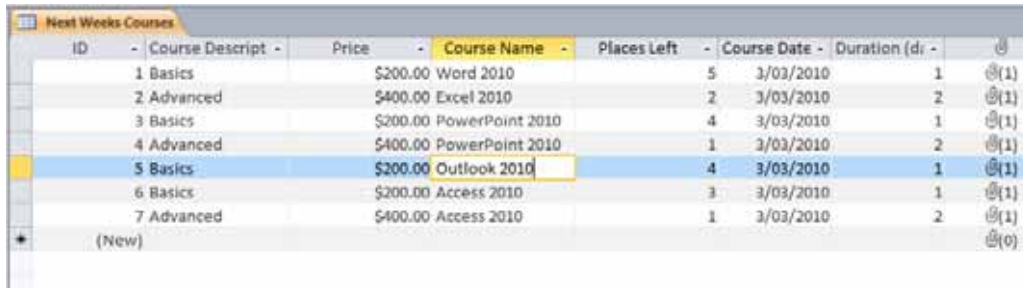
- Make a note of the order of the columns, BEFORE you start experimenting with rearranging the order of the columns.
- Move the mouse pointer to a column header, such as **Course Name**.

Next Weeks Courses				
ID	Course Name	Course Descript	Price	
1	Word 2010	Basics		
2	Excel 2010	Advanced		
3	PowerPoint 2010	Basics		
4	PowerPoint 2010	Advanced		
5	Outlook 2010	Basics		
6	Access 2010	Basics		
7	Access 2010	Advanced		
*	(New)			

- When the pointer changes to a **down arrow**, click once to highlight the column.

Next Weeks Courses				
ID	Course Name	Course Descript	Price	Places
1	Word 2010	Basics	\$200.00	
2	Excel 2010	Advanced	\$400.00	
3	PowerPoint 2010	Basics	\$200.00	
4	PowerPoint 2010	Advanced	\$400.00	
5	Outlook 2010	Basics	\$200.00	
6	Access 2010	Basics	\$200.00	
7	Access 2010	Advanced	\$400.00	
*	(New)			

- Click and hold down the mouse button. Use the thick dark line (left of the highlighted column) as a guide to the new position. Drag the column until the guide line is between two columns. Release the mouse button.



ID	Course Descript	Price	Course Name	Places Left	Course Date	Duration (di	
1	Basics	\$200.00	Word 2010	5	3/03/2010	1	📎(1)
2	Advanced	\$400.00	Excel 2010	2	3/03/2010	2	📎(1)
3	Basics	\$200.00	PowerPoint 2010	4	3/03/2010	1	📎(1)
4	Advanced	\$400.00	PowerPoint 2010	1	3/03/2010	2	📎(1)
5	Basics	\$200.00	Outlook 2010	4	3/03/2010	1	📎(1)
6	Basics	\$200.00	Access 2010	3	3/03/2010	1	📎(1)
7	Advanced	\$400.00	Access 2010	1	3/03/2010	2	📎(1)
+	(New)						📎(0)

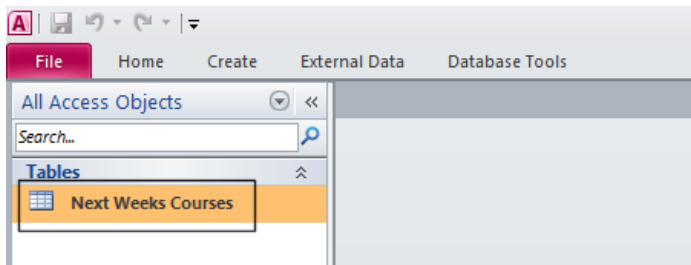
TIP: To move multiple columns in one go, click in the first column and without releasing the mouse button, drag across to the last column of the group you wish to select. Let go of the mouse button to highlight the selected columns. To move the selected columns, follow the same steps used to move a single column.

- Experiment with re-ordering more columns. When you have finished experimenting, reorder the columns back to their original order.
- Save your changes and close the Access program.

Field Properties

Field Properties

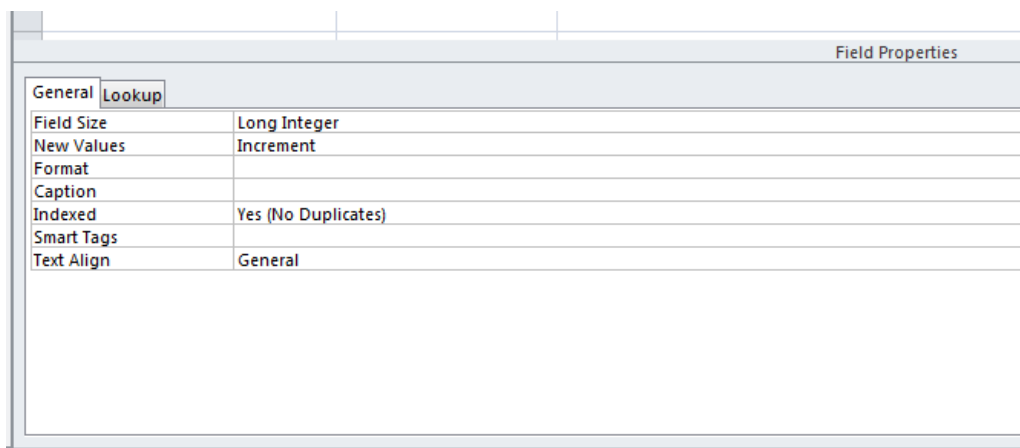
- Field Properties amongst other things, control how information is displayed, specifies default values and prevents incorrect data entry. Options available will depend upon the data type of each field.
- Open access and open the **Field Properties** database.
- Open the table called **Next Weeks Courses**.



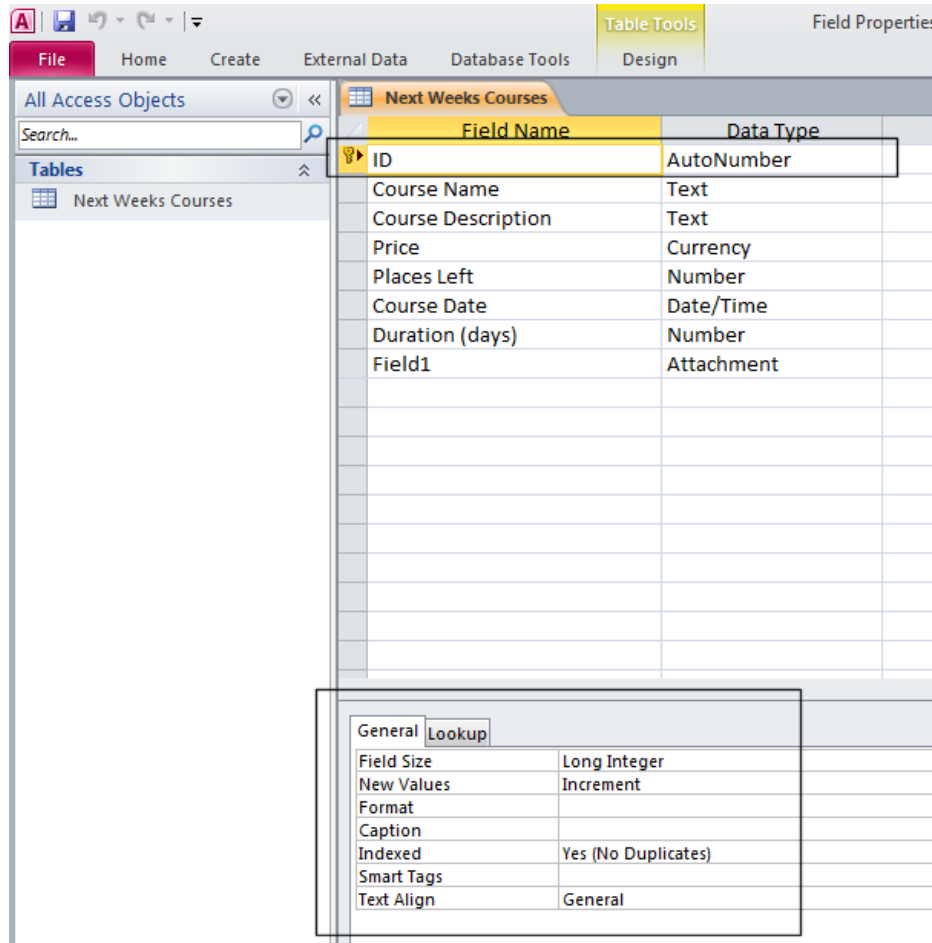
- Click on the **Design View** button (bottom-right of the screen) to switch to **Design View**.



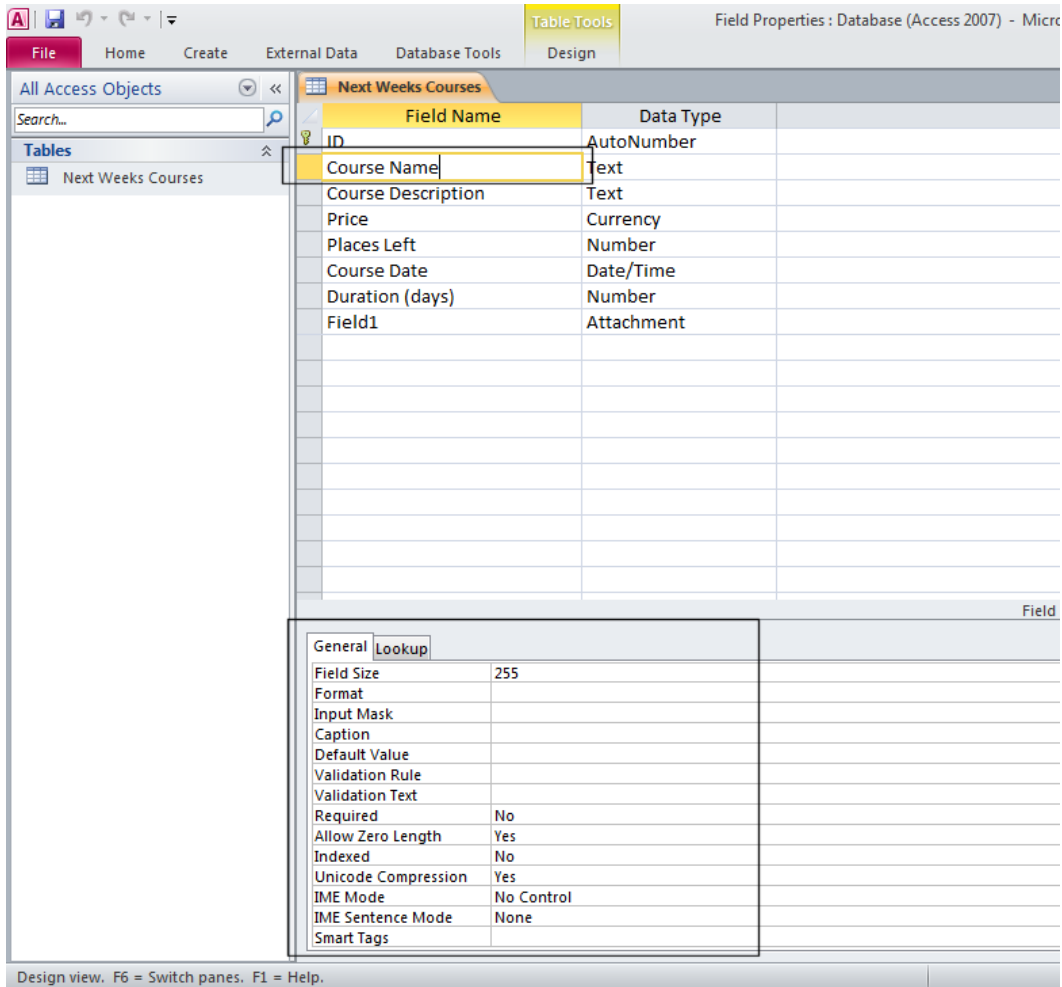
- The **Field Properties** section occupies the lower half of the screen.



- Click on the **ID** field (in the top section of the window) and you will see the following **field properties** displayed.



- Click on the **Course Name** field (in the top section of the window) and you will see the following field properties displayed.



- Click on the **Price** field (in the top section of the window) and you will see the following field properties displayed.

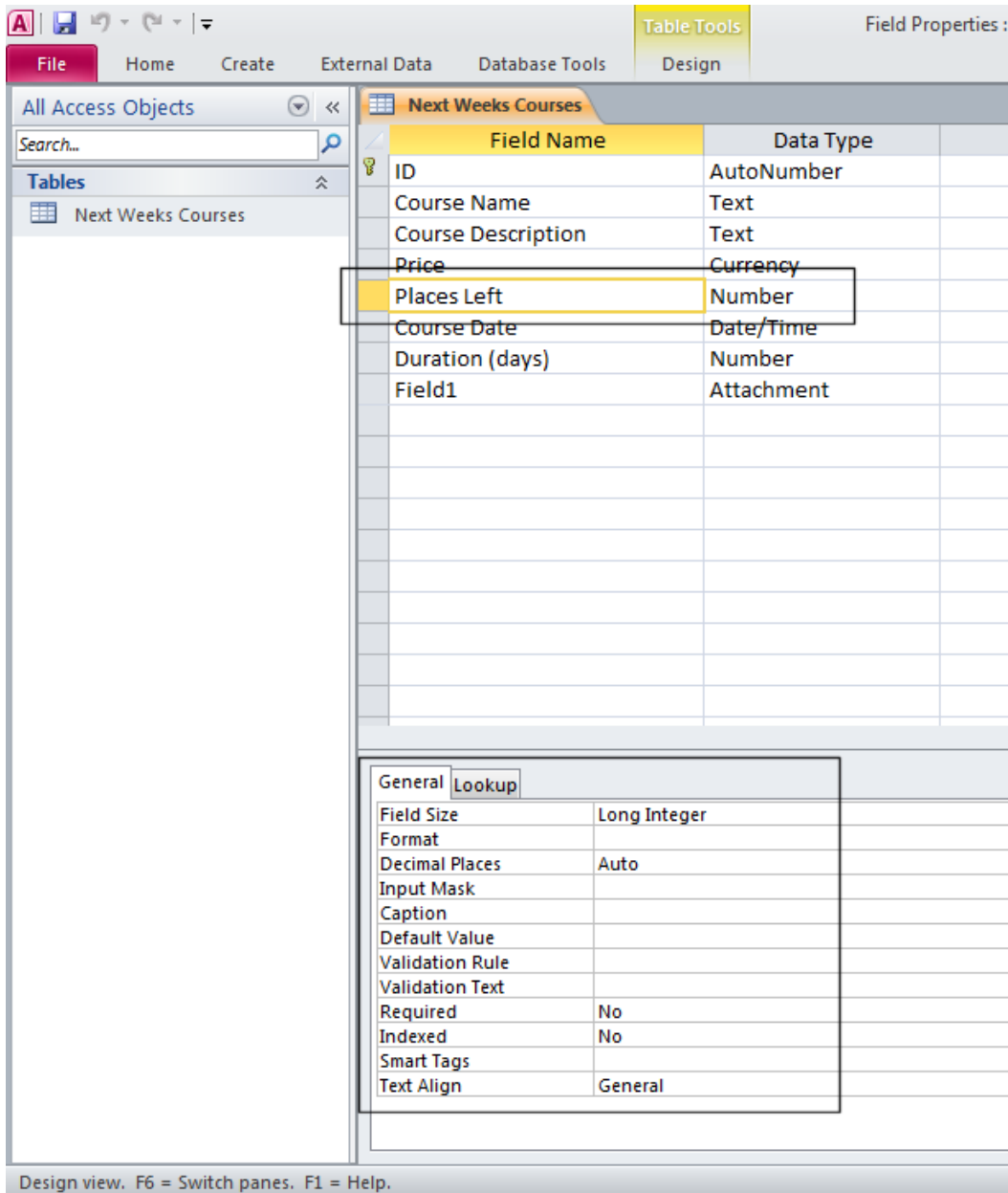
The screenshot shows the Microsoft Access 2010 interface. The 'Next Weeks Courses' table is open in Design view. The 'Price' field is selected, and its properties are displayed in the 'Field Properties' task pane.

Field Name	Data Type
ID	AutoNumber
Course Name	Text
Course Description	Text
Price	Currency
Places Left	Number
Course Date	Date/Time
Duration (days)	Number
Field1	Attachment

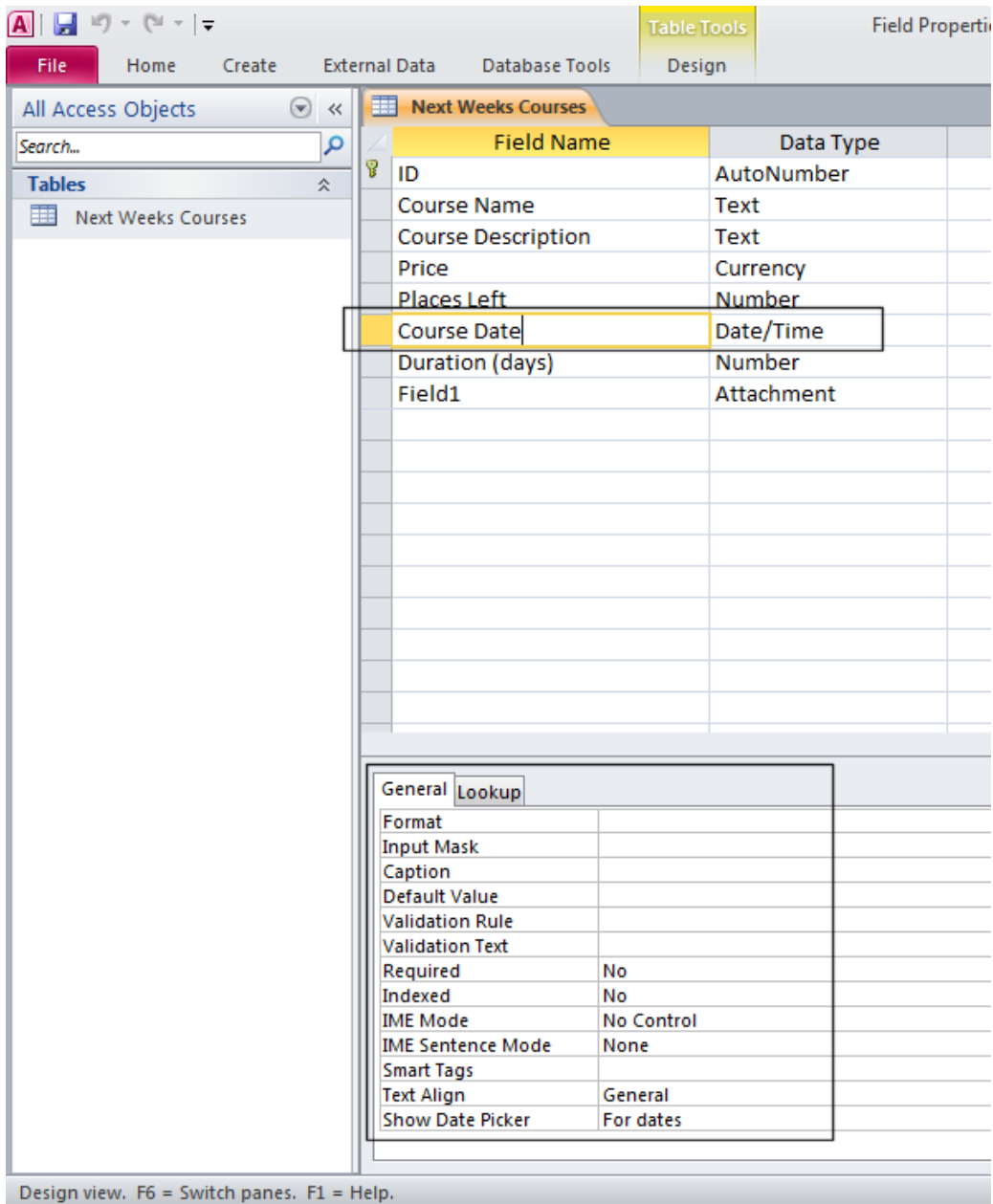
Field Properties: Price	
Format	Currency
Decimal Places	Auto
Input Mask	
Caption	
Default Value	
Validation Rule	
Validation Text	
Required	No
Indexed	No
Smart Tags	
Text Align	General

Design view. F6 = Switch panes. F1 = Help.

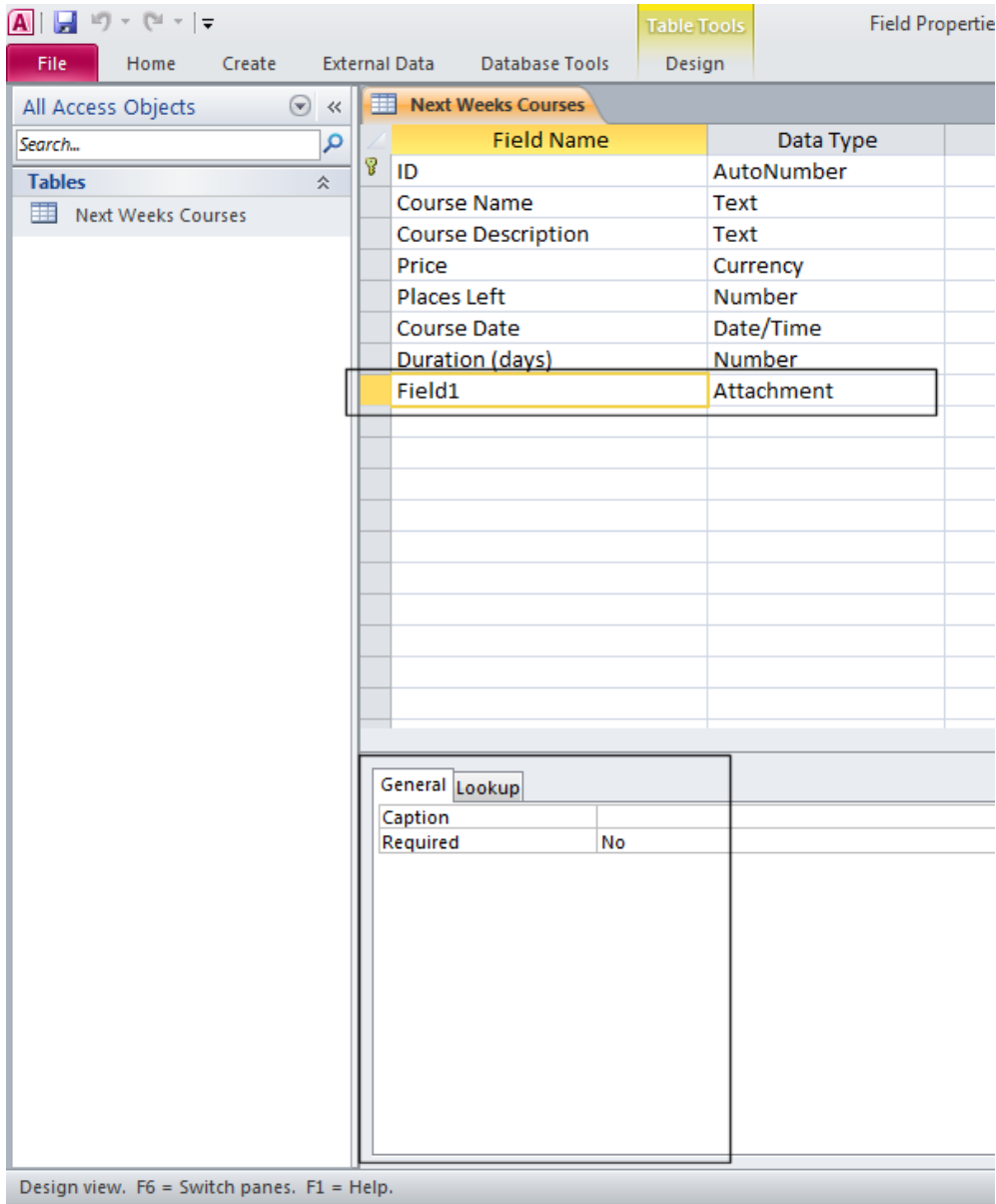
- Click on the **Places Left** field (in the top section of the window) and you will see the following field properties displayed.



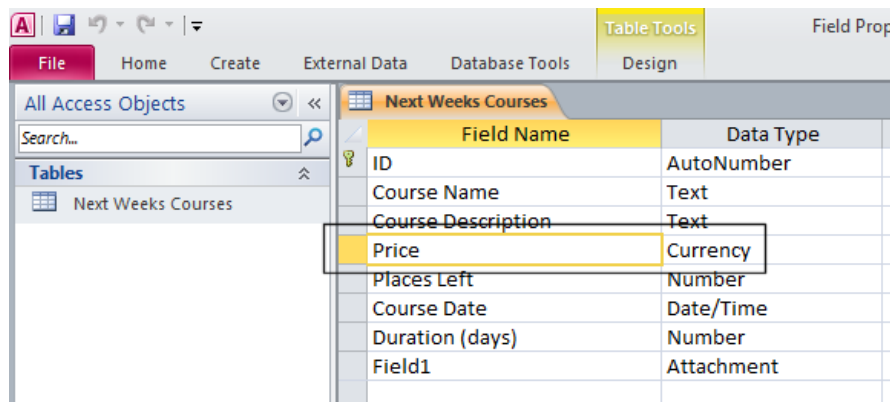
- Click on the **Course Date** field (in the top section of the window) and you will see the following field properties displayed.



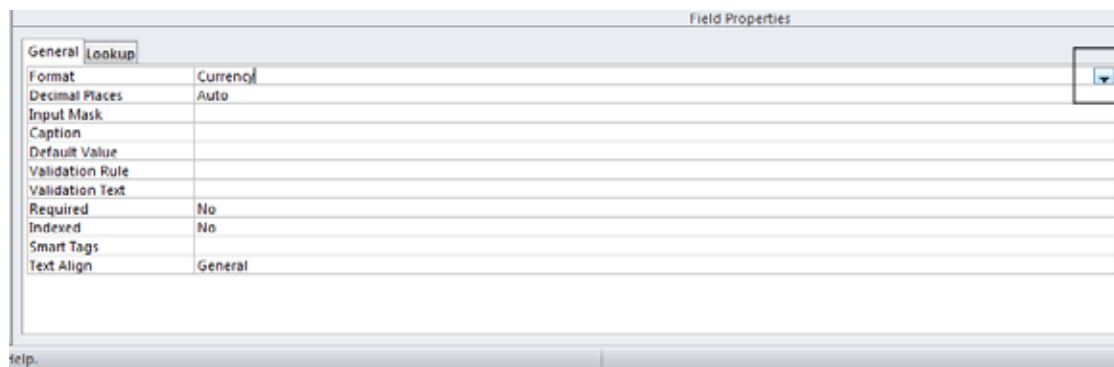
- Click on the **Field1** field (in the top section of the window) and you will see the following field properties displayed.



- Click into the **Price** field name.



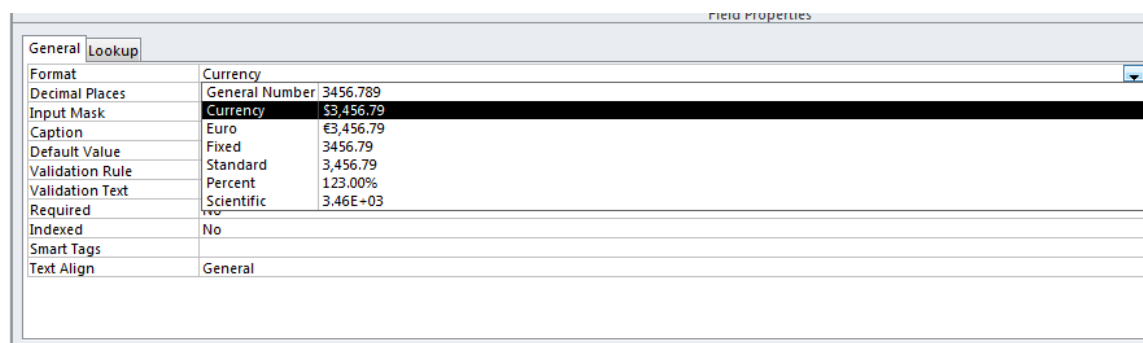
- Move to the **Field Properties** section and click in the cell to the right of **Format**, where it says **Currency**.



- A small (drop down) arrow is displayed to the right of the box.



- Click on the **down arrow** to display a drop down list.



- The list displays the options available for the **Currency** data type according to the regional settings of your computer.


- Select a different currency type. In the example below, the **Euro** currency has been selected.

Field Properties

General		Lookup
Format	Currency	
Decimal Places	General Number	3456.789
Input Mask	Currency	\$3,456.79
Caption	Euro	€3,456.79
Default Value	Fixed	3456.79
Validation Rule	Standard	3,456.79
Validation Text	Percent	123.00%
Required	Scientific	3.46E+03
Indexed	No	
Smart Tags		
Text Align	General	



- Once selected the format will be marked as **Euro**, as illustrated.

Field Properties

General		Lookup
Format		Euro
Decimal Places	Auto	
Input Mask		
Caption		
Default Value		
Validation Rule		
Validation Text		
Required	No	
Indexed	No	
Smart Tags		
Text Align	General	

- Click within the **Decimal Places** line and you will see a **down arrow** displayed at the end of the line.

Field Properties

General		Lookup
Format		Euro
Decimal Places	Auto	
Input Mask		
Caption		
Default Value		
Validation Rule		
Validation Text		
Required	No	
Indexed	No	
Smart Tags		
Text Align	General	

- Click on the down arrow and as you can see you can set the number of decimal places that will be used. You would normally use the default Auto setting, but in this case select 2 decimal places, as illustrated.

The screenshot shows the 'Field Properties' window for a field. The 'General' tab is selected. The 'Decimal Places' property is set to 2. The 'Format' property is set to 'Auto'. The 'Input Mask' property is set to 'Auto'. The 'Caption' property is empty. The 'Default Value' property is empty. The 'Validation Rule' property is empty. The 'Validation Text' property is empty. The 'Required' property is set to 'No'. The 'Indexed' property is set to 'No'. The 'Smart Tags' property is empty. The 'Text Align' property is set to 'General'.

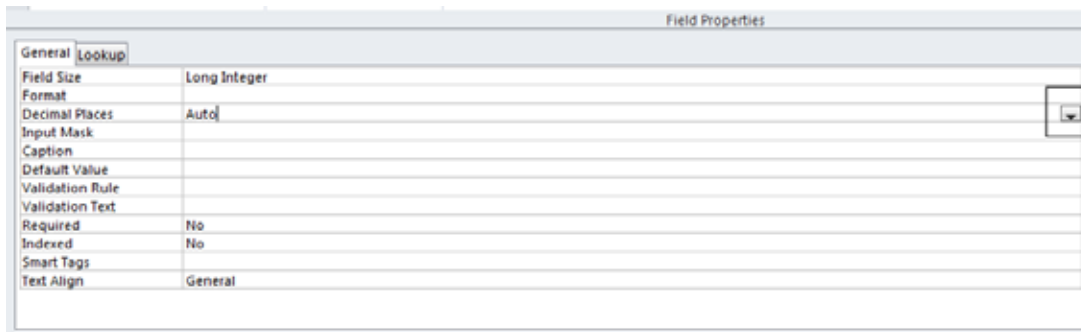
- You will now see the **Decimal Places** set to 2.

The screenshot shows the 'Field Properties' window for a field. The 'General' tab is selected. The 'Decimal Places' property is set to 2. The 'Format' property is set to 'Euro'. The 'Input Mask' property is empty. The 'Caption' property is empty. The 'Default Value' property is empty. The 'Validation Rule' property is empty. The 'Validation Text' property is empty. The 'Required' property is set to 'No'. The 'Indexed' property is set to 'No'. The 'Smart Tags' property is empty. The 'Text Align' property is set to 'General'.

- Click on the **Places Left** field, within the top section of the window.

Next Weeks Courses	
Field Name	Data Type
ID	AutoNumber
Course Name	Text
Course Description	Text
Price	Currency
Places Left	Number
Course Date	Date/Time
Duration (days)	Number
Field1	Attachment

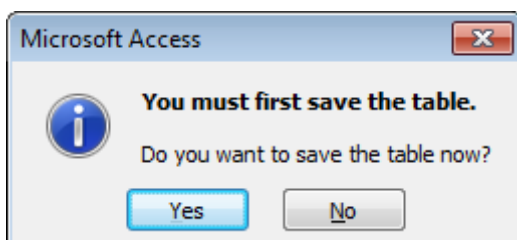
- Within the lower, **Field Properties** section click on the **down arrow** displayed to the right of the **Decimal Places**.



- From the drop down list displayed, select **0**.



- Switch back to the Datasheet View by clicking on the Datasheet icon at the bottom-right of the screen. You will see the following dialog box displayed.



- Click on the **Yes** button to save your changes and you will see the following.

Next Weeks Courses							
ID	Course Name	Course Description	Price	Places Left	Course Date	Duration (days)	
1	Word 2010	Basics	€200.00	5	3/03/2010	1	0(1)
2	Excel 2010	Advanced	€400.00	2	3/03/2010	2	0(1)
3	PowerPoint 20	Basics	€200.00	4	3/03/2010	1	0(1)
4	PowerPoint 20	Advanced	€400.00	1	3/03/2010	2	0(1)
5	Outlook 2010	Basics	€200.00	4	3/03/2010	1	0(1)
6	Access 2010	Basics	€200.00	3	3/03/2010	1	0(1)
7	Access 2010	Advanced	€400.00	1	3/03/2010	2	0(1)
*	(New)						0(0)

- Click on the **Design View** icon (bottom-right) to switch back to design view.
- In the **Field Name** column (displayed in the top section of the dialog box), select **Course Date**.

Next Weeks Courses	
Field Name	Data Type
ID	AutoNumber
Course Name	Text
Course Description	Text
Price	Currency
Places Left	Number
Course Date	Date/Time
Duration (days)	Number
Field1	Attachment

- Move down to the **Field Properties** section. Click in the **Format** box and then click on the **down arrow** to view the list of options.



- You will see the following. Select **Short Date**.

Field Properties		
General		
Format	19/06/2007 5:34:23 PM	
Input Mask	General Date	19/06/2007 5:34:23 PM
Caption	Long Date	Tuesday, 19 June 2007
Default Value	Medium Date	19-Jun-07
Validation Rule	Short Date	19/06/2007
Validation Text	Long Time	5:34:23 PM
Required	Medium Time	5:34 PM
Indexed	Short Time	17:34
JME Mode	No Control	
JME Sentence Mode	None	
Smart Tags		
Text Align	General	
Show Date Picker	For dates	

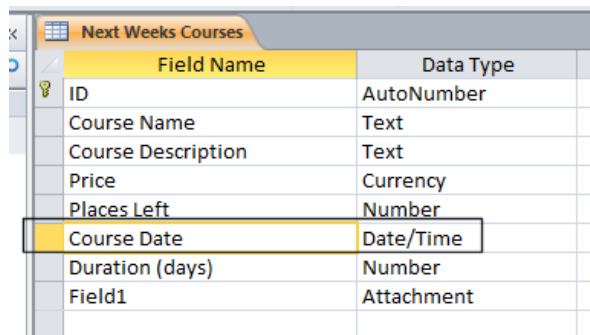
NOTE: Access stores full date and time information, even when for example; the format is set to display only the **Short Date**.

Input Masks

- Input Masks are used to restrict how data is entered. By forcing users of the database to only enter data in a fixed format this greatly reduces the chances of data input errors.

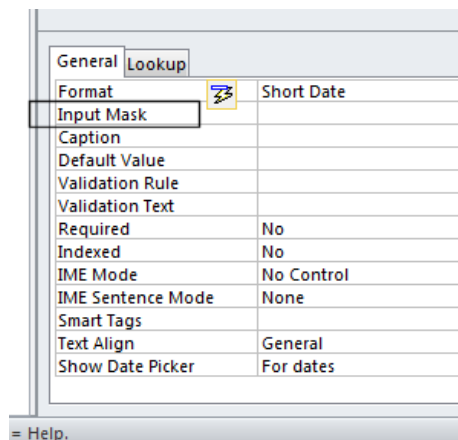
NOTE: Input Masks only work with **Text** and **Date** data types.

- Within the upper section, click on the **Course Date**, Data Type cell, as illustrated below.



Field Name	Data Type
ID	AutoNumber
Course Name	Text
Course Description	Text
Price	Currency
Places Left	Number
Course Date	Date/Time
Duration (days)	Number
Field1	Attachment

- Look at the bottom of the screen and you will see a table that includes **Input Mask**, as illustrated.



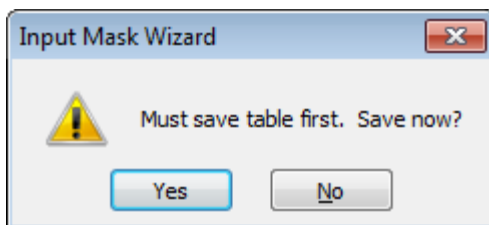
General	
Format	Short Date
Input Mask	
Caption	
Default Value	
Validation Rule	
Validation Text	
Required	No
Indexed	No
IME Mode	No Control
IME Sentence Mode	None
Smart Tags	
Text Align	General
Show Date Picker	For dates

= Help.

- Click within the **Input Mask** line.
- Click on the small button containing three dots displayed at the right end of this line.

General		Lookup
Format	Short Date	
Input Mask		
Caption		
Default Value		
Validation Rule		
Validation Text		
Required	No	
Indexed	No	
IME Mode	No Control	
IME Sentence Mode	None	
Smart Tags		
Text Align	General	
Show Date Picker	For dates	

- If prompted to save the table, click on the **Yes** button.



- The **Input Mask Wizard** dialog box is displayed.

Input Mask Wizard

Which input mask matches how you want data to look?

To see how a selected mask works, use the Try It box.

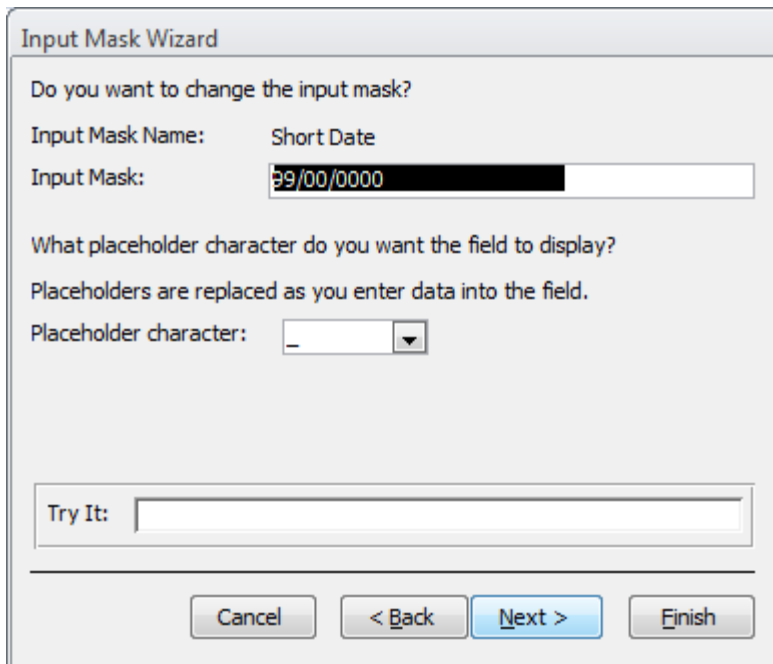
To change the Input Mask list, click the Edit List button.

Input Mask:	Data Look:
Long Time	1:12:00 PM
Short Date	27/09/1969
Short Time	13:12
Medium Time	01:12 PM
Medium Date	27-Sep-69

Try It:

Edit List Cancel < Back Next > Finish

- Select the **Short Date** option, and then click on the **Next** button. Although it is highly unlikely in the case of a date, that you would wish to change the placeholder character, you have the ability to substitute the character, inserting others in their place. Do not make any changes in this case; simply look at what options are available.



Input Mask Wizard

Do you want to change the input mask?

Input Mask Name: Short Date

Input Mask: 99/00/0000

What placeholder character do you want the field to display?

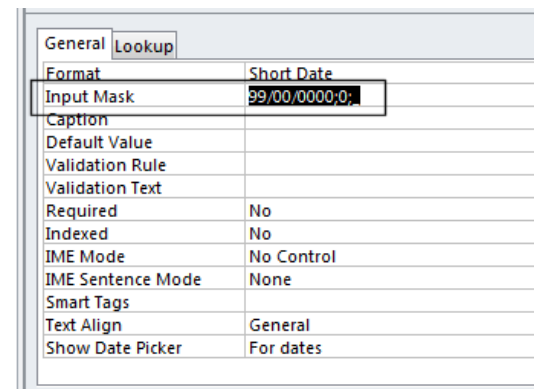
Placeholders are replaced as you enter data into the field.

Placeholder character: _

Try It:

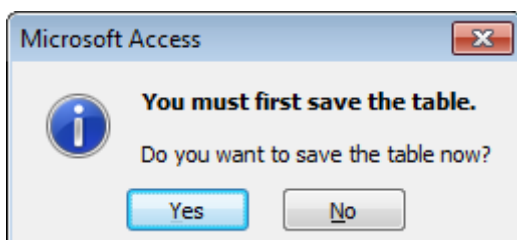
Buttons: Cancel, < Back, Next >, Finish

- Click on the **Next** button and then the **Finish** button. The **Input Mask** now displays the following.



General	
Format	Short Date
Input Mask	99/00/0000;0;
Caption	
Default Value	
Validation Rule	
Validation Text	
Required	No
Indexed	No
IME Mode	No Control
IME Sentence Mode	None
Smart Tags	
Text Align	General
Show Date Picker	For dates

Click on the **Datasheet View** button (bottom-right) to switch to **Datasheet View**. When prompted, click on the **Yes** button to save the changes.



Microsoft Access

You must first save the table.

Do you want to save the table now?

Buttons: Yes, No

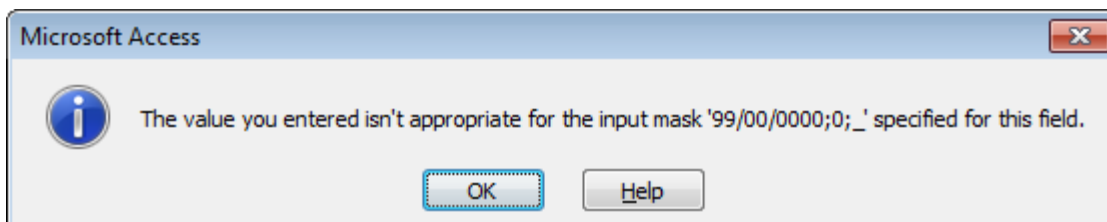
- Using the mouse pointer, select the next blank cell at the bottom of the **Date Received** column.

Next Weeks Courses						
ID	Course Name	Course Desc	Price	Places Left	Course Date	Duration (days)
1	Word 2010	Basics	€200.00	5	3/03/2010	1
2	Excel 2010	Advanced	€400.00	2	3/03/2010	2
3	PowerPoint 20	Basics	€200.00	4	3/03/2010	1
4	PowerPoint 20	Advanced	€400.00	1	3/03/2010	2
5	Outlook 2010	Basics	€200.00	4	3/03/2010	1
6	Access 2010	Basics	€200.00	3	3/03/2010	1
7	Access 2010	Advanced	€400.00	1	3/03/2010	2
*	(New)				/ /	

- Notice the new Input Mask appears. From this point on, each new record added to the database will require the operator to follow the format. No other format will be accepted.

Using Input Masks with **Text** data type for example, is useful when storing phone numbers. As calculation is not needed, phone numbers are entered into fields configured with the **Text** data type. Following the same approach as the Date / Time input mask will ensure data entry operators will enter in phone numbers according to the mask you have set.

NOTE: If at any stage incomplete data has been entered into the field using an input mask, you will not be able to move out of the field or select another function until the data is either removed or completed. Access will display the following message.



- Click on the **Design View** button (bottom-right) to switch to **Design View**.

Validating Numbers

- Validation rules help to control and therefore limit the type and amount of data users can enter. By providing conditions (criteria), in the form of expressions in the **Validation** property of a field, data entered must match the given conditions to be accepted.
- If the data fails to meet the conditions specified, **Validation Text**, also specified within **Field Properties** below the validation rule, will be displayed prompting the

user of the conditions required to meet data entry requirements.

- Select the **Price** field.

Field Name	Data Type
ID	AutoNumber
Course Name	Text
Course Description	Text
Price	Currency
Places Left	Number
Course Date	Date/Time
Duration (days)	Number
Field1	Attachment

- Click within the **Validation Rule** line and type in:

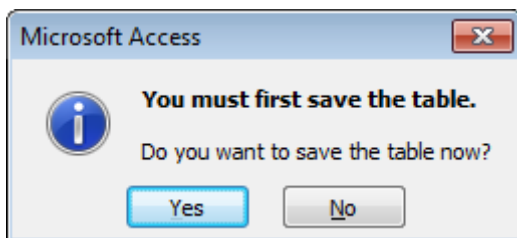
≥ 200

General	
Format	Euro
Decimal Places	2
Input Mask	
Caption	
Default Value	
Validation Rule	≥ 200
Validation Text	
Required	No
Indexed	No
Smart Tags	
Text Align	General

- Press the **Enter** key.
- Within the **Validation Text** section type in the following line of text
A price greater equal to, or greater than, 200 must be entered

General	Lookup
Format	Euro
Decimal Places	2
Input Mask	
Caption	
Default Value	
Validation Rule	>=200
Validation Text	A price greater equal to, or greater than, 200 must be entered
Required	No
Indexed	No
Smart Tags	
Text Align	General

- Press the **Enter** key.
- Click on the **Datasheet View** button (bottom-right of the screen). You will see the following dialog box displayed.



- Click on the **Yes** button.
- Within row 8, under the Price column, enter the number 200, and press the enter key. It will be displayed as illustrated. The validation rule allows the number 200 to be entered so Access accepts this number with no problems.

Next Weeks Courses				
ID	Course Nam	Course Desc	Price	Places Left
1	Word 2010	Basics	€200.00	
2	Excel 2010	Advanced	€400.00	
3	PowerPoint 20	Basics	€200.00	
4	PowerPoint 20	Advanced	€400.00	
5	Outlook 2010	Basics	€200.00	
6	Access 2010	Basics	€200.00	
7	Access 2010	Advanced	€400.00	
8			€200.00	
*	(New)			


- Try overtyping the value you have just typed with the number 300. Again Access will accept this as you also specified that prices over 200 could be entered.

Next Weeks Courses					
ID	Course Name	Course Desc	Price	Places Left	Courses
1	Word 2010	Basics	€200.00	5	3
2	Excel 2010	Advanced	€400.00	2	3
3	PowerPoint 20	Basics	€200.00	4	3
4	PowerPoint 20	Advanced	€400.00	1	3
5	Outlook 2010	Basics	€200.00	4	3
6	Access 2010	Basics	€200.00	3	3
7	Access 2010	Advanced	€400.00	1	3
8			€300.00		3
*	(New)				

- Now try overtyping the value with **150** and press the **Enter** key. This time you will see an error message displayed, as the validation rule specifies that the price must be 200 or above.

ID	Course Name	Course Desc	Price	Places Left	Course Date	Duration (c
1	Word 2010	Basics	€200.00	5	3/03/2010	
2	Excel 2010	Advanced	€400.00	2	3/03/2010	
3	PowerPoint 20	Basics	€200.00	4	3/03/2010	
4	PowerPoint 20	Advanced	€400.00	1	3/03/2010	
5	Outlook 2010	Basics	€200.00	4	3/03/2010	
6	Access 2010	Basics	€200.00	3	3/03/2010	
7	Access 2010	Advanced	€400.00	1	3/03/2010	
8			150.00		3/03/2010	
*	(New)					

Microsoft Access

 A price greater equal to, or greater than, 200 must be entered

OK Help

- Click on the **OK** button and enter a valid number such as **400** and press the **Enter** key.

Validating Dates

- Click on the **Design View** button (bottom-right).
- Select the **Course Date** field name.

Next Weeks Courses	
Field Name	Data Type
ID	AutoNumber
Course Name	Text
Course Description	Text
Price	Currency
Places Left	Number
Course Date	Date/Time
Duration (days)	Number
Field1	Attachment

- Make sure that the format is set to **Short Date**.
- Within the **Validation Rule** line type in the following and then press the **Enter** key.

>01/01/2010

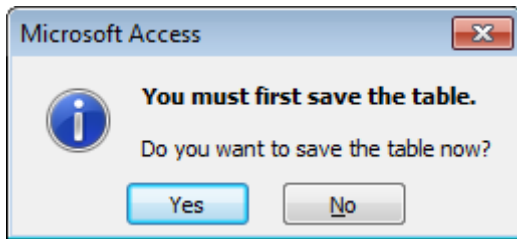
- The screen will now look like this.

General	
Format	Short Date
Input Mask	99/00/0000;0;_
Caption	
Default Value	
Validation Rule	>01/01/2010
Validation Text	
Required	No
Indexed	No
IME Mode	No Control
IME Sentence Mode	None
Smart Tags	
Text Align	General
Show Date Picker	For dates

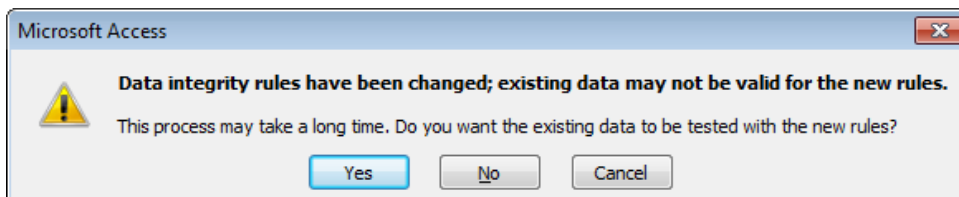
- In the **Validation Text**, type in Records **cannot be backdated to last year**, then press the **Enter** key.

General	
Format	Short Date
Input Mask	99/00/0000;0;_
Caption	
Default Value	
Validation Rule	>#1/01/2010#
Validation Text	Records cannot be backdated to last year
Required	No
Indexed	No
IME Mode	No Control
IME Sentence Mode	None
Smart Tags	
Text Align	General
Show Date Picker	For dates

- Click on the **Datasheet View** button (bottom-right of the screen) to switch to **Datasheet View**. When prompted, click on the **Yes** button to save the changes.



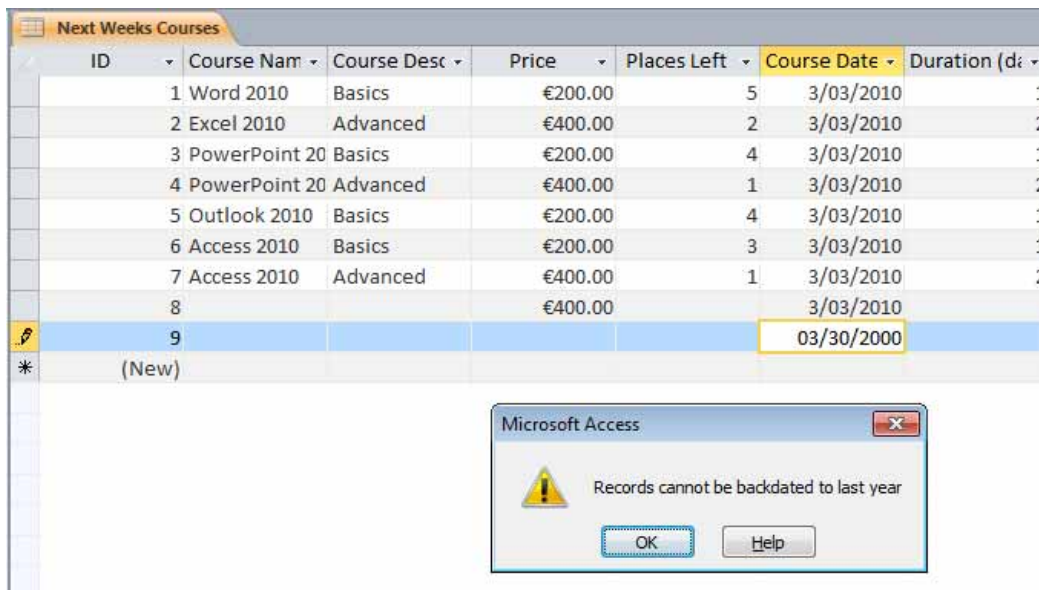
- Access notifies you that the Data integrity rules have changed. Click on the **Yes** button. When setting up Validation Rules, data in existing records may not meet the new rules and if that is the case the following will be displayed.



- As we are only interested in making certain all new record entries conform to the rule, click on the **Yes** button to keep the new settings and continue testing.

NOTE: Access continues checking any other validation rules you added and will inform you if they contain data that fails to meet the rules.

- Within the **Course Date** column, try entering a date such as **03/03/2000**, which clearly is before the validated date specified. You will see the following dialog box displayed.



- Click on the **OK** button and overtype the invalid date with a valid date, i.e. after **01/01/2010**, which will fulfill the validation criteria.

Data Entry Required / Not Required

- A validation rule ensures that data entered into a field meets the rules; however it does not require data to be entered into a field. You can use the **Required** option to force a user to enter data into a particular field.
- Click on the **Design View** button (bottom-right) and if required save any changes that you have made.
- Click within the **Course Name** field, in the upper part of the window.

Next Weeks Courses		
Field Name	Data Type	
ID	AutoNumber	
Course Name	Text	
Course Description	Text	
Price	Currency	
Places Left	Number	
Course Date	Date/Time	
Duration (days)	Number	
Field1	Attachment	

- If you look within the **Field Properties** section, in the lower part of the window, you will see that the **Required** option is set to **No**.

General		Lookup	
Field Size		255	
Format			
Input Mask			
Caption			
Default Value			
Validation Rule			
Validation Text			
Required	No		
Allow Zero Length	Yes		
Indexed	No		
Unicode Compression	Yes		
IME Mode	No Control		
IME Sentence Mode	None		
Smart Tags			

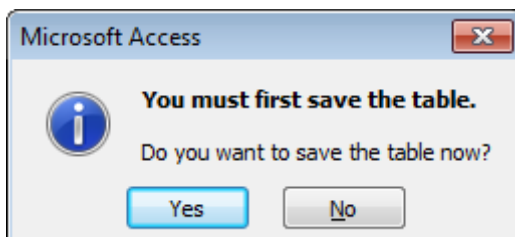
- Double click on the word **No** and this will toggle to the word **Yes**.

General		Lookup
Field Size	255	
Format		
Input Mask		
Caption		
Default Value		
Validation Rule		
Validation Text		
Required	<input checked="" type="checkbox"/> Yes	
Allow Zero Length	Yes	
Indexed	No	
Unicode Compression	Yes	
IME Mode	No Control	
IME Sentence Mode	None	
Smart Tags		

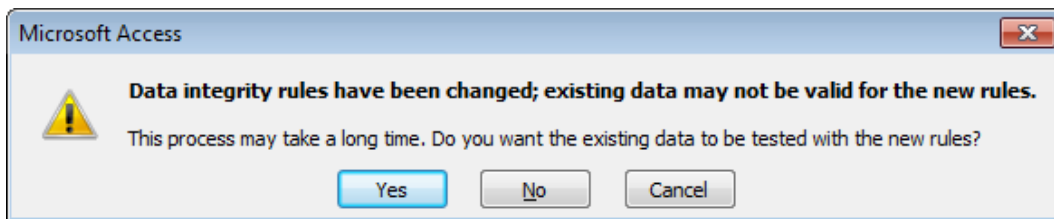
- Click within the **Course Description** field.

Next Weeks Courses	
Field Name	Data Type
ID	AutoNumber
Course Name	Text
Course Description	Text
Price	Currency
Places Left	Number
Course Date	Date/Time
Duration (days)	Number
Field1	Attachment

- Within the lower part of the window, set the **Required** option for this field to **Yes**.
- Set the **Required** option for the **Price** field to **Yes**.
- Set the **Required** option for the **Places Left** field to **No**.
- Set the **Required** option for the **Course Date** field to **Yes**.
- Set the **Required** option for the **Duration** field to **Yes**.
- Leave the **Required** option for the **Field1** field set to **No**.
- Click on the **Datasheet** button (bottom-right) to switch to the Datasheet View. When you see the following dialog box, click on the **Yes** button.



- You may see the following dialog box, click on the **Yes** button.



- Click on the next available row in the **Course Name** column.

Next Weeks Courses						
ID	Course Nam	Course Desc	Price	Places Left	Course	
1	Word 2010	Basics	€200.00	5	3/	
2	Excel 2010	Advanced	€400.00	2	3/	
3	PowerPoint 20	Basics	€200.00	4	3/	
4	PowerPoint 20	Advanced	€400.00	1	3/	
5	Outlook 2010	Basics	€200.00	4	3/	
6	Access 2010	Basics	€200.00	3	3/	
7	Access 2010	Advanced	€400.00	1	3/	
*	(New)					

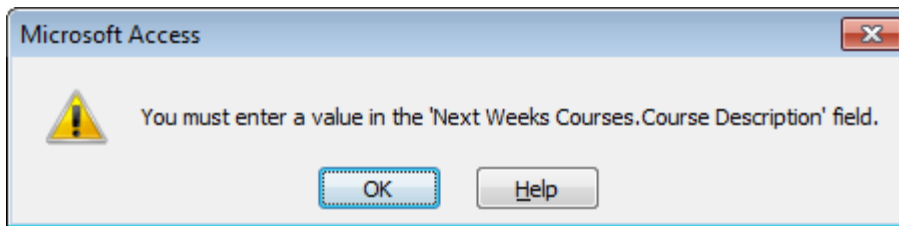
- Enter a name for the course, such as **PC Theory** and press the **Enter** key. Your screen will now look like this.

Next Weeks Courses						
ID	Course Nam	Course Desc	Price	Pla		
1	Word 2010	Basics	€200.00			
2	Excel 2010	Advanced	€400.00			
3	PowerPoint 20	Basics	€200.00			
4	PowerPoint 20	Advanced	€400.00			
5	Outlook 2010	Basics	€200.00			
6	Access 2010	Basics	€200.00			
7	Access 2010	Advanced	€400.00			
10	PC Theory					
*	(New)					

- Press the **Enter** key to jump to the **Price** field. Enter a price of **200**.
- Press the **Enter** key to jump to the **Course date** field. Enter a value of **03/03/2010**.
- Press the **Enter** key to jump to the **Duration** field. Enter a value of **1**.
- Press the **Enter** key to jump to the **Field1** field. Your screen will now look like this.

Next Weeks Courses								
ID	Course Nam	Course Desc	Price	Places Left	Course Date	Duration (d)		Click to Add
1	Word 2010	Basics	€200.00	5	3/03/2010	1	@(1)	
2	Excel 2010	Advanced	€400.00	2	3/03/2010	2	@(1)	
3	PowerPoint 20	Basics	€200.00	4	3/03/2010	1	@(1)	
4	PowerPoint 20	Advanced	€400.00	1	3/03/2010	2	@(1)	
5	Outlook 2010	Basics	€200.00	4	3/03/2010	1	@(1)	
6	Access 2010	Basics	€200.00	3	3/03/2010	1	@(1)	
7	Access 2010	Advanced	€400.00	1	3/03/2010	2	@(1)	
10	PC Theory		€200.00	3	3/03/2010	1	@(0)	
*	(New)						@(0)	

- Press the **Enter** key and you will see the following dialog box displayed. Remember that you set the **Required** setting to **Yes** for the **Course Description**, which is why this warning dialog box is displayed.



- Click on the **OK** button and enter the word **Basics** into the **Course Description** field.

Next Weeks Courses				
ID	Course Nam	Course Desc	Price	Places Left
1	Word 2010	Basics	€200.00	
2	Excel 2010	Advanced	€400.00	
3	PowerPoint 20	Basics	€200.00	
4	PowerPoint 20	Advanced	€400.00	
5	Outlook 2010	Basics	€200.00	
6	Access 2010	Basics	€200.00	
7	Access 2010	Advanced	€400.00	
10	PC Theory	Basics	€200.00	
*	(New)			

- Press the **Enter** key and you will no longer see any error messages.
- Save your changes and close the Access program.

Field Properties – Reference Materials

- These tables provide a reference guide to some of the most commonly used field properties, along with examples and descriptions.

NOTE: These operators, wildcards, etc., along with the examples will prove useful when learning about and using queries (covered in a later section), therefore it is worth spending some time familiarizing yourself with them.

- Table – Field Properties – Validation Rule Comparison Operators**

The following table contains comparison operators used to **compare** values and return a result that is true, false, or null.

Validation Rule Comparison Operators	Description
>	Greater than
<	Less than
=	Equal to
>=	Greater than or Equal to
<=	Less than or Equal to
<>	Not Equal to

Field Properties – Logical Operators

- The following table contains logical operators used to combine two values and return a true, false, or null result.

Operator	Usage	Description
And	Expr1 And Expr2	True when Expr1 and Expr2 are true.
Or	Expr1 Or Expr2	True when either Expr1 or Expr2 is true.
Eqv	Expr1 Eqv Expr2	True when both Expr1 and Expr2 are true or both Expr1 and Expr2 are false.
Not	Not Expr	True when Expr is not true.
Xor	Expr1 Xor Expr2	True when either Expr1 is true, or Expr2 is true, but not both.

Field Properties – Validation Rule Examples

- The following table contains Validation Rule examples and description.

Validation Rule Example	Description
<> 0	Entry must be a nonzero value.
> 1000 Or Is Null	Entry must be blank or greater than 1000.
Like "A????"	Entry must be 5 characters and begin with the letter "A".
>= #1/1/96# And <#1/1/97#	Entry must be a date in 1996.
"<> 8 Or Is Null	Entry must not equal 8 or can be a 'Null' value Note: As Access does not normally allow Null entries when using Validation, the 'Required' property must be set to 'No' on this occasion

Field Properties – General

The following table provides a brief description of the purpose of commonly used field properties.

Use this Field property	To
Field Size	Set the maximum size for data stored as a Text, Number, or AutoNumber data type
Format	Customize the way the field appears when displayed or printed
Decimal Places	Specify the number of decimal places to use when displaying numbers
New Values	Set whether an AutoNumber field is incremented or assigned a random value
Input Mask	Display characters to guide data entry i.e. ___/___/___
Caption	Set the text displayed by default in labels for forms, reports, and queries
Default Value	Automatically assign a default value to a field when new records are added
Validation Rule	Supply an expression that must be met when adding a value in this field
Validation Text	Enter text that appears when a value violates the ValidationRule expression
Required	Require that data be entered in a field.
Indexed	Speed up access to data in this field by creating and using an index

Field Properties – Format

- The following table provide a description of how each of the formats affect the way information is displayed.

Format Property	Option	Description
Text	User Defined	You can define a custom format. For more information, see Format data in tables, forms, and reports.
Number	General Number	In most cases, displays the number as entered, however this format will not display a decimal point or '00' (zeros) if the zeros fall after a decimal point. I.E. 1234.00 becomes 1234 & 1234.0100 becomes 1234.01 Does not display or store the last two zeros
	Currency	Displays the number using the thousand separator (,). Currency symbols displayed according to Microsoft Windows Regional and Language settings (Control Panel)
	Euro	Displays the number using the Euro currency symbol, regardless of the symbol specified in the Regional and Language settings.
	Fixed	Stores the whole value entered but only displays the number up to two decimal places, (depending upon Regional & Language settings). No currency symbol displayed.
	Standard	Displays the number using the thousand separator (,). No Currency symbol displayed. 2,345.678 becomes 2,345.67
	Percent	Multiplies the value by 100 and displays the number with a percent sign added to the end. 0.3456 becomes 35%
	Scientific	Displays the value in standard scientific notation. 1234.567 becomes 1.23E+03
Date/Time		Displays Dates and/or Times according to Regional & Language settings (Control Panel)
	General Date	Displays the value as dd/mm/yyyy hh:mm:ss pm
	Long Date	Displays the value as day date month yyyy
	Medium Date	Displays the value as dd-mmm-yy
	Short Date	Displays the value as dd/mm/yyyy
	Long Time	Displays the value as hh:mm:ss pm
	Medium Time	Displays the value as hh:mm pm
	Short Time	Displays the value as hh:mm (24 hour clock) i.e. 17:30
Yes/No		True/False — Displays the value as either True or False. Yes/No — Displays the value as either Yes or No. On/Off — Displays the value as either On or Off.

Field Properties – Input Mask Characters

- The following characters can be used to define an input mask.

Character	Description
0	Digit (0 to 9, entry required, plus [+] and minus [-] signs not allowed)
9	Digit or space (entry not required, plus [+] and minus [-] signs not allowed)
#	Digit or space (entry not required; spaces are displayed as blanks while in Edit mode, but blanks are removed when data is saved; plus [+] and minus [-] signs allowed)
L	Letter (A to Z, entry required)
?	Letter (A to Z, entry optional)
A	Letter or digit (entry required)
a	Letter or digit (entry optional)
&	Any character or a space (entry required)
C	Any character or a space (entry optional)
.,;- /	Decimal placeholder and thousand, date, and time separators. The character used depends on Regional Settings (Control Panel)
<	Causes all characters to be converted to lowercase
>	Causes all characters to be converted to uppercase
!	Causes the input mask to display from right to left, rather than from left to right. Characters typed into the mask always fill it from left to right. You can include the exclamation point anywhere in the input mask
\	Causes the character that follows to be displayed as the literal character (for example, \A is displayed as just A)

Field Properties – Input Mask Examples

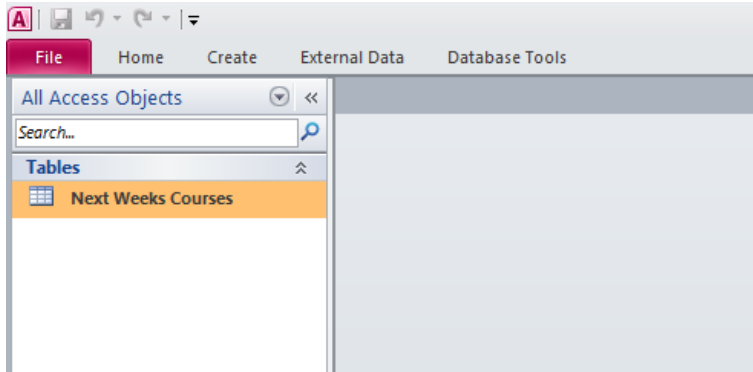
- The following characters can be used to define an input mask.

Input mask	Sample values
(00) 000-0000	(06) 123-4567
(99) 999-9999	(06) 123-4567 () 123-4567
(00) AAA-AAAA	(06) 123-CALL
#999	-20 2000
>L????L?000LO	GREENGR339M3 MAY R 452B7
>LOLOLO	T2F 8M4
00000-9999	98115- 98115-3007
>L<??????????????	Maria Brendan
SSN 000-00-0000	SSN 555-55-5555
>LL00000-0000	DB51392-0493

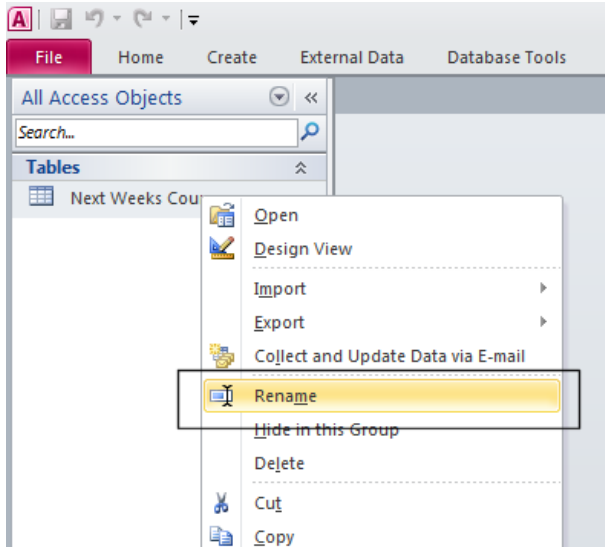
Manipulating Tables & Records

Renaming a table

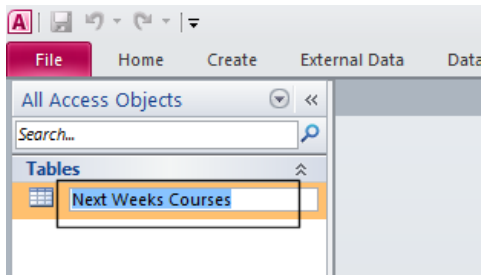
- Start the Access program.
- Open a database called **Tables and Records**.



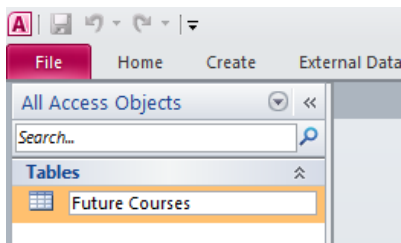
- Select (but do not open) the table called **Next Weeks Courses**. Right click on the table and from the popup list displayed select the **Rename** command.



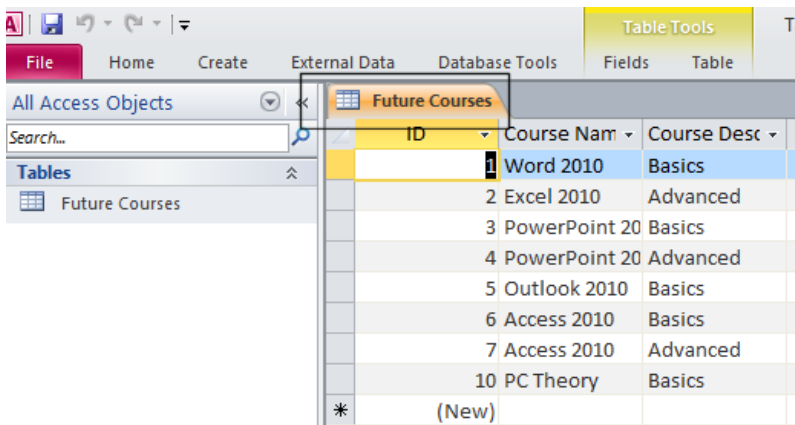
- The table name is now displayed in editing mode.



- Type in **Future Courses** and press the **Enter** key.



- Double click on the table to open it. The table object tab now displays the new name, **Future Courses**.



Editing data within a record

- With the table open, under the **Course Description** field, click within the record relating to the **PowerPoint** course.

Future Courses			
ID	Course Nam	Course Desc	Price
1	Word 2010	Basics	€200.00
2	Excel 2010	Advanced	€400.00
3	PowerPoint 20	Basics	€200.00
4	PowerPoint 20	Advanced	€400.00
5	Outlook 2010	Basics	€200.00
6	Access 2010	Basics	€200.00
7	Access 2010	Advanced	€400.00
10	PC Theory	Basics	€200.00
*	(New)		

- Press the **F2** function key (located at the top of the keyboard). The cell is now in Editing mode and existing values can be overwritten, edited or removed (depending upon field properties).

Future Courses					
ID	Course Nam	Course Desc	Price	Places Left	Co
1	Word 2010	Basics	€200.00	5	
2	Excel 2010	Advanced	€400.00	2	
3	PowerPoint 20	Basics	€200.00	4	
4	PowerPoint 20	Advanced	€400.00	1	
5	Outlook 2010	Basics	€200.00	4	
6	Access 2010	Basics	€200.00	3	
7	Access 2010	Advanced	€400.00	1	
10	PC Theory	Basics	€200.00	3	
*	(New)				

- Type in the word **Advanced** and press the **Enter** key.

Future Courses				
ID	Course Nam	Course Desc	Price	Pl
1	Word 2010	Basics	€200.00	
2	Excel 2010	Advanced	€400.00	
3	PowerPoint 20	Advanced	€200.00	
4	PowerPoint 20	Advanced	€400.00	
5	Outlook 2010	Basics	€200.00	
6	Access 2010	Basics	€200.00	
7	Access 2010	Advanced	€400.00	
10	PC Theory	Basics	€200.00	
*	(New)			

- Use the same technique to change the duration for this course from **one** to **two** days.

- Change the price for this course from **200** to **400**. Your data will now look like this.

Future Courses							
ID	Course Nam	Course Desc	Price	Places Left	Course Date	Duration (d	
1	Word 2010	Basics	€200.00	5	3/03/2010	1	
2	Excel 2010	Advanced	€400.00	2	3/03/2010	2	
3	PowerPoint 20	Advanced	€400.00	4	3/03/2010	2	
4	PowerPoint 20	Advanced	€400.00	1	3/03/2010	2	
5	Outlook 2010	Basics	€200.00	4	3/03/2010	1	
6	Access 2010	Basics	€200.00	3	3/03/2010	1	
7	Access 2010	Advanced	€400.00	1	3/03/2010	2	
10	PC Theory	Basics	€200.00	3	3/03/2010	1	
*	(New)						

Deleting data within a record

- Deleting data in a record is similar to editing data in a record; however there are a number of considerations to take into account.

Data cannot be deleted from fields where the **Required** field property is set to **Yes**, as this prevents the field from being left blank.

Deleting data from an **Attachment** (Data Type) field is actually not a deletion but the removal of an attachment.

- To remove data from a record, select the **Places Left** field for the **PowerPoint 2010** record.

Future Courses						
ID	Course Nam	Course Desc	Price	Places Left	Course Da	
1	Word 2010	Basics	€200.00	5	3/03/	
2	Excel 2010	Advanced	€400.00	2	3/03/	
3	PowerPoint 20	Advanced	€400.00	4	3/03/	
4	PowerPoint 20	Advanced	€400.00	1	3/03/	
5	Outlook 2010	Basics	€200.00	4	3/03/	
6	Access 2010	Basics	€200.00	3	3/03/	
7	Access 2010	Advanced	€400.00	1	3/03/	
10	PC Theory	Basics	€200.00	3	3/03/	
*	(New)					

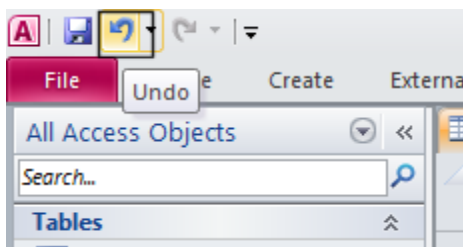
- Then press the **F2** key to activate editing mode, then use either the **Delete** or the **Backspace** key to delete the entry. Press the **Enter** key to commit the changes.

Future Courses						
ID	Course Nam	Course Desc	Price	Places Left	Course Date	Dur
1	Word 2010	Basics	€200.00	5	3/03/2010	
2	Excel 2010	Advanced	€400.00	2	3/03/2010	
3	PowerPoint 20	Advanced	€400.00		3/03/2010	
4	PowerPoint 20	Advanced	€400.00	1	3/03/2010	
5	Outlook 2010	Basics	€200.00	4	3/03/2010	
6	Access 2010	Basics	€200.00	3	3/03/2010	
7	Access 2010	Advanced	€400.00	1	3/03/2010	
10	PC Theory	Basics	€200.00	3	3/03/2010	
*	(New)					

- The pointer moves to the next column, leaving the **Places Left** field empty.

Using the Undo command

- Like other Microsoft Office applications, the **Undo** command (**CTRL-Z**), allows the user to undo previous actions.



Unlike other Office Applications however, when working with tables for example, the **Undo** function will only undo the **last action**. The **Undo** button is located on the Quick Access Toolbar.

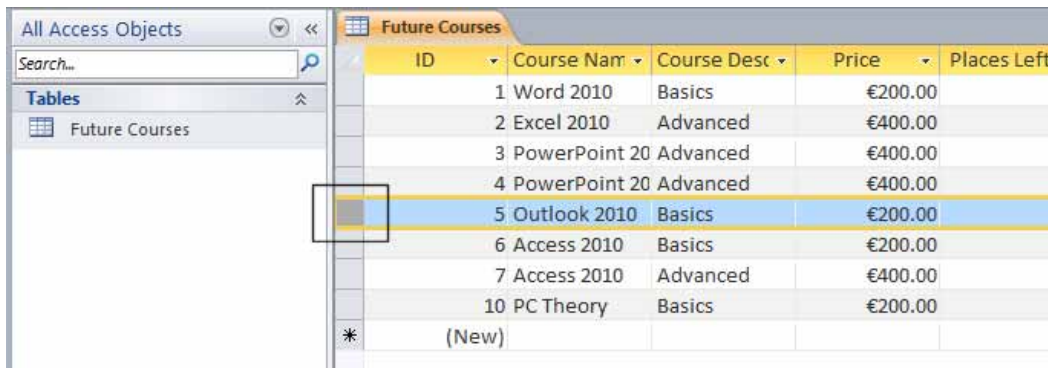
- Select an item within the **Places Left** column, press the **F2** key and then press the **Del** key. The item will be removed. Repeat this procedure for each item under the **Places Left** column. Your data will now look like this.

Future Courses						
ID	Course Nam	Course Desc	Price	Places Left	Course Date	Duration
1	Word 2010	Basics	€200.00		3/03/2010	
2	Excel 2010	Advanced	€400.00		3/03/2010	
3	PowerPoint 20	Advanced	€400.00		3/03/2010	
4	PowerPoint 20	Advanced	€400.00		3/03/2010	
5	Outlook 2010	Basics	€200.00		3/03/2010	
6	Access 2010	Basics	€200.00		3/03/2010	
7	Access 2010	Advanced	€400.00		3/03/2010	
10	PC Theory	Basics	€200.00		3/03/2010	
*	(New)					

- Click on the **Undo** button and the last item you deleted will be displayed again. Click on the **Undo** button again, and you will see that no more undo's can be performed.

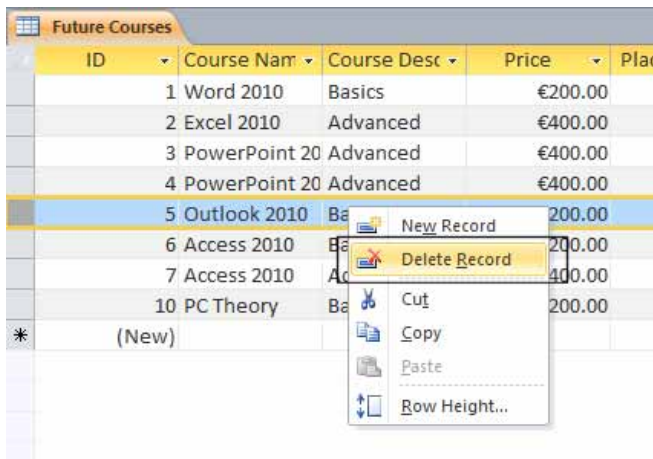
Deleting a single record

- You may need to remove a record from a table. In this example you will remove the record relating to the **Outlook 2010** course.
- Move the pointer to the column, left of the **ID** field for the Outlook record. When the pointer changes to a right pointing arrow, click to highlight the whole row (record).



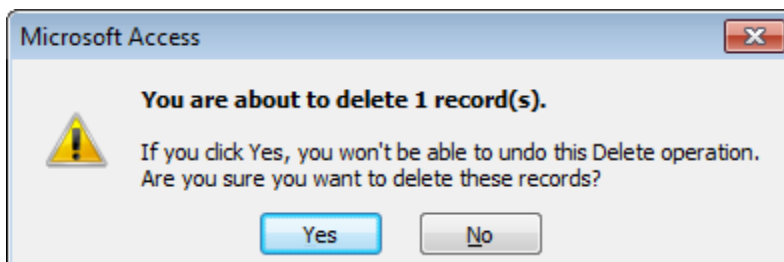
ID	Course Name	Course Desc	Price	Places Left
1	Word 2010	Basics	€200.00	
2	Excel 2010	Advanced	€400.00	
3	PowerPoint 20	Advanced	€400.00	
4	PowerPoint 20	Advanced	€400.00	
5	Outlook 2010	Basics	€200.00	
6	Access 2010	Basics	€200.00	
7	Access 2010	Advanced	€400.00	
10	PC Theory	Basics	€200.00	
*	(New)			

- With the pointer anywhere within the highlighted area, click using the right mouse button to activate the shortcut menu.



ID	Course Name	Course Desc	Price	Places Left
1	Word 2010	Basics	€200.00	
2	Excel 2010	Advanced	€400.00	
3	PowerPoint 20	Advanced	€400.00	
4	PowerPoint 20	Advanced	€400.00	
5	Outlook 2010	Basics	€200.00	
6	Access 2010	Basics	€200.00	
7	Access 2010	Advanced	€400.00	
10	PC Theory	Basics	€200.00	
*	(New)			

- Click on the **Delete Record** option. A warning is displayed.



NOTE: Undo is not available when deleting records, therefore any deletions will be committed.

- Click on the **Yes** button to confirm the deletion.

Future Courses					
ID	Course Nam	Course Desc	Price	Places Left	Course Date
1	Word 2010	Basics	€200.00	5	3/03/2010
2	Excel 2010	Advanced	€400.00		3/03/2010
3	PowerPoint 20	Advanced	€400.00		3/03/2010
4	PowerPoint 20	Advanced	€400.00		3/03/2010
5	Access 2010	Basics	€200.00		3/03/2010
7	Access 2010	Advanced	€400.00		3/03/2010
10	PC Theory	Basics	€200.00		3/03/2010
*	(New)				

- The Outlook course record has been deleted from the table.

NOTE: When deleting records from a table, the unique number in an ID (AutoNumber) field is also deleted and will not be reused.

TIP: Instead of using the shortcut menu and the **Delete Record** option, you could simply highlight the row and press the **Delete** key.

Deleting multiple records

- If a group of records needs to be deleted, the process is similar to deleting a single record. The only difference is in selecting the records.
- Move the pointer left to the ID column for the **Excel 2010** course.

Future Courses			
ID	Course Nam	Course Desc	Price
1	Word 2010	Basics	€200.00
2	Excel 2010	Advanced	€400.00
3	PowerPoint 20	Advanced	€400.00
4	PowerPoint 20	Advanced	€400.00
6	Access 2010	Basics	€200.00
7	Access 2010	Advanced	€400.00
10	PC Theory	Basics	€200.00
*	(New)		

- Drag down the list to the **Access 2010** basics course and all the rows, i.e. records, will be selected.

Future Courses			
ID	Course Nam	Course Desc	Price
1	Word 2010	Basics	€200
2	Excel 2010	Advanced	€400
3	PowerPoint 20	Advanced	€400
4	PowerPoint 20	Advanced	€400
6	Access 2010	Basics	€200
7	Access 2010	Advanced	€400
10	PC Theory	Basics	€200
*	(New)		

- Press the **Del** key and you will see a warning dialog box.

Future Courses						
ID	Course Nam	Course Desc	Price	Places Left	Course Date	D
1	Word 2010	Basics	€200.00	5	3/03/2010	
7	Access 2010	Advanced	€400.00		3/03/2010	
10	PC Theory	Basics	€200.00		3/03/2010	
*	(New)					

Microsoft Access

You are about to delete 4 record(s).

If you click Yes, you won't be able to undo this Delete operation. Are you sure you want to delete these records?

Yes No

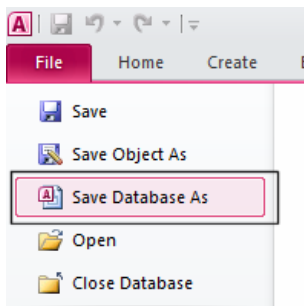
- Click on the **Yes** button to delete the selected records. Your data will now look like this.

Future Courses				
ID	Course Nam	Course Desc	Price	Places Left
1	Word 2010	Basics	€200.00	5
7	Access 2010	Advanced	€400.00	
10	PC Theory	Basics	€200.00	
*	(New)			

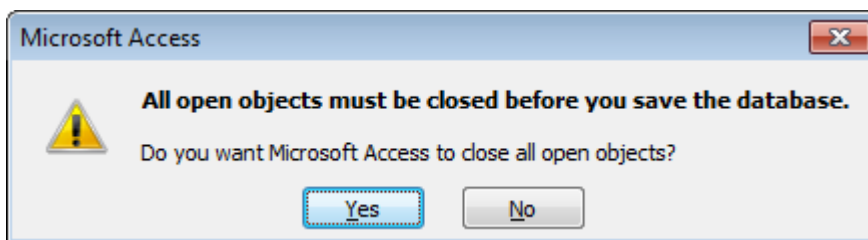
TIP: Records can also be highlighted by clicking on the first record, moving to the last, then whilst holding down the **Shift** key, select the last record to highlight all records between and including the first and last records.

Using Save As to back up the database using a different file name

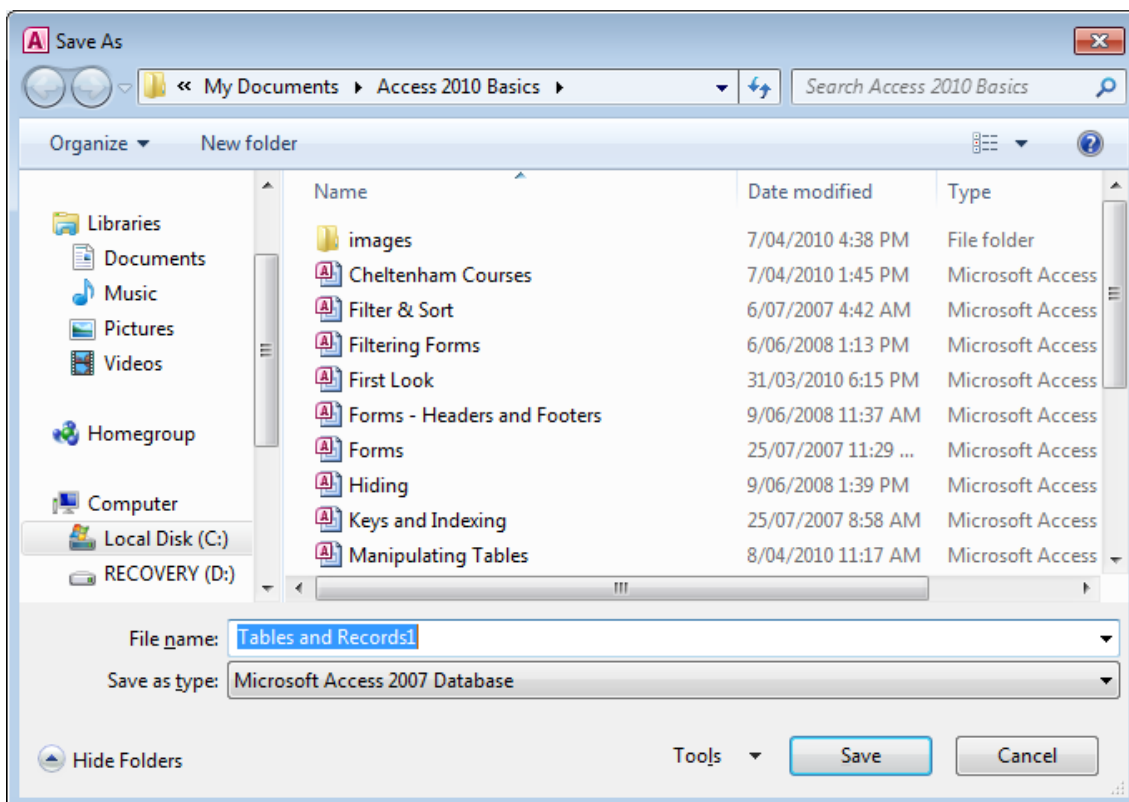
- Click on the **File** tab and select the **Save Database As** option.



- You may see a dialog box asking you to close all open objects. If you see this dialog box click on the **Yes** button.



- The **Save As** dialog box will be displayed.

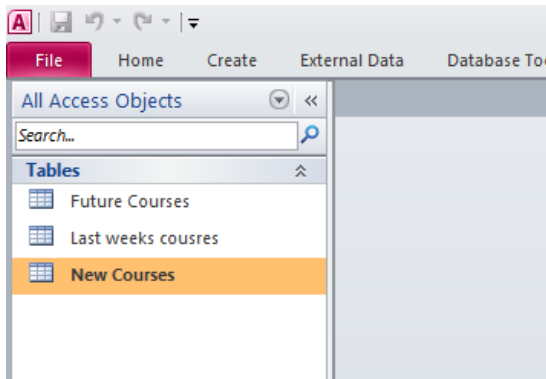


- Enter a new name for the database, such as **Backup Tables and Records**.

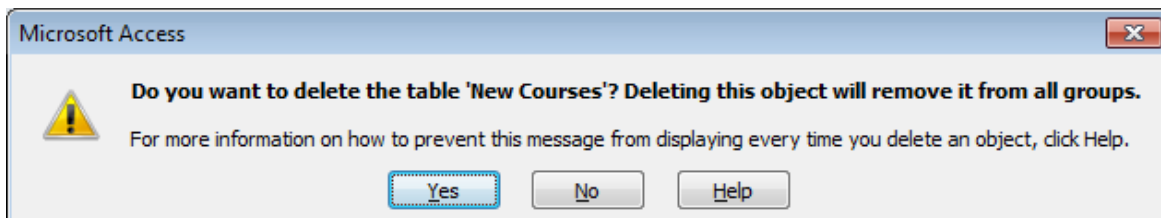
- Click on the **Save** button to save the database under the new name.

Deleting a table

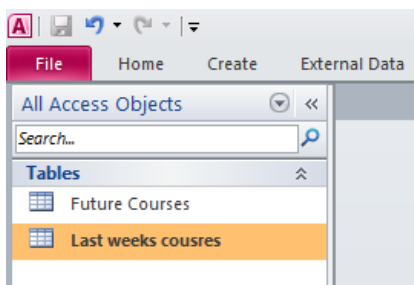
- Open a database called **Deleting a Table**. This database contains three tables.



- Select the table that you wish to delete, such as **New Courses**.
- Press the **Del** key and you will see a warning dialog box.



- Click on the **Yes** button and the table will be deleted.



TIP: To delete a table from a database, the table must be closed.

- Close the Access program.

Primary Keys and Indexing

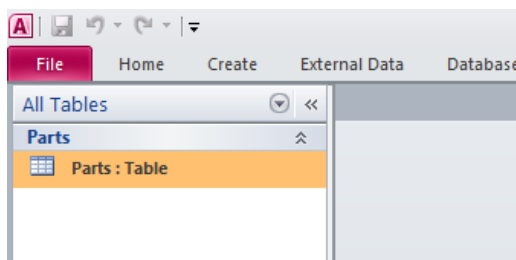
Defining a Primary Key

- A primary key is used as a unique identifier for each record in a database table and is essential when working with relational tables.
- To be effective, a primary key cannot have duplicate entries and must be set on a field generating a unique identifier. When creating a new table Access automatically adds the ID field with an AutoNumber data type. By default the ID field is also the primary key.

Other fields suitable to be set as a primary key are for example passport, social security and driving licence numbers, military identification, tax, workplace or personal identification numbers, unique to each individual.

NOTE: A primary key field can never be empty.

- Access also uses primary keys to index tables.
- Start the Access program.
- Open a database called **Keys and indexing**.

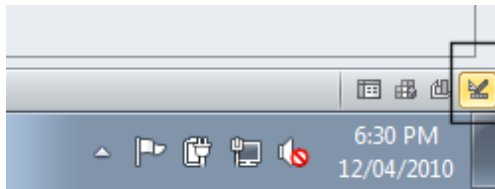


- Open the **Parts** table.

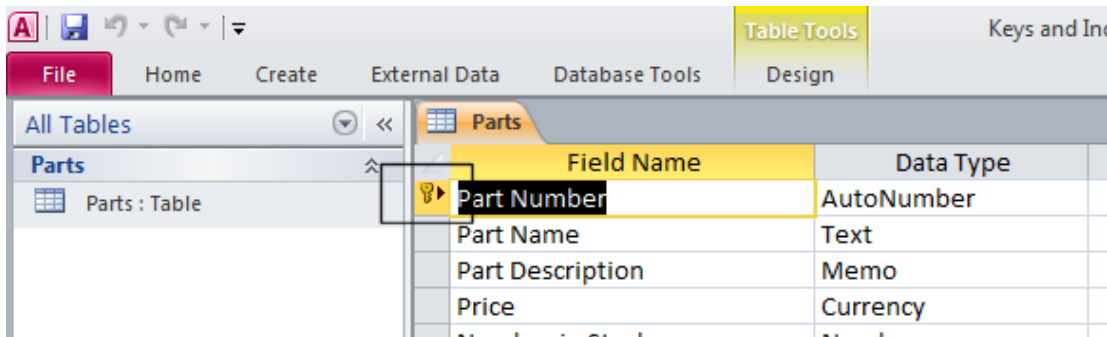
 A screenshot of the Microsoft Access interface showing the 'Parts' table in Datasheet View. The table has the following columns: Part Number, Part Name, Part Description, Price, Number in Stock, Date Received, and Discontinued. The data is as follows:

Part Number	Part Name	Part Description	Price	Number in Stock	Date Received	Discontinued
1	Light	Stop Light	2.50	43	24/01/2005	<input checked="" type="checkbox"/>
2	Air Filter	Paper Filter	6.70	10	8/10/2006	<input type="checkbox"/>
3	Spark Plugs	Box of 8 Plugs	43.50	6	11/02/2007	<input type="checkbox"/>
4	Light	Halogen Light	15.50	8	28/05/2007	<input type="checkbox"/>
6	Oil Additive	Motor Oil Additive	1.50	24	2/01/2007	<input type="checkbox"/>
7	Battery	12v Heavy Duty Batt	64.90	4	2/02/2007	<input type="checkbox"/>
*	(New)					<input type="checkbox"/>

- Switch to the Design View, by clicking on the **Design View** button (bottom-right).

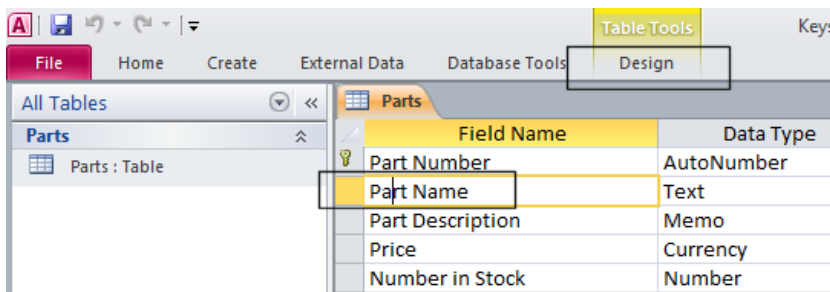


- The **Primary Key** symbol identifies the **Part Number** field as being the primary key.

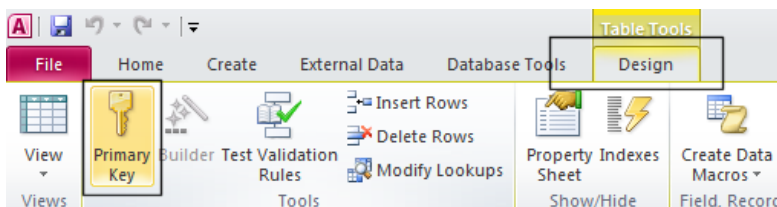


NOTE: The **Primary Key** button is also shown in the **Tools** group on the Ribbon.

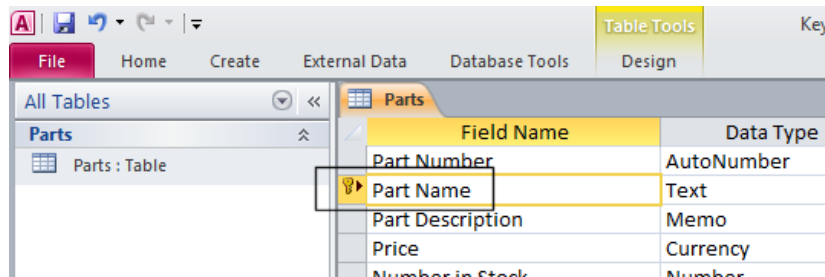
- To use another field as the primary key, select the **Part Name** field.



- Click on the **Design** tab.



- Click on the **Primary Key** button on the Ribbon. The **Primary Key** symbol is now displayed beside the **Part Name** field.

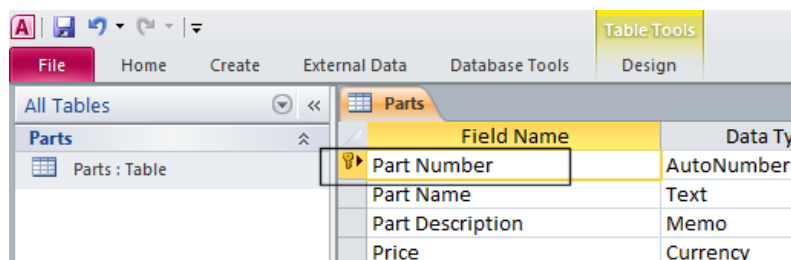


NOTE: The **Part Name** field however is not a suitable data type to become a primary key, as data within this field is unlikely to be unique.

- When working with related tables, the Primary Key field in one table is generally the (foreign key) field used to create the relationship with another table.

NOTE: Depending upon the data type a field is set to, more than one field can be highlighted and set as a primary key, although only one displays the Primary Key symbol.

- MAKE SURE YOU DO THIS:** Reset the Primary Key back to the **Part Number**, field before continuing, as illustrated below.



Indexing - Reference Notes

- Access uses indexes much like the Table of Contents at the beginning of this course, to help locate and sort information quickly. An index stores the location of records based on the field or fields that you choose to index. After Access obtains the location from the index, it can then retrieve the data by moving directly to the correct location.
- As mentioned earlier, by default, Access sets the Primary key as the Index within a table; however indexing can be set on other fields, especially fields used frequently in searches.

NOTE: Although indexing may speed up searches, it can also slow the process of updating data within tables. Also, you **cannot** index OLE objects or attachment fields.

- As a guide, consider indexing a field if all of the following conditions are met:
 - The field's data type is Text, Memo, Number, Date/Time, AutoNumber, Currency, Yes/No or Hyperlink.
 - You anticipate searching for values stored in the field.
 - You anticipate sorting values in the field.
 - You anticipate storing many different values in the field. If many of the values in the field are the same, the index might not significantly speed up queries.
- Indexing can also be set for multiple fields. If you are likely to perform searches on two or more fields within a single query, it makes sense to create a multiple-field index on both fields.

NOTE: You can include up to 10 and set the order of fields in a multiple-field index.

- When you sort a table using a multiple-field index, Access first sorts by the first field defined for the index. If there are records with duplicate values in the first field, Access then sorts using the second field defined for the multiple-field index.
- Before creating an index, decide whether you want to create a single-field index or a multiple-field index.
- You create an index on a single field by setting the **Indexed** property.

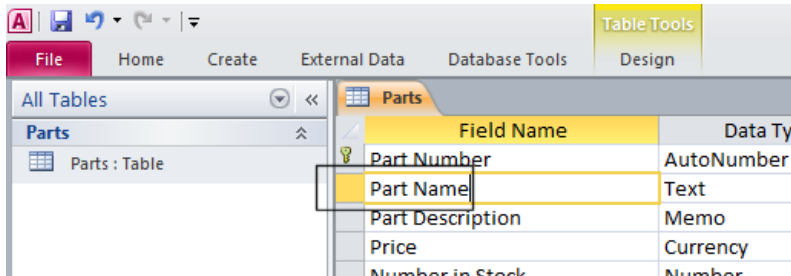
The following table lists the possible settings for the **Indexed** property.

Indexed property setting	Meaning
No	Don't create an index on this field (or delete the existing index)
Yes (Duplicates OK)	Create an index on this field
Yes (No Duplicates)	Create a unique index on this field

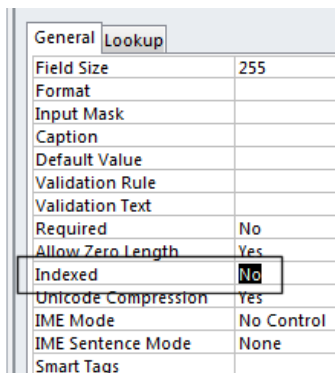
NOTE: By setting the Index property to **No Duplicates**, Access prevents any new value which matches an existing value from being entered into the field. For example, indexing the ID field in a table and setting it to Yes (No Duplicates) prevents duplicate numbers being entered and therefore the values in the field remain unique.

Creating a single-field Index

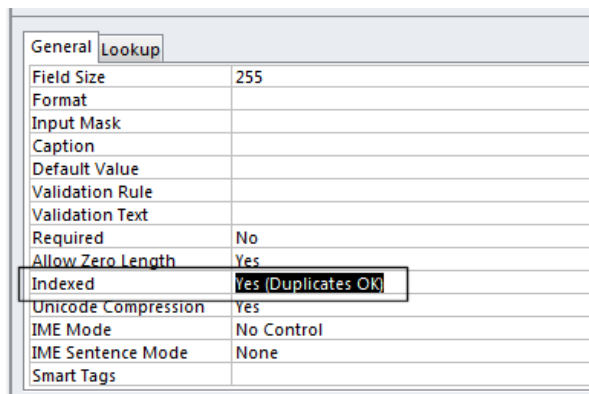
- For the purpose of this exercise, we will assume that the **Part Name** field in the **Parts** table will be subject to many searches; therefore it would be worthwhile indexing this field to speed up searches.
- Click on the **Part Name** field.



- Move down to the **General** tab within the **Field Properties** section.
- If you look at the **Indexed** properties, you will see that it is set to **No**.



- Double click on the word **No** and it will toggle to the word **Yes**. The **Field Properties** section will now look like this.

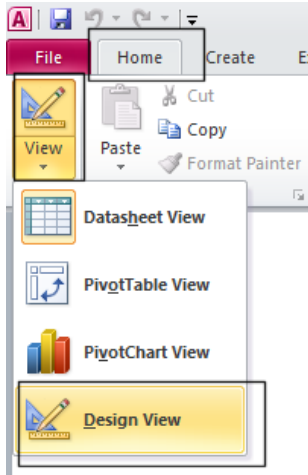


- Press **Ctrl-S** to save your changes.

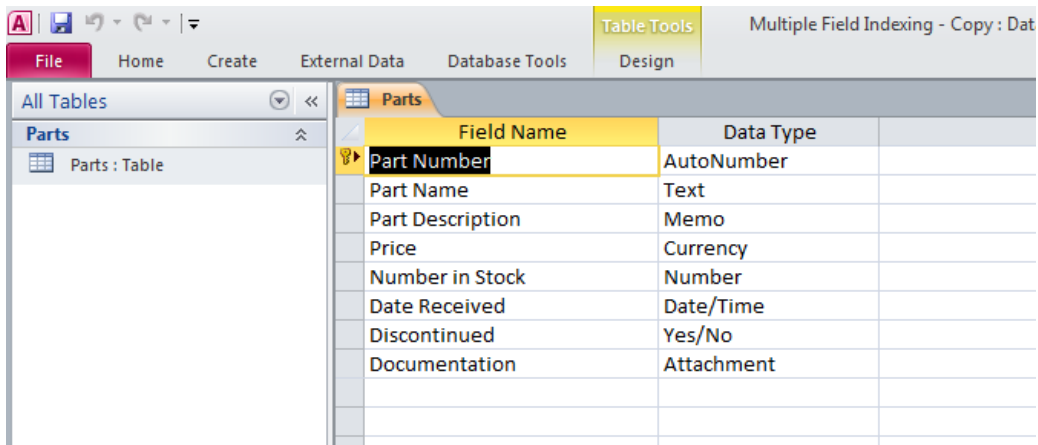
- Close the Access program.

Creating a multiple-field Index

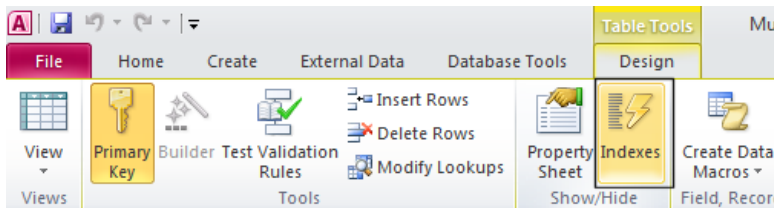
- Start the Access program.
- Open a table called **Multiple Field Indexing**.
- Open the **Parts** table.
- Click on the **Home** tab and then click on the **View** button. Click on **Design View**.



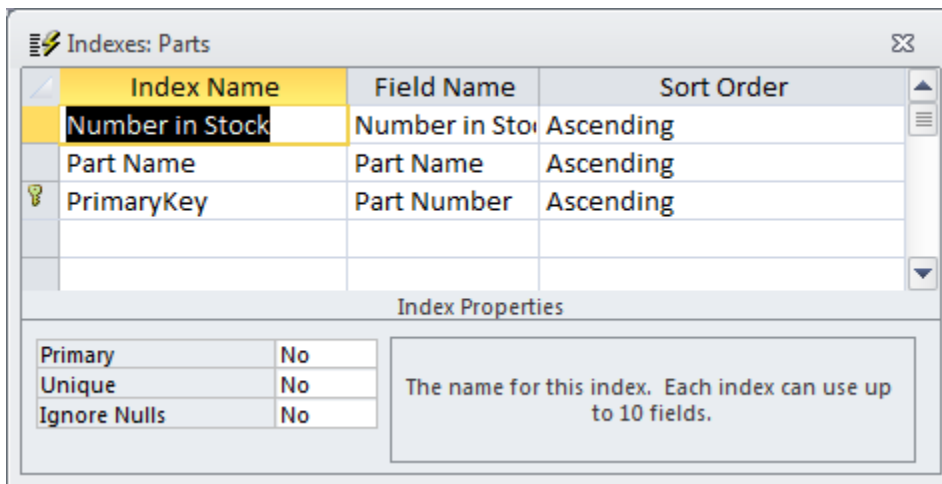
- Your screen will look like this.



- On the **Design** tab, within the **Show/Hide** group, click on the **Indexes** button.

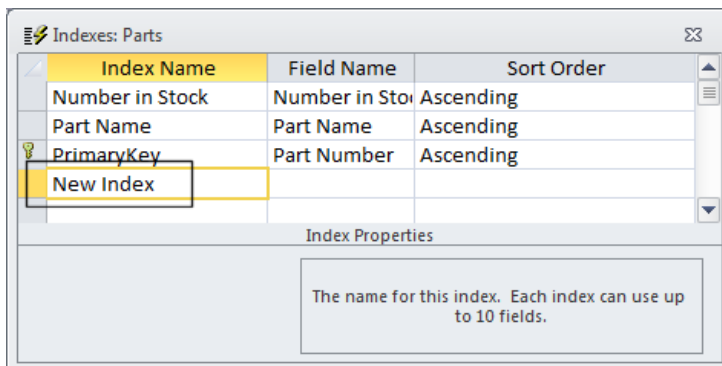


- The **Indexes** window is displayed.



NOTE: By default, Access automatically configures indexes on certain fields as they are added to a table, for example ID fields. In such cases, these indexes will display in the **Indexes** dialog box when opened.

- A name for the index is required in the first blank row in the **Index Name** column. This name is used only to identify the index and can be the name of a field(s) to be indexed or another name.
- In the **Index Name** column, type **New Index** and press the **Enter** key to move to the **Field Name** column, as illustrated.



- Click on the **drop arrow** and select **Part Name** and press the **Enter** key to move to the **Sort Order** column.

Index Name	Field Name	Sort Order
Number in Stock	Number in Stock	Ascending
Part Name	Part Name	Ascending
PrimaryKey	Part Number	Ascending
New Index	Part Name	Ascending

Primary: No
Unique: No
Ignore Nulls: No

The name of the field to be indexed.

- Leave the sort order set to **Ascending** (default) and press the **Enter** key to move to the next row down.

Index Name	Field Name	Sort Order
Number in Stock	Number in Stock	Ascending
Part Name	Part Name	Ascending
PrimaryKey	Part Number	Ascending
New Index	Part Name	Ascending

Index Properties

Primary: No
Unique: No
Ignore Nulls: No

Records can be sorted in ascending or descending order.

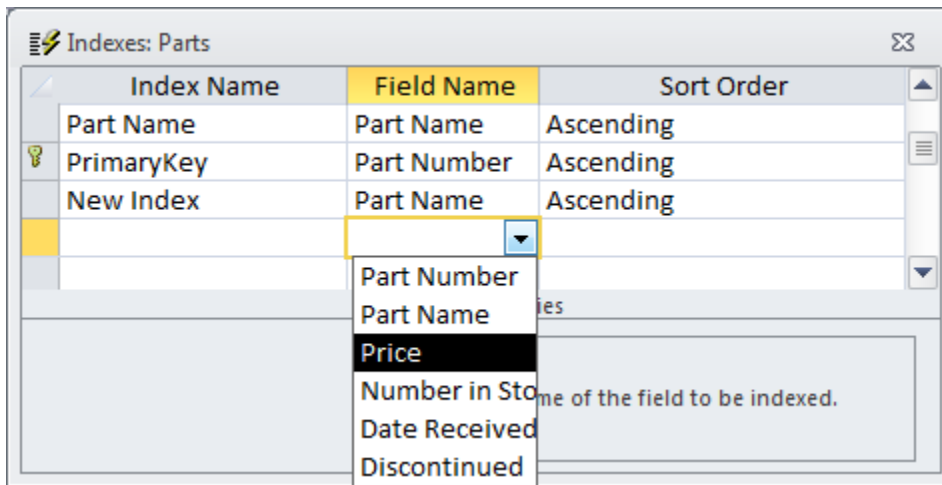
- Press the **Enter** key again to move to the **Field Name** column, as illustrated.

Index Name	Field Name	Sort Order
Part Name	Part Name	Ascending
PrimaryKey	Part Number	Ascending
New Index	Part Name	Ascending

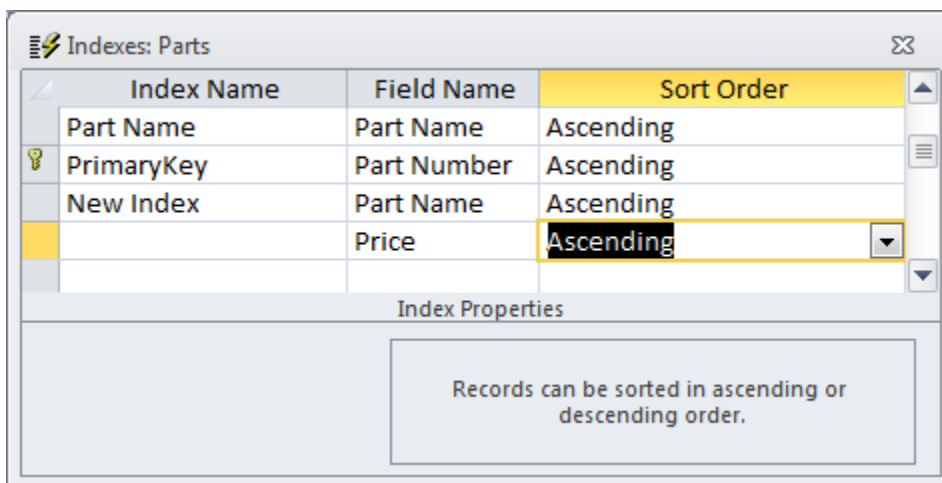
Index Properties

The name of the field to be indexed.

- Click in the **down arrow** and select **Price**.



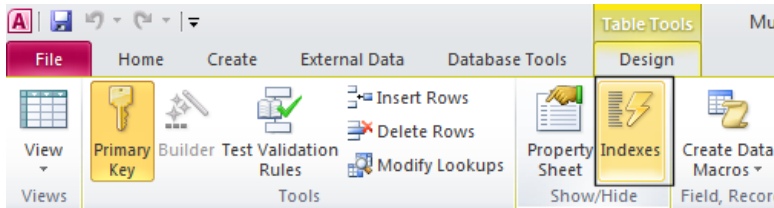
- The screen will now look like this.



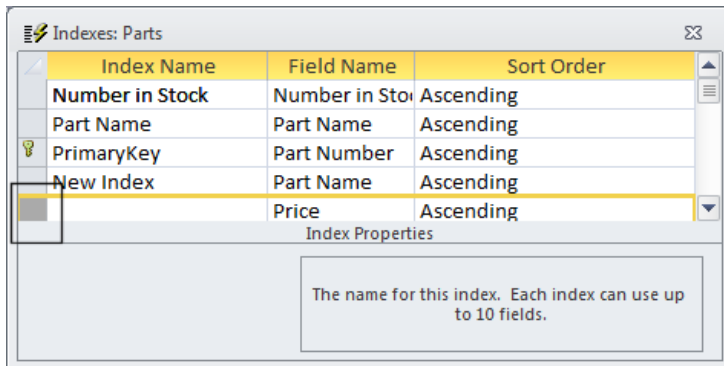
- Press the **Enter** key to move to the **Sort Order** column.
- Close the dialog box.

Deleting multi-field indexes

- On the **Design** tab, in the **Show/Hide** group, click on the **Indexes** button.



- Click in the left most column to highlight the row as shown below.



- Press the **Delete** key on the keyboard.

NOTE: To delete multiple rows in one go, click and drag in the left most column to select the required rows before pressing the **Delete** key.

- Close the dialog box.
- Close Access and save any changes that you have made.

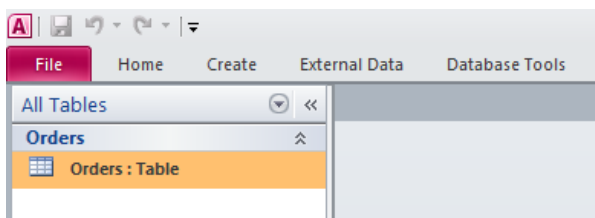
Filtering

Text Filters

- Text Filters provide a means to find one or more specific records in table, form or print specific records in a report, table, or query.
- By using criteria in a filter, you effectively display only those records matching the criteria. Records not matching the criteria disappear from view, hence the term 'filter'. For example if you only want to display records that fall between the first day of a month and the last day of a month, you can apply a filter, specifying the oldest date and the newest and only records matching the criteria remain visible in the table
- Filters remain in place until they are removed or until the object is closed.
- More than one filter may be active at one time, although only one filter per field is possible. Setting a new filter on a field will effectively remove the previous filter for that field before applying the new filter.

Applying a single filter

- A single filter is one that is applied to a single field, using the quick filter options made available in Access 2010.
- Open the Access program.
- Open a database called **Filtering Records**. You will see the following.



- Double click to open the **Orders** table.

Filter & Sort: Database (Access 2007) - Microsoft Access

Order No.	First Name	Last Name	Position	Sales Account Manager	Category	Product Name	Unit Qty
1	Anna	Bedecs	Owner	Mariya Sergienko	Beverages	Chai	10 boxes x 20 bags
2	Antonio	Gratacos Solsona	Purchasing Representative	Laura Giussani	Condiments	Syrup	12 - 550 ml bottles
3	Thomas	Axen	Purchasing Manager	Anne Hellung-Larsen	Condiments	Cajun Seasoning	48 - 6 oz jars
4	Christina	Lee	Owner	Jan Kotas	Oil	Olive Oil	36 boxes
5	Martin	O'Donnell	Purchasing Manager	Mariya Sergienko	Jams, Preserves	Boysenberry Spread	12 - 8 oz jars
6	Francisco	Pérez-Olaeta	Owner	Nancy Freehafer	Dried Fruit & Nuts	Dried Pears	12 - 1 lb pkgs.
7	Ming-Yang	Xie	Purchasing Representative	Nancy Freehafer	Sauces	Curry Sauce	12 - 12 oz jars
8	Elizabeth	Andersen	Purchasing Manager	Nancy Freehafer	Dried Fruit & Nuts	Walnuts	40 - 100 g pkgs.
9	Sven	Mortensen	Purchasing Manager	Nancy Freehafer	Canned Fruit & Vegetables	Fruit Cocktail	15.25 OZ
10	Roland	Wacker	Purchasing Manager	Nancy Freehafer	Baked Goods & Mixes	Chocolate Biscuits Mix	10 boxes x 12 pieces
11	Peter	Krschne	Purchasing Manager	Robert Zare	Jams, Preserves	Marmalade	30 gift boxes
12	John	Edwards	Purchasing Representative	Michael Neipper	Baked Goods & Mixes	Scones	24 pkgs. x 4 pieces
13	Andre	Ludick	Purchasing Representative	Mariya Sergienko	Beverages	Beer	24 - 12 oz bottles
14	Carlos	Grilo	Purchasing Manager	Anne Hellung-Larsen	Canned Meat	Crab Meat	24 - 4 oz tins
15	Helena	Kupkova	Purchasing Representative	Anne Hellung-Larsen	Soups	Clam Chowder	12 - 12 oz cans
16	Daniel	Goldschmidt	Owner	Nancy Freehafer	Beverages	Coffee	16 - 500 g tins
17	Jean Philippe	Bagel	Purchasing Representative	Andrew Cencini	Candy	Chocolate	16 pkgs
18	Catherine	Autier Miconi	Accounting Assistant	Anne Hellung-Larsen	Dried Fruit & Nuts	Dried Apples	50 - 300 g pkgs.
19	Alexander	Eggerer	Purchasing Manager	Jan Kotas	Grains	Long Grain Rice	16 - 2 kg boxes
20	George	Li	Accounting Manager	Mariya Sergienko	Pasta	Gnocchi	24 - 250 g pkgs.
21	Bernard	Tham	Purchasing Assistant	Michael Neipper	Pasta	Ravioli	24 - 250 g pkgs.
22	Luciana	Ramos	Purchasing Manager	Anne Hellung-Larsen	Sauces	Hot Pepper Sauce	32 - 8 oz bottles
23	Michael	Entin	Owner	Jan Kotas	Sauces	Tomato Sauce	24 - 8 oz jars
24	Jonas	Hasselberg	Purchasing Manager	Mariya Sergienko	Dairy Products	Mozzarella	24 - 200 g pkgs.
25	John	Rodman	Accounting Assistant	Laura Giussani	Dried Fruit & Nuts	Almonds	5 kg pkg.
26	Rui	Liu	Purchasing Manager	Anne Hellung-Larsen	Condiments	Mustard	12 boxes
27	Karen	Toh	Purchasing Manager	Jan Kotas	Dried Fruit & Nuts	Dried Plums	1 lb bag
28	Amritansh	Raghav	Purchasing Manager	Mariya Sergienko	Beverages	Green Tea	20 bags per box
29	Soo Jung	Lee	Owner	Nancy Freehafer	Cereal	Granola	10 per box

- To apply a single filter click at the top of the **Position** column to select the whole column.

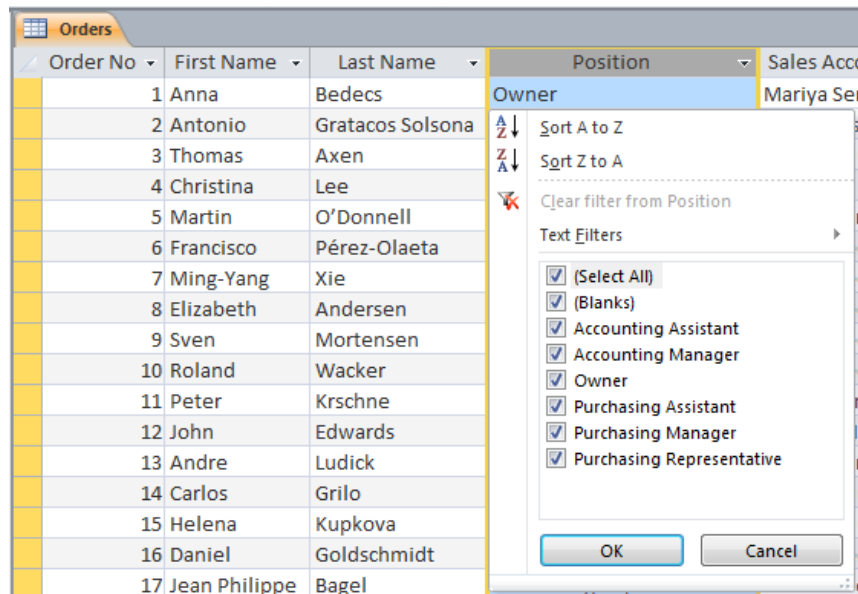
Order No.	First Name	Last Name	Position	Sales Account Manager
1	Anna	Bedecs	Owner	Mariya S
2	Antonio	Gratacos Solsona	Purchasing Representative	Laura Gi
3	Thomas	Axen	Purchasing Manager	Anne He
4	Christina	Lee	Owner	Jan Kota
5	Martin	O'Donnell	Purchasing Manager	Mariya S
6	Francisco	Pérez-Olaeta	Owner	Nancy Fr
7	Ming-Yang	Xie	Purchasing Representative	Nancy Fr
8	Elizabeth	Andersen	Purchasing Manager	Nancy Fr
9	Sven	Mortensen	Purchasing Manager	Nancy Fr
10	Roland	Wacker	Purchasing Manager	Nancy Fr
11	Peter	Krschne	Purchasing Manager	Robert Z

- Click on the **Home** tab, within the **Sort & Filter** group click on the **Filter** button.

Filter & Sort: Database (Access 2007)

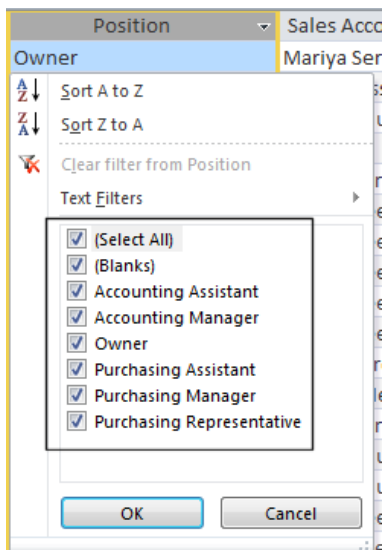
Order No.	First Name	Last Name	Position	Sales Account Manager
3	Thomas	Axen	Purchasing Manager	An
4	Christina	Lee	Owner	Jar
5	Martin	O'Donnell	Purchasing Manager	Mi
6	Francisco	Pérez-Olaeta	Owner	Na

- The **Filter** drop down is displayed.

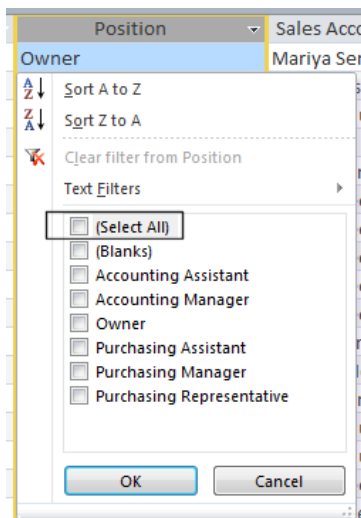


This drop down menu is divided by lines, into three sections, however only the second and third areas of the dialog box apply to filtering. For now, ignore the **A-Z sort** section as this will be covered elsewhere.

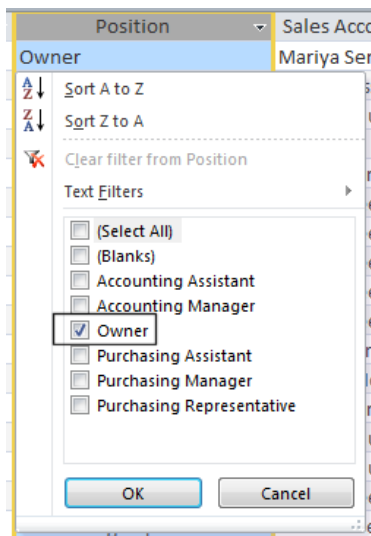
- In the lower section of the dialog, you will notice a group of tick boxes. These tick boxes represent all the available (unique) job titles entered into the **Positions** field.



- At the top of the tick box group is a tick box labeled **(Select All)**.
- Click on the **(Select All)** tick box to un-tick all boxes.



- To locate all records for those who are an **Owner**, click on the **Owner** tick box.



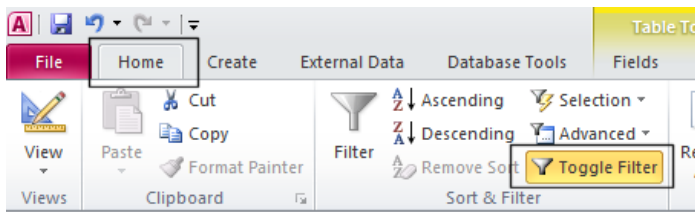
- Click on the **OK** button. Six records are displayed with **Owner** in the **Positions** field.

Order No	First Name	Last Name	Position	Sales Account
1	Anna	Bedecs	Owner	Mariya Sergien
4	Christina	Lee	Owner	Jan Kotas
6	Francisco	Pérez-Olaeta	Owner	Nancy Freehafe
16	Daniel	Goldschmidt	Owner	Nancy Freehafe
23	Michael	Entin	Owner	Jan Kotas
29	Soo Jung	Lee	Owner	Nancy Freehafe
*	(New)			

- A button is displayed to the right of the field name of any field which has a filter applied.

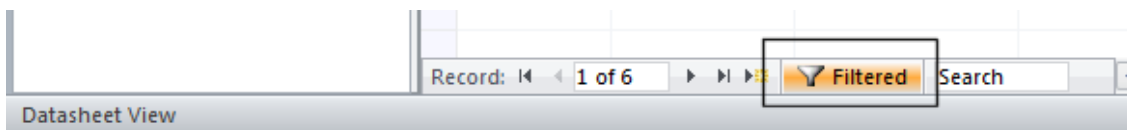
Position	
Owner	Position equals "Owner"
Owner	Jan Kotas
Owner	Nancy Freehafer
Owner	Nancy Freehafer
Owner	Jan Kotas
Owner	Nancy Freehafer

- Click on the **Home** tab and within the **Sort & Filter** group, the **Toggle Filter** button is now active.

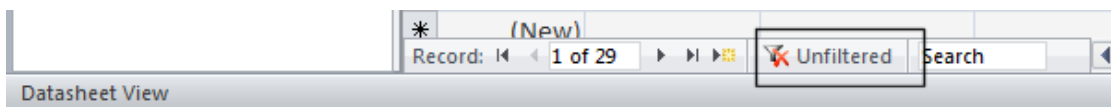


Toggle Filter effectively turns the filter on and off, switching between the filtered view and normal view (unfiltered).

- The **Filtered** button (at the bottom of the window) which was previously grayed out is now active in the record navigation bar at the bottom of the table.

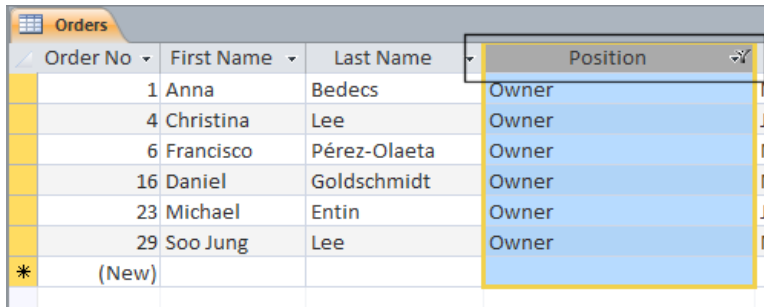


- The **Filtered** button works in exactly the same way as a **Toggle Filter** button in the **Sort & Filter** group in the ribbon.
- Click on the **Filtered** button once. The table is temporarily unfiltered and all records are visible.
- Click on the **Unfiltered** button to revert back to the filtered view.



Clearing a single filter

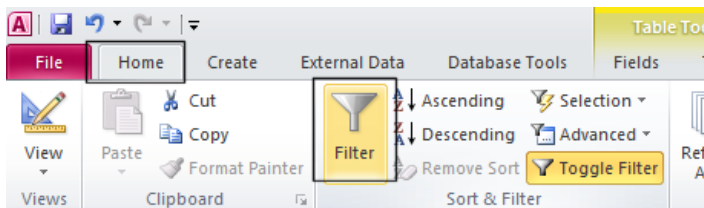
- To clear a filter that you applied click at the top of the **Position** column to select the column.



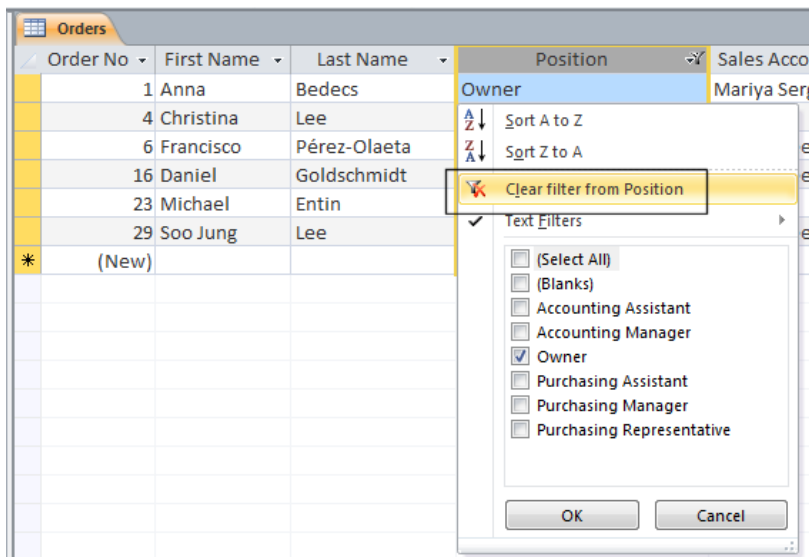
The screenshot shows the 'Orders' table in Access. The 'Position' column is selected, and a dropdown menu is open showing the following values: Owner, Owner, Owner, Owner, Owner, Owner, and (New). The table data is as follows:

Order No	First Name	Last Name	Position
1	Anna	Bedecs	Owner
4	Christina	Lee	Owner
6	Francisco	Pérez-Olaeta	Owner
16	Daniel	Goldschmidt	Owner
23	Michael	Entin	Owner
29	Soo Jung	Lee	Owner
*	(New)		

- Click on the **Home** tab and within the **Sort & Filter** group, click on the **Filter** button.



The **Filter** dialog box is displayed.



NOTE: Only when a filter is in use, will the **Clear filter from Position** option be available in the list, otherwise the option will be grayed out.

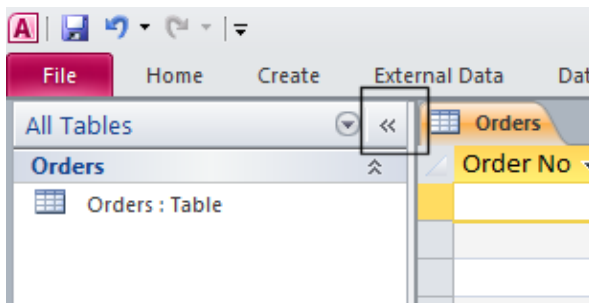
- Select the **Clear filter from Position** option from the list to remove the filter.
- All the records will now be displayed again.

Creating multiple filters

- Using a filter on one field helps reduce the list of records to those that meet the criteria set, however there may be occasions when you want to be even more specific about the records you wish to display. This can be accomplished by setting different filters across multiple fields.

NOTE: Only one filter can be specified per field, however multiple criteria can be included in one filter.

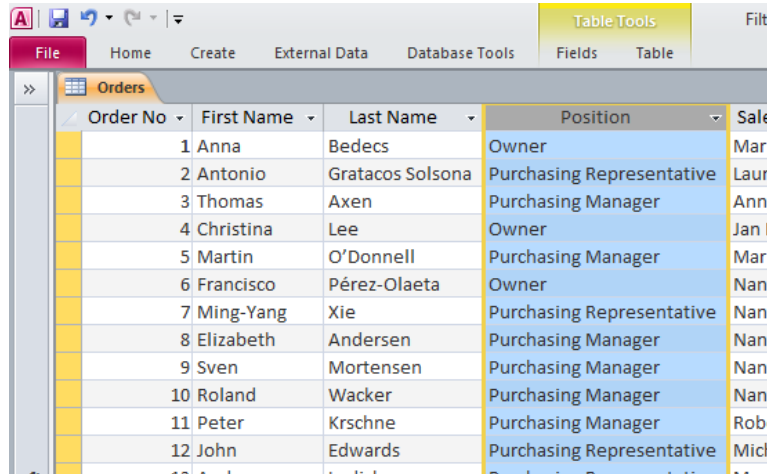
- To set filters on multiple fields, you simply follow the steps used for creating a simple filter and repeat the process across additional fields. The only subtle difference is in the process of clearing multiple field filters, covered later in this section.
- With the **Orders** table open, click on the double left pointing arrow button, top right of the Navigation Pane to minimize the pane.



NOTE: Minimizing the navigation pane provides more viewing space when working with database object.

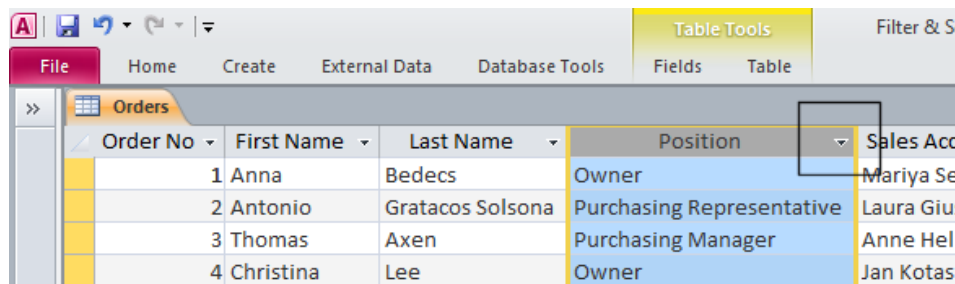
Order No.	First Name	Last Name	Position	Sales Account Manager	Category	Product Name	Unit Qty	Quantity	Order Date	Cl
1	Anna	Bedets	Owner	Maria Sergienko	Beverages	Chai	10 boxes x 20 bags	75	15/01/2006	
2	Antonio	Gratacos Solsona	Purchasing Representative	Laura Gussani	Condiments	Syrup	12- 550 ml bottles	40	20/01/2006	
3	Thomas	Axen	Purchasing Manager	Anne Hellung-Larsen	Condiments	Cajun Seasoning	48- 6 oz jars	100	22/01/2006	
4	Christina	Lee	Owner	Jan Kotas	Oil	Olive Oil	36 boxes	120	30/01/2006	
5	Martin	O'Donnell	Purchasing Manager	Maria Sergienko	Jams, Preserves	Boysenberry Spread	12- 8 oz jars	80	6/02/2006	
6	Francisco	Pérez-Olaeta	Owner	Nancy Freehafer	Dried Fruit & Nuts	Dried Pears	12- 1 lb pkgs.	100	10/02/2006	
7	Ming-Yang	Xie	Purchasing Representative	Nancy Freehafer	Sauces	Curry Sauce	12- 12 oz jars	40	21/02/2006	
8	Elizabeth	Andersen	Purchasing Manager	Nancy Freehafer	Dried Fruit & Nuts	Walnuts	40- 100 g pkgs.	40	6/03/2006	
9	Sven	Mortensen	Purchasing Manager	Nancy Freehafer	Canned Fruit & Vegetables	Fruit Cocktail	15.25 oz	40	10/03/2006	
10	Roland	Wacker	Purchasing Manager	Nancy Freehafer	Baked Goods & Mixes	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	22/03/2006	
11	Peter	Krschne	Purchasing Manager	Robert Zane	Jams, Preserves	Marmalade	10 gift boxes	20	24/03/2006	
12	John	Edwards	Purchasing Representative	Michael Neipper	Baked Goods & Mixes	Scones	24 pkgs. x 4 pieces	40	24/03/2006	
13	Andre	Ludick	Purchasing Representative	Maria Sergienko	Beverages	Beer	24- 12 oz bottles	20	24/03/2006	
14	Carlos	Grilo	Purchasing Manager	Anne Hellung-Larsen	Canned Meat	Crab Meat	24- 4 oz tins	120	24/03/2006	
15	Helena	Kupkova	Purchasing Representative	Anne Hellung-Larsen	Soups	Clam Chowder	12- 12 oz cans	40	24/03/2006	
16	Daniel	Goldschmidt	Owner	Nancy Freehafer	Beverages	Coffee	18- 300 g tins	100	7/04/2006	
17	Jean Philippe	Bagel	Purchasing Representative	Andrew Cecitis	Candy	Chocolate	10 pkgs	40	5/04/2006	
18	Catherine	Aulier Miconi	Accounting Assistant	Anne Hellung-Larsen	Dried Fruit & Nuts	Dried Apples	50- 300 g pkgs.	20	8/04/2006	
19	Alexander	Eggerer	Purchasing Manager	Jan Kotas	Grains	Long Grain Rice	16- 2 kg boxes	60	5/04/2006	
20	George	Li	Accounting Assistant	Maria Sergienko	Pasta	Gnocchi	24- 250 g pkgs.	100	5/04/2006	
21	Bernard	Tham	Purchasing Assistant	Michael Neipper	Pasta	Ravioli	24- 250 g pkgs.	40	5/04/2006	
22	Luckiana	Ramos	Purchasing Manager	Anne Hellung-Larsen	Sauces	Hot Pepper Sauce	32- 8 oz bottles	40	5/04/2006	
23	Michael	Entin	Owner	Jan Kotas	Sauces	Tomato Sauce	24- 8 oz jars	40	3/04/2006	
24	Jonas	Heiselberg	Purchasing Manager	Maria Sergienko	Dairy Products	Mozzarella	24- 200 g pkgs.	80	22/04/2006	
25	John	Rootman	Accounting Assistant	Laura Gussani	Dried Fruit & Nuts	Almonds	5 kg pkg.	40	22/04/2006	
26	Rui	Uji	Purchasing Manager	Anne Hellung-Larsen	Condiments	Mustard	12 boxes	60	22/04/2006	
27	Karen	Toh	Purchasing Manager	Jan Kotas	Dried Fruit & Nuts	Dried Plums	1 lb bag	100	30/04/2006	
28	Amritansh	Raghav	Purchasing Manager	Maria Sergienko	Beverages	Green Tea	20 bags per box	125	7/04/2006	
29	Soo Jung	Lee	Owner	Nancy Freehafer	Cereal	Granola	10 per box	30	12/04/2006	

- Click at the top of the **Position** field name to highlight the column.



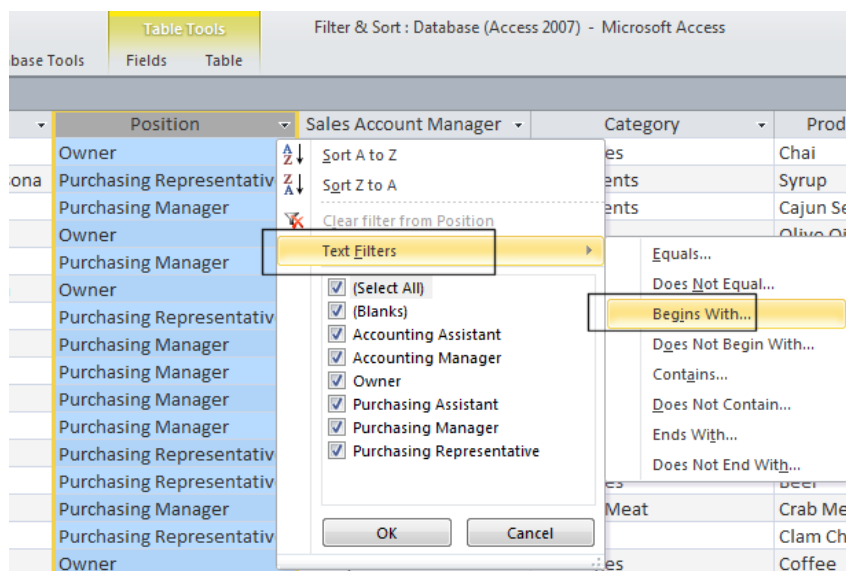
Order No	First Name	Last Name	Position	Sales Account Manager
1	Anna	Bedecs	Owner	Mariya Se
2	Antonio	Gratacos Solsona	Purchasing Representative	Laura Giu
3	Thomas	Axen	Purchasing Manager	Anne Hel
4	Christina	Lee	Owner	Jan Kotas
5	Martin	O'Donnell	Purchasing Manager	
6	Francisco	Pérez-Olaeta	Owner	
7	Ming-Yang	Xie	Purchasing Representative	
8	Elizabeth	Andersen	Purchasing Manager	
9	Sven	Mortensen	Purchasing Manager	
10	Roland	Wacker	Purchasing Manager	
11	Peter	Krschne	Purchasing Manager	
12	John	Edwards	Purchasing Representative	

- Click on the **down arrow** button to the right of the **Position** field name.



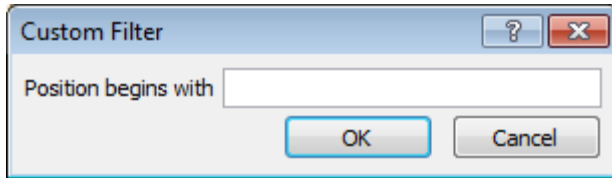
Order No	First Name	Last Name	Position	Sales Account Manager
1	Anna	Bedecs	Owner	Mariya Se
2	Antonio	Gratacos Solsona	Purchasing Representative	Laura Giu
3	Thomas	Axen	Purchasing Manager	Anne Hel
4	Christina	Lee	Owner	Jan Kotas

- In the dialog box click on the **Text Filters** command and from the submenu displayed, click on **Begins With**.

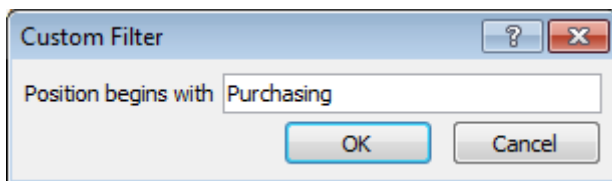


NOTE: Text Filters are custom filters that allow you to specify criteria without having to use operators such as <, >, =, etc

- The **Custom Filter** dialog box is displayed.



- Click into the box and type in **Purchasing**.



- Click on the **OK** button.

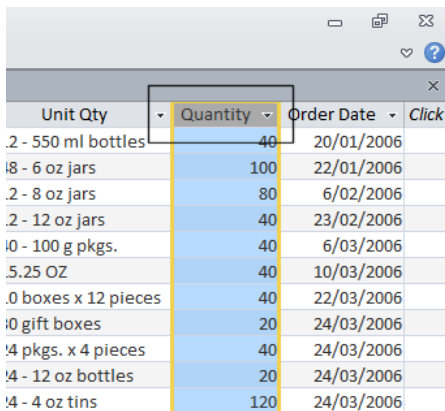
Only records matching the criteria, beginning with the word '**Purchasing**' in the **Position** field remain displayed.

 A screenshot of the Microsoft Access interface showing a table named 'Orders'. The 'Position' column is highlighted in yellow. The table contains 28 records, all of which have 'Purchasing' in their position titles. The 'Navigation Pane' is visible on the left, and the 'Table Tools' ribbon is at the top.

Order No	First Name	Last Name	Position	Sales Account
2	Antonio	Gratacos Solsona	Purchasing Representative	Laura Giussar
3	Thomas	Axen	Purchasing Manager	Anne Hellun
5	Martin	O'Donnell	Purchasing Manager	Mariya Sergie
7	Ming-Yang	Xie	Purchasing Representative	Nancy Freeh
8	Elizabeth	Andersen	Purchasing Manager	Nancy Freeh
9	Sven	Mortensen	Purchasing Manager	Nancy Freeh
10	Roland	Wacker	Purchasing Manager	Nancy Freeh
11	Peter	Krschne	Purchasing Manager	Robert Zare
12	John	Edwards	Purchasing Representative	Michael Neip
13	Andre	Ludick	Purchasing Representative	Mariya Sergie
14	Carlos	Grilo	Purchasing Manager	Anne Hellun
15	Helena	Kupkova	Purchasing Representative	Anne Hellun
17	Jean Philippe	Bagel	Purchasing Representative	Andrew Cenc
19	Alexander	Eggerer	Purchasing Manager	Jan Kotas
21	Bernard	Tham	Purchasing Assistant	Michael Neip
22	Luciana	Ramos	Purchasing Manager	Anne Hellun
24	Jonas	Hasselberg	Purchasing Manager	Mariya Sergie
26	Run	Liu	Purchasing Manager	Anne Hellun
27	Karen	Toh	Purchasing Manager	Jan Kotas
28	Amritansh	Raghav	Purchasing Manager	Mariya Sergie
*	(New)			

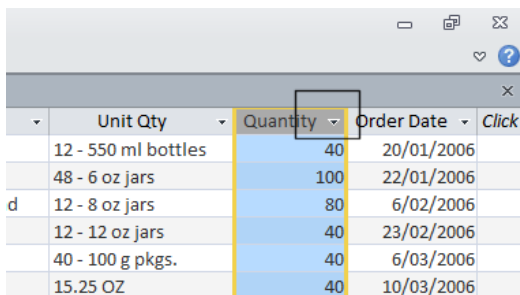
- Click at the top of the **Quantity** field column.

NOTE: If you do not see this field, you may have the scroll to the right.



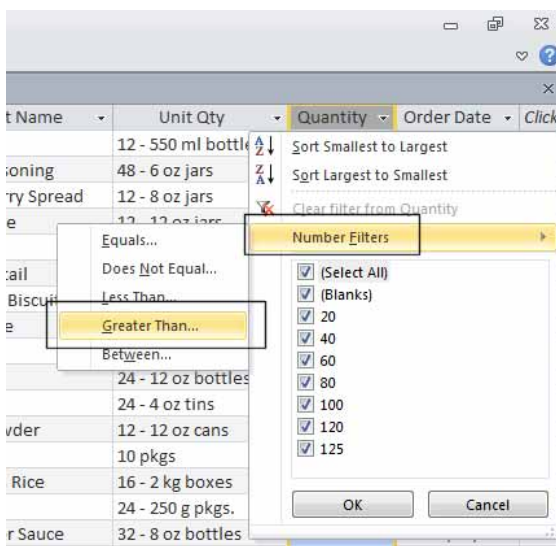
Unit Qty	Quantity	Order Date	Click
2 - 550 ml bottles	40	20/01/2006	
18 - 6 oz jars	100	22/01/2006	
2 - 8 oz jars	80	6/02/2006	
2 - 12 oz jars	40	23/02/2006	
10 - 100 g pkgs.	40	6/03/2006	
5.25 OZ	40	10/03/2006	
10 boxes x 12 pieces	40	22/03/2006	
10 gift boxes	20	24/03/2006	
14 pkgs. x 4 pieces	40	24/03/2006	
14 - 12 oz bottles	20	24/03/2006	
14 - 4 oz tins	120	24/03/2006	

- Click on the **down arrow** button to the right of the **Quantity** field name.

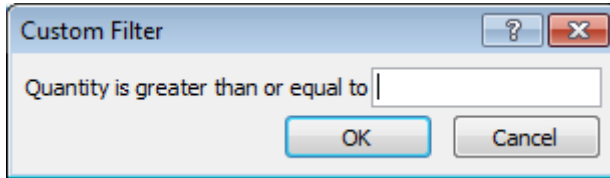


Unit Qty	Quantity	Order Date	Click
12 - 550 ml bottles	40	20/01/2006	
48 - 6 oz jars	100	22/01/2006	
12 - 8 oz jars	80	6/02/2006	
12 - 12 oz jars	40	23/02/2006	
40 - 100 g pkgs.	40	6/03/2006	
15.25 OZ	40	10/03/2006	

- When the **Filter** dialog box is displayed, click on the **Number Filters** command and from the sub menu displayed, click on **Greater Than**.



- The **Custom Filter** dialog box is displayed.

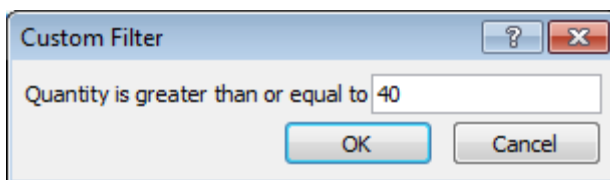


NOTE: Although the title in the **Number** filter list was

'Greater Than'

the dialog box states **'Quantity is greater than or equal to'** therefore when you enter in a value of **40** for example, the filter will display records with values of **40** and above.

- Click into the **box** and type in **40**.

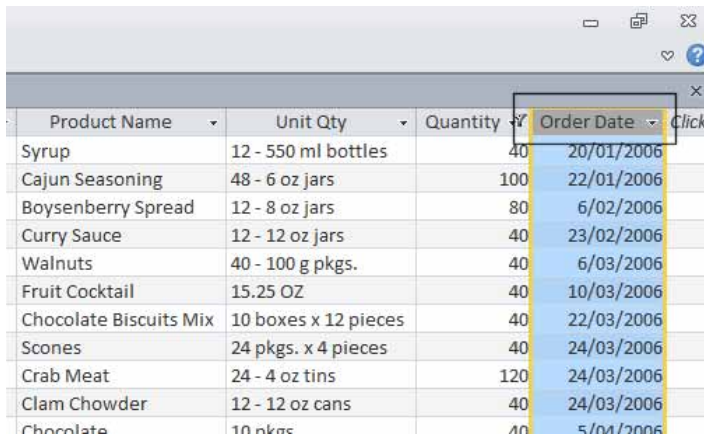


- Click on the **OK** button. Only records matching a **Position** beginning with the word **'Purchase'** and a **'Quantity'** greater than or equal to **40** remain displayed.

Filter & Sort : Database (Access 2007) - Microsoft Access							
Table Tools							
Fields Table							
	Position	Sales Account Manager	Category	Product Name	Unit Qty	Quantity	Order
na	Purchasing Representative	Laura Giussani	Condiments	Syrup	12 - 550 ml bottles	40	20
	Purchasing Manager	Anne Hellung-Larsen	Condiments	Cajun Seasoning	48 - 6 oz jars	100	22
	Purchasing Manager	Mariya Sergienko	Jams, Preserves	Boysenberry Spread	12 - 8 oz jars	80	6
	Purchasing Representative	Nancy Freehafer	Sauces	Curry Sauce	12 - 12 oz jars	40	23
	Purchasing Manager	Nancy Freehafer	Dried Fruit & Nuts	Walnuts	40 - 100 g pkgs.	40	6
	Purchasing Manager	Nancy Freehafer	Canned Fruit & Vegetables	Fruit Cocktail	15.25 OZ	40	10
	Purchasing Manager	Nancy Freehafer	Baked Goods & Mixes	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	22
	Purchasing Representative	Michael Neipper	Baked Goods & Mixes	Scones	24 pkgs. x 4 pieces	40	24
	Purchasing Manager	Anne Hellung-Larsen	Canned Meat	Crab Meat	24 - 4 oz tins	120	24
	Purchasing Representative	Anne Hellung-Larsen	Soups	Clam Chowder	12 - 12 oz cans	40	24
	Purchasing Representative	Andrew Cencini	Candy	Chocolate	10 pkgs	40	5
	Purchasing Manager	Jan Kotas	Grains	Long Grain Rice	16 - 2 kg boxes	60	5
	Purchasing Assistant	Michael Neipper	Pasta	Ravioli	24 - 250 g pkgs.	40	5
	Purchasing Manager	Anne Hellung-Larsen	Sauces	Hot Pepper Sauce	32 - 8 oz bottles	40	5
	Purchasing Manager	Mariya Sergienko	Dairy Products	Mozzarella	24 - 200 g pkgs.	80	22
	Purchasing Manager	Anne Hellung-Larsen	Condiments	Mustard	12 boxes	60	22
	Purchasing Manager	Jan Kotas	Dried Fruit & Nuts	Dried Plums	1 lb bag	100	30
	Purchasing Manager	Mariya Sergienko	Beverages	Green Tea	20 bags per box	125	7

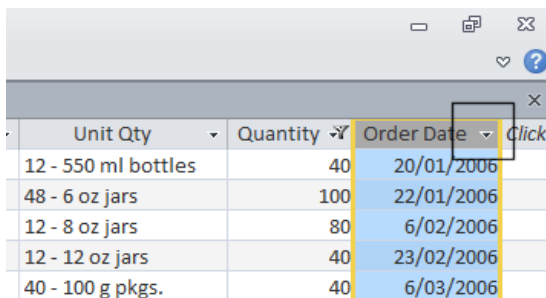
- Position the pointer at the top of the **Order Date** field.

NOTE: You may have to scroll to the right to view this field.



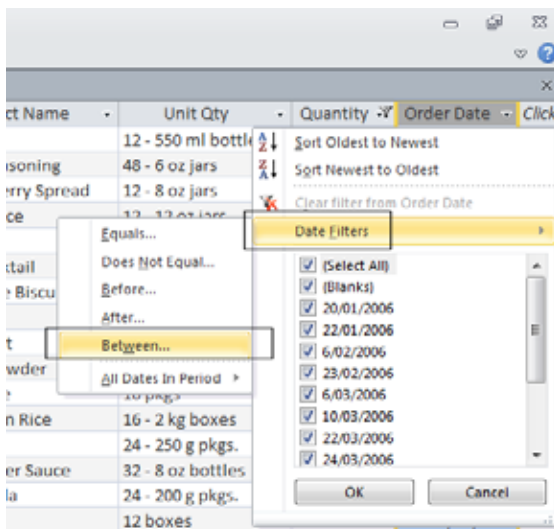
Product Name	Unit Qty	Quantity	Order Date
Syrup	12 - 550 ml bottles	40	20/01/2006
Cajun Seasoning	48 - 6 oz jars	100	22/01/2006
Boysenberry Spread	12 - 8 oz jars	80	6/02/2006
Curry Sauce	12 - 12 oz jars	40	23/02/2006
Walnuts	40 - 100 g pkgs.	40	6/03/2006
Fruit Cocktail	15.25 OZ	40	10/03/2006
Chocolate Biscuits Mix	10 boxes x 12 pieces	40	22/03/2006
Scones	24 pkgs. x 4 pieces	40	24/03/2006
Crab Meat	24 - 4 oz tins	120	24/03/2006
Clam Chowder	12 - 12 oz cans	40	24/03/2006
Chocolate	10 pkgs.	40	5/04/2006

- Click on the **down arrow** button to the right of the **Order Date** field name.

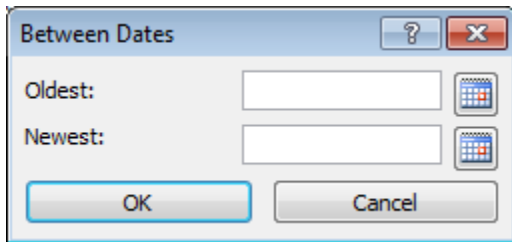


Unit Qty	Quantity	Order Date
12 - 550 ml bottles	40	20/01/2006
48 - 6 oz jars	100	22/01/2006
12 - 8 oz jars	80	6/02/2006
12 - 12 oz jars	40	23/02/2006
40 - 100 g pkgs.	40	6/03/2006

- When the filter dialog box is displayed, select the **Date Filters** command and from the submenu displayed, click on **Between**.

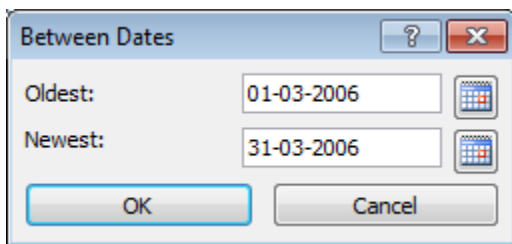


- The **Between Dates** dialog box is displayed.



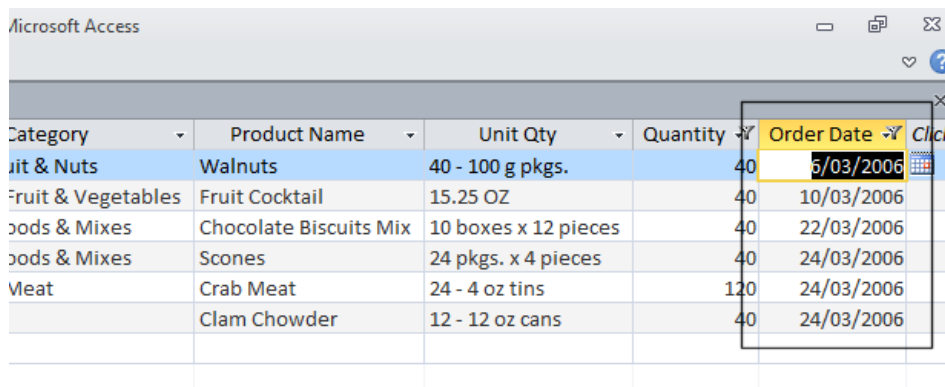
The 'Between Dates' dialog box is shown. It has a title bar with a question mark and a close button. Inside, there are two text boxes: 'Oldest:' and 'Newest:'. Each text box has a calendar icon to its right. At the bottom, there are 'OK' and 'Cancel' buttons.

- Into the **Oldest** section, type in **01-03-2006**.
- Into the **Newest** section type in **31-03-2006**.



The 'Between Dates' dialog box is shown again, but now the 'Oldest:' text box contains '01-03-2006' and the 'Newest:' text box contains '31-03-2006'. The 'OK' and 'Cancel' buttons are still at the bottom.

- Click on the **OK** button. Now the number of records matching the three filters is reduced even further.



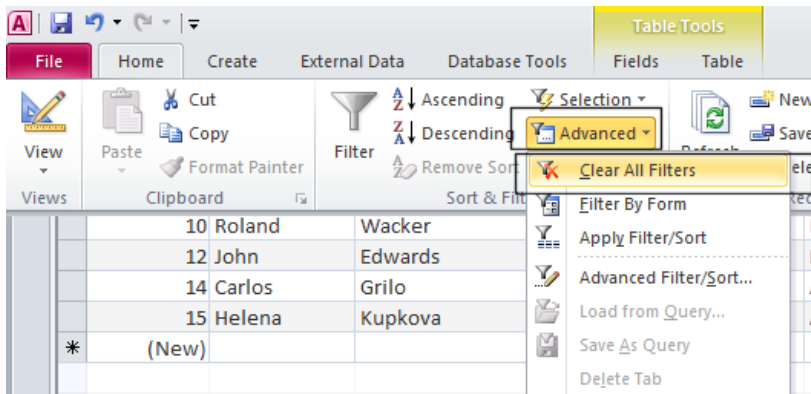
The Microsoft Access window shows a table with the following data:

Category	Product Name	Unit Qty	Quantity	Order Date
Nut & Nuts	Walnuts	40 - 100 g pkgs.	40	05/03/2006
Fruit & Vegetables	Fruit Cocktail	15.25 OZ	40	10/03/2006
Snacks & Mixes	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	22/03/2006
Snacks & Mixes	Scones	24 pkgs. x 4 pieces	40	24/03/2006
Meat	Crab Meat	24 - 4 oz tins	120	24/03/2006
	Clam Chowder	12 - 12 oz cans	40	24/03/2006

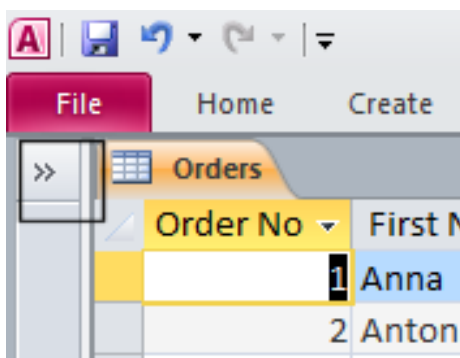
A yellow box highlights the 'Order Date' column header, and a red box highlights the first row of data (Walnuts).

Clearing multiple filters

- Although it is possible to clear each filter, one at a time by following the steps used to clear a single filter; it is also possible to clear all filters at once.
- Click on the **Home** tab and within the **Sort & Filter** group, click on the **Advanced** button. From the list displayed, select **Clear All Filters** option. The filters will be removed and all records will once again be displayed.



- Click on the button, as illustrated below to re-expand the side pane.

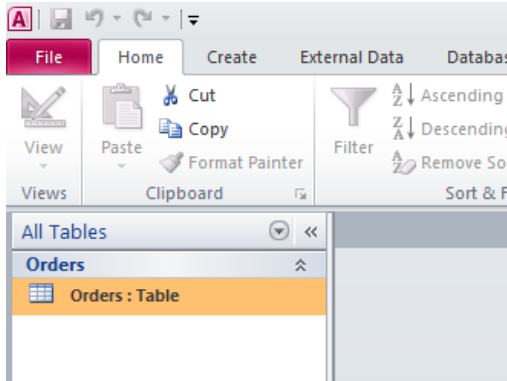


- Close Access and save any changes you have made.

Sorting

Sorting Records A-Z

- Start the Access program.
- Open a database called **Sorting Records**.



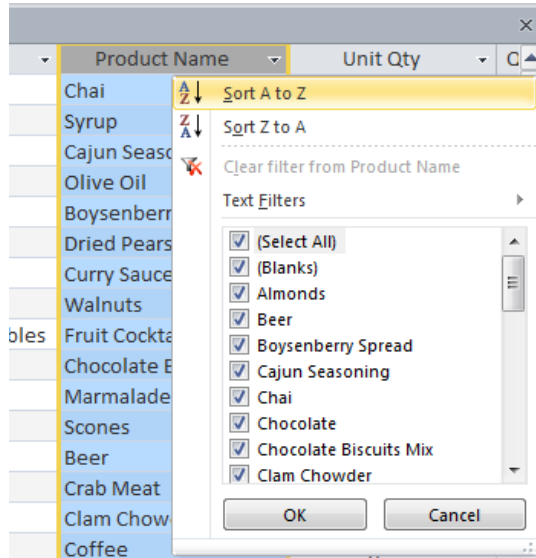
- Sorting arranges the data within a table into alphabetical or numerical order, making it more effective and easier to use. Data is easier to find when we know it is sorted in some order, for example, even a simple computerized address book is sorted alphabetically from A – Z and calendars are sorted by date order.

NOTE: A table, query, form, or report can be sorted on one or more fields, with the exception of attachments or OLE data type fields.

- Double click on the **Orders** table to open the table.
- To sort a single field, such as the **Product Name** field, click on the down arrow on the field name header.

nager ▾	Category ▾	Product Name ▾	Unit Qty
	Beverages	Chai	10 boxes x 20 l
	Condiments	Syrup	12 - 550 ml bot
en	Condiments	Cajun Seasoning	48 - 6 oz jars
	Oil	Olive Oil	25 boxes

- From the drop down list displayed, select **Sort A to Z**.

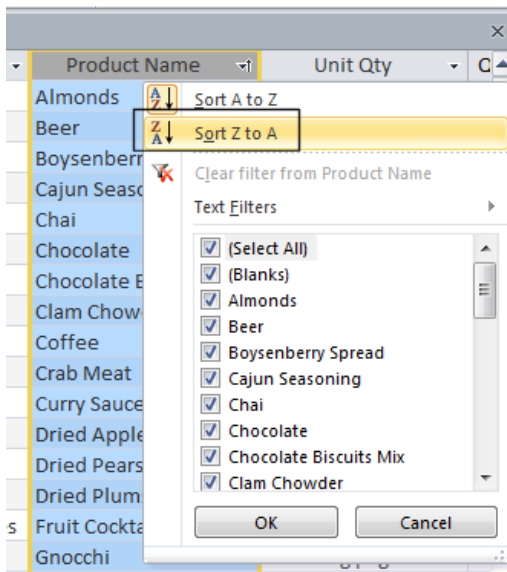


- The data will be sorted by Product Name, as illustrated.

Text Formatting		
Category	Product Name	Unit Qty
Dried Fruit & Nuts	Almonds	5 kg pkg.
Beverages	Beer	24 - 12 oz bottl
Jams, Preserves	Boysenberry Spread	12 - 8 oz jars
Condiments	Cajun Seasoning	48 - 6 oz jars
Beverages	Chai	10 boxes x 20 b
Candy	Chocolate	10 pkgs
Baked Goods & Mixes	Chocolate Biscuits Mix	10 boxes x 12 p
Soups	Clam Chowder	12 - 12 oz cans
Beverages	Coffee	16 - 500 g tins
Canned Meat	Crab Meat	24 - 4 oz tins
Sauces	Curry Sauce	12 - 12 oz jars
Dried Fruit & Nuts	Dried Apples	50 - 300 g pkgs.
Dried Fruit & Nuts	Dried Pears	12 - 1 lb pkgs.
Dried Fruit & Nuts	Dried Plums	1 lb bag

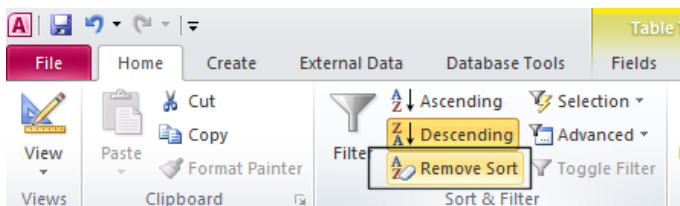
Sorting records Z-A

- To sort in reverse order, repeat the process and select **Sort Z to A**.



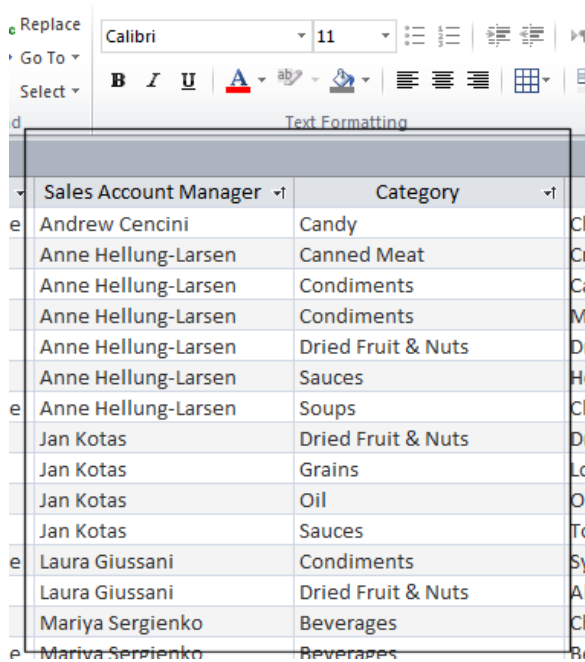
Removing a sort

- To remove a sort, click on the **Remove Sort** button in the **Sort & Filter** group. The table returns to the default sort order.



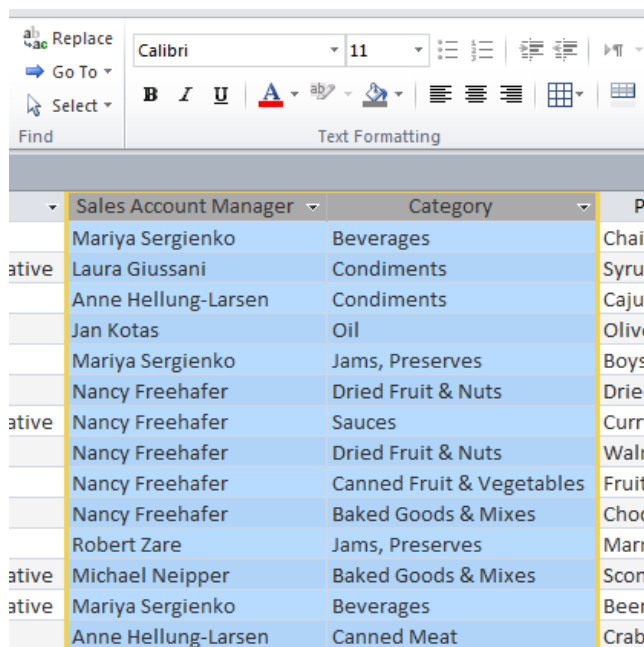
Sorting on multiple fields

- In the table below, the **Sales Account Manager** and the **Category** fields are side by side, with the **Sales Account Manager** field to the left of the **Category** field. This positioning is relevant when using a sort on multiple fields in a table, as the left most field in the select group of fields, takes priority over the fields to the right.
- A sort is needed to organize the **Sales Account Managers** into alphabetical order first, then sort the **Category** field so that categories within that field are alphabetical according to each **Sales Account Manager**, as seen in the image below.



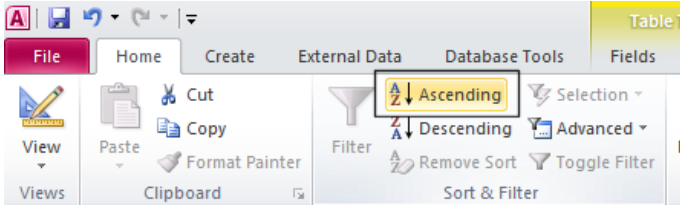
Sales Account Manager	Category
Andrew Cencini	Candy
Anne Hellung-Larsen	Canned Meat
Anne Hellung-Larsen	Condiments
Anne Hellung-Larsen	Condiments
Anne Hellung-Larsen	Dried Fruit & Nuts
Anne Hellung-Larsen	Sauces
Anne Hellung-Larsen	Soups
Jan Kotas	Dried Fruit & Nuts
Jan Kotas	Grains
Jan Kotas	Oil
Jan Kotas	Sauces
Laura Giussani	Condiments
Laura Giussani	Dried Fruit & Nuts
Mariya Sergienko	Beverages
Mariya Sergienko	Beverages

- Place the pointer over the **Sales Account Manager** field name (at the top of the column) **without clicking**. When the pointer changes to the **down arrow** shape, click and drag (right) across to the **Category** field in one movement, to highlight both fields. Release the mouse button to complete this task. The two columns will be highlighted, as illustrated.



Sales Account Manager	Category	Product
Mariya Sergienko	Beverages	Chai
Laura Giussani	Condiments	Syrup
Anne Hellung-Larsen	Condiments	Cajun
Jan Kotas	Oil	Olive
Mariya Sergienko	Jams, Preserves	Boys
Nancy Freehafer	Dried Fruit & Nuts	Dried
Nancy Freehafer	Sauces	Curry
Nancy Freehafer	Dried Fruit & Nuts	Walrus
Nancy Freehafer	Canned Fruit & Vegetables	Fruit
Nancy Freehafer	Baked Goods & Mixes	Choc
Robert Zare	Jams, Preserves	Marm
Michael Neipper	Baked Goods & Mixes	Scon
Mariya Sergienko	Beverages	Beer
Anne Hellung-Larsen	Canned Meat	Crab

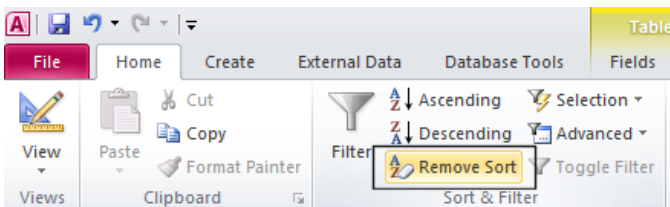
- Within the **Home** tab, in the **Sort & Filter** group, click on the **Ascending** button.



- Click anywhere in the table to clear the highlighting from the two fields. The fields are sorted in the order you expected.

	Sales Account Manager	Category
	Andrew Cencini	Candy
	Anne Hellung-Larsen	Canned Meat
	Anne Hellung-Larsen	Condiments
	Anne Hellung-Larsen	Condiments
	Anne Hellung-Larsen	Dried Fruit & Nuts
	Anne Hellung-Larsen	Sauces
	Anne Hellung-Larsen	Soups
	Jan Kotas	Dried Fruit & Nuts
	Jan Kotas	Grains
	Jan Kotas	Oil
	Jan Kotas	Sauces
	Laura Giussani	Condiments
	Laura Giussani	Dried Fruit & Nuts
	Mariya Sergienko	Beverages
	Mariya Sergienko	Beverages

- To demonstrate how the position of fields can impact the results of a sort, first remove the sort. To remove a sort, click on the **Remove Sort** button in the **Sort & Filter** group.



- Move the pointer to the **Category** field name (at the top of the column) and when the pointer changes to the **down arrow** shape click to highlight the column. Release the mouse button to complete this task.

er	Category	Prodi
	Beverages	Chai
	Condiments	Syrup
	Condiments	Cajun Se
	Oil	Olive Oil
	Jams, Preserves	Boysenb
	Dried Fruit & Nuts	Dried Pe
	Sauces	Curry Sai
	Dried Fruit & Nuts	Walnuts
	Canned Fruit & Vegetables	Fruit Coc
	Baked Goods & Mixes	Chocolat
	Jams, Preserves	Marmala

- With the **Category** field highlighted, click on the **Category** field name again and drag the field to the left of the **Sales Account Manager** field.

TIP: Remember the **thick black line** indicates the current position of the field as you drag it across the table.

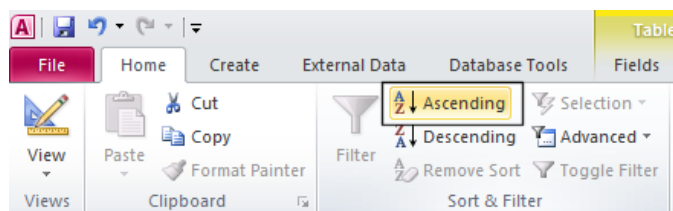
- When the **Category** field is in position, release the mouse button to complete the move.

Position	Category	Sales Account Manager	
Owner	Beverages	Mariya Sergienko	Ch
Purchasing Representative	Condiments	Laura Giussani	Syi
Purchasing Manager	Condiments	Anne Hellung-Larsen	Ca
Owner	Oil	Jan Kotas	Oli
Purchasing Manager	Jams, Preserves	Mariya Sergienko	Bo
Owner	Dried Fruit & Nuts	Nancy Freehafer	Dri
Purchasing Representative	Sauces	Nancy Freehafer	Cu
Purchasing Manager	Dried Fruit & Nuts	Nancy Freehafer	Wi
Purchasing Manager	Canned Fruit & Vegetables	Nancy Freehafer	Fru
Purchasing Manager	Baked Goods & Mixes	Nancy Freehafer	Ch
Purchasing Manager	Jams, Preserves	Robert Zare	Me
Purchasing Representative	Baked Goods & Mixes	Michael Meiner	Se

- Place the pointer over the **Category** field name **without clicking**. When the pointer changes to the **down arrow** shape click and drag right across to the **Sales Account Manager** field in one movement, to highlight both fields. Release the mouse button to complete this task.

	Category	Sales Account Manager	Product
	Beverages	Mariya Sergienko	Chai
ve	Condiments	Laura Giussani	Syrup
	Condiments	Anne Hellung-Larsen	Cajun S
	Oil	Jan Kotas	Olive O
	Jams, Preserves	Mariya Sergienko	Boysen
	Dried Fruit & Nuts	Nancy Freehafer	Dried P
ve	Sauces	Nancy Freehafer	Curry S
	Dried Fruit & Nuts	Nancy Freehafer	Walnut
	Canned Fruit & Vegetables	Nancy Freehafer	Fruit Cc
	Baked Goods & Mixes	Nancy Freehafer	Chocola

- In the **Sort & Filter** group click on the **Ascending** button.



- Click anywhere in the table to clear the highlight from the two fields.

	Category	Sales Account Manager	Product
?	Baked Goods & Mixes	Michael Neipper	Sco
	Baked Goods & Mixes	Nancy Freehafer	Cho
	Beverages	Mariya Sergienko	Gre
?	Beverages	Mariya Sergienko	Bee
	Beverages	Mariya Sergienko	Cha
	Beverages	Nancy Freehafer	Cof
?	Candy	Andrew Cencini	Cho
	Canned Fruit & Vegetables	Nancy Freehafer	Fru
	Canned Meat	Anne Hellung-Larsen	Cra
	Cereal	Nancy Freehafer	Gra
	Condiments	Anne Hellung-Larsen	Mu
	Condiments	Anne Hellung-Larsen	Caj
?	Condiments	Laura Giussani	Syr

- This time the **Category** field is sorted alphabetically first and the **Sales Account Managers** second.

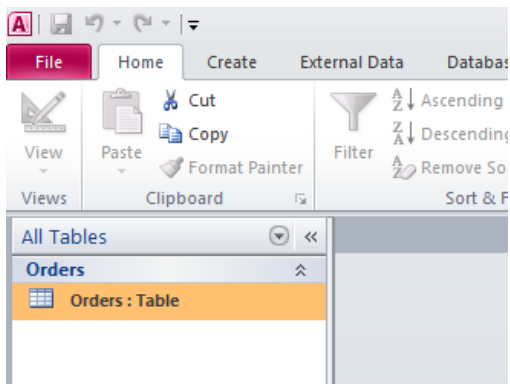
NOTE: When sorting text fields that contain null or zero-length strings, the null values are listed first (ascending order A-Z) and last (descending order Z-A).

- Save your changes and close the Access Program.

Searching

Searching through records

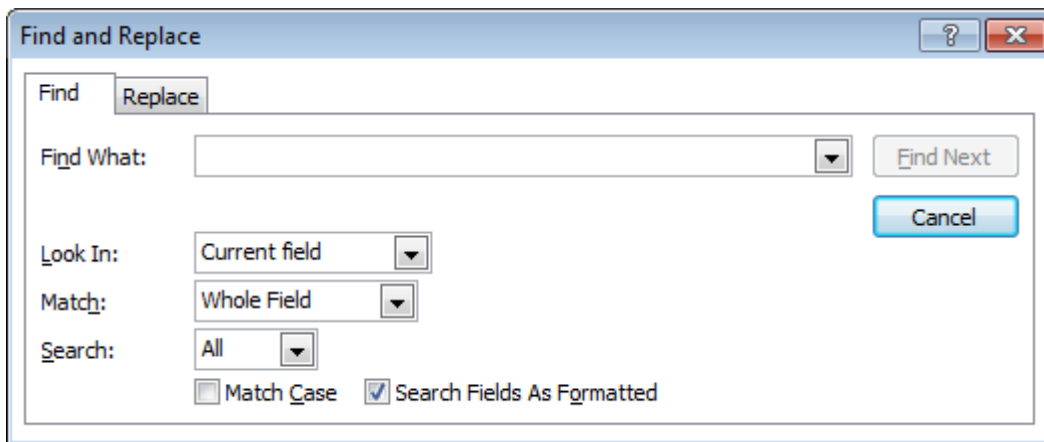
- Start the Access program.
- Open a database called **Searching Records**.



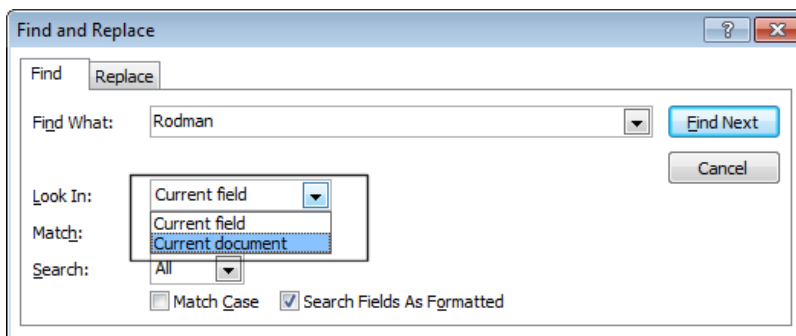
- Open the **Orders** table, so that your data looks like this.

Order No	First Name	Last Name	Position	Sales Account Manager	Category	Product
1	Anna	Bedecs	Owner	Mariya Sergienko	Beverages	Chai
2	Antonio	Gratacos Solsona	Purchasing Representative	Laura Giussani	Condiments	Syrup
3	Thomas	Axen	Purchasing Manager	Anne Hellung-Larsen	Condiments	Cajun
4	Christina	Lee	Owner	Jan Kotas	Oil	Olive
5	Martin	O'Donnell	Purchasing Manager	Mariya Sergienko	Jams, Preserves	Boyse
6	Francisco	Pérez-Olaeta	Owner	Nancy Freehafer	Dried Fruit & Nuts	Dried
7	Ming-Yang	Xie	Purchasing Representative	Nancy Freehafer	Sauces	Curry
8	Elizabeth	Andersen	Purchasing Manager	Nancy Freehafer	Dried Fruit & Nuts	Walnu
9	Sven	Mortensen	Purchasing Manager	Nancy Freehafer	Canned Fruit & Vegetables	Fruit C
10	Roland	Wacker	Purchasing Manager	Nancy Freehafer	Baked Goods & Mixes	Choco
11	Peter	Krschne	Purchasing Manager	Robert Zare	Jams, Preserves	Marmi
12	Jake	Edwards	Purchasing Representative	Michael Malone	Baked Goods & Mixes	Cocoa

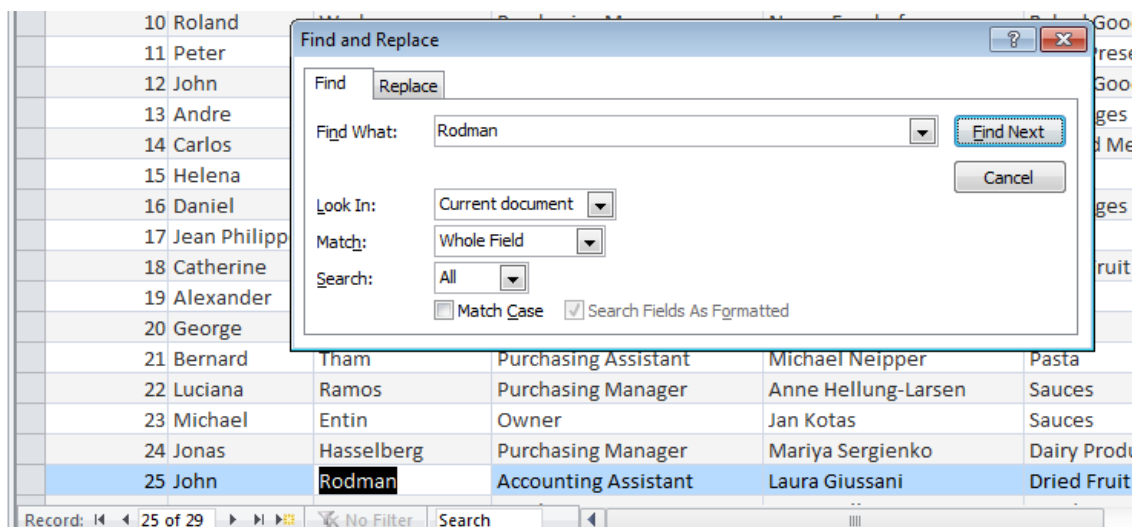
- Press **Ctrl+F** to display the **Find and Replace** dialog box.



- You can use this dialog box to find a specific word. To do this, enter a word into the **Find What** section of the dialog box. In this example, enter **Rodman**
- You can also set where you wish to search. Click on the **down arrow** next to the **Look In** section of the dialog box, and from the drop down list displayed, select **Current Document**.



- Click on the **Find Next** button. You will see the first instance of the word highlighted, as illustrated below.



NOTE: Re-clicking on the **Find Next** button will find more instances of the word within the table. In this case the word only occurs once.

- You can also search for a number. Try searching the number **40**. You should find multiple instances of this number within the table. Make sure that the **Look In** section of the dialog box is set to look at the **Current Document** (i.e. **Orders**), not just the active column.
- You can also search for a phrase rather than a single word. Try searching for **Autier Miconi**. Make sure that the **Look In** section of the dialog box is set to look at the **Current Document** (i.e. **Orders**), not just the active column.
- You can also search for a date within a table. Try searching for **7/04/2006**.
- Save your changes and close the Access program.

Relationships

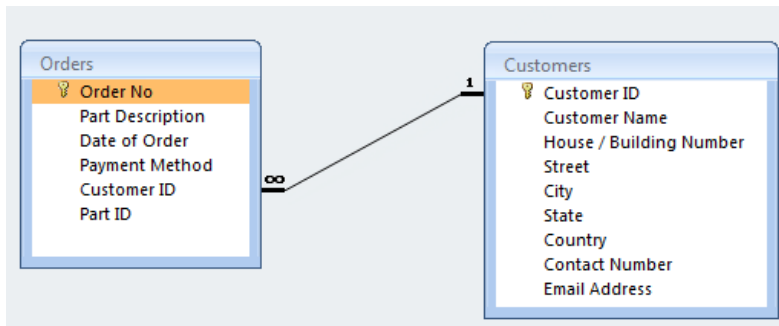
Table relationships

- Good database design suggests data is organized across multiple tables, as to store data in one single table would;
 - 1) Result in vast amounts of duplicated data and
 - 2) Quickly become unmanageable.
- Relationships are used to create a link between two or more tables within a database. When a link is established and with the use of other objects within the database, data can be entered into or viewed from one or more tables at the same time, without the need to close one table and open another.
- The most common relationships between tables are:
 - One-Many**
 - Many-Many**
 - One-One**
- A relationship is built by matching a unique field within one table with a field within another table.

One-to-many relationship

- Consider a **Parts** sales database that includes a **Customers** table and an **Orders** table. A customer can place any number of orders. It follows that for any customer represented in the **Customers** table, there can be many orders represented in the **Orders** table. The relationship between the **Customers** table and the **Orders** table is therefore a one-to-many relationship.
- To establish a one-to-many relationship between tables, it is necessary to take the Primary Key (normally the **ID** field) of the 'one' side of the relationship, (in this case the **Customer** table) and add it as an additional field within the 'many' side (**Orders**) table.

TIP: This requires you to add a new (**Customers ID**) field to the **Orders** table and set the data type. As the **AutoNumber** field can only be used once in a table, the **Number** data type is used. Notice the **Customer ID** field is included in the **Orders** table, shown in the following image.



NOTE: When using the name of a primary key field to create a field in another table and thereby a link, the new field is often referred to as a **Foreign** key.

Many-to-many relationship

- Consider the relationship between a **Parts (Product)** table and an **Orders** table. A single order might include more than one product. On the other hand, a single product can appear on many orders. For each record in the **Orders** table therefore, there can be many records in the **Products** table.
- In addition, for each record in the **Parts** table, there can be many records in the **Orders** table. This type of relationship is called a many-to-many relationship because, for any product, there can be many orders and, for any order, there can be many products.
- A many-to-many relationship, is actually achieved by creating two one-to-many relationships, using a third table, often referred to as a Junction. The Primary key from both the **Parts** and **Orders** tables are added to the third table (junction) thereby effectively creating two one-to-many relationships.

NOTE: In many circles, a many-to-many relationship between your tables is not considered ideal and consideration should be given to the design, possibly breaking data across additional tables to avoid the necessity for many-to-many relationships.

One-to-one relationships

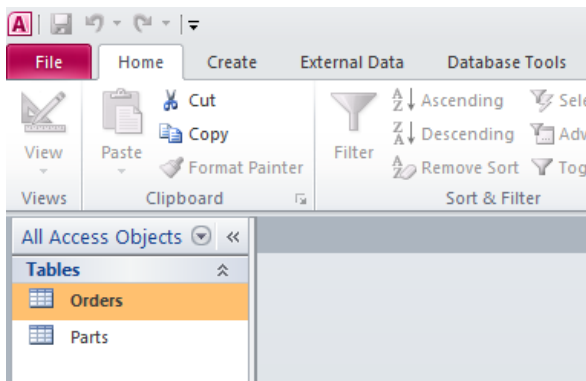
- In a one-to-one relationship, each record in the first table can have only one matching record in the second table, and each record in the second table can have only one matching record in the first table. This type of relationship is not common because, most often, the information related in this way is stored in the same table.
- One example of a one-to-one relationship might be to transfer sensitive data to another table and isolate it for security reasons.

NOTE: Both tables must share a common field but not necessarily a Primary key

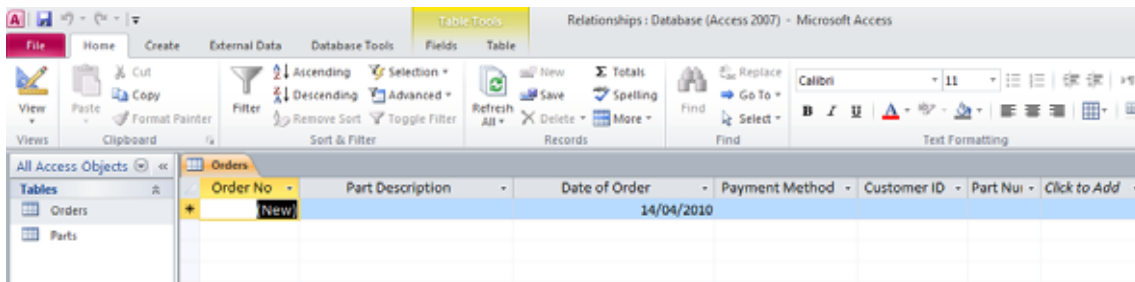
field.

Creating relationships between tables

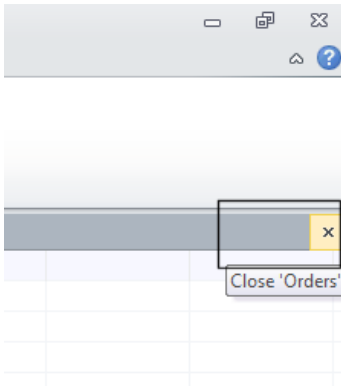
- Before a relationship can be created, a database must contain two or more tables upon which a relationship can be formed.
- Start Access and open a database called **Relationships** from your **Access 2010 Basics** folder. You will notice the **Orders** and **Parts** tables in the navigation pane.

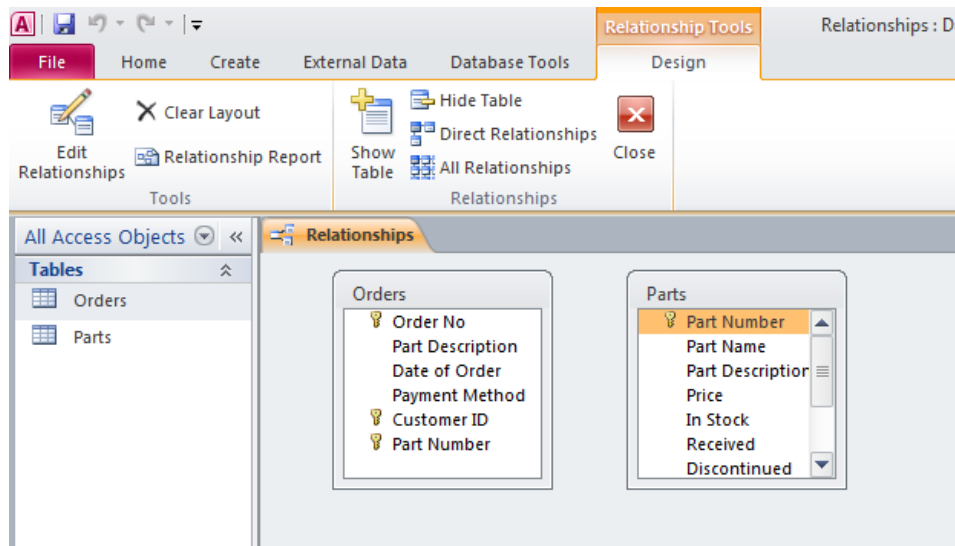


- Double click on the **Orders** table to open it. Take a moment to look at the fields in the table. As you might expect, you will find the **Orders No** field (primary key) and several others, including a **Part Number** field from the **Parts** table (foreign primary key).

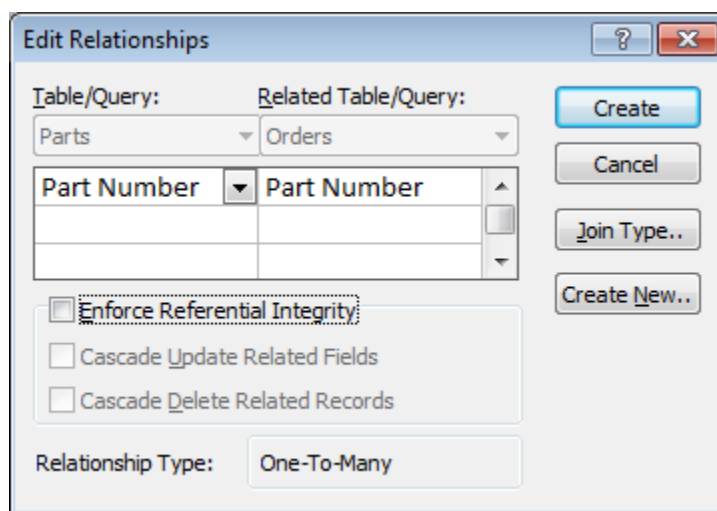


- To create a relationship between tables, the tables must be closed. Click on the **Close** button to close the **Orders** table (and if open, the **Parts** table too).

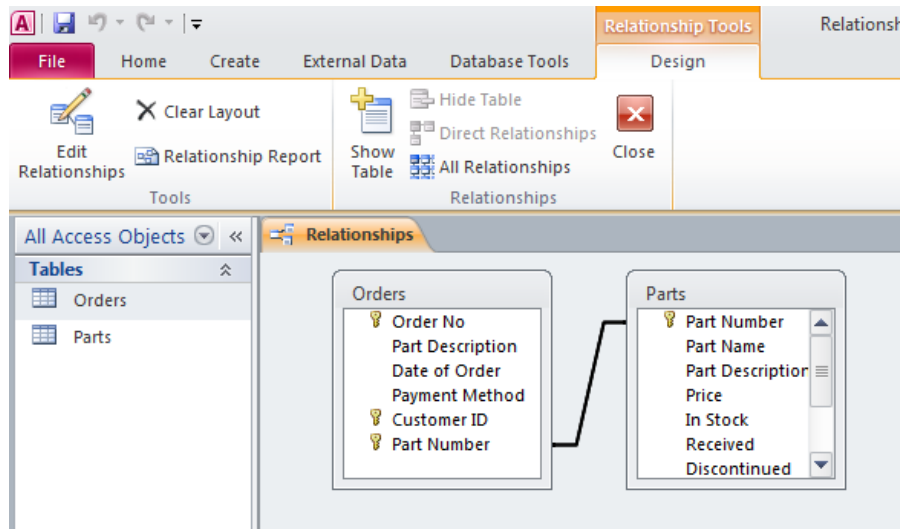




- Using the mouse pointer, select the **Part Number** field from the **Parts** table.
- Drag across to the corresponding **Part Number** field in the **Orders** table. The **Edit Relationships** options box is displayed.



- Click on the **Create** button to establish the relationship and close the **Edit Relationships** options box. There is now a link shown graphically as a line between the two tables.

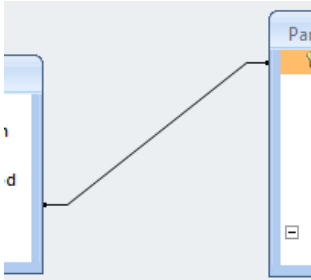


About Referential integrity

- Good database design suggests dividing information into many subject-based tables to minimize data redundancy. Relationships are then used to bring the data back together by placing common fields into related tables.
- To bring data back together, Access uses the value in the "many" table to look up the corresponding value in the "one" table.
- Suppose you have a one-to-many relationship between **Parts** and **Orders** and you want to delete a Part (Item). If the Part you want to delete has orders in the **Orders** table, those orders will become "orphans" when you delete the **Parts** record.
- The orders will still contain a **Part ID**, but the record (Parent) that it references no longer exists. Referential integrity is designed to prevent this situation occurring and keep references in sync so that this kind of situation never occurs.
- Referential integrity by default is not enabled and therefore has to be enabled either during the creation of relationships or when editing relationships. When enabled, Access will reject any operation that violates referential integrity for that particular relationship.
- Access rejects updates that change the target of a reference or deletions that remove the target of a reference. In other words, if you attempt to delete an individual part from the **Parts** table that has been referenced in the Orders table (included in an order), Access will prevent this from happening.

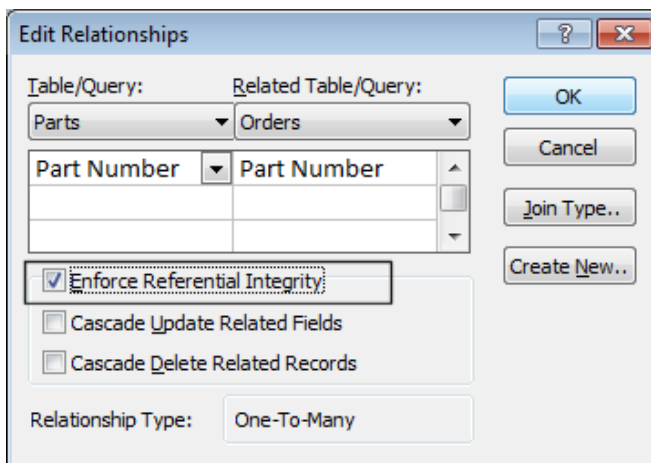
Enabling Referential Integrity

- Double click on the line between the two tables to open the **Edit Relationships** options box again.



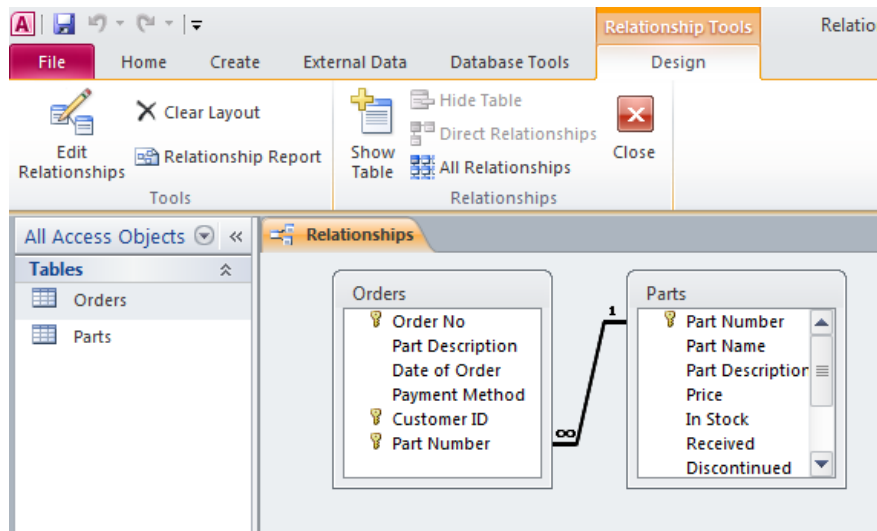
NOTE: If you miss the line when clicking, you will open a **blank Edit Relationships** options box. Close the box and try again.

- Click and check the **Enforce Referential Integrity** check box. Also notice how the cascade options are now available for selection.



Warning: The appropriate cascade option should **only** be checked during maintenance periods when legitimate changes need to be made to the database.

- The **Relationship Type:** section shows this will be a **One-To-Many** relationship.
- Click on the **OK** button to establish the relationship.



- In a One-To-Many relationship, with **Enforce Referential Integrity** enabled, the line changes to display the digit **1** at one end and the infinite symbol at the other.



This graphically displays which table is the **One** and which is the **Many** in a One-To-Many relationship.

Cascade options

- There may be occasions when legitimate changes are necessary and for that reason, there are two options available in Access which when enabled, allow updates to fields and deletion of records (row) whilst maintaining data integrity.

Cascade update related fields

- When updating fields in related tables, with this option enabled, Access automatically updates all affected records as part of a single operation and ensures that the updates are completed, without inconsistencies.

Cascade delete related records

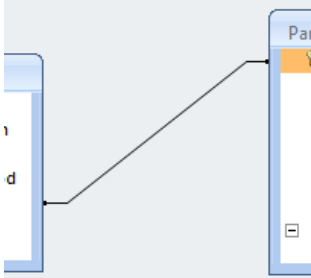
- Equally, you may also have a valid reason for deleting a record in one table and related records in the related table, for example, a record from the **Parts** table and all related orders for that **Part** in the **Orders** table. Again, when enabled, Access will automatically delete all related references, maintaining data integrity.

NOTE: Both cascade options are designed for maintenance purposes and should

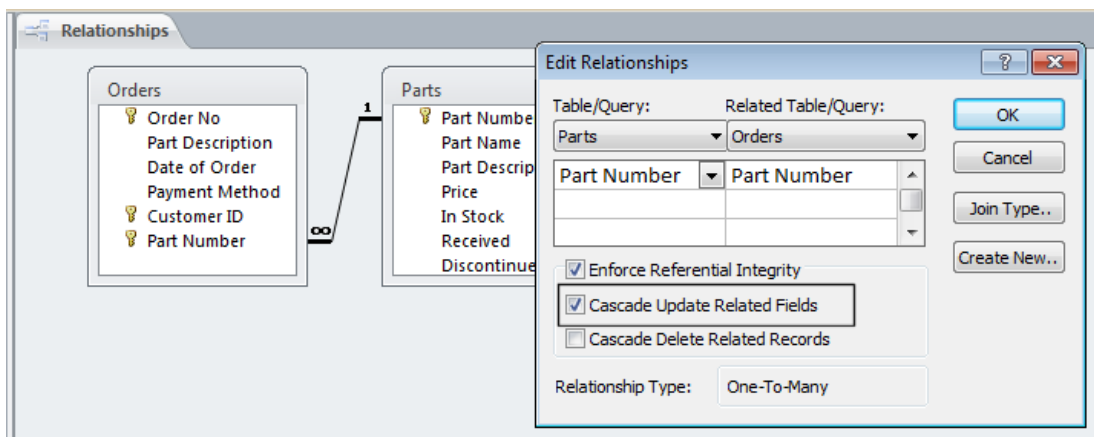
therefore only be enabled during system maintenance.

Enabling cascade options

- To enable Referential Integrity, double click on the line between the two tables to open the **Edit Relationships** options box again.



- Click and check the required **Cascade** option tick box.



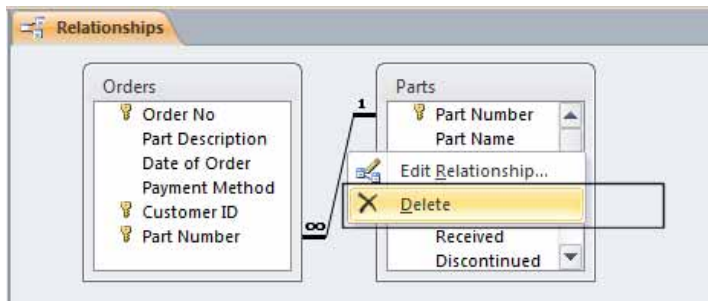
- Click on the **OK** button to update the changes.

Deleting relationships

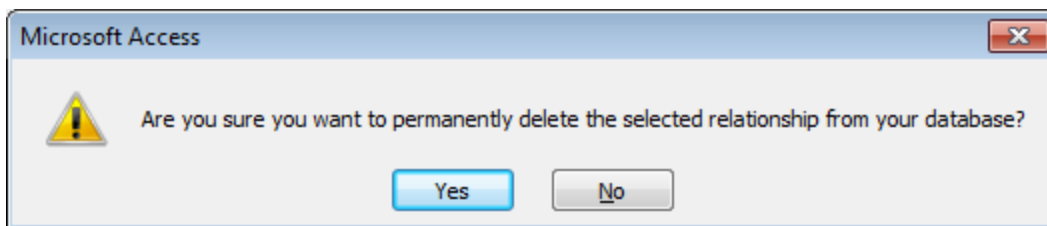
- Once relationships have been established, Access behaves very differently and you may find yourself unable to edit tables as you have done in the past, even when referential integrity is disabled. This is because having established a relationship, attempting to delete fields in a related table or editing / changing certain field properties, etc., can have a knock on effect to other related tables, therefore Access prevents the action.

NOTE: It is advisable to design your database well. Make sure your table design and layout works, create and test your tables before you consider establishing relationships.

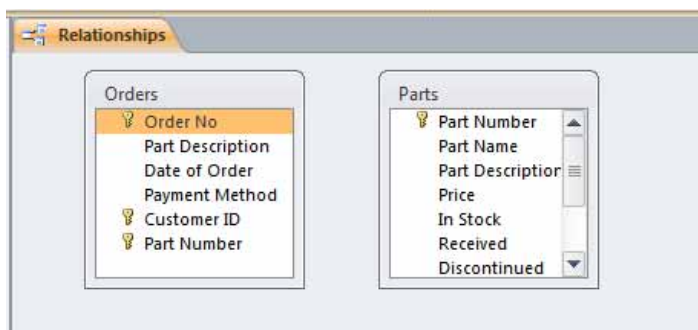
- Changes to the design, improvements and modification over time may also require removal or changes to relationships between tables.
- To delete a relationship, first click once on the line between the two tables. The line appears thicker. Right click to activate the shortcut menu and select **Delete**.



- You will be prompted to confirm the deletion.



- Click on the **Yes** button to confirm. The relationship line between the two tables is removed and the tables are no longer related.



- Close Access and save any changes that you have made.

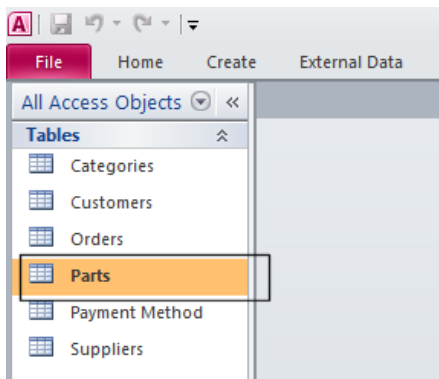
Forms

Forms overview

- Up to this point, you have entered data directly into a table. Rather than having information overload from viewing a screen full of records in a table, forms provide an aesthetically pleasing window to enter and display record information.
- Forms can be used to display and maintain records within your database.
- Forms can be designed to display fields from multiple tables and can also be used to restrict what information users have access to. In addition, buttons can also be added to provide automated functionality.
- Microsoft Access 2010 gives you tools to help you create forms quickly, and provides new form types and features that improve the usability of your database.

Creating forms

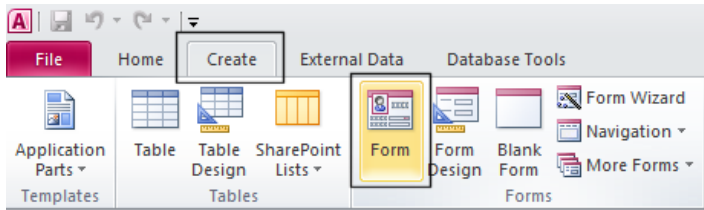
- Start the Access program.
- Open a database called **Forms**.
- In the **Navigation Pane**, click to select the **Parts** table.



NOTE: It is **VERY** important that you have selected the **Parts** table, **NOT** one of the other tables, as we are going to produce a form based on the **Parts** table.

NOTE: There is no need to open a table or query, however if it is open, make certain it is the active object in the object window, otherwise Access may base the form on another open object.

- Click on the **Create** tab and from within the **Forms** group, click on the **Form** button.



You will see the following, which displays all the fields within the **Parts** table.

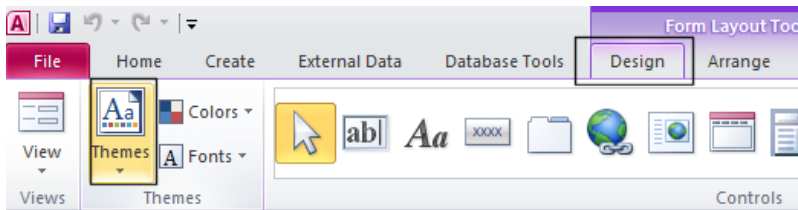
Order No	Part Description	Date of Order	Payment Method	Customer ID
(New)		13/04/2010		

Modifying forms

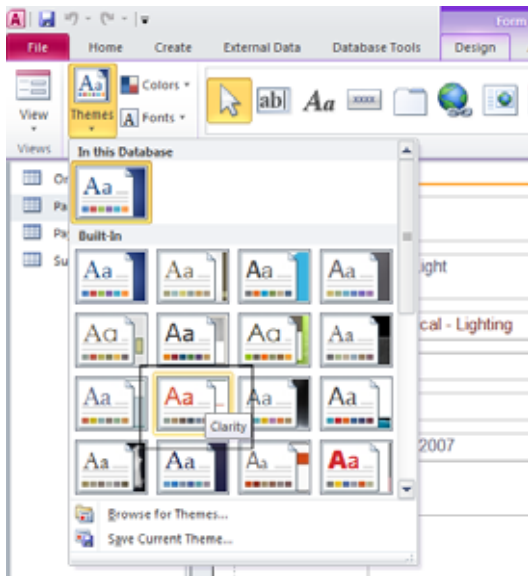
- Make sure the newly created form is still in Layout View. If necessary, click on the **Layout View** button at the bottom-right of the screen.



- Click on the **Design** tab and within the **Themes** group, click on the **Themes** button.



- You will see a drop down list of available styles. Select the **Clarity** style.



- The form changes to match the setting of the style chosen.

A screenshot of a Microsoft Access form titled 'Parts'. The form is displayed in 'Form View' and contains the following fields and values:

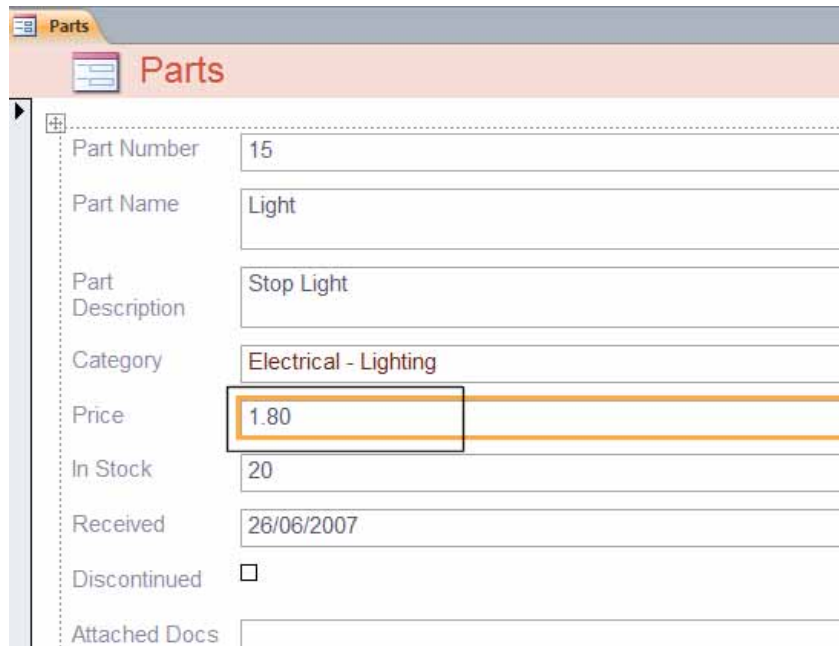
Field Name	Value
Part Number	15
Part Name	Light
Part Description	Stop Light
Category	Electrical - Lighting
Price	1.80
In Stock	20
Received	26/06/2007
Discontinued	<input type="checkbox"/>
Attached Docs	
Supp ID	2

At the bottom of the form, there is a table with the following data:

Order No	Part Description	Date of Order	Payment Method	Customer ID
(New)		13/04/2010		

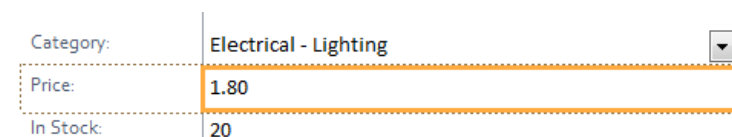
NOTE: You can select different styles until you find one suitable. The final color is not set until the form is saved and can be modified again at a later time.

- Although the boxes are no longer visible around each data field in the form, they do still exist.
- Click on the **Price** field, i.e. select the number **1.80**, **not** the text label. Your screen will look like this.

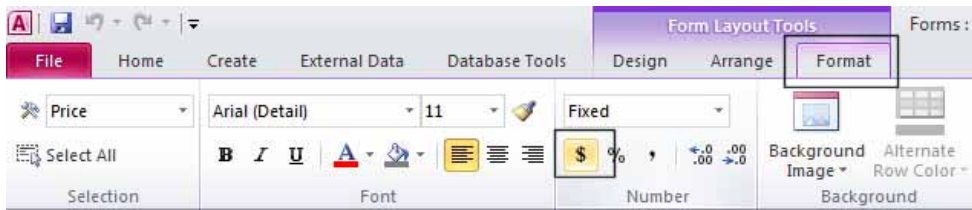


NOTE: Text labels (such as the word **Price**) are used to indicate the purpose of the data fields in a Form. Labels are simply text in text boxes and can be modified, for example the **Attached Docs** label could be edited to show **Attachments** instead.

- The **Price** field in the **Parts** table is formatted as **Fixed**, not **Number** and therefore there is no currency symbol.



- Click on the **Format** tab, and within the **Number** group, click on the **Apply Currency Format** button.



- All entries in the **Price** field within the form will now show a currency symbol preceding the value. The underlying table however remains unchanged.

NOTE: The actual currency symbol depends upon the **Region and Language** settings in the Windows **Control Panel**.

- Click on the **Supp ID** field, (i.e. click on the box containing the number **2**) as illustrated below.

Parts

Part Number: 15

Part Name: Light

Part Description: Stop Light

Category: Electrical - Lighting

Price: \$1.80

In Stock: 20

Received: 26/06/2007

Discontinued: ☐

Attached Docs:

Supp ID: 2

Order No	Part Description	Date of Order	Payment Method
* (New)		13/04/2010	

- The **Supp ID** field is a foreign key field from another table and used to establish a relationship between the **Supplier** and the **Parts** tables. There is no reason for users to see this field in the table therefore it can be removed from the form.
- With the field box highlighted press the **Del** key to remove the field. Your screen will now look like this.

Parts

Part Number: 15

Part Name: Light

Part Description: Stop Light

Category: Electrical - Lighting

Price: \$1.80

In Stock: 20

Received: 26/06/2007

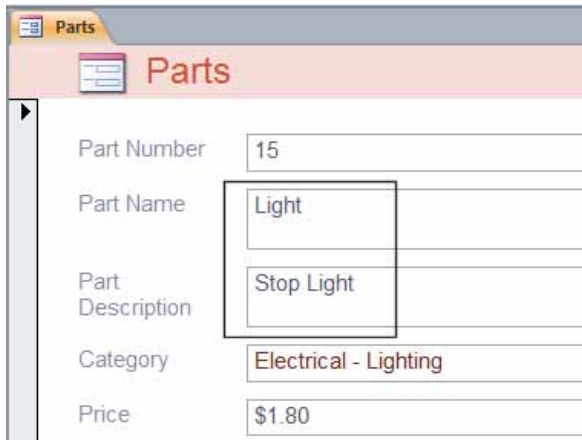
Discontinued: ☐

Attached Docs:

Order No	Part Description	Date of Order	Payment Method	Customer ID
* (New)		13/04/2010		

NOTE: Deleting fields in a form has no impact on the table, which remains unchanged.

- The **Part Name** and **Description** fields each occupy double line spacing and these need to be adjusted. The double spacing is illustrated below.

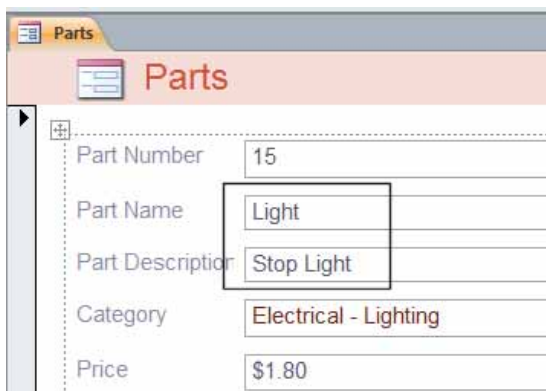


Part Number	15
Part Name	Light
Part Description	Stop Light
Category	Electrical - Lighting
Price	\$1.80

- Select the **Part Name** field first (i.e. click to select the box containing the word **Light**), move the pointer to the bottom line of the box, until the pointer changes to a double arrow.

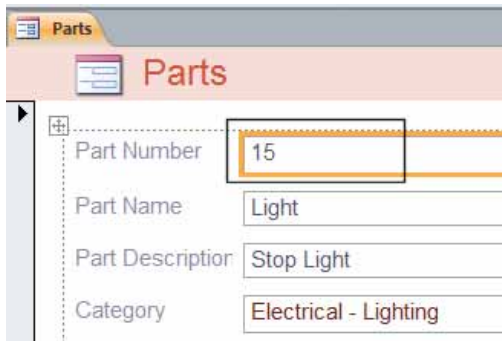


- Click and drag the line up to **reduce** the **box height**, similar to that of the **Category**, **Price**, **In Stock**.
- Repeat the same steps, this time selecting the **Part Description** field.



Part Number	15
Part Name	Light
Part Description	Stop Light
Category	Electrical - Lighting
Price	\$1.80

- Select the **Part Number** field.

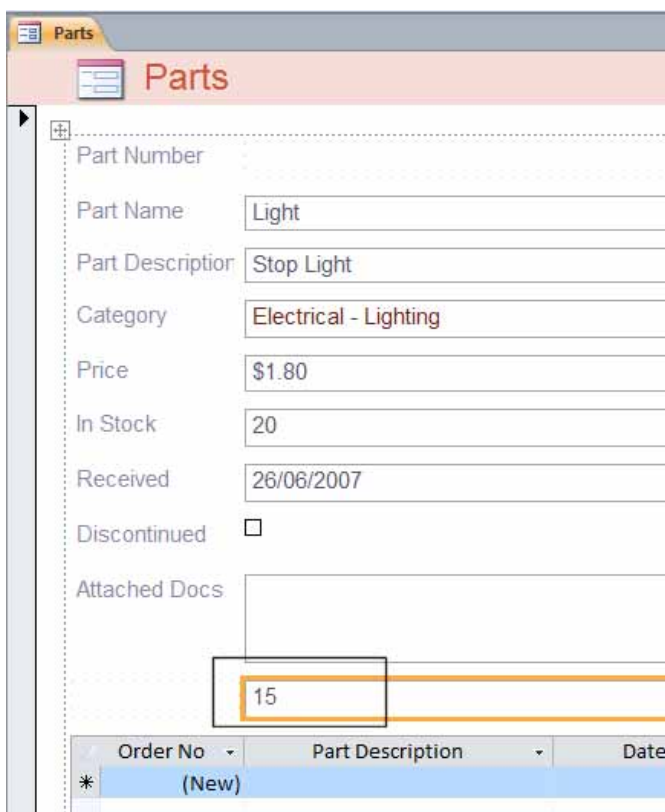


Parts	
Part Number	15
Part Name	Light
Part Description	Stop Light
Category	Electrical - Lighting

- We can easily move fields within a form. To try this, place the pointer in the middle of the highlighted field (i.e. the **Part Number** field), until the pointer changes to a (crosshair) pointer.



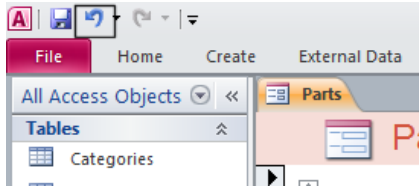
- Click and drag the **Part Number** field down the form and position below the **Attached Docs** field.



Parts	
Part Number	
Part Name	Light
Part Description	Stop Light
Category	Electrical - Lighting
Price	\$1.80
In Stock	20
Received	26/06/2007
Discontinued	<input type="checkbox"/>
Attached Docs	
	15

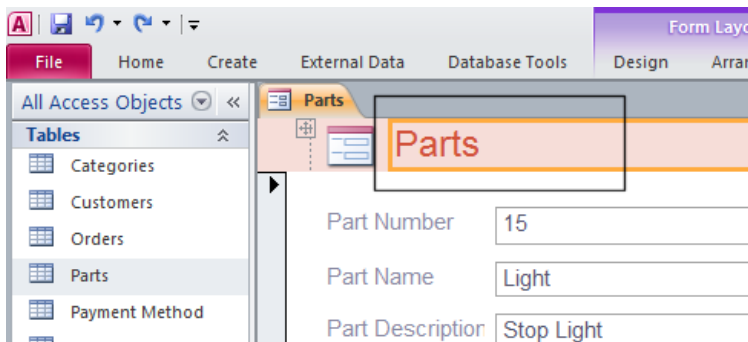
Order No	Part Description	Date
* (New)		

- Click on the **Undo** button to undo the move and return the **Part Number** field back to its original position.

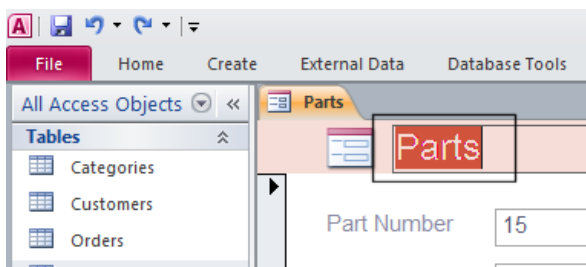


Modifying a form title

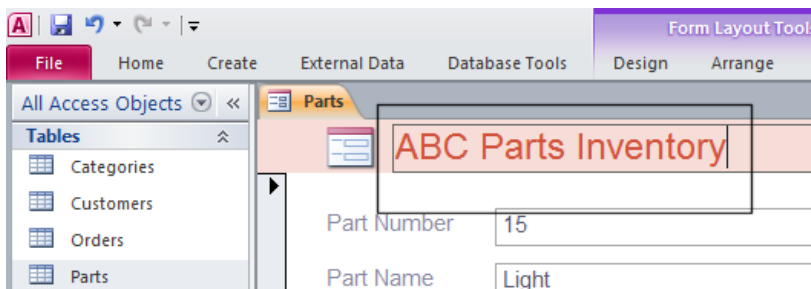
- When created, Access added a text label to the top of the form using the name of the table (**Parts**) the form was based on.
- Click on the **Parts** label. A box outline appears around **Parts** as illustrated below.



- Double click on the **Parts** label again to select and highlight it.

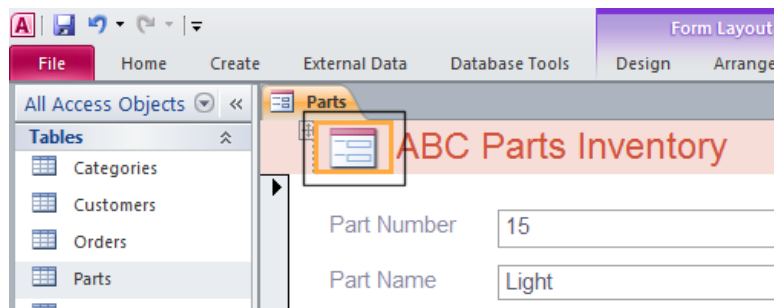


- Type in **ABC Parts Inventory** and press the **Enter** key.

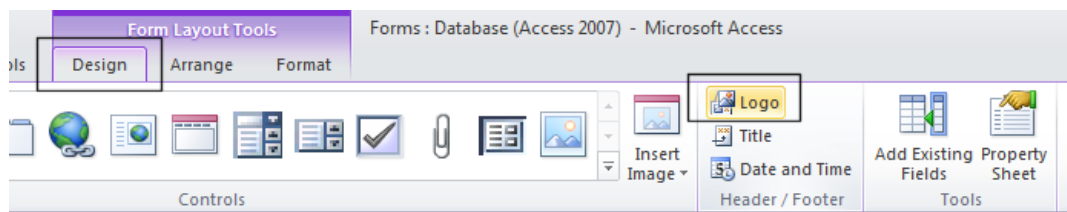


Changing a form logo

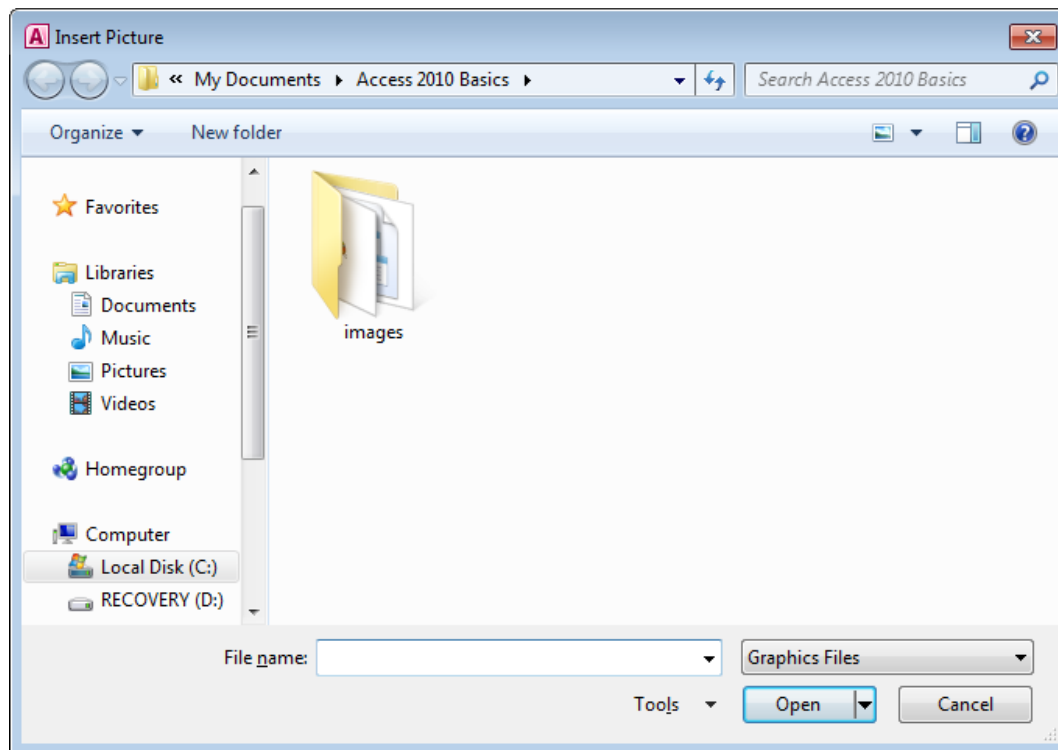
- Next, click once on the logo to select it. An outline box appears around the logo.



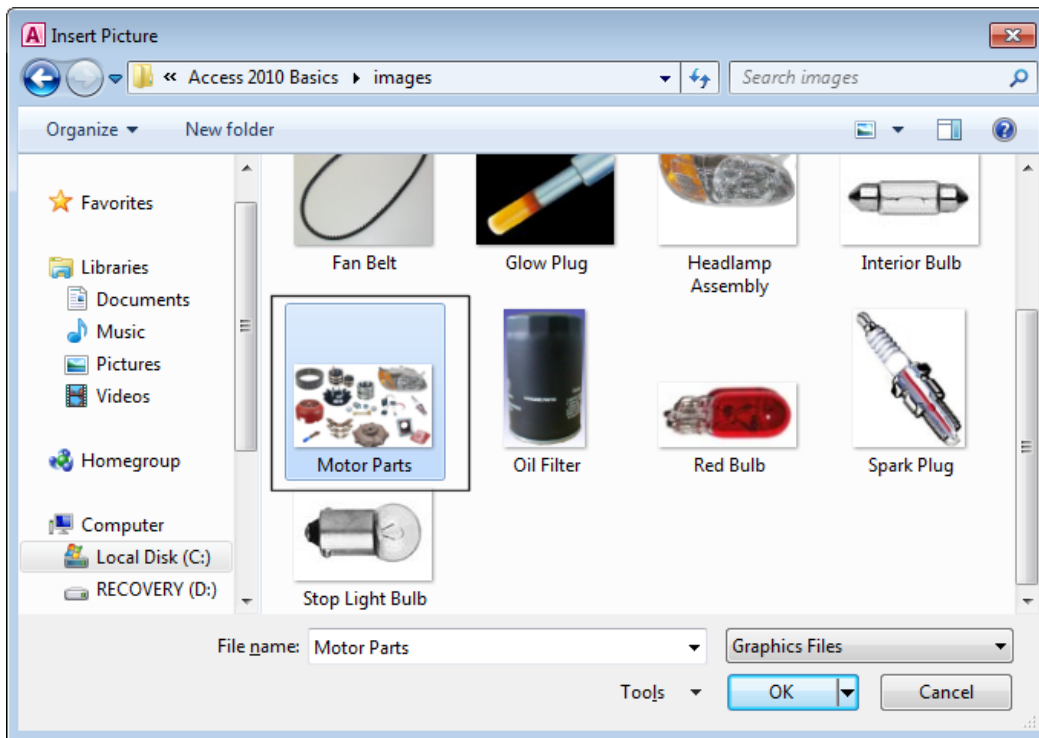
- Click on the **Design** tab and from within the **Header / Footer** group click on the **Logo** button.



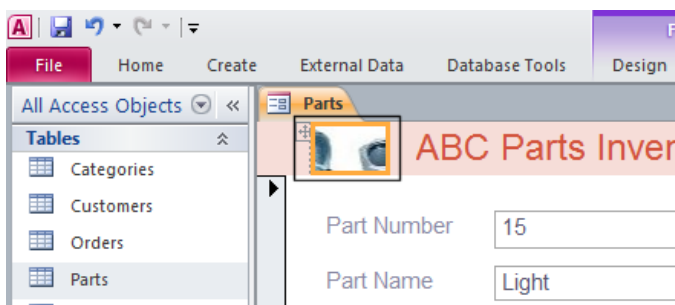
- The **Insert Picture** dialog box is displayed.



- Double click on the **Images** folder and you will see a selection of pictures.
- Select an image file called **Motor Parts**.



- Click on the **OK** button and the logo will be displayed as illustrated below.



Modifying a form label

- Click on the **Attached Docs** label to select the label.

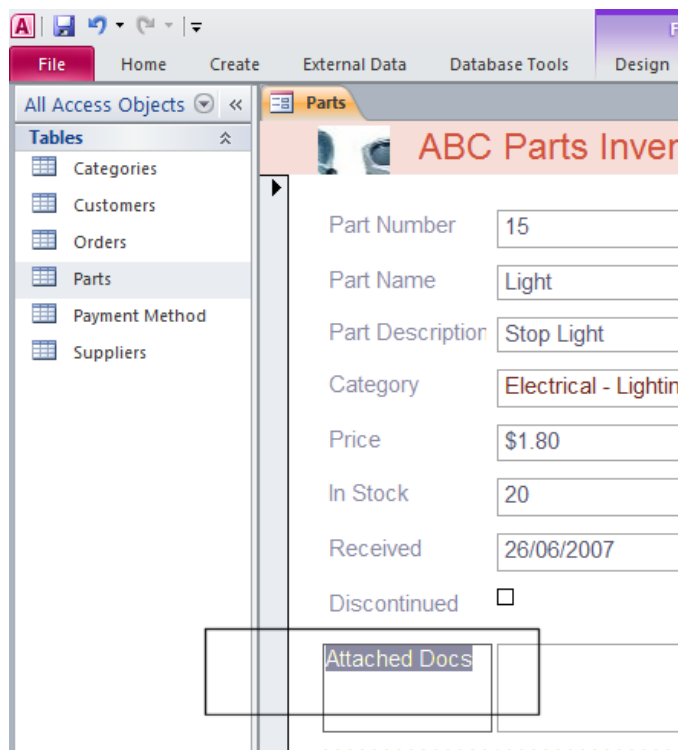
NOTE: Make sure that you click on the label **NOT** the field which is next to the label. Look closely at the illustration below.

The screenshot shows the Microsoft Access 2010 interface. The 'All Access Objects' pane on the left lists several tables: Categories, Customers, Orders, Parts, Payment Method, and Suppliers. The 'Parts' table is selected. The main window displays the 'ABC Parts Inventory' form in Design View. The form has a title bar 'ABC Parts Inventory' and a 'Form Layout Tools' ribbon with 'Design', 'Arrange', and 'Format' tabs. The form contains several text boxes for data entry: Part Number (15), Part Name (Light), Part Description (Stop Light), Category (Electrical - Lighting), Price (\$1.80), In Stock (20), Received (26/06/2007), and a Discontinued checkbox. A label 'Attached Docs' is visible at the bottom, highlighted with an orange box.

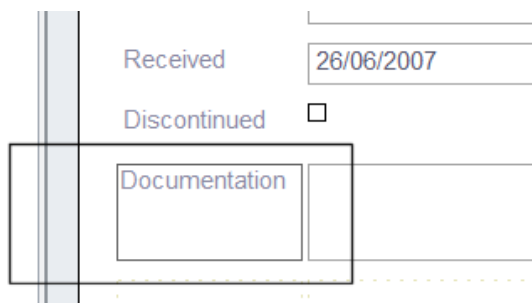
- Click once again within the label box outline.

This screenshot is similar to the previous one, showing the 'ABC Parts Inventory' form in Design View. The 'Attached Docs' label is now highlighted with a black box, indicating the next step in the process.

- The outline changes to show a thin outline box which indicates you are now in text edit mode. Place the mouse pointer at one end of the label, then in one motion, click and drag to highlight both words.

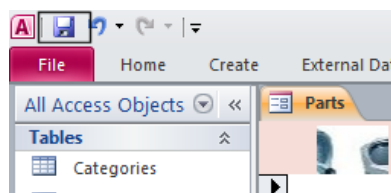


- Type in the word **Documentation**, then press the **Enter** key to commit the change.

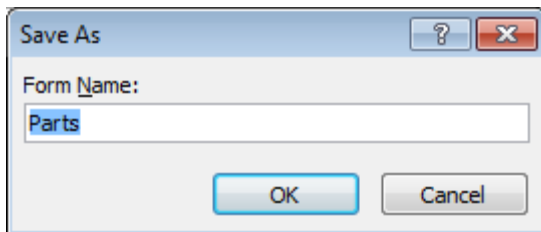


Saving a form

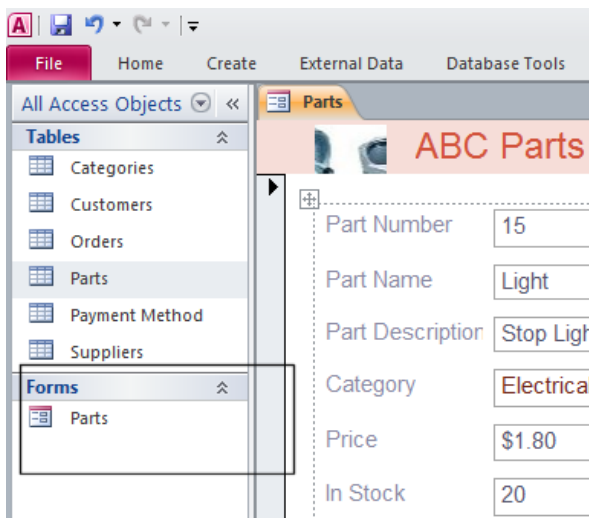
- Press **Ctrl-S** or click on the **Save** icon to save the form.



- The **Save As** dialog box is displayed.



- Click on the **OK** button to save the form. The new form appears below tables in the Navigation Pane.



Form View

- Click on the **Form View** button (bottom-right of the screen) to switch to **Form View**.



- Unlike the Layout View, Form View does not allow the form to be modified, however a user will be able to enter and edit data, navigate and create new records in the underlying table.
- Initially, there is little to differentiate between Layout View and Form View. The first noticeable difference will be the ribbon, as the Form Layout contextual tab is no

longer available. Clicking into the field text boxes also no longer activates the border around the data input area; instead double clicking will highlight the data.

Adding and formatting attachments

- Use the **record navigation bar** (at the bottom of your screen) to move from one record to the next and see how the data within the form changes with each record.

- Use the record navigation bar to locate and display record **6**.

NOTE: Although this is record number **6**, the **Part Number** is **21**. Record navigation

relates to the number of record in the table, not to the unique numbers assigned to each record.

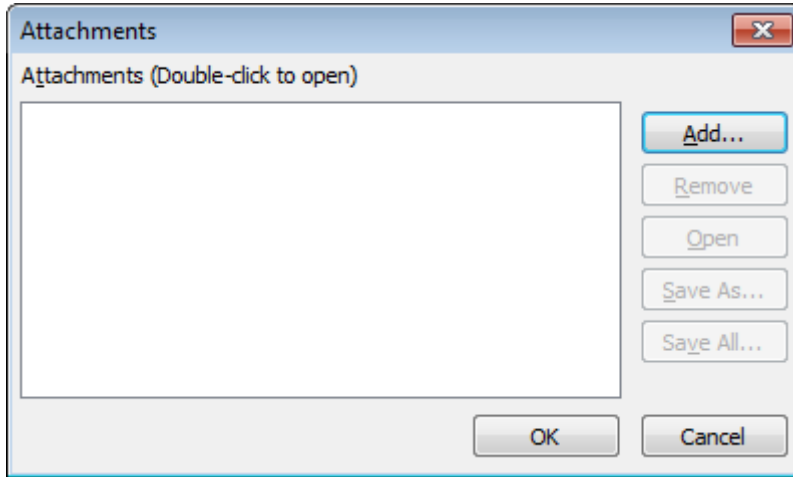
- Click once in the **Documentation** field box. An outline box appears around the **Attachments** box and a control options toolbar appears just above the attachments box.

The screenshot shows the Microsoft Access interface with the 'ABC Parts Inventory' form open. The 'Documentation' field is highlighted with a black border, and a control options toolbar (containing icons for undo, redo, and save) is visible above it.

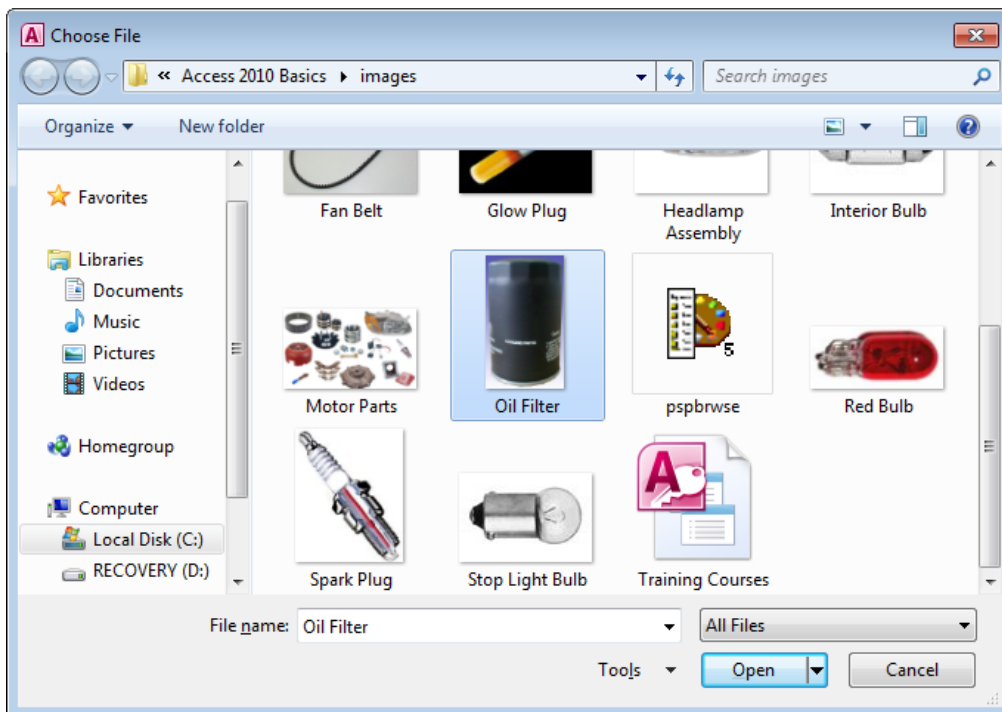
- Click on the **paperclip** button.

The screenshot shows the Microsoft Access interface with the 'ABC Parts Inventory' form open. The 'Attachments' box is now visible, and the 'paperclip' button is highlighted with a yellow box.

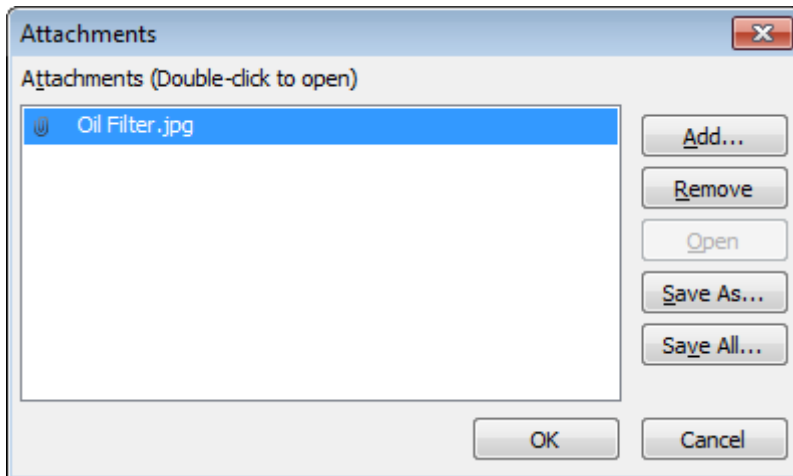
- The **Attachments** dialog box is displayed.



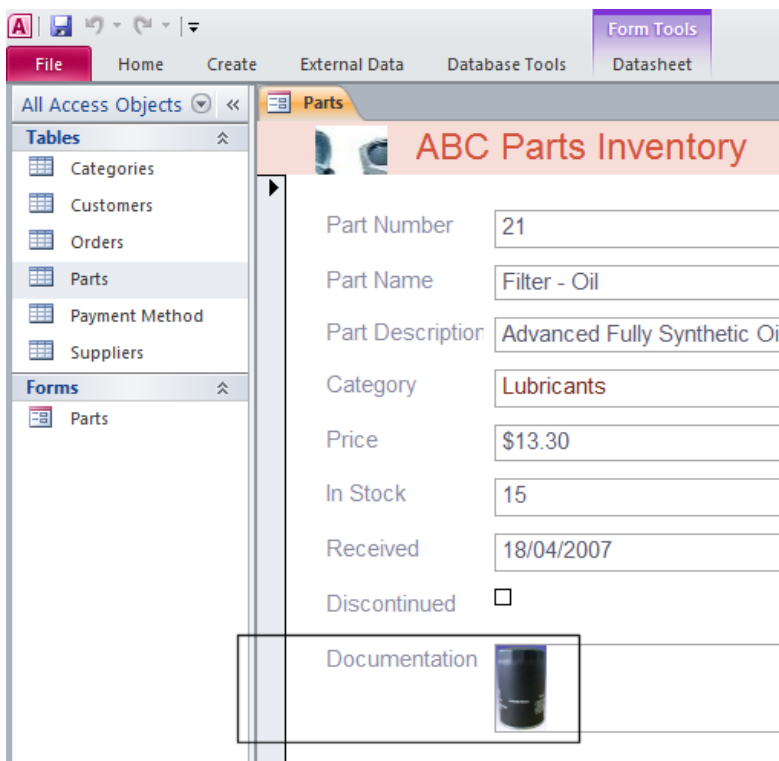
- Click on the **Add** button and locate an image file named **Oil Filter**, which is located in the **Images** folder under your sample files folder.



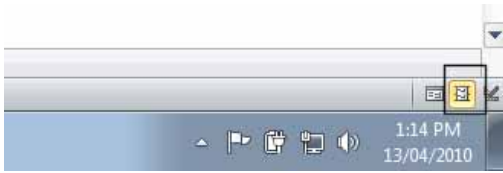
- Double click on the **Oil Filter** image file to add it as an attachment.



- Click on the **OK** button to close the **Attachments** dialog box and return to the form.



- An image of the oil filter is now displayed in the **Documentation** field, however the image is small and difficult to determine.
- Click on the **Layout View** button (bottom-right) to switch to **Layout View**.



- Move the mouse pointer to the bottom edge of the **Documentation** field box and position until the pointer changes to a double headed arrow.

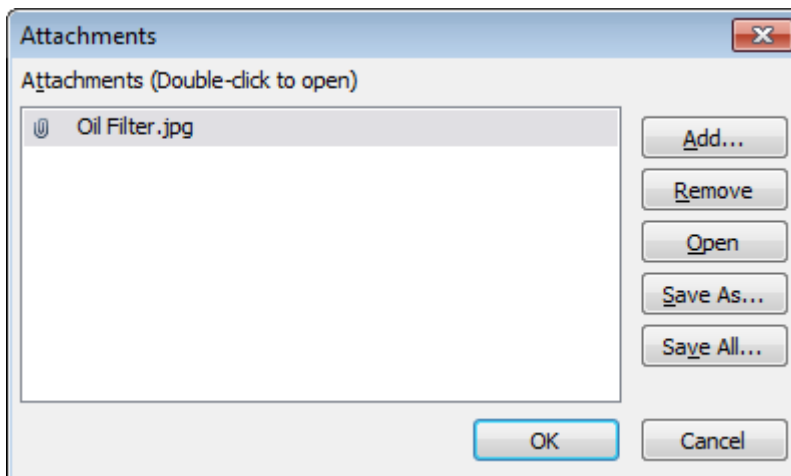


- Using the mouse pointer, click and drag the bottom of the field box downwards so that the screen resembles the illustration below, then release the mouse button.

- Click on the **Form View** button (bottom-right) to switch back to **Form View**.

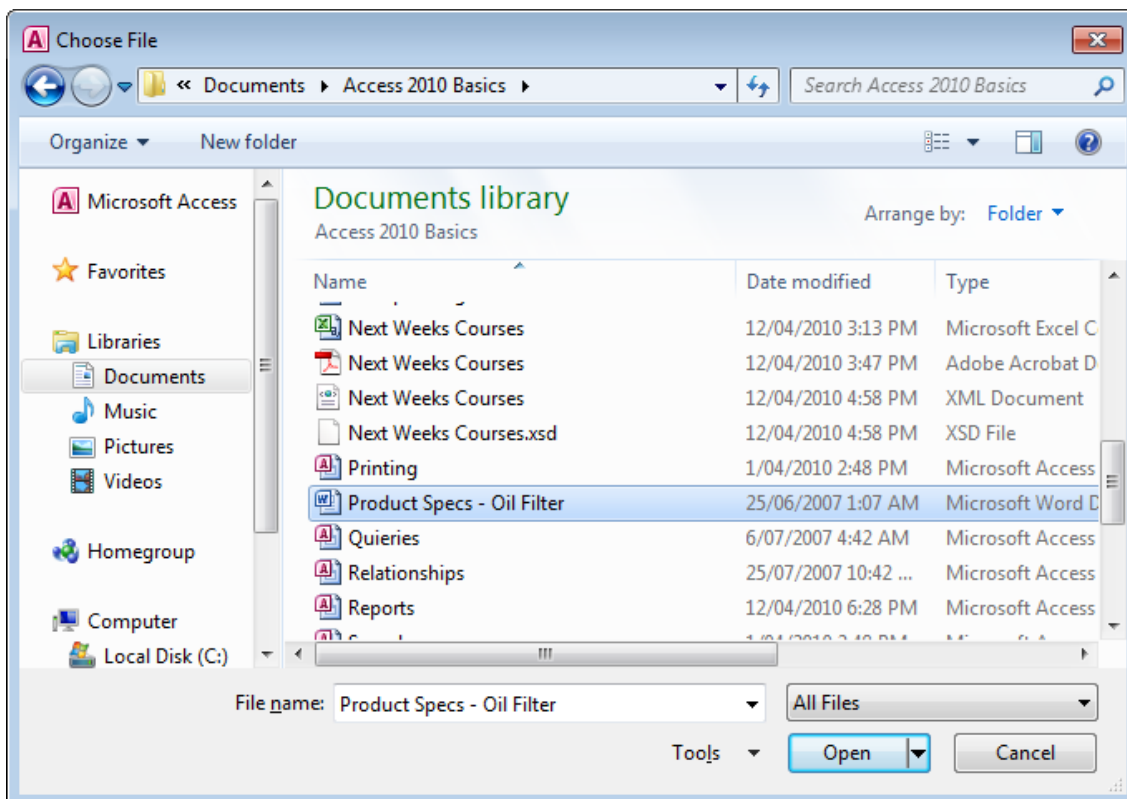


- Double click within the **Documentation** field. The **Attachments** dialog box will be displayed.

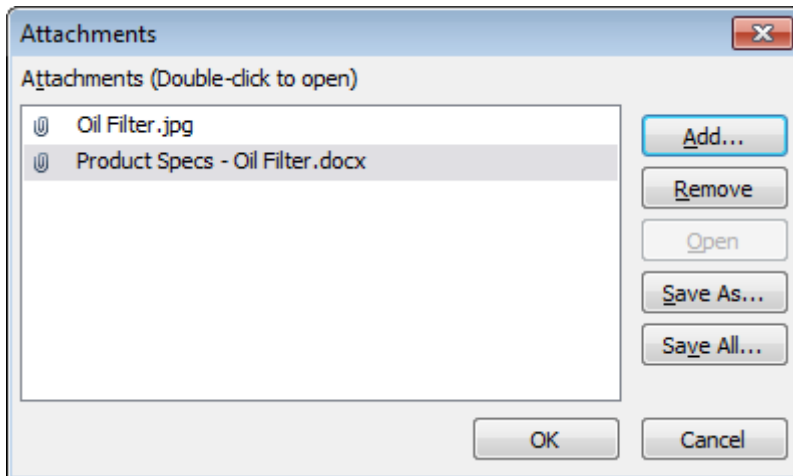


- Click on the **Add** button and select a **Word document** file named **Product Specs – Oil Filter**, located in the **Access 2010 Basics** folder.

NOTE: You will have to move up a folder level, as you are currently viewing the **Images** folder, which is located under the **Access 2010 Basics** folder.



- Double click on the file to add it as an attachment.

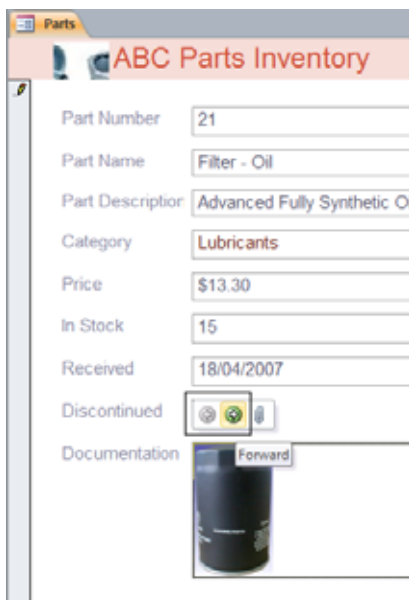


- Click on the **OK** button to close the **Attachments** dialog box and return to the form. The image of the oil filter is still displayed in the **Documentation** field.

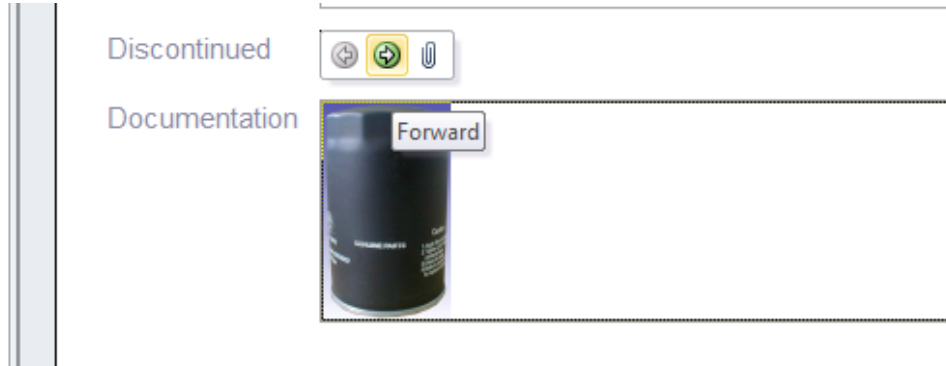
NOTE: When file attachments are added to a field, the first image file added will be the image displayed by default for the record. If documents are attached to a field without an image, a button, representing the application used to create or open the document, i.e. Microsoft Word will be displayed.



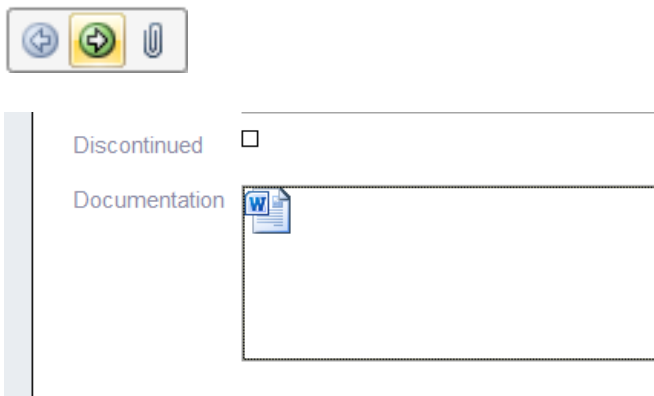
- When two or more attachments have been added to a field, the **arrow controls** provide a means of viewing them.



- Click once in the **Documentation** field to activate the control options toolbar.



- Click on the **right arrow** button within the toolbar.



TIP: The attachment navigation arrows are most useful when viewing multiple image attachments.

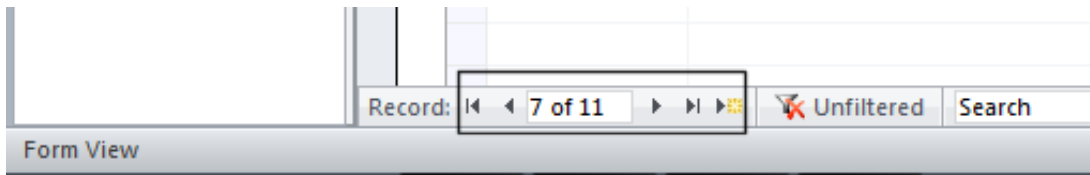
- When active, click on the **left arrow** button to navigate backwards through the list of available files.



NOTE: If you had wanted to open and view the attached document, you could have double clicked to view the document.

Modifying data within records

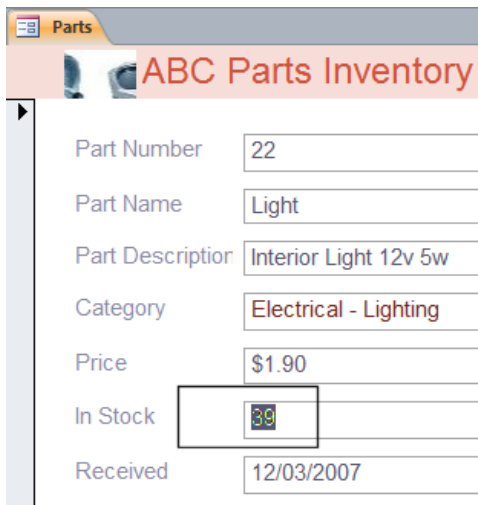
- Using the record navigation bar locate record **7**.



- The following data will be displayed.

Part Number	22
Part Name	Light
Part Description	Interior Light 12v 5w
Category	Electrical - Lighting
Price	\$1.90
In Stock	39
Received	12/03/2007
Discontinued	<input type="checkbox"/>
Documentation	

- Let us assume after checking your stock, it emerges that in fact there are only **34** of these lights in stock, not **39**, therefore the record needs to be edited and updated with this new information.
- Double click on the **In Stock** field to highlight the value.



Parts

ABC Parts Inventory

Part Number	22
Part Name	Light
Part Description	Interior Light 12v 5w
Category	Electrical - Lighting
Price	\$1.90
In Stock	39
Received	12/03/2007

- Type **34** and press the **Enter** key.



Parts

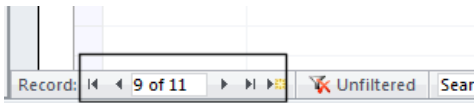
ABC Parts Inventory

Part Number	22
Part Name	Light
Part Description	Interior Light 12v 5w
Category	Electrical - Lighting
Price	\$1.90
In Stock	34
Received	12/03/2007

NOTE: The value has been updated and committed to the **Parts** table.

Deleting records using a form

- Using the record navigation bar locate record **9**, which is to be removed from the table.



Record: 9 of 11 Unfiltered Search

- The data will look like this.

ABC Parts Inventory

Part Number	24
Part Name	Light - Red
Part Description	Side Light - Coloured Red
Category	Electrical - Lighting
Price	\$2.70
In Stock	3
Received	30/05/2007
Discontinued	<input checked="" type="checkbox"/>
Documentation	

- At the top-left of each record in a form there is a bar with a single right pointing arrow at the top of the bar.

ABC Parts Inventory

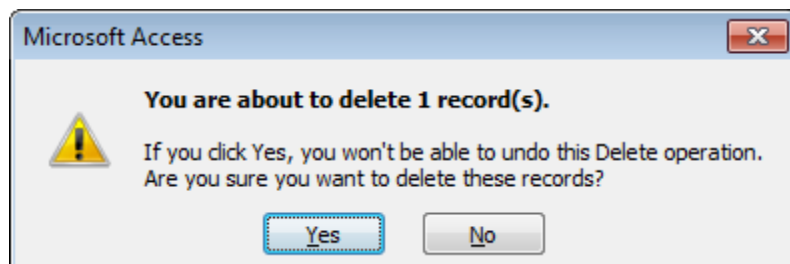
Part Number	24
Part Name	Light - Red
Part Description	Side Light - Coloured
Category	Electrical - Lighting

- When clicked, the bar changes to show the whole record is selected. By doing this, you can delete an entire record in one go. Click anywhere on the bar to select the record. The bar changes to look like this.

The screenshot shows the Microsoft Access interface. On the left, the 'All Access Objects' pane is open, showing a list of tables: Categories, Customers, Orders, Parts, Payment Method, and Suppliers. The 'Parts' table is selected. The main window displays the 'ABC Parts Inventory' form. The form contains the following fields and values:

Field	Value
Part Number	24
Part Name	Light - Red
Part Description	Side Light - Coloured Red
Category	Electrical - Lighting
Price	\$2.70
In Stock	3
Received	30/05/2007
Discontinued	<input checked="" type="checkbox"/>
Documentation	

- Press the **Del**. Access displays a warning requesting confirmation of deletion.

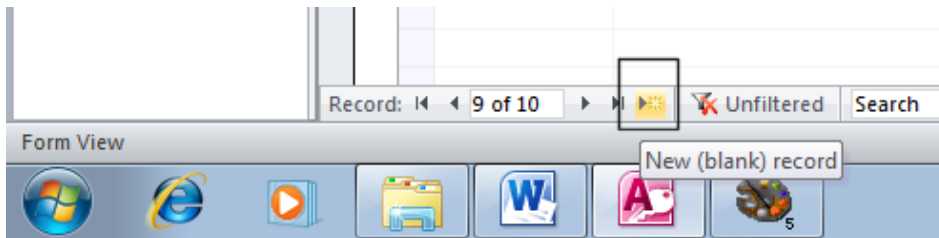


NOTE: The record which is about to be deleted has disappeared and the Record Navigation bar displays one less record.

- Click on the **Yes** button to confirm deletion.

Adding records using a form

- Click on the **New Record** button on the record navigation bar (displayed at the bottom-left of your screen).



- A new blank record will be displayed.

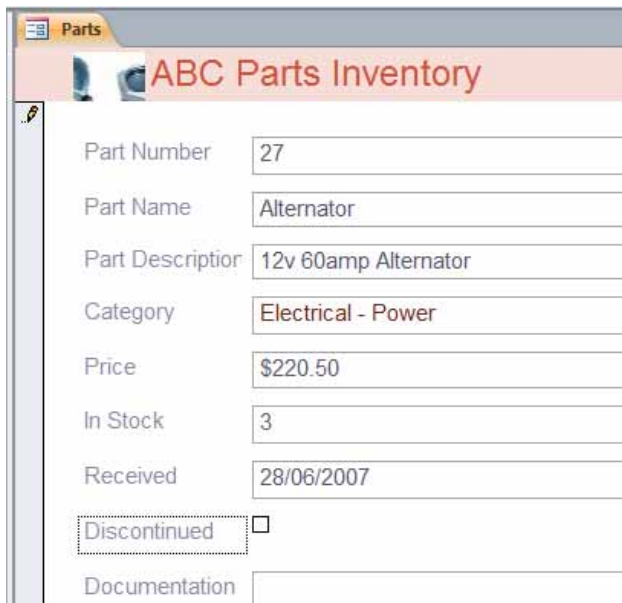
A screenshot of the 'ABC Parts Inventory' form in Form View. The form has a title bar 'Parts' and a header 'ABC Parts Inventory'. The fields are: 'Part Number' with a dropdown showing '(New)', 'Part Name' (text box), 'Part Description' (text box), 'Category' (text box), 'Price' (text box), 'In Stock' (text box), 'Received' (text box), 'Discontinued' (checkbox), and 'Documentation' (text box).

- Enter the following information to complete the new record, pressing the **Tab** or the **Enter** key to move from one field to the next.

NOTE: Leave the last two items blank.

Part Name	Alternator
Part Description	12v 60amp Alternator
Category	Electrical - Power
Price	220.50
In Stock	3
Received	28/06/2007
Discontinued	
Documentation	

- Your screen will now look like this.



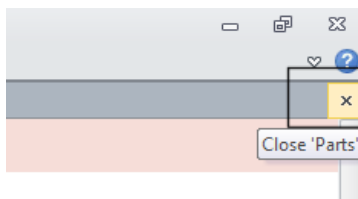
- Press **Enter** once more to move to the next new record and save the record you just completed.

Adding or deleting text in a record using a form

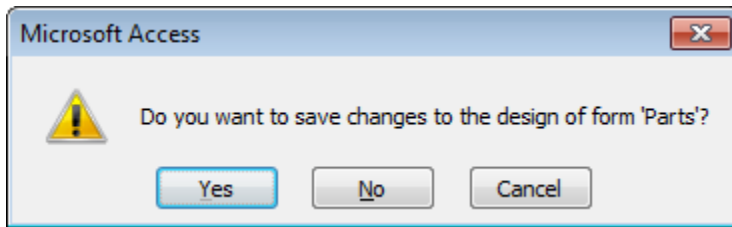
- You can delete any existing data within a record. For instance delete the **12v 60amp** text. Click on the **Undo** button to restore the deleted text.
- You can easily add to existing text. Change the **Part Name** text from **Alternator** to **Power Alternator**. Click on the **Undo** button to remove the additional text.

Closing forms

- To close a form, click on the **Close** button at the top right of the form window.

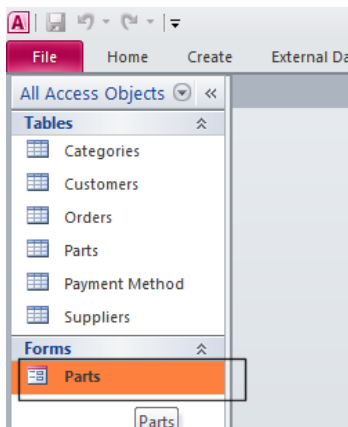


You will see a dialog box asking if you want to save your changes. Click on the **Yes** button.



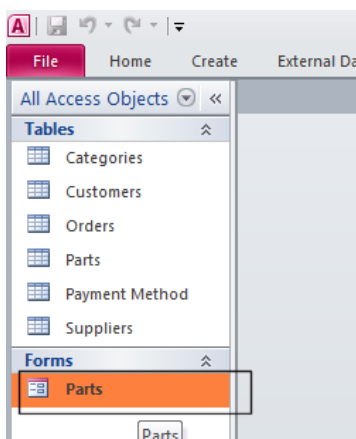
Opening forms

- To open a form, locate and double click on the form name in the Navigation Pane.

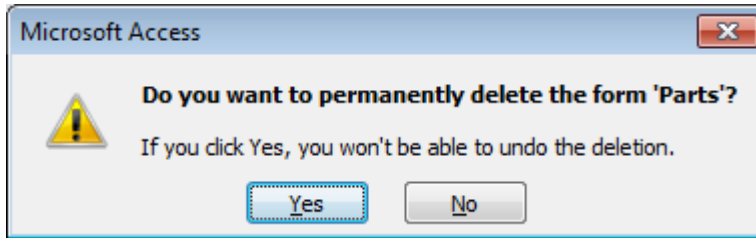


Deleting a form

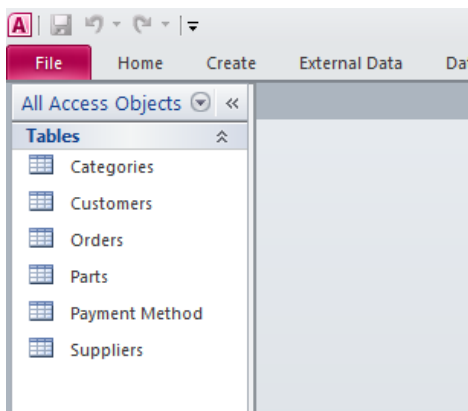
- If you opened the form, close it now. Deleting a form is similar to deleting a table or any other object in the database. Before an object in this case a form can be deleted, the object must be closed.
- Locate the form in the Navigation Pane.



- Click once to highlight the **Parts** form name and then press the **Del** key. Access displays a warning dialog box, requesting confirmation of deletion.



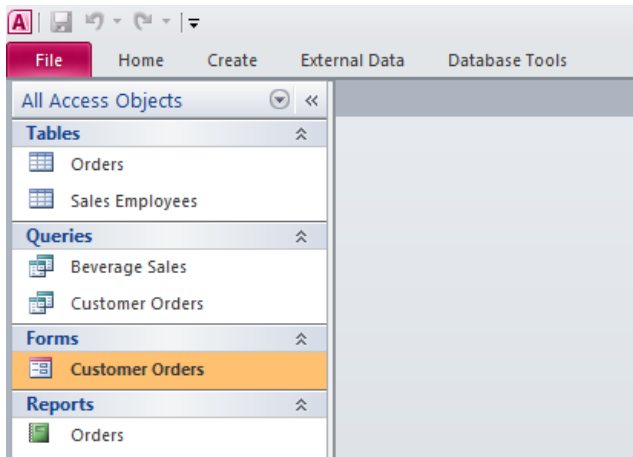
- Click on the **Yes** button to confirm deletion. You will no longer see the form, as illustrated below.



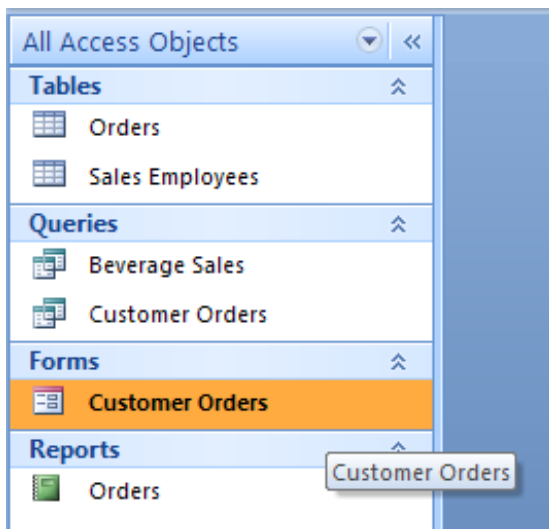
- Close the Access program.

Filtering a form

- Start the Access program.
- Open a database called **Filtering Forms**.



- Open the **Customer Orders** form (by double clicking on it).



- Your screen will look like this.

Filtering Forms : Database (Acc

File Home Create External Data Database Tools

All Access Objects

Tables

- Orders
- Sales Employees

Queries

- Beverage Sales
- Customer Orders

Forms

- Customer Orders

Reports

- Orders

Customer Orders

First Name: Anna

Last Name: Bedecs

Category: Beverages

Product Name: Chai

Quantity: 75

Order Date: 15/01/2006

- If you click on the **Next Record** arrow button (towards the bottom-left) a few times you will see that there are a number of records relating to the **Beverages** category.

Record: 1 of 240

Next record

Unfiltered Search

- Display a record where the **Category**, displays the word **Beverages**.

Customer Orders

First Name: Martin

Last Name: O'Donnell

Category: Beverages

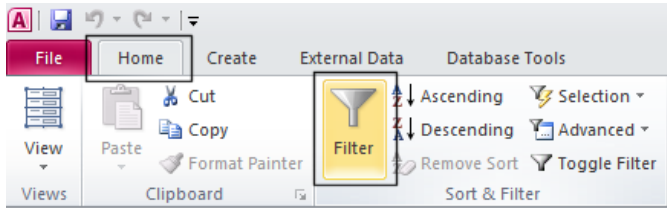
Product Name: Chai

Quantity: 80

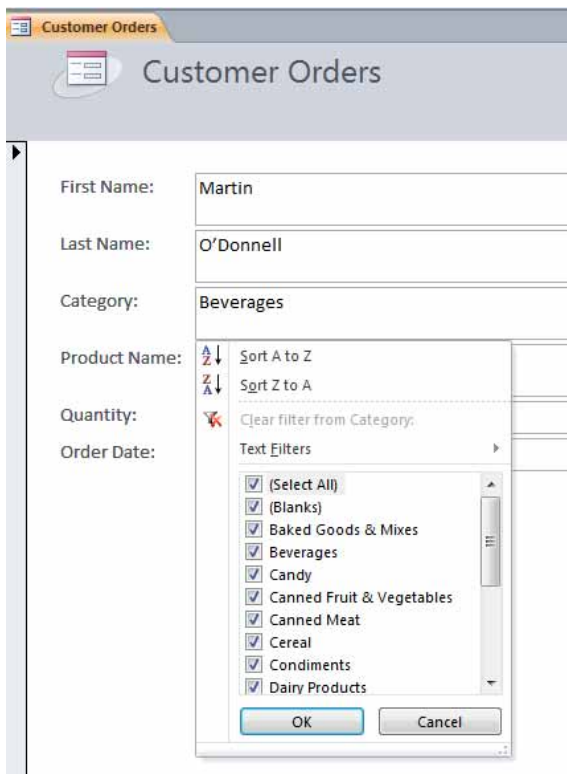
Order Date: 9/05/2006

- Click within the **Category** section of the form (i.e. click over **Beverages**).

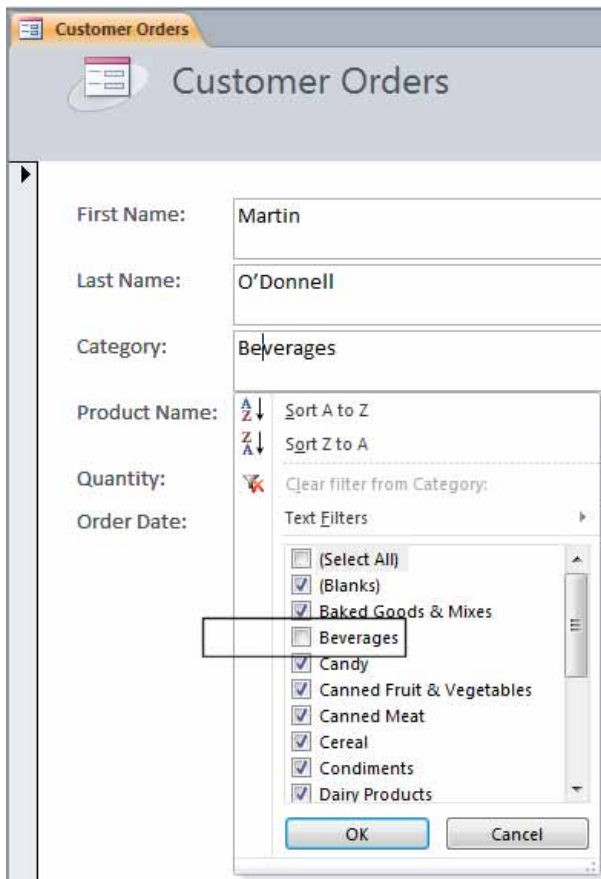
- Click on the **Home** tab and then click on the **Filter** button within the **Ribbon**.



- This will display the following.



- Click within the **Beverages** check box to remove the tick.



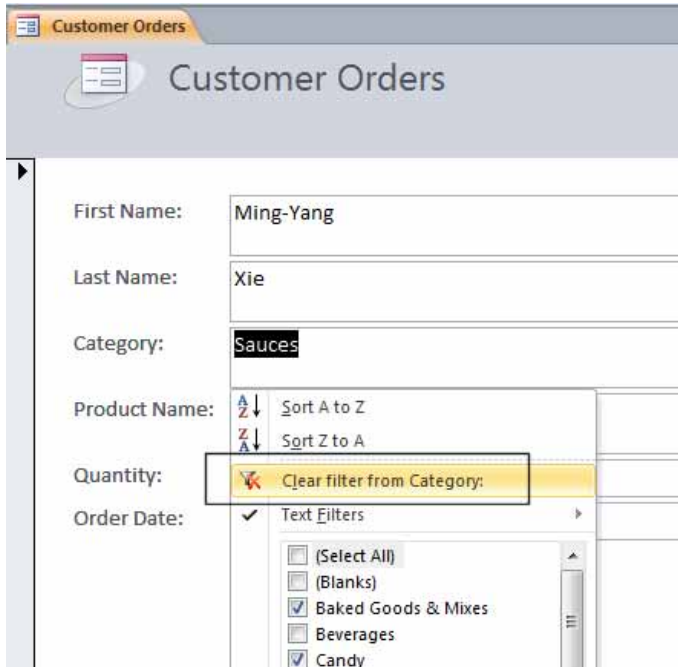
- Click on the **OK** button. If you now click on the **Next Record** button a few times you will not see any items relating to the **Beverages** category, as you have filtered the form not to show them.

Removing a filter from a form

- Right click over the **Category** box (i.e. over **Sauces** in the example shown below).



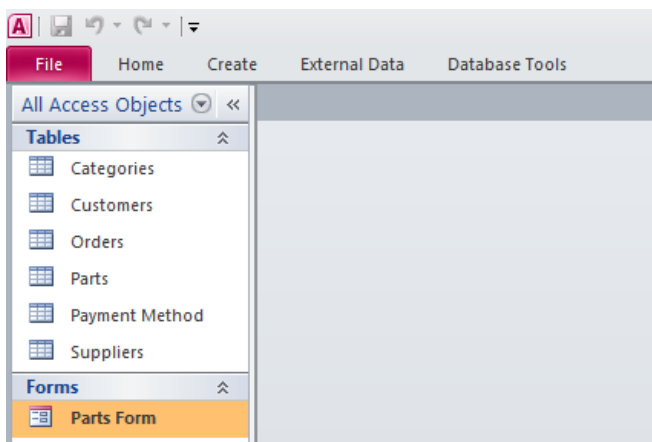
- From the popup menu displayed, select the **Clear filter from Category** command.



- The **Beverages** category will now be displayed again.
- Save your changes and close Access.

Inserting and modifying a form header

- Start the Access program.
- Open a database called **Forms - Headers and Footers**. You will see the following.



- Double click on the **Parts Form** to open it. Your screen will now look like this.

Forms - Headers and Footers :

File Home Create External Data Database Tools

All Access Objects << Parts Form

Tables

- Categories
- Customers
- Orders
- Parts
- Payment Method
- Suppliers

Forms

- Parts Form

Parts

Part Number: 15

Part Name: Light

Part Description: Stop Light

Category: Electrical - Lighting

Price: 1.80

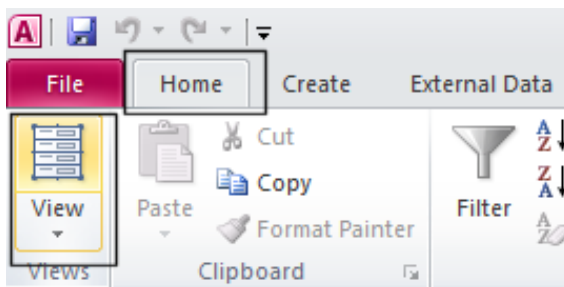
In Stock: 20

Received: 26/06/2007

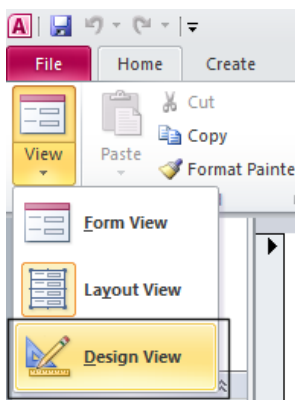
Discontinued: ☐

Attached Docs:

- Switch to **Design View**. To do this, click on the **Home** tab and then click on the **down arrow** under (or next to) the **View** button.



- From the drop down list displayed, select **Design View**.



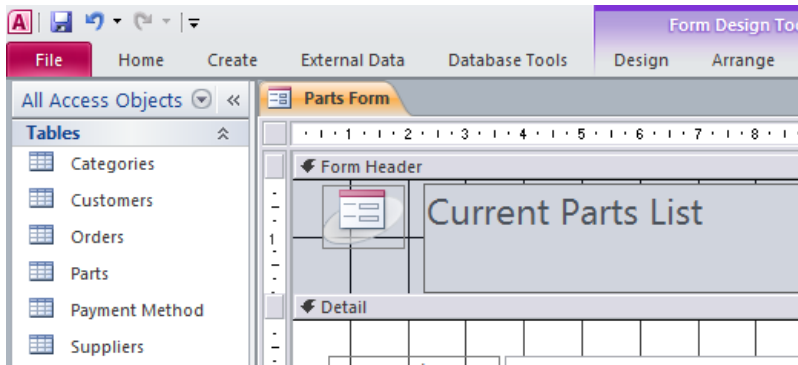
- Your screen will now look like this. Notice there is a '**Form Header**' section at the top of the form.

The screenshot shows the 'Parts Form' in Access 2010. The form is divided into two main sections: 'Form Header' and 'Detail'. The 'Form Header' section is at the top and contains a tab labeled 'Parts'. The 'Detail' section is below the header and contains several fields: 'Part Number', 'Part Name', 'Part Description', 'Category' (a dropdown menu), 'Price', 'In Stock', 'Received', 'Discontinued' (a checkbox), 'Attached Docs' (a text field), and 'Supp ID'. The form is set to 'Table: Orders'.

- Double click on the existing form header called '**Parts**' to select it, as illustrated.

The screenshot shows the Access 2010 interface with the 'Parts Form' in Design view. The 'Form Header' section is selected, and the 'Parts' tab is visible. The 'Detail' section is also visible with the 'Part Number' field.

- Enter a new header, in this case **Current Parts List**, as illustrated below.



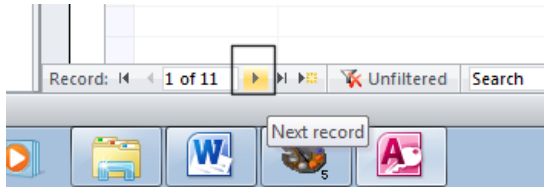
- Switch back to **Form View**.



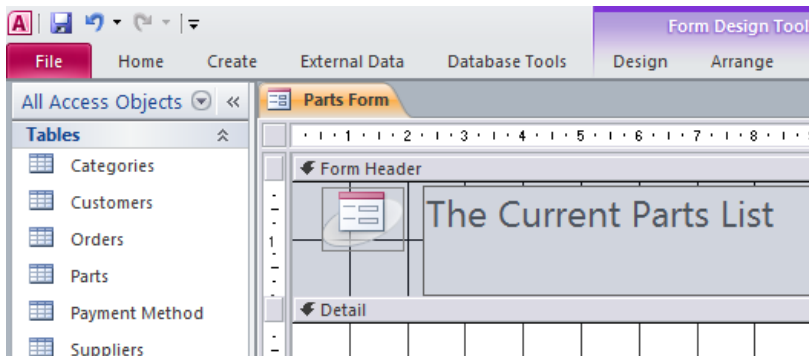
- You will see the following.

Part Number:	15
Part Name:	Light
Part Description:	Stop Light
Category:	Electrical - Lighting
Price:	1.80
In Stock:	20
Received:	26/06/2007
Discontinued:	<input type="checkbox"/>
Attached Docs:	

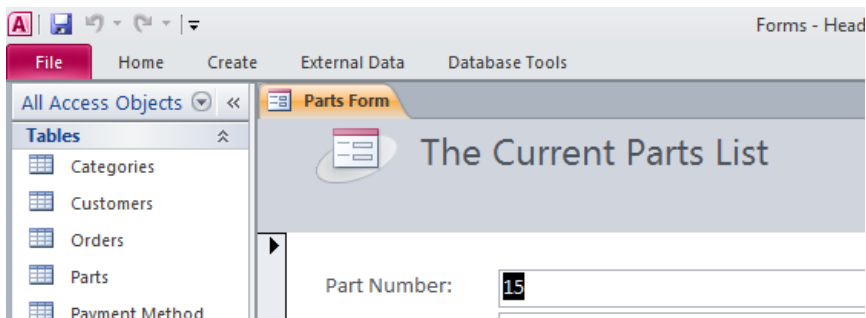
- If you use the **Next Record** control towards the bottom-left of the screen, you will see that the form header is always displayed.



- Switch back to **Design View**.
- Insert the word '**The**' in front of the existing header.

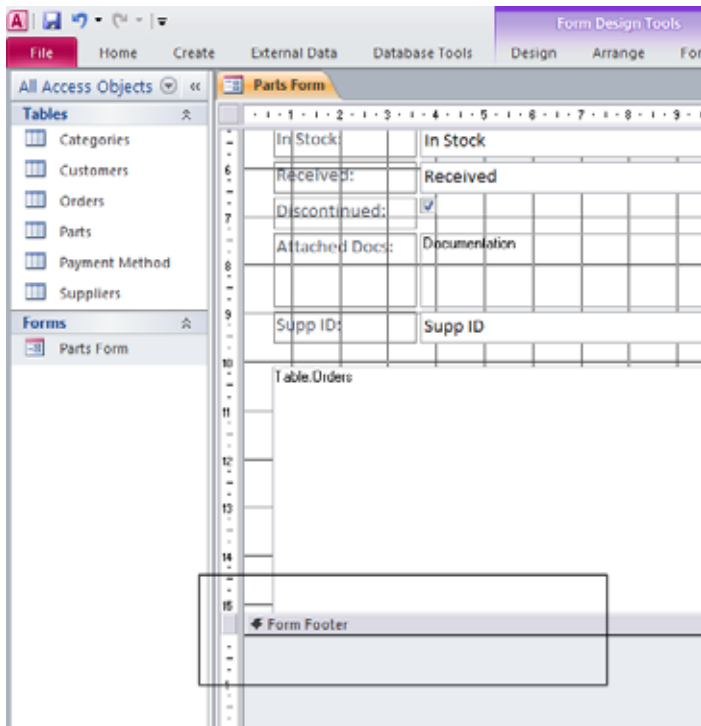


- Switch to **Form View** and you will see the following.

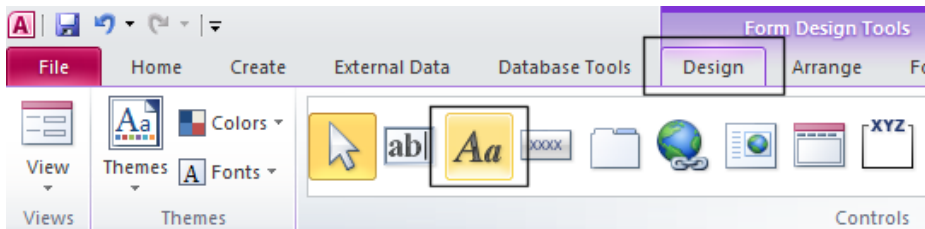


Inserting and modifying a form footer

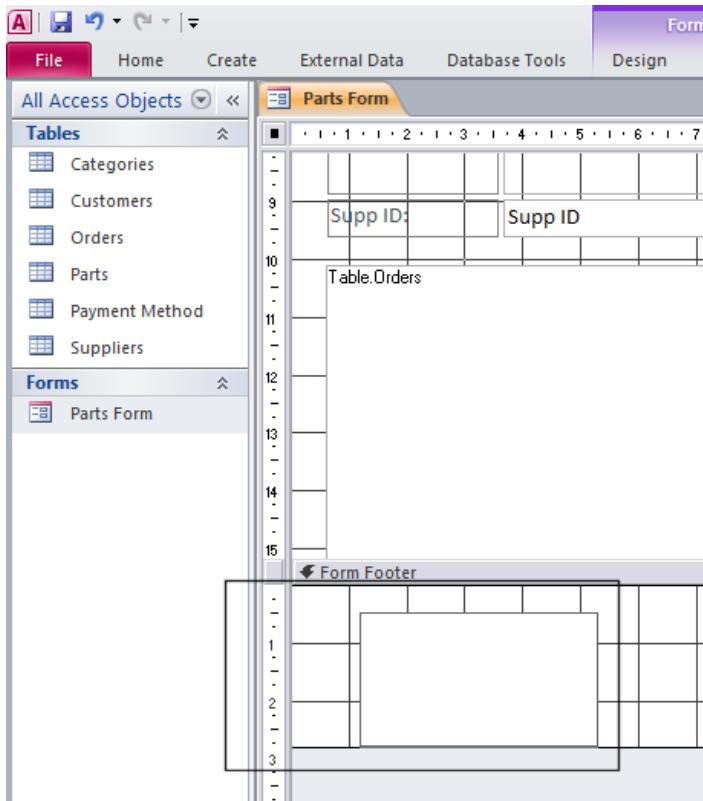
- Switch to Design View. If necessary scroll down until you see the **Form Footer** area.



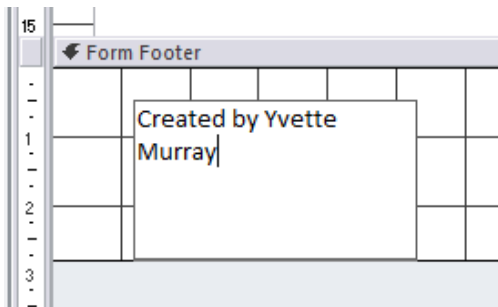
- Click on the **Design** tab and then click on the **Label** button (within the **Controls** group).



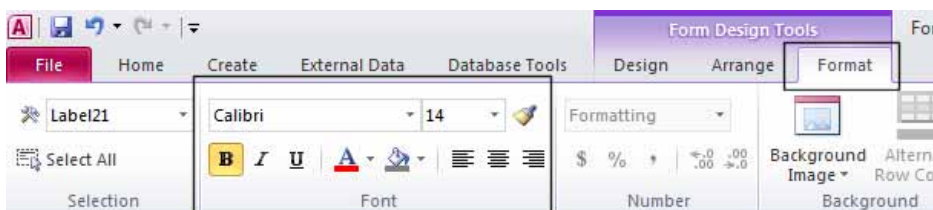
- Move the mouse pointer down to the area under the words '**Form Footer**'. Press the mouse button and while keeping it pressed move diagonally to create a text box as illustrated below.



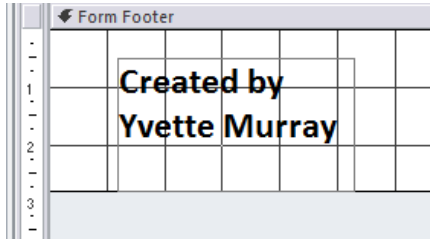
- Release the mouse button and type the words **Created by <your name>**, as illustrated below.



- Select the text that you have just typed in.
- Click on the **Format** tab and use the text formatting controls to make the text more visible.



- An example is illustrated below.



- Switch to **Form View**. Move between different records to verify that the form footer is visible for different records.

NOTE: If you wanted to modify the form footer, you would use the same technique used for modifying form headers.

- Save your changes and close the database.
- Close the Access program.

Queries

What are queries?

- Using a query is similar to filtering and sorting tables but much more powerful. Unlike filters, multiple criteria can be used in one or more fields to be highly specific about the information you wish to extract from a table.
- Queries are used to extract and analyze data within one or more tables.
- Queries can be saved, edited and reused. They provide output for use by other database objects, such as forms and reports.
- Queries are also capable of working with data across multiple tables.
- Different queries are designed to perform different functions, for example an update query searches for and updates field information in one or more tables, whilst a delete query searches for and deletes records from one or more tables.
- **An update query** is similar to the Find & Replace function found in most Microsoft applications, only more advanced. For example, if telephone area codes change to accommodate an increasing population, an update query might be created to find all existing area codes affected by the change and at the same time, replace the old area code with a new area code.

NOTE: Update queries cannot create new records, only update existing records.

- **A select query is** used to search for and display data according to the specified criteria. This data can then be viewed as a table, in a form created specifically on the query or as a report.
- **A delete query** is used when you need to remove entire records (rows) from a table. Delete queries, by default, remove all of the data in each field, along with the unique key field, (normally the primary key field) When the query is run, it removes the entire record (row) from the table.

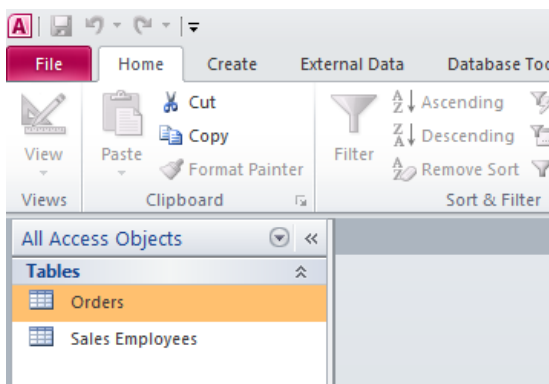
Before creating a delete query, you would create a select query first to ensure it returns the records that you want to delete. This way you are able to test the query first, rather than inadvertently deleting the wrong records. Only when the select query is tested and returns the correct results, would you convert the query to a delete query.

- An **append query**, is used when you want to extract information (records) from one or more tables and append (add) it to one or more tables. Normally the tables would reside in the same database however other database can also be used.
- A **make table query** retrieves data from one or more tables, and then loads the result set into a new table. That new table can reside in the database that you have open, or you can create it in another database.
- As with all objects, Access provides a Wizard tool to help create different types of queries or blank queries that can be configured from scratch.

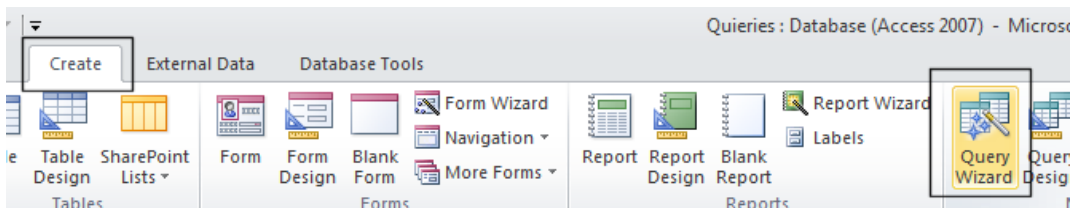
NOTE: Tables do not have to be open or selected to create a query.

Creating a query

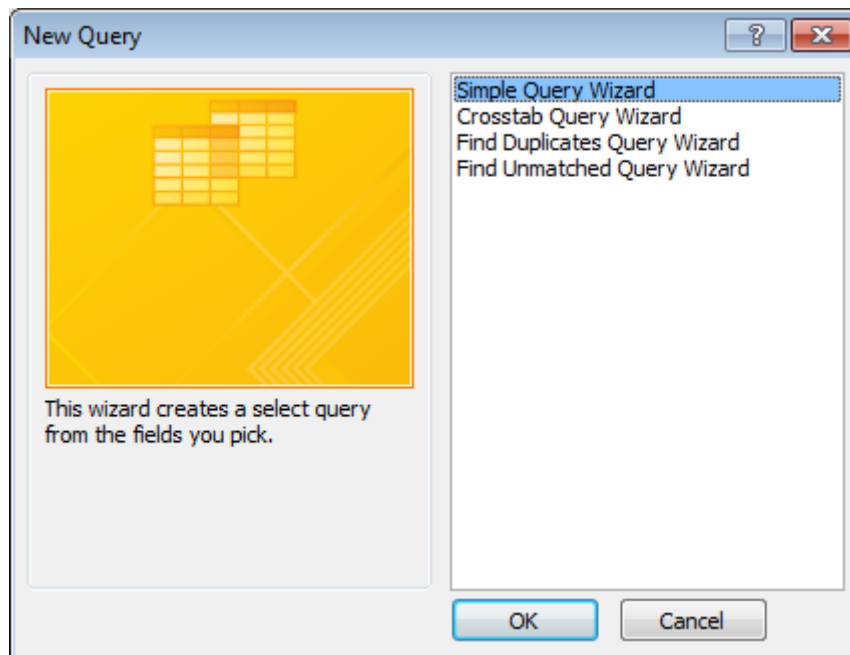
- Start the Access program.
- Open a file called **Queries**. The database opens with two tables (**Orders** and **Sales Employees**) displayed in the Navigation Pane.



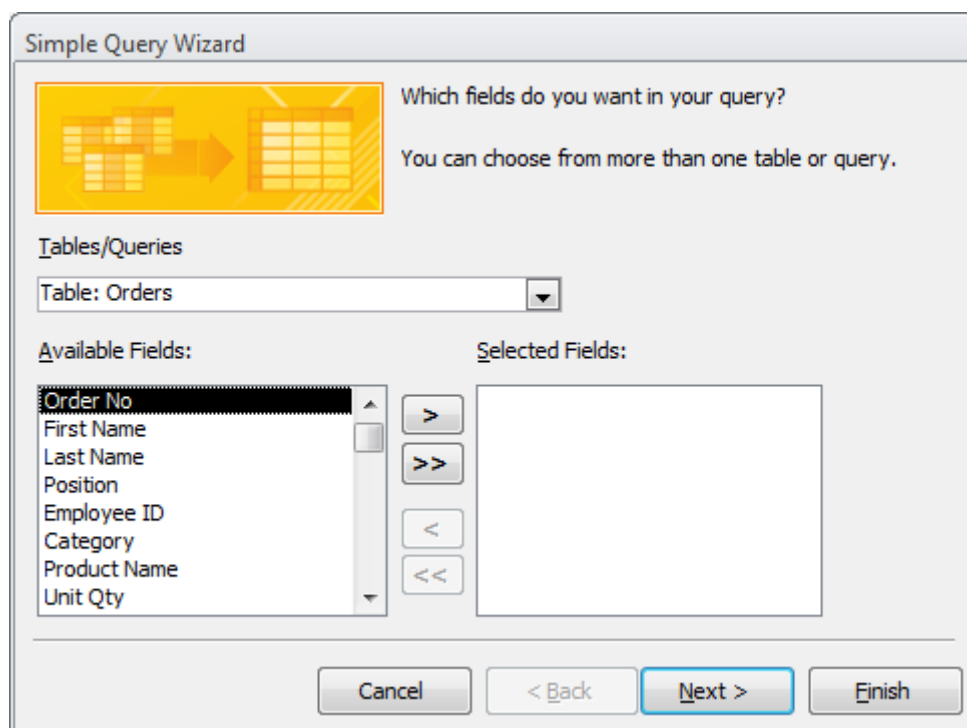
- Click on the **Create** tab and from within the **Macros & Code** group click on the **Query Wizard** button.



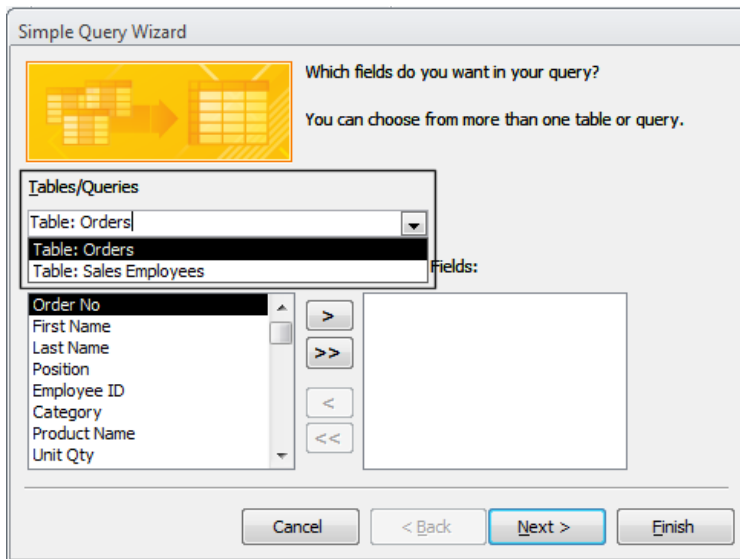
- The **New Query** dialog box is displayed.



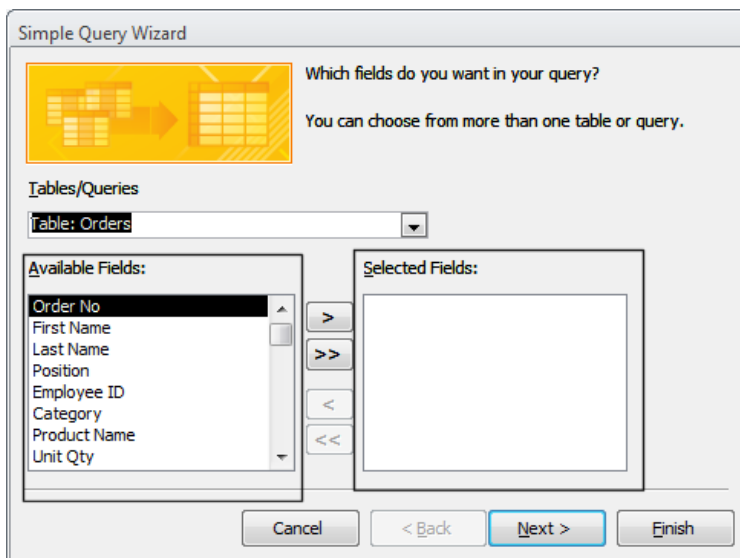
- With the **Simple Query Wizard** selected, click on the **OK** button. The **Simple Query Wizard** dialog opens.



- Use the **down arrow** in the upper part of the dialog box to select the table or query you intend working with, in this case select **Table: Orders**.



- In the lower part of the dialog box are two field selection boxes, **Available Fields** and **Selected Fields**.



- **Available Fields** can be added to the **Selected Fields** box by first highlighting the field and then clicking on the right pointing arrow button.



Or you could double click on a field within the **Available Fields** list.

Alternatively, clicking on the button below adds all fields to the **Selected Fields** box.



NOTE: When fields are displayed in the **Selected Fields box**, this button will remove all fields.

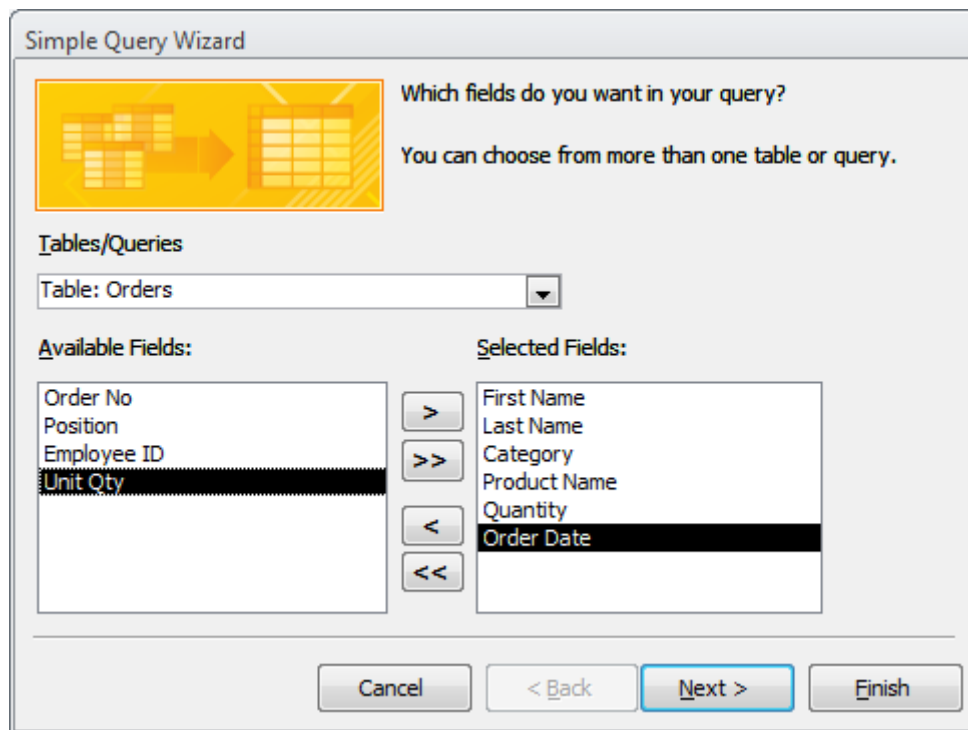


This button removes a single highlighted field.



- Add the following fields:

First Name
Last Name
Category
Product Name
Quantity
Order Date.



The Simple Query Wizard dialog box is shown. It has a title bar 'Simple Query Wizard'. Inside, there's a yellow graphic with a grid and an arrow. Text says 'Which fields do you want in your query?' and 'You can choose from more than one table or query.' Below this is a 'Tables/Queries' section with a dropdown menu showing 'Table: Orders'. Then there are two list boxes: 'Available Fields:' and 'Selected Fields:'. The 'Available Fields:' list contains 'Order No', 'Position', 'Employee ID', and 'Unit Qty'. The 'Selected Fields:' list contains 'First Name', 'Last Name', 'Category', 'Product Name', 'Quantity', and 'Order Date'. Between the lists are four buttons: '>', '>>', '<', and '<<'. At the bottom are four buttons: 'Cancel', '< Back', 'Next >', and 'Finish'.

- Click on the **Next** button.

Simple Query Wizard

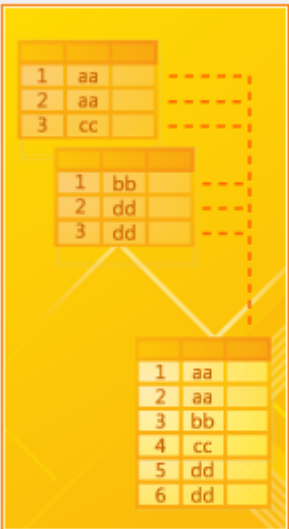
Would you like a detail or summary query?

☒ Detail (shows every field of every record)

☐ Summary

Summary Options ...

Cancel < Back Next > Finish



- Click on the **Next** button.

Simple Query Wizard

What title do you want for your query?

Orders Query


That's all the information the wizard needs to create your query.

Do you want to open the query or modify the query's design?

☒ Open the query to view information.

☐ Modify the query design.

Cancel < Back Next > Finish



- At this point you can accept the default name provided by Access or type your own. Highlight the **Query Name** and type in **Customer Orders**, as illustrated.

Simple Query Wizard

What title do you want for your query?

Customer Orders

That's all the information the wizard needs to create your query.

Do you want to open the query or modify the query's design?

☒ Open the query to view information.

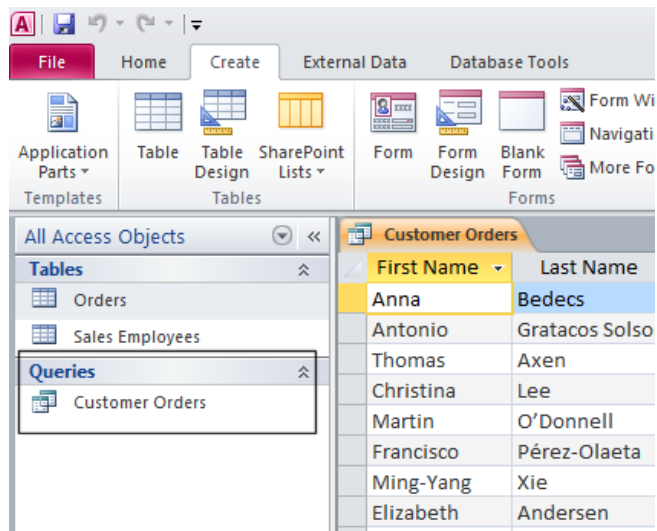
☐ Modify the query design.

Cancel < Back Next > Finish

- Click on the **Finish** button. The **Customer Orders** query displays the result in table form.

First Name	Last Name	Category	Product Name	Quantity	Order Date
Anna	Bedecs	Beverages	Chai	75	15/01/2006
Antonio	Gratacos Solsona	Condiments	Syrup	40	20/01/2006
Thomas	Axen	Condiments	Cajun Seasoning	100	22/01/2006
Christina	Lee	Oil	Olive Oil	120	30/01/2006
Martin	O'Donnell	Jams, Preserves	Boysenberry Spread	80	6/02/2006
Francisco	Pérez-Olaeta	Dried Fruit & Nuts	Dried Pears	100	10/02/2006
Ming-Yang	Xie	Sauces	Curry Sauce	40	23/02/2006
Elizabeth	Andersen	Dried Fruit & Nuts	Walnuts	40	6/03/2006
Sven	Mortensen	Canned Fruit & Vegetables	Fruit Cocktail	40	10/03/2006
Roland	Wacker	Baked Goods & Mixes	Chocolate Biscuits Mix	40	22/03/2006
Peter	Krschne	Jams, Preserves	Marmalade	20	24/03/2006
John	Edwards	Baked Goods & Mixes	Scones	40	24/03/2006
Andre	Ludick	Beverages	Beer	20	24/03/2006
Carlos	Grilo	Canned Meat	Crab Meat	120	24/03/2006
Helena	Kupkova	Soups	Clam Chowder	40	24/03/2006
Daniel	Goldschmidt	Beverages	Coffee	100	5/04/2006
Jean Philippe	Bagel	Candy	Chocolate	40	5/04/2006
Catherine	Autier Miconi	Dried Fruit & Nuts	Dried Apples	20	8/04/2006
Alexander	Eggerer	Grains	Long Grain Rice	60	9/04/2006
George	Li	Pasta	Gnocchi	100	12/04/2006

- The new query can be seen as a new object in the Navigation Pane.



- Currently all this query has done is to display information from the **Orders** table using only the fields chosen as you worked through the wizard.

NOTE: By default, Access has already saved the query using the name provided during the wizard process.

Adding (and removing) criteria to a query

- To utilize the power of a query and locate specific records, criteria must be entered to give the query something to work with.

For example, if there is a need to locate orders placed between certain dates, we would use the **AND** operator with the following type of criteria entered into the date field of the query.

>=01/01/2006 AND <=01/06/2006

Using the **OR** operator you could enter the following criteria into the date field.

22/01/2006 OR 9/04/2006

This criteria would locate records with either of those two dates.

The **NOT** operator could be used to exclude records with certain dates from the query results. For example:

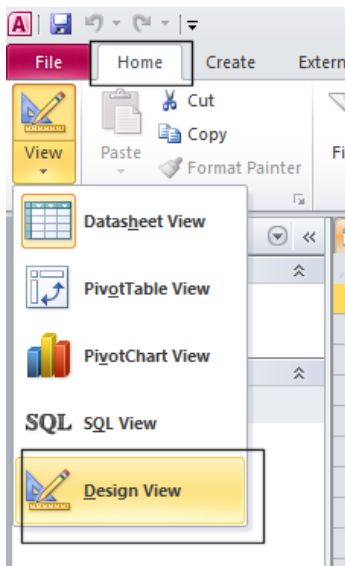
NOT 22/01/2006

This criteria would exclude all records dated **22/01/2006** from the query results.

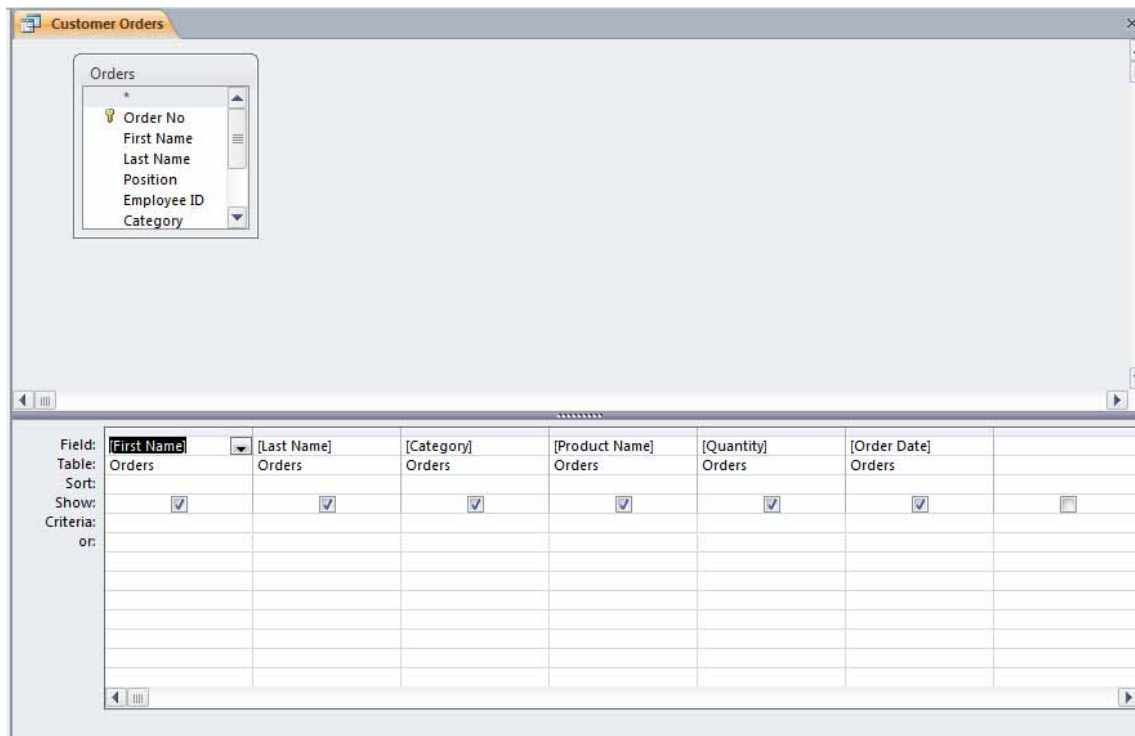
TIP: Operators used to create criteria in queries are the same operators used to create validation rules.

Validation Rule Comparison Operators	Description
>	Greater than
<	Less than
=	Equal to
>=	Greater than or Equal to
<=	Less than or Equal to
<>	Not Equal to

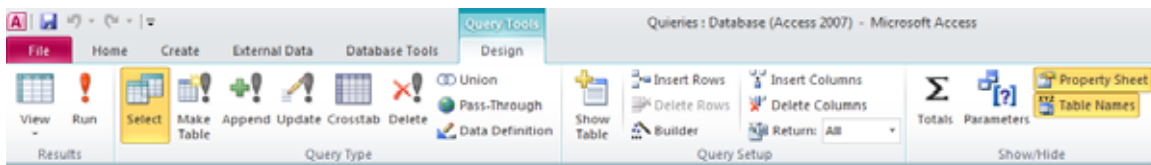
- To add criteria to a query, the query must first be in Design View. Click on the **Home** tab. Click on the down arrow under the **View** button to switch to **Design View**.



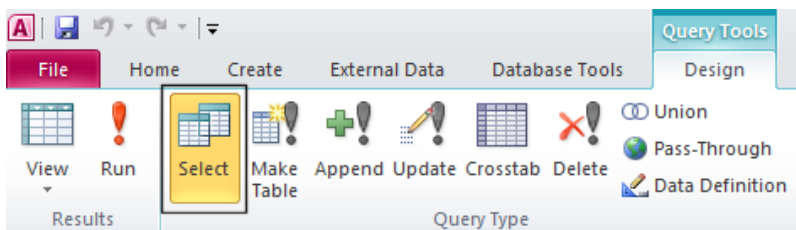
- Your screen will now look like this.



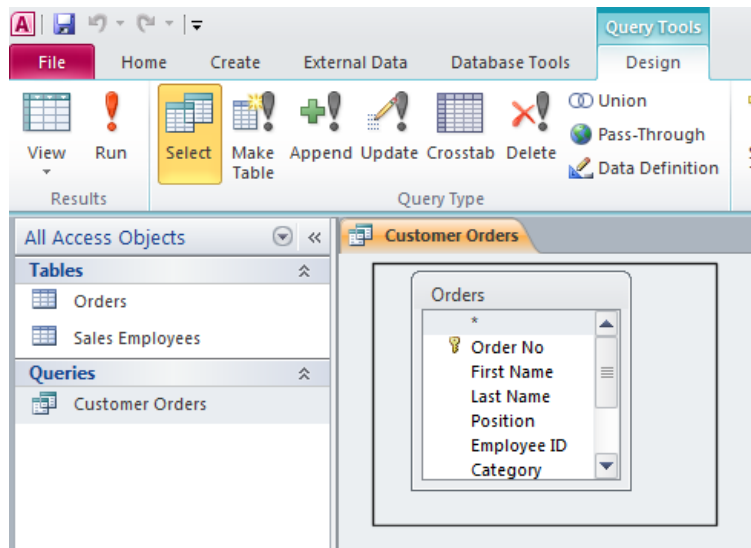
- Similar to other objects when in Design View, queries have their own specific ribbon, functions and tools.



NOTE: Although this is currently a **Select** query, this query can be modified at any stage to become a different type of query and therefore perform a different function.

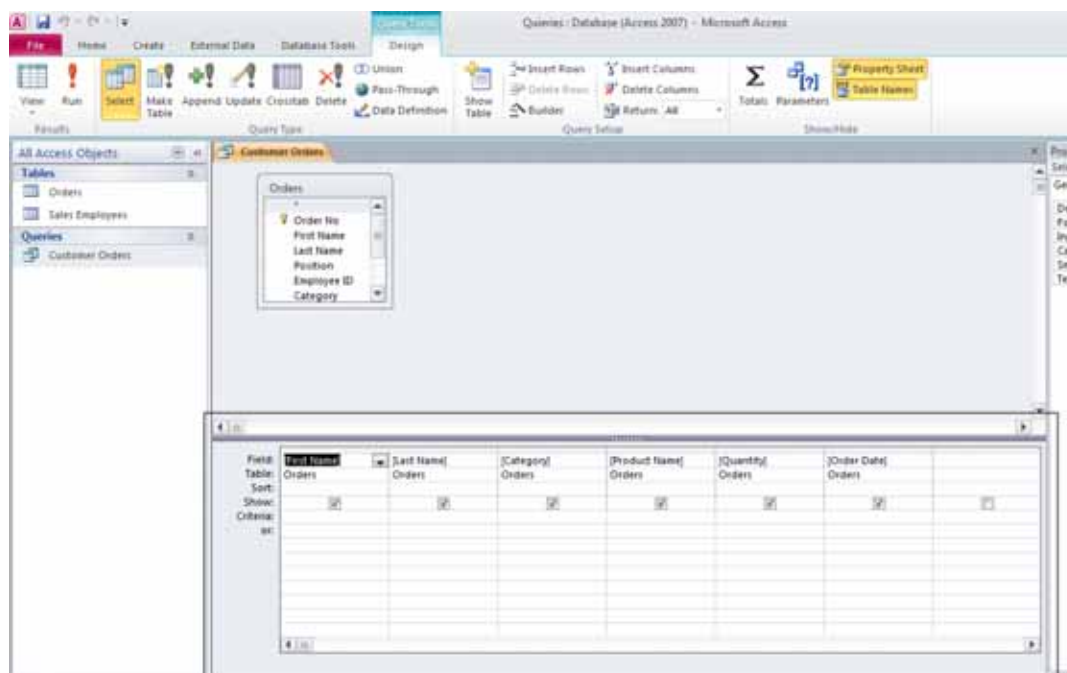


- When working with existing queries, the table field list, located in the Query Design window, is similar to that used when creating relationships between tables. The underlying table can be identified by the name at the top of the list, in this case **Orders**.



NOTE: One difference with this table field list is the * symbol above the Primary Key. When used, the * represents **All** fields in the table and is used to save time.

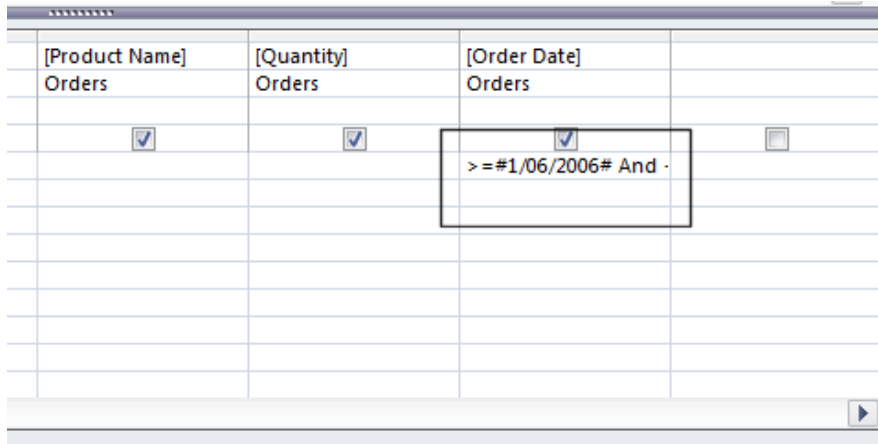
- The Query Design Grid is where selected fields from one or more tables are added, criteria entered, the sort order set and fields set to display or not when the query is run.



NOTE: Fields can be included in the query design grid for criteria (record search) purposes only and they do not have to be displayed when the query is run.

- Place the mouse pointer in the **Criteria** row under the **Order Date** field in the query design grid and type the following.

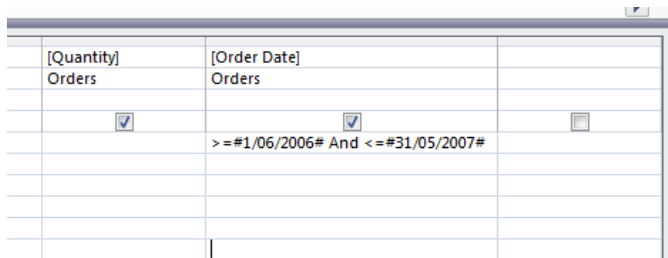
>=1/06/2006 AND <=31/05/2007



- Press the **Enter** key or use the keyboard cursor key to move to another cell in the grid.
- Notice how the criteria entered changes. Access places hash symbols either side of the dates to signify this value as a date.

#

NOTE: You may have to widen the column to see this clearly.

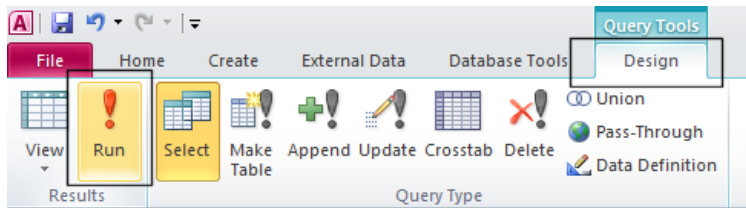


NOTE: Don't do this now, but if you wanted to remove this criteria, you would simply select it in **Design View** and then press the **Del** key to delete it.

Running a query

- When all the necessary fields, criteria, sort parameters, etc., have been entered into a query and it is ready to be tested or used, you will need to 'run' the query.

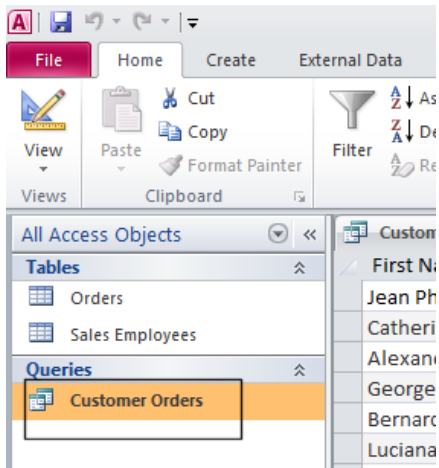
- As an example, when you run a select query, you are giving the query a command to look at its parameters, go and search the table or tables for records matching the criteria and produce a list of those records.
- Click on the **Design** tab and from within the **Results** group click on the **Run** button.



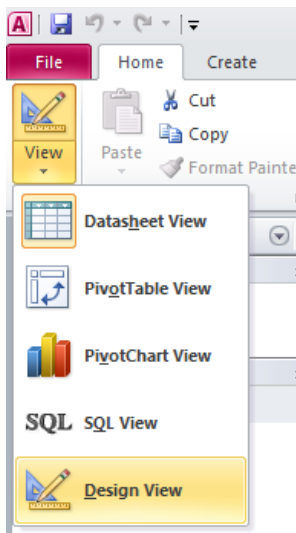
- The results of the query are displayed in table form, as illustrated.

Customer Orders						
First Name	Last Name	Category	Product Name	Quantity	Order Date	
Jean Philippe	Bagel	Cereal	Granola	40	2/06/2006	
Catherine	Autier Miconi	Beverages	Green Tea	20	4/06/2006	
Alexander	Eggerer	Sauces	Hot Pepper Sauce	60	6/06/2006	
George	Li	Grains	Long Grain Rice	100	8/06/2006	
Bernard	Tham	Jams, Preserves	Marmalade	40	10/06/2006	
Luciana	Ramos	Dairy Products	Mozzarella	40	12/06/2006	
Michael	Entin	Condiments	Mustard	40	14/06/2006	
Jonas	Hasselberg	Oil	Olive Oil	80	16/06/2006	
John	Rodman	Pasta	Ravioli	40	18/06/2006	
Run	Liu	Baked Goods & Mixes	Scones	60	20/06/2006	
Karen	Toh	Condiments	Syrup	100	22/06/2006	
Amritansh	Raghav	Sauces	Tomato Sauce	125	24/06/2006	
Soo Jung	Lee	Dried Fruit & Nuts	Walnuts	30	26/06/2006	
Anna	Bedecs	Dried Fruit & Nuts	Almonds	75	28/06/2006	
Antonio	Gratacos Solsona	Beverages	Beer	40	30/06/2006	
Thomas	Aven	Jams, Preserves	Rosensherry Spread	100	2/07/2006	

- Look at the data within the **Order Date** column and you should see that all the dates displayed are within the range specified by the query criteria.
- In the **Navigation Pane**, click once on the **Customer Orders** query to select it.



- Click on the **Design View** button to return to **Design View**.



- Next we want to narrow down the search to purchases made for products which fall under the **Dried Fruit & Nuts** and **Grains** categories, between the date criteria previously set.
- Place the mouse pointer into the **Criteria** row of the query design grid in the **Category** field. Type in the following.

Dried Fruit & Nuts.

Field:	[First Name]	[Last Name]	[Category]	[Product Name]	[Quant
Table:	Orders	Orders	Orders	Orders	Orders
Sort:					
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Criteria:			Dried Fruit & Nuts		
or:					

- Use the keyboard **down arrow** pointer key or mouse to move down to the row below (the 'or' row) in the same field (**Category**).

Field:	First Name	Last Name	Category	Product Name	Quantity	Order Date
Table:	Orders	Orders	Orders	Orders	Orders	Orders
Sort:						
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:			"Dried Fruit" & "Nuts"			>=#1/06/2006# And <=#31/05/2007#
or:			"Grains"			

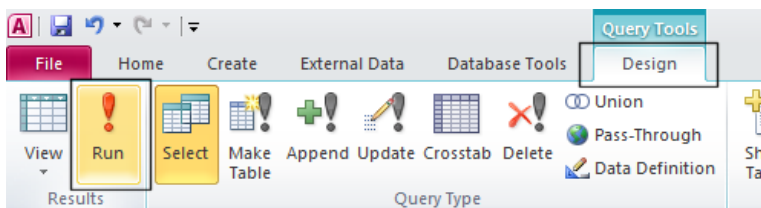
- Type in the following and press the **Enter** key.

Grains

Field:	[First Name]	[Last Name]	[Category]	[Product Name]
Table:	Orders	Orders	Orders	Orders
Sort:				
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:			"Dried Fruit" & "Nuts"	
or:			"Grains"	

NOTE: This time Access encloses the text with "Speech" marks to set the data type to search for as text.

- When run, the query will now search for any records between the date range specified which contain either **Dried Fruit & Nuts** or **Grains**.
- Click on the **Design** tab and from within the **Results** group click on the **Run** button.



- When the results are displayed however they are not what we might have expected. There are no records listing **Dried Fruit & Nuts**.

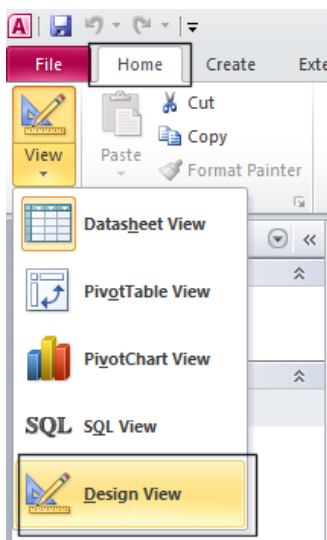
Customer Orders					
First Name	Last Name	Category	Product Name	Quantity	Order Date
Alexander	Eggerer	Grains	Long Grain Rice	60	9/04/2006
George	Li	Grains	Long Grain Rice	100	8/06/2006
George	Li	Grains	Long Grain Rice	100	5/08/2006
George	Li	Grains	Long Grain Rice	100	2/10/2006
Bernard	Tham	Grains	Long Grain Rice	80	21/11/2006
Thomas	Axen	Grains	Long Grain Rice	40	11/02/2007
Martin	O'Donnell	Grains	Long Grain Rice	40	15/02/2007
Amritansh	Raghav	Grains	Long Grain Rice	100	30/05/2007
*					

- It is possible that none of the sales of **Dried Fruit & Nuts** took place between the dates specified but this is unlikely. Either way, it is worth checking the query design to make sure the criteria is correct.

TIP: The easiest way to check the results is to take a look at the table or tables the query is working with. If records matching the criteria are available in the table but not the query, there must be an issue with the query design.

Editing criteria in a query

- Switch back to Design View (using the **View** button).



- As we know the data range works, having run the query prior to adding the **Category** criteria, the problem must be elsewhere. Look at the criteria in the **Category** field.

Field:	[First Name]	[Last Name]	[Category]	[Product]
Table:	Orders	Orders	Orders	Orders
Sort:				
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:			"Dried Fruit" & "Nuts"	
or:			"Grains"	

- When you entered the criteria and moved to the next row, Access added "speech" marks. The criteria went from **Dried Fruit & Nuts** to "**Dried Fruit**" & "**Nuts**".
- Despite all good intentions, Access does not always interpret entries in the way there were intended. Access has seen the **&** between **Dried Fruit** and **Nuts** and interpreted this to be two statements;

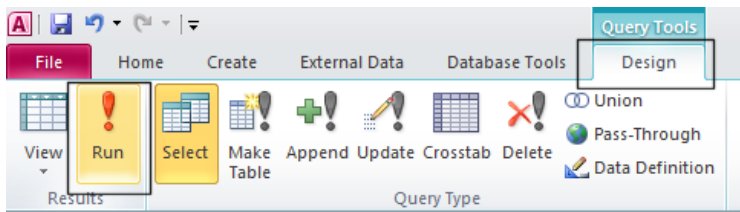
- 1) **Dried Fruit**
- 2) **Nuts**.

- As no such entries exist in the table, nothing was displayed.
- Place the pointer into the **Criteria** row of the **Category** field and remove the two "speech" marks either side of the **&** symbol.

The result should be "**Dried Fruit & Nuts**".

Field:	[First Name]	[Last Name]	[Category]	[Product]
Table:	Orders	Orders	Orders	Orders
Sort:				
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:			"Dried Fruit & Nuts"	
or:			"Grains"	

- Press **Enter** to commit the changes.
- Click on the **Design** tab and from within the **Results** group click on the **Run** button.

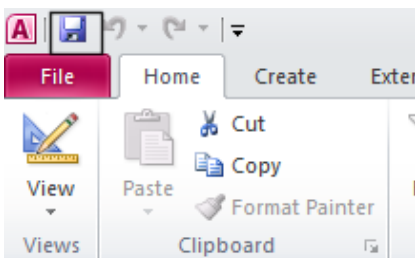


- The results are displayed and this time includes records which contain the category **Dried Fruit & Nuts** according to the criteria set.

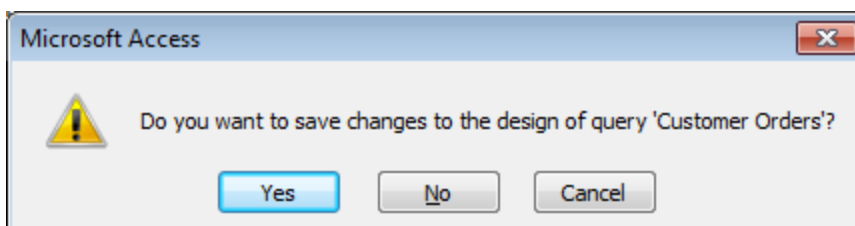
Customer Orders					
First Name	Last Name	Category	Product Name	Quantity	Order Date
Alexander	Eggerer	Grains	Long Grain Rice	60	9/04/2006
George	Li	Grains	Long Grain Rice	100	8/06/2006
Soo Jung	Lee	Dried Fruit & Nuts	Walnuts	30	26/06/2006
Anna	Bedecs	Dried Fruit & Nuts	Almonds	75	28/06/2006
John	Edwards	Dried Fruit & Nuts	Dried Apples	40	20/07/2006
Andre	Ludick	Dried Fruit & Nuts	Dried Pears	20	22/07/2006
Carlos	Grilo	Dried Fruit & Nuts	Dried Plums	120	24/07/2006
George	Li	Grains	Long Grain Rice	100	5/08/2006
Soo Jung	Lee	Dried Fruit & Nuts	Walnuts	30	23/08/2006
Anna	Bedecs	Dried Fruit & Nuts	Almonds	75	25/08/2006
John	Edwards	Dried Fruit & Nuts	Dried Apples	40	16/09/2006
Andre	Ludick	Dried Fruit & Nuts	Dried Pears	20	18/09/2006

Saving a query

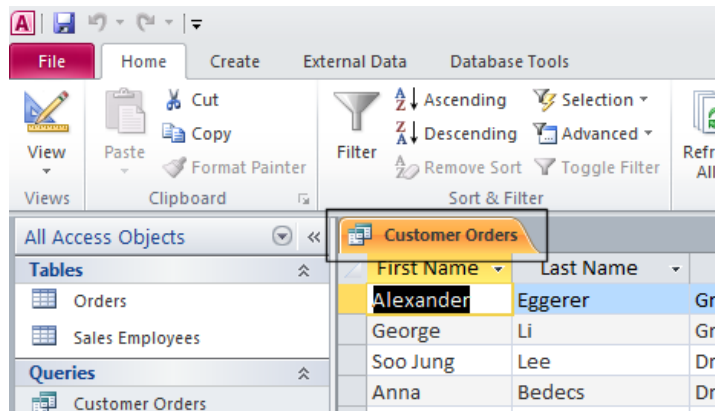
- When first created using the Access wizard, a query is saved automatically. If the query is then modified at a later stage or you create a blank query, you will need to save using the **Save** button.



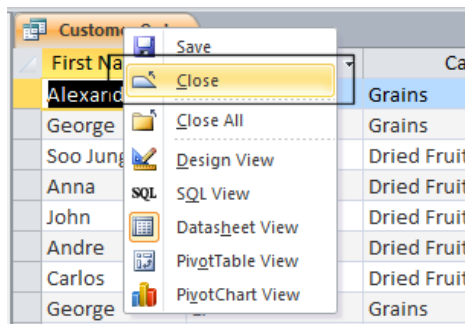
- If you make changes to a query and then run the query, then when you exit the query without saving, you will be prompted to save the query.



- Click on the **Yes** button to save any changes, otherwise they will be lost and you will have to start afresh.
- Right click on the **Customers Orders** query tab.

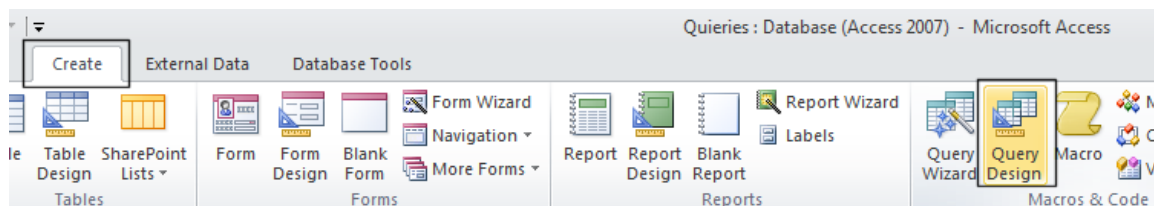


- This will display a popup menu. Select the **Close** command. If prompted, click on the **Yes** button to save the query.

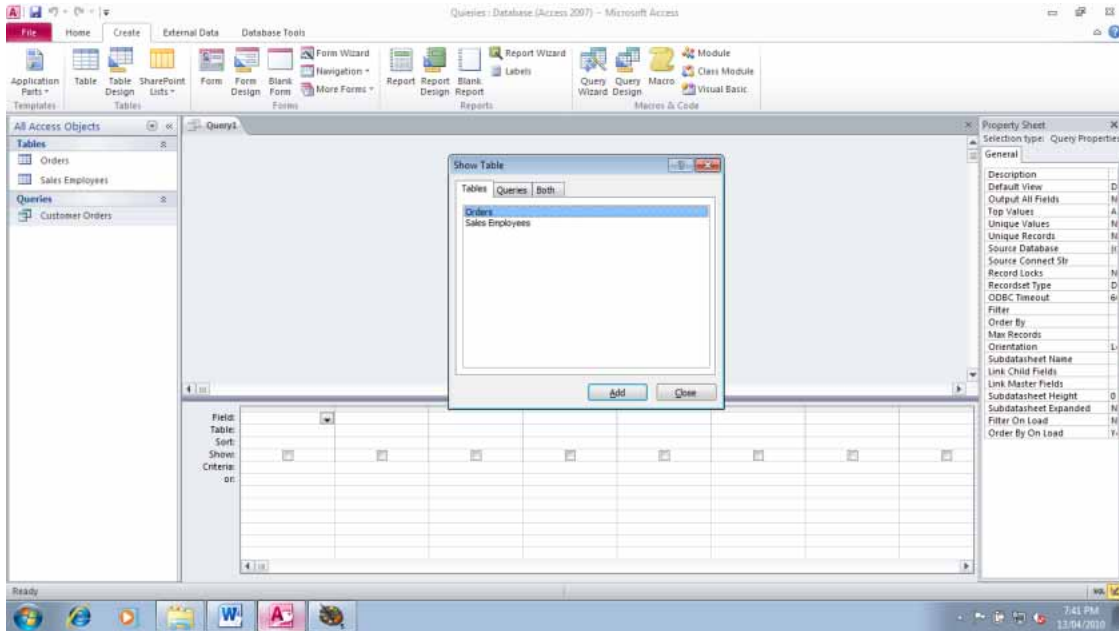


Creating a two table query and sorting the results

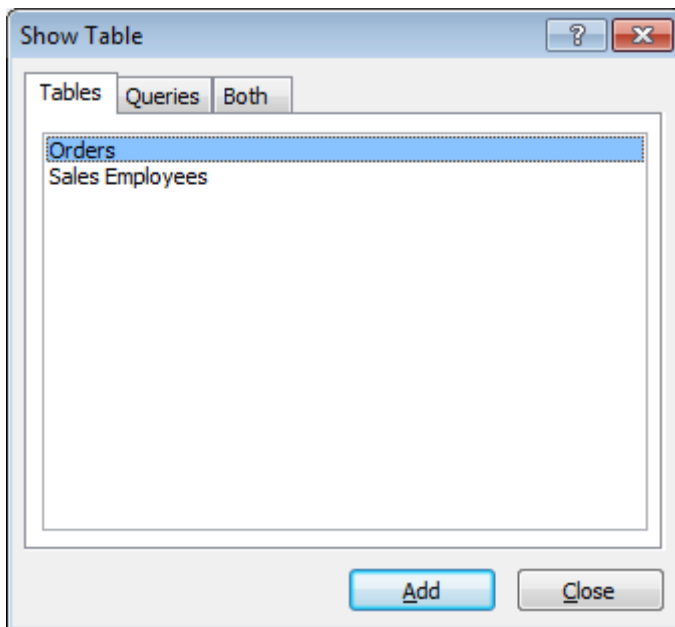
- More often than not, the information in a database will be split across multiple tables. For a query to work with multiple tables, a relationship between the tables must be established.
- Continuing with the **Queries** database and the **Customer Orders** query, the next objective is to search for records matching a given criteria, using both the **Orders** and **Sales Employees** table.
- Click on the **Create** tab and from within the **Macros & Code** group, click on the **Query Design** button.



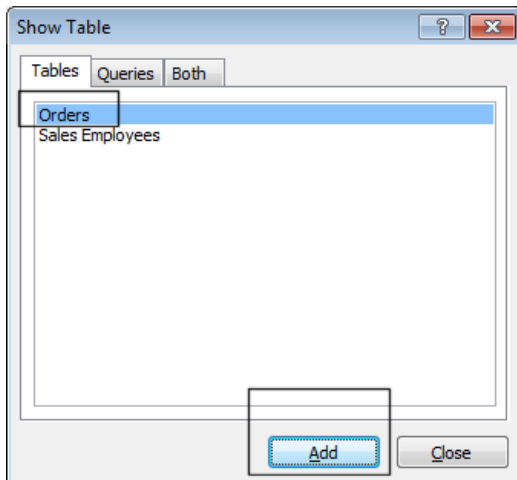
- The Query Design window is displayed.



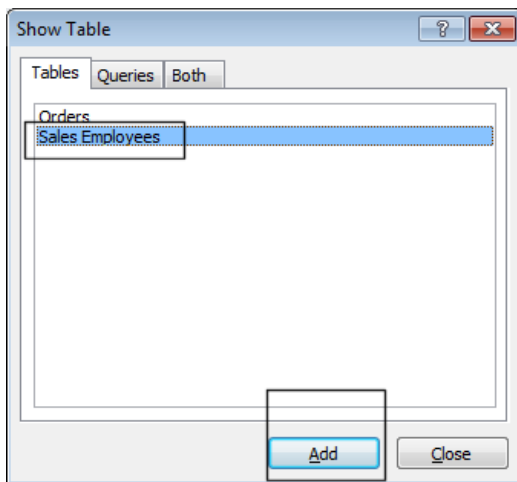
- The **Show Table** dialog box is also displayed, similar to the one used to add tables when creating table relationships.



- Click on the **Add** button to add the **Orders** table.



- Select the **Sales Employees** table and click on the **Add** button again.

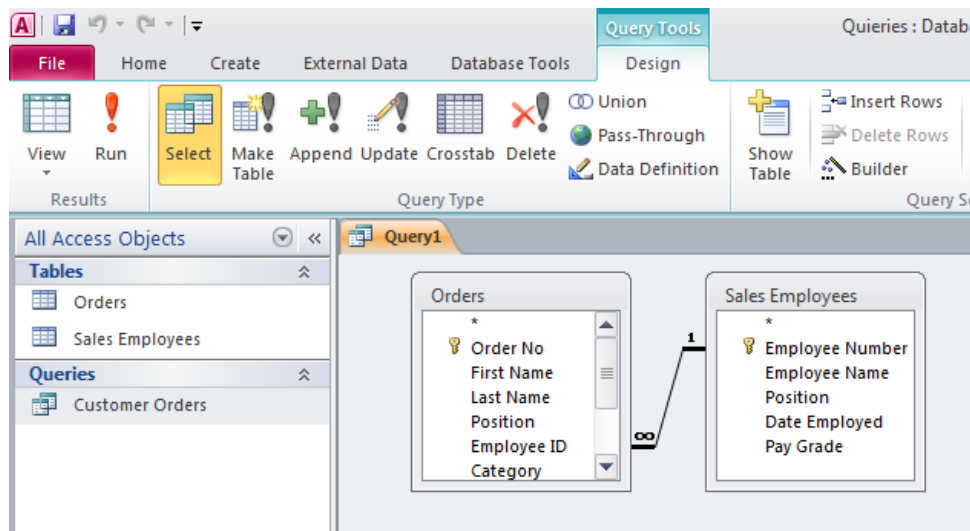


TIP: Double clicking on both table names quickly adds them to the query design window.

- When both tables have been added to the query design window, click on the **Close** button to close the **Show Table** dialog box.

NOTE: If you inadvertently add a table twice to the query design window, with the pointer in the name area at the top of the additional table, (normally identified by the Original Table name with a _1 after the name), click using the right mouse button and from the shortcut menu, select **Remove**. See next image.

- When the **Show Table** dialog box is closed, the design window should be left with two linked tables.

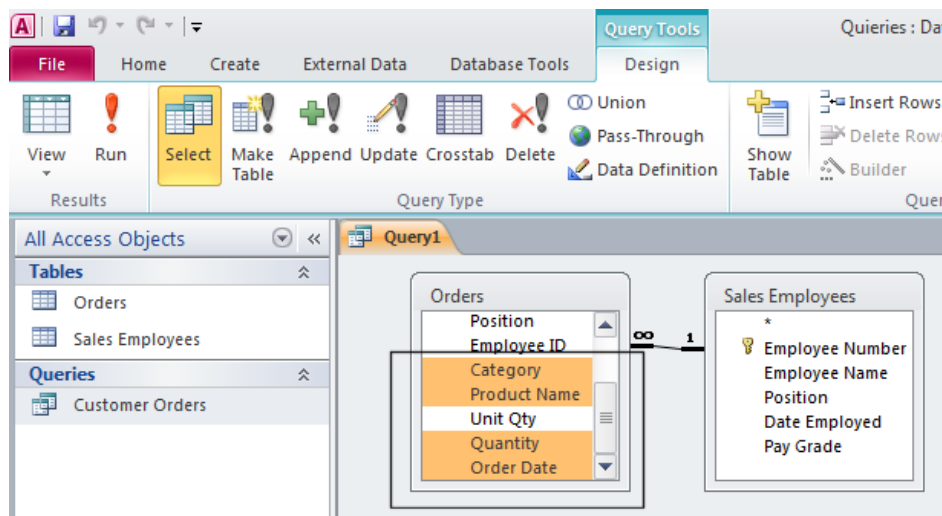


- The purpose of this query is to check the sales performance of staff. The **Sales Employees** table contains the names of each of the sales teams and other staff information. The **Orders** table contains information about products sold, quantities, dates, etc.
- A relationship between the two tables has already been established with the **Employee Number** (Primary key) field in the **Sales Employees** table linked to the **Employees ID** (Foreign key) field in the **Orders** table.
- **Employee names** are not listed in the **Orders** table. To have the query display the names of staff against the orders they have processed, a query will have to include fields from both tables.
- In the **Orders** table, click once to select the **Category** field. Now hold down the **Ctrl** key and click once on each of the following fields.

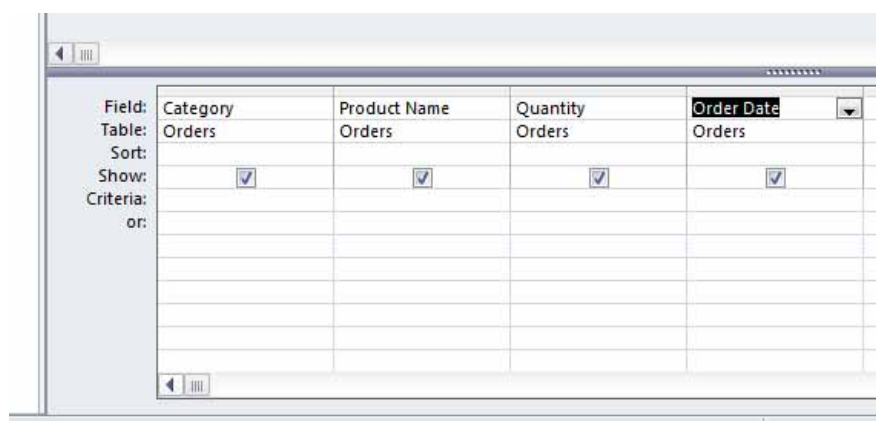
NOTE: You may need to scroll down the list to see all these items.

Product Name
Quantity
Order Date.

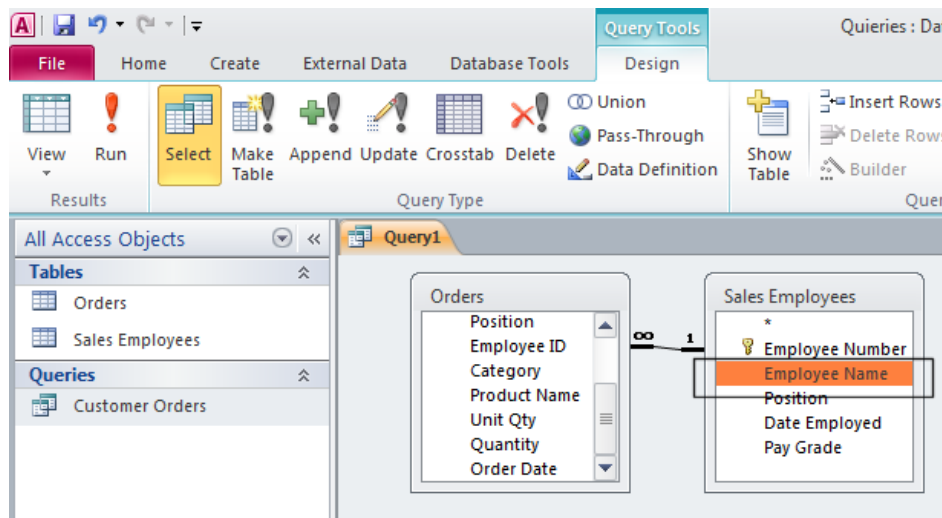
- Release the **Ctrl** key and the four fields should now be highlighted within the **Orders** table.



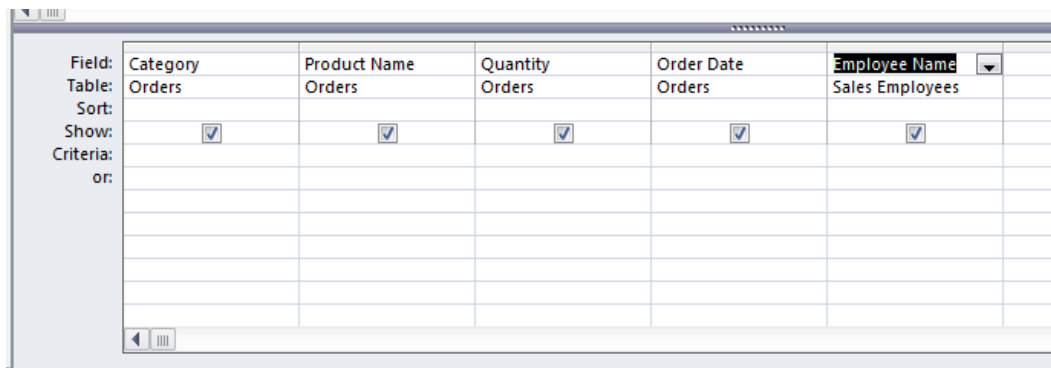
- In one movement, place the pointer over one of the highlighted fields, click and drag to the design grid below. When the pointer is in the grid, release the mouse button. The fields are added to the design grid and are ordered from left to right as they would be in the table.



- Next click to select the **Employee Name** field in the **Sales Employee** table.

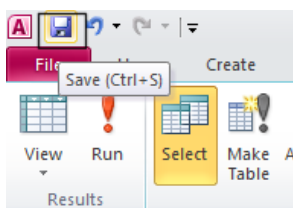


- Click and drag the **Employee Name** field down and to the next blank column to the right of the **Order Date** field.
- With the pointer correctly positioned, release the mouse button to add the field.

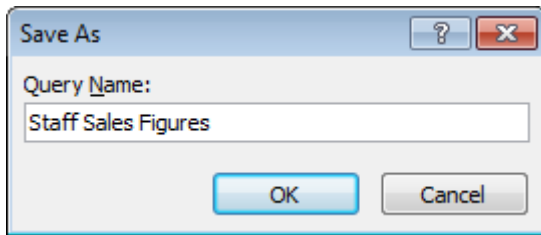


NOTE: The table row of the query design grid displays the names of the tables used in this query.

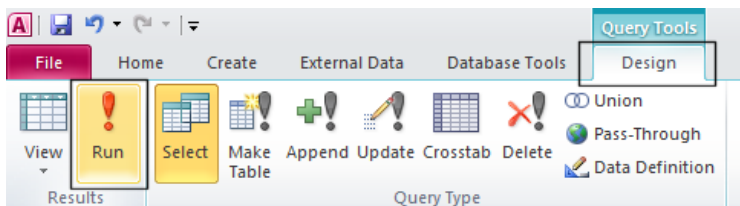
- Click on the **Save** button.



- When prompted to name the query, type in **Staff Sales Figures**.



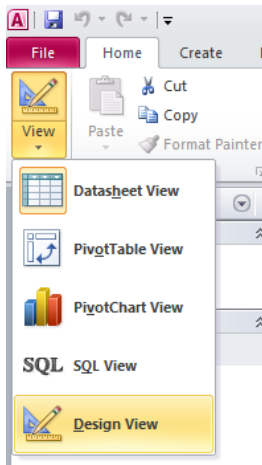
- Click on the **OK** button to name and save the query.
- Click on the **Design** tab and within the **Results** group click on the **Run** button.



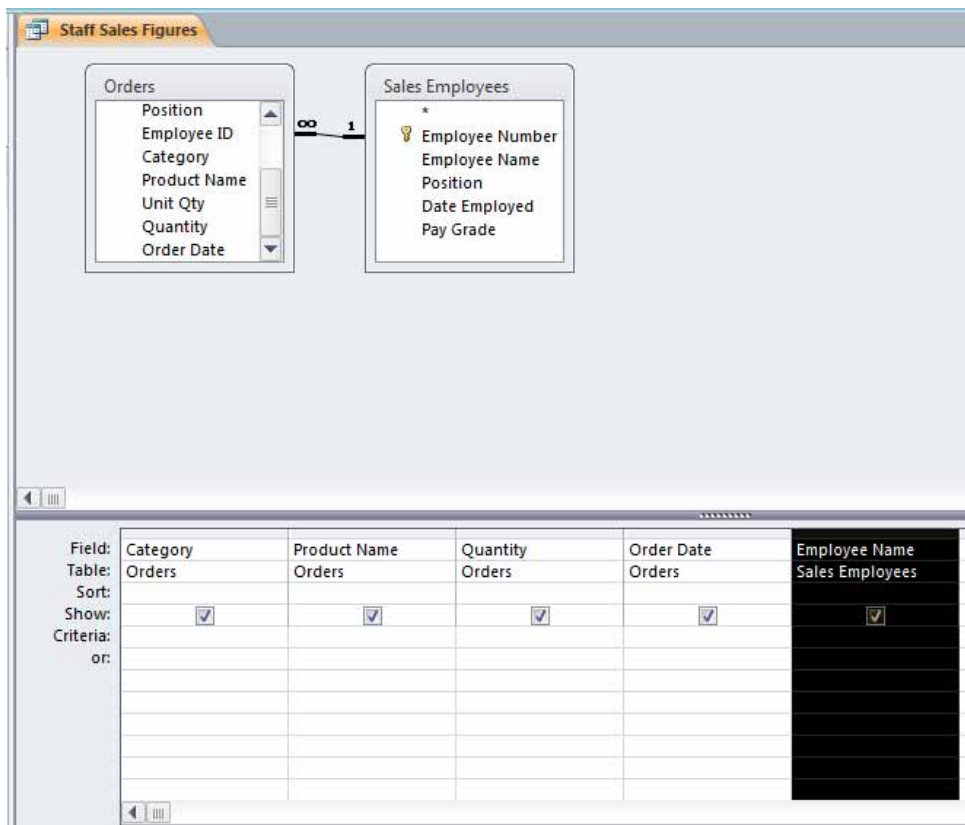
- The query displays a table containing a list of all the sales staff and the orders placed with each member of staff. At this time the table is arranged in order of **Employee ID**, the primary key field, even though this field was not included in the query design.

Category	Product Name	Quantity	Order Date	Employee Name
Canned Meat	Crab Meat	120	24/03/2006	Mariya Sergienko
Jams, Preserves	Boysenberry Spread	100	5/05/2006	Mariya Sergienko
Candy	Chocolate	100	11/05/2006	Mariya Sergienko
Condiments	Mustard	40	14/06/2006	Mariya Sergienko
Baked Goods & Mixes	Scones	60	20/06/2006	Mariya Sergienko
Baked Goods & Mixes	Chocolate Biscuits Mix	40	10/07/2006	Mariya Sergienko
Oil	Olive Oil	80	13/08/2006	Mariya Sergienko
Condiments	Syrup	100	19/08/2006	Mariya Sergienko
Soups	Clam Chowder	40	8/09/2006	Mariya Sergienko
Pasta	Ravioli	40	12/10/2006	Mariya Sergienko
Sauces	Tomato Sauce	125	18/10/2006	Mariya Sergienko
Beverages	Coffee	40	15/11/2006	Mariya Sergienko
Dried Fruit & Nuts	Dried Apples	40	19/11/2006	Mariya Sergienko
Pasta	Gnocchi	40	23/11/2006	Mariya Sergienko
Sauces	Tomato Sauce	125	29/11/2006	Mariya Sergienko

- Switch to **Design View** by clicking on the **View** button.



- Move the mouse pointer to just above the **Employee Name** field name (within the lower section of the screen) where there is a thin grey line and until the pointer changes to a **down arrow** shape.
- With the **down arrow** shape as the pointer, click to highlight the **Employee Name** field.

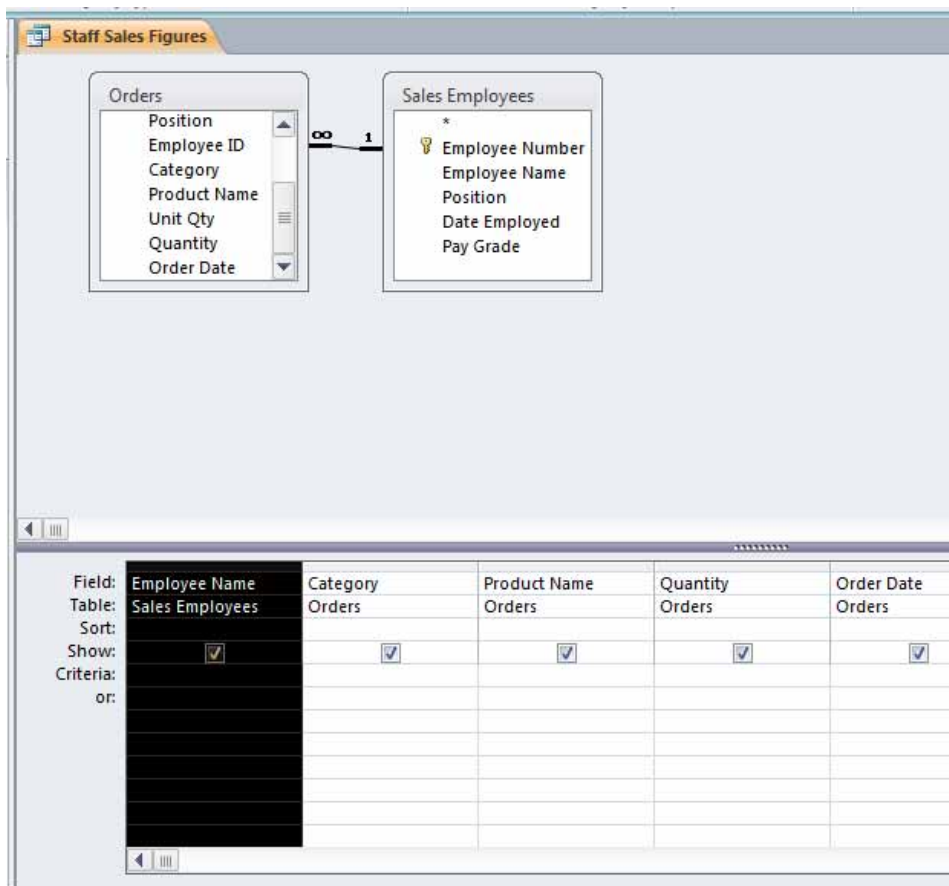


- Move the **pointer** once more to just above the **Employee Name** field name where there is a thin line and until the pointer this time changes to an arrow shape.

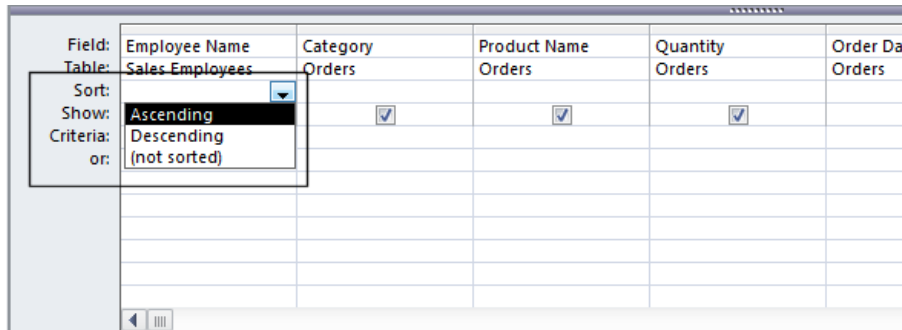


- In one movement, click and drag the field to the left of the **Category** field, then release the mouse button.

NOTE: As always, Access provides a thick black guideline to highlight the current position of the moving field before release. The **Employee Name** field should now be on the left side of the query design grid.



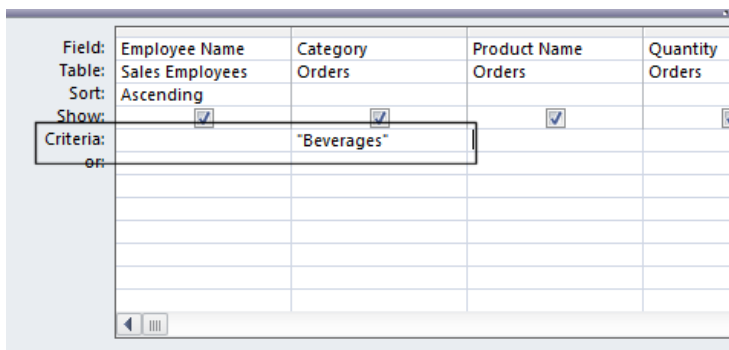
- Using the pointer, click in the **Sort** row under the **Sales Employees** field. Then click on the **down arrow** displayed in this cell.



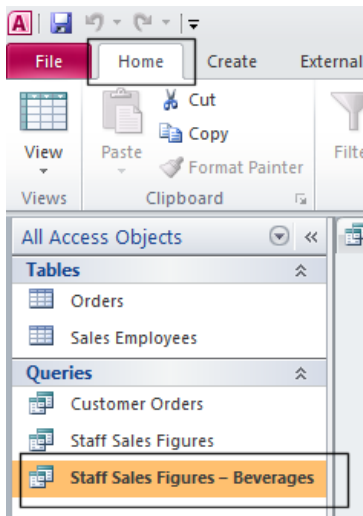
- Select **Ascending** from the drop down option box. When run, this query will display the results in alphabetical order of **Employee Names**, rather than order of **Employee ID**.
- Click into the **Criteria** row of the **Category** field, type in the following word and then press the **Enter** key.

Beverages

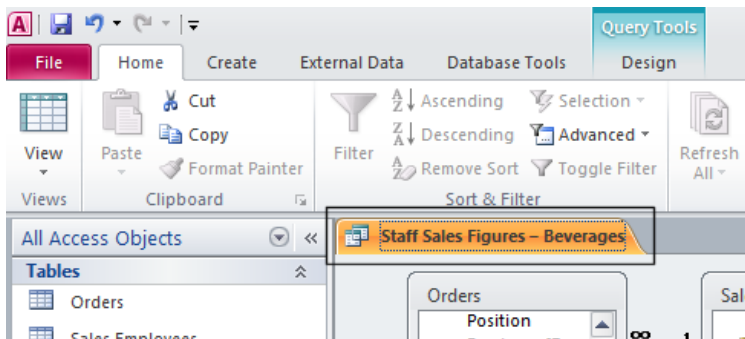
When run, this query will return only records which match **Beverages** in the **Category** field.



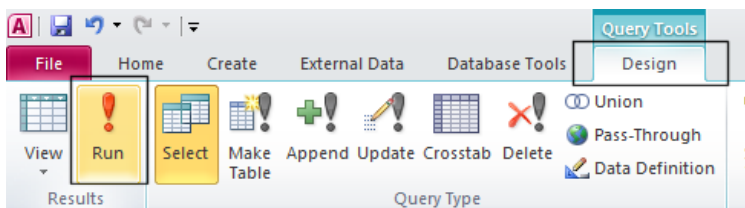
- Click on the **tick box** above the criteria you just entered in the **Category** field. This will remove the tick. Although the **Category** field is used by the query to specify search criteria, the field does not have to be displayed in the final results.



- The query tab also changes to display the new name, as illustrated



- Click on the **Design** tab and from within the **Results** group click on the **Run** button.



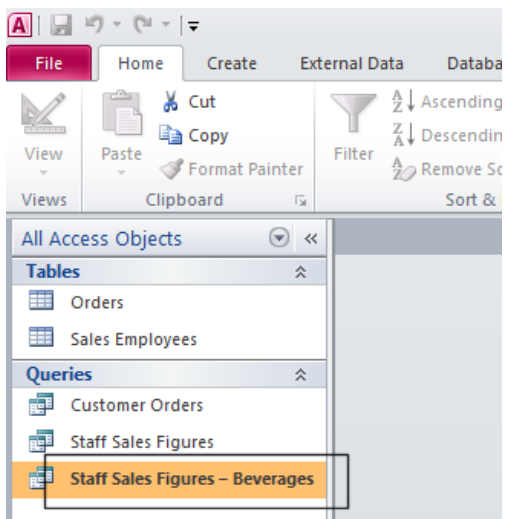
- The results of the modified query are displayed. Only records matching the search criteria **Beverages** in the **Category** field are displayed and the **Category** field is hidden.

Staff Sales Figures – Beverages			
Employee Name	Product Name	Quantity	Order Date
Andrew Cencini	Green Tea	80	7/02/2007
Andrew Cencini	Chai	80	2/09/2006
Andrew Cencini	Coffee	40	14/07/2006
Andrew Cencini	Green Tea	100	9/12/2006
Andrew Cencini	Beer	20	19/12/2006
Andrew Cencini	Beer	40	30/06/2006
Anne Hellung-Larsen	Coffee	40	10/09/2006
Anne Hellung-Larsen	Green Tea	20	1/08/2006
Anne Hellung-Larsen	Coffee	40	19/06/2007
Anne Hellung-Larsen	Coffee	100	20/01/2007
Anne Hellung-Larsen	Green Tea	20	28/09/2006
Anne Hellung-Larsen	Beer	40	15/03/2007

- Save your changes and close the Access program.

Refining your query

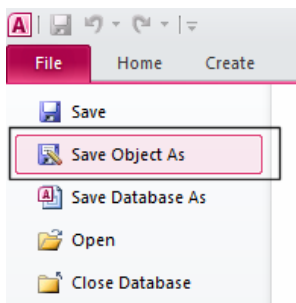
- Start the Access program.
- Open a database called **Refining a query**.



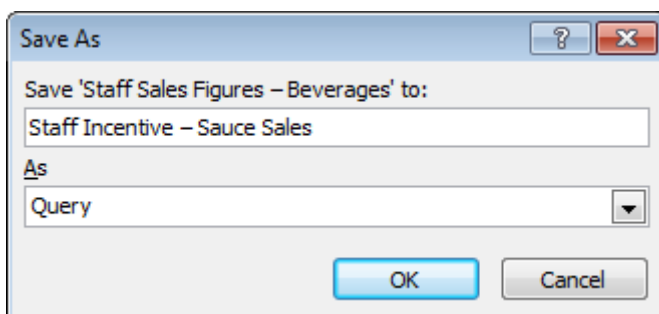
- Double click on the **Staff Sales Figures – Beverages** query.

Staff Sales Figures – Beverages				
Employee Name	Product Name	Quantity	Order Date	
Andrew Cencini	Green Tea	80	7/02/2007	
Andrew Cencini	Chai	80	2/09/2006	
Andrew Cencini	Coffee	40	14/07/2006	
Andrew Cencini	Green Tea	100	9/12/2006	
Andrew Cencini	Beer	20	19/12/2006	
Andrew Cencini	Beer	40	30/06/2006	
Anne Hellung-Larsen	Coffee	40	10/09/2006	
Anne Hellung-Larsen	Green Tea	20	1/08/2006	
Anne Hellung-Larsen	Coffee	40	19/06/2007	
Anne Hellung-Larsen	Coffee	100	20/01/2007	
Anne Hellung-Larsen	Green Tea	20	28/09/2006	

- What if there was a bonus incentive for staff who sold more than **40** items of any **Sauce** products since **01/01/2007**. Also **Nancy Freehafer** has left the company; therefore we want to exclude her from the search.
- You can use and modify an existing query; however the query should be given a new name and saved before changes go ahead.
- Click on the **File** tab and click on the **Save Object As** button.

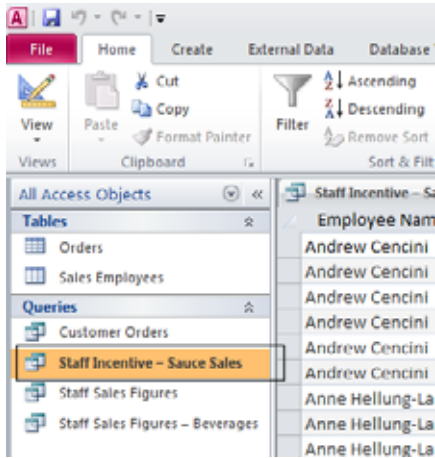


- In the **Save As** dialog box, replace the default name with:
Staff Incentive – Sauce Sales.

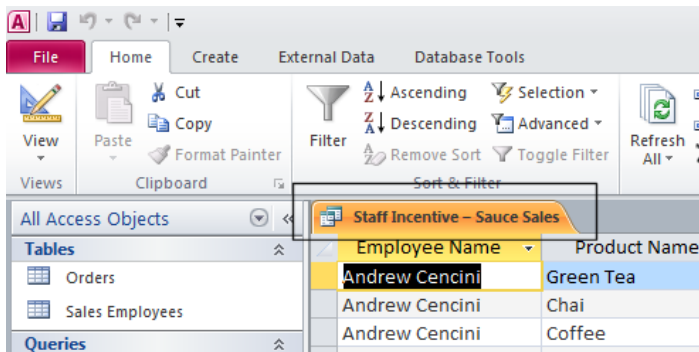


- Click on the **OK** button.

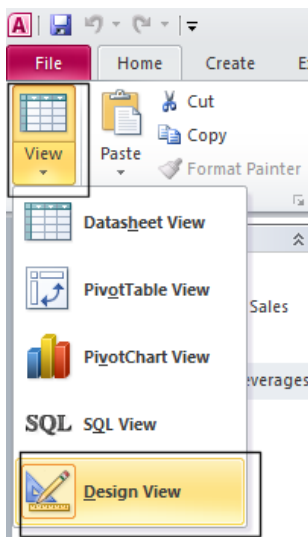
- Click on the **Home** tab and the Navigation Pane displays the newly saved query.



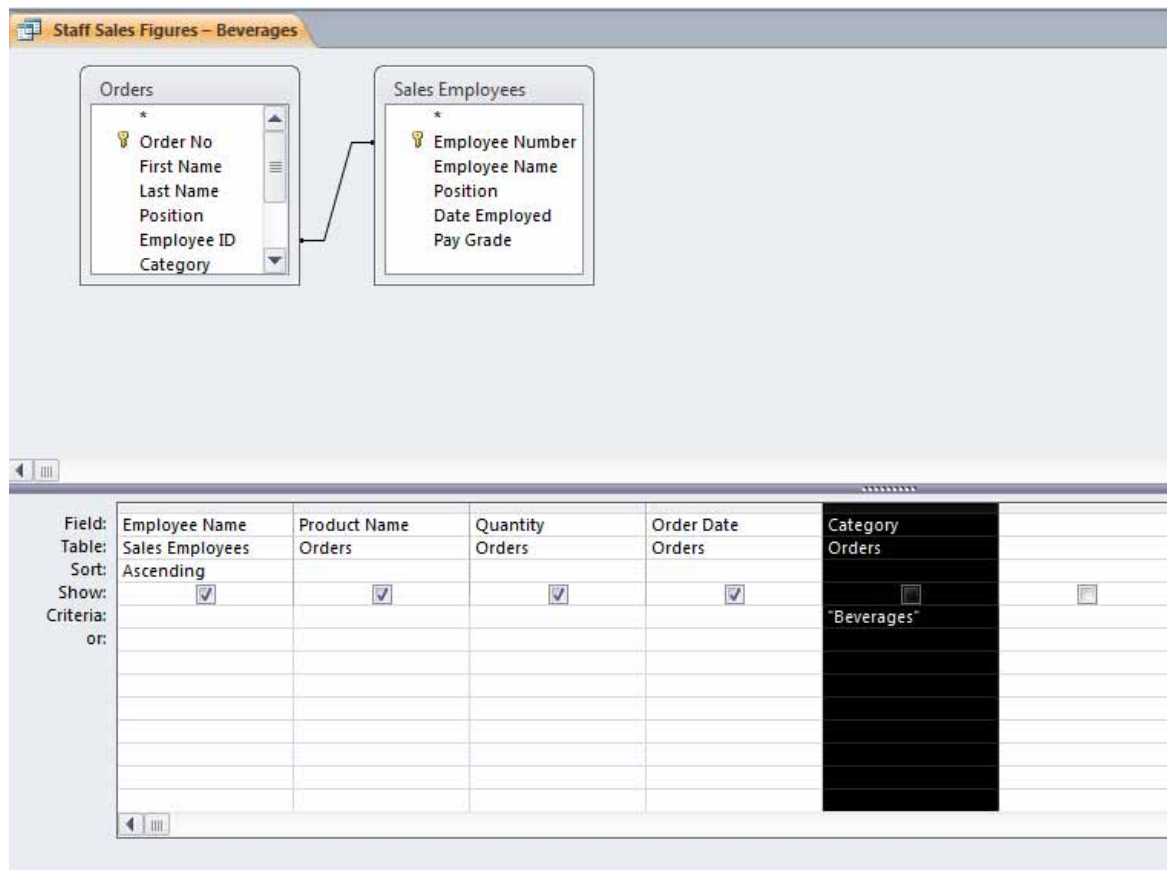
- The query tab also changes to display the new name.



- Click on the **Home** tab, click on the **View** button and then click on **Design View**.



- Move the pointer to just above the **Category** field name where there is a thin grey line and until the pointer changes to a **down arrow** shape. With the **down arrow** shape as the pointer, click to highlight the **Category** field.



- With the field highlighted, press the **Delete** key on the keyboard to delete the field from the grid.

Field:	Employee Name	Product Name	Quantity	Order Date	
Table:	Sales Employees	Orders	Orders	Orders	
Sort:	Ascending				
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Criteria:					
or:					

- Click within the **Criteria** row of the **Employee Name** field and type:

<>Nancy Freehafer

Then press the **Enter** key.

Field:	Employee Name	Product Name	Quantity
Table:	Sales Employees	Orders	Orders
Sort:	Ascending		
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:	<> Nancy Freehafer		
or:			

- Click into the **Criteria** row of the **Product Name** field and type:

Like *Sauce*

Then press the **Enter** key.

Field:	Employee Name	Product Name	Quantity
Table:	Sales Employees	Orders	Orders
Sort:	Ascending		
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:	<> *Nancy Freehafer	Like *Sauce*	
or:			

NOTE: Wildcards such as the * can be used to signify, in this case for example, that the word **Sauce** can appear anywhere in the **Product Name** description.

- Click into the **Criteria** row of the **Quantity** field and type the following and press the **Enter** key.

>40

Field:	Employee Name	Product Name	Quantity	Order Date
Table:	Sales Employees	Orders	Orders	Orders
Sort:	Ascending			
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:	<> *Nancy Freehafer	Like **Sauce**	>40	
or:				

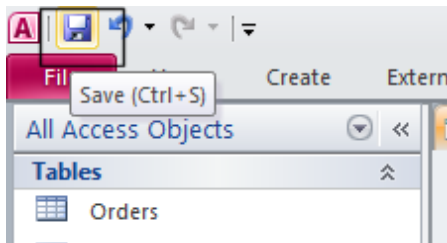
- Click into the **Criteria** row of the **Order Date** field and type

>=01/01/2007

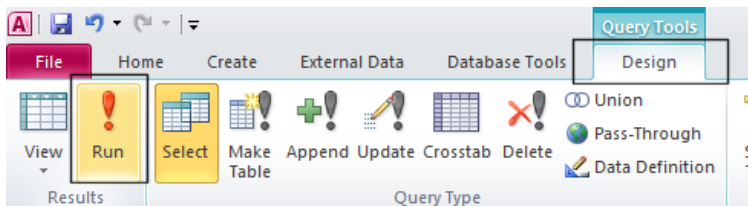
and press the **Enter** key.

Field:	Employee Name	Product Name	Quantity	Order Date
Table:	Sales Employees	Orders	Orders	Orders
Sort:	Ascending			
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:	<> "Nancy Freehafer"	Like "**Sauce**"	>40	>=01/01/2007
or:				

- Click on the **Save** button in the Quick Access toolbar to save the changes to the new query.



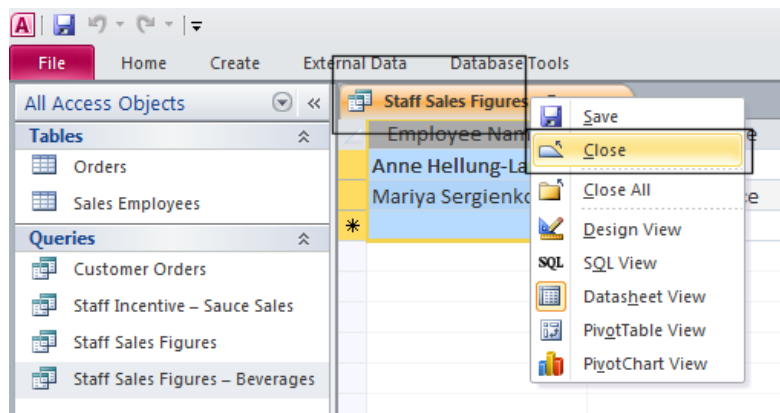
- Click on the **Design** tab and from within the **Results** group click on the **Run** button.



- Your screen will now look like this.

Employee Name	Product Name	Quantity	Order Date
Anne Hellung-Larsen	Curry Sauce	100	6/05/2007
Mariya Sergienko	Hot Pepper Sauce	100	5/06/2007

- Right click on the **Staff Incentive – Sauce Sales** query tab and from the popup menu displayed select the **Close** command.



- Close the Access program.

What are Wildcards?

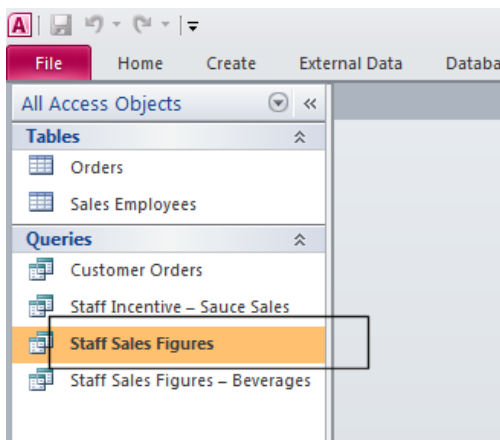
- Wildcards are special characters that you can use within a query to specify or exclude certain characters. If you examine the charts below, they should become more understandable.

Wildcard	Function	Examples
%	Matches multiple characters within a string at the start or finish of a character string.	wh% would find: when what which It would not find: awhile watch water
_	Matches a single alphabetic character within a string	B_II would find: bull ball bell It would not find: Bail
[]	Matches any single character defined within the brackets.	B[ae]II would find: ball bell

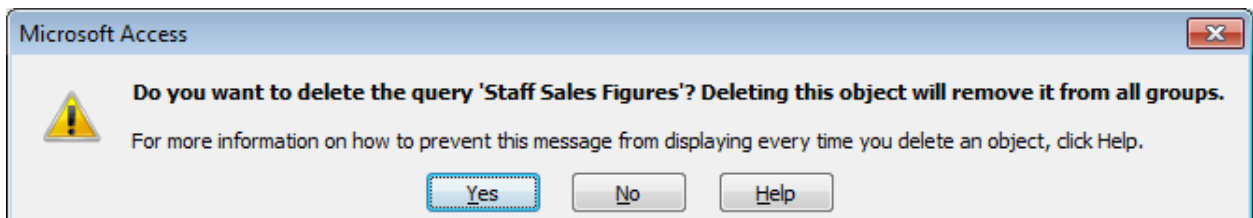
		It would not find: bill
^	Matches any character not defined within the brackets.	b[^ae]ll would find: bill bull It would not find: ball bell
-	Matches any one of a range of characters defined within the brackets, which must be defined in ascending order, i.e. A to Z and not Z to A.	z[a-c]z would find: xaz xbz xcz

Deleting a query

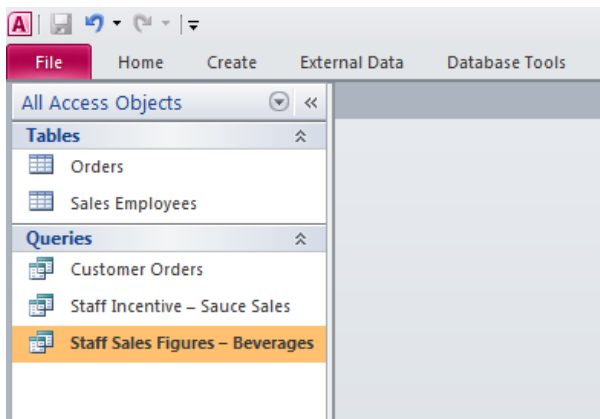
- In the **Navigation Pane**, click once to highlight the **Staff Sales Figures** query.



- Press the **Delete** key on the keyboard. Access displays a warning dialog box.



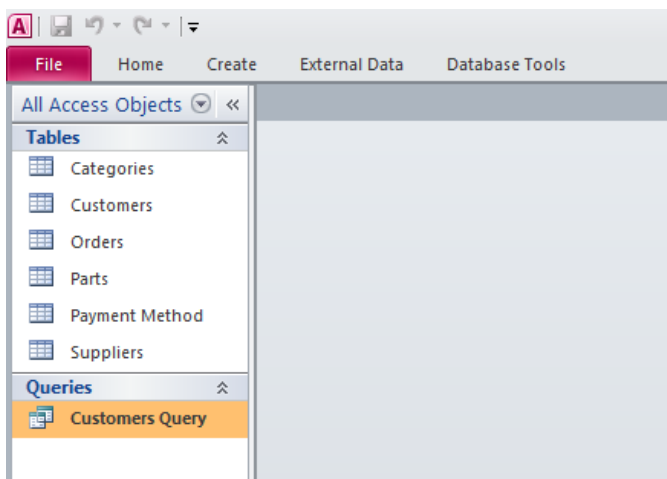
- Click on the **Yes** button to continue and delete the query. The screen will now look like this



- Close Access.

Hiding and un-hiding fields within a query

- Open the Access program.
- Open a database called **Hiding**. Your screen will look like this.



- Double click on the query called **Customers Query** and you will see the following.

Custid	Customer Name	House / Building	Street	City	State	Zip Code or	Country	Contact Number
1	J Smith	8	Bent St	Highgate	London	GL50 2LD	UK	01242 227200
2	P Harris	22	McCormick Drive	Joondalup	WA	6005	Australia	9300 1505
3	G Singh	Block 121 #35	East Avenue	Madison	AL	35758	USA	256 461 8000
•	(New)							

- To hide the **City** field, we need to select the **City** column. To select this column click at the top of the City column, as illustrated below.

Building	Street	City	State	Zip Code
	Bent St	Highgate	London	GL50 2LD
	McCormick Drive	Joondalup	WA	6005
Block 121 #35	East Avenue	Madison	AL	35758

- Right click over the top cell containing the word **City** and from the popup menu displayed select the **Hide Fields** command.

Building	Street	City	State	Zip Code
	Bent St	Highgate	London	GL50 2LD
	McCormick Drive	Joondalup	WA	6005
	East Avenue	Madison	AL	35758

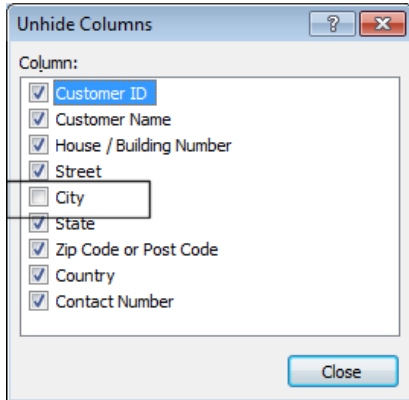
- The screen will change as illustrated below. The **City** column has been hidden.

House / Building	Street	State	Zip Code or	Country
8	Bent St	London	GL50 2LD	U
22	McCormick Drive	WA	6005	A
Block 121 #35	East Avenue	AL	35758	U

- To unhide the hidden column you need to select the columns either side of the hidden column, as illustrated below. Now when you right click over the selected columns you will now see the **Unhide Columns** command.

House / Building	Street	State	Zip Code or	Country
8	Bent St	London	GL50 2LD	U
22	McCormick Drive	WA	6005	A
Block 121 #35	East Avenue	AL	35758	U

- Clicking on this command will display the **Unhide Columns** dialog box.



- Click on the column that is hidden, in this case **City** and then click on the **Close** button. The column will then become visible, as illustrated below.

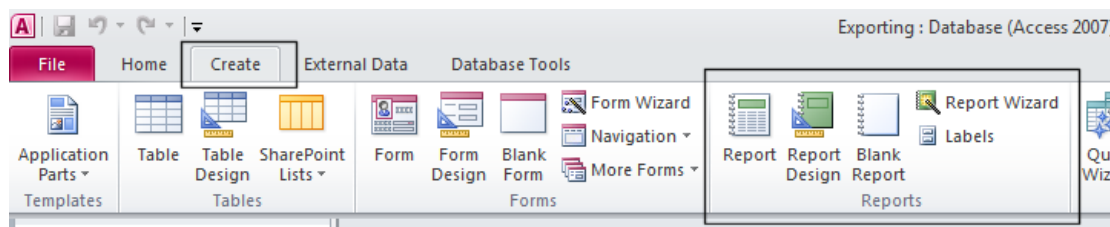
Iding ▾	Street ▾	City ▾	State ▾	Zip Co
	Bent St	Highgate	London	GL50 :
	McCormick Drive	Joondalup	WA	6005
:5	East Avenue	Madison	AL	35758

- Save your changes and close the database.

Reports

What are reports?

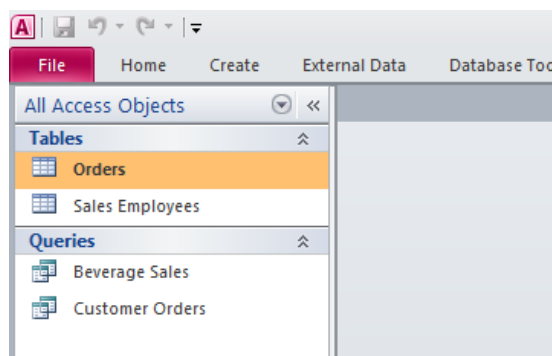
- In Access, a report is a summary generated from information in a table or query. Access provides you with a number of tools that help you to quickly build reports that present the data in an organized, meaningful and easy-to-read layout. These reports can then be printed.
- You can use the commands on the **Create** tab to create a simple report with a single click, use the **Report Wizard** to create a more complicated report or create a report from scratch by adding all the data and formatting elements.



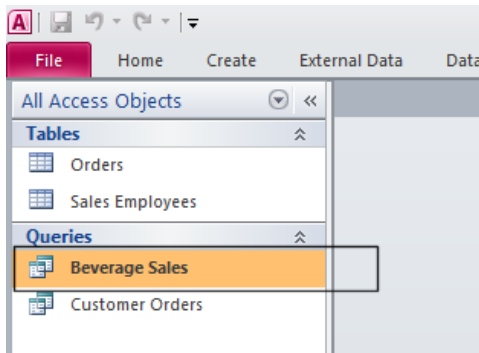
- Whichever method you choose, you will probably need to make at a few changes to the design, for example, adjusting column positions and widths to fine tune the final output of the report (how it displays on the screen or printed).

Creating a simple report

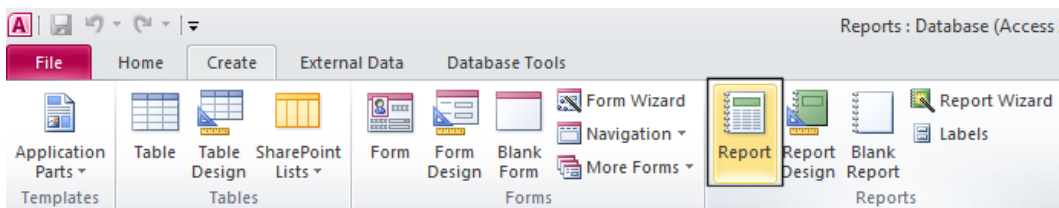
- Reports are based on information in tables or queries. If the report is to be based on information contained in more than one table, a relationship must exist, however it is far more likely that a query has already been created to produce the information required for the report.
- Click on the **File** tab and click on **Open** and open a file called **Reports** contained within your samples folder.
- The database opens with two tables (**Orders** and **Sales Employees**) and two queries (**Beverage Sales** and **Customer Orders**) displayed in the Navigation Pane.



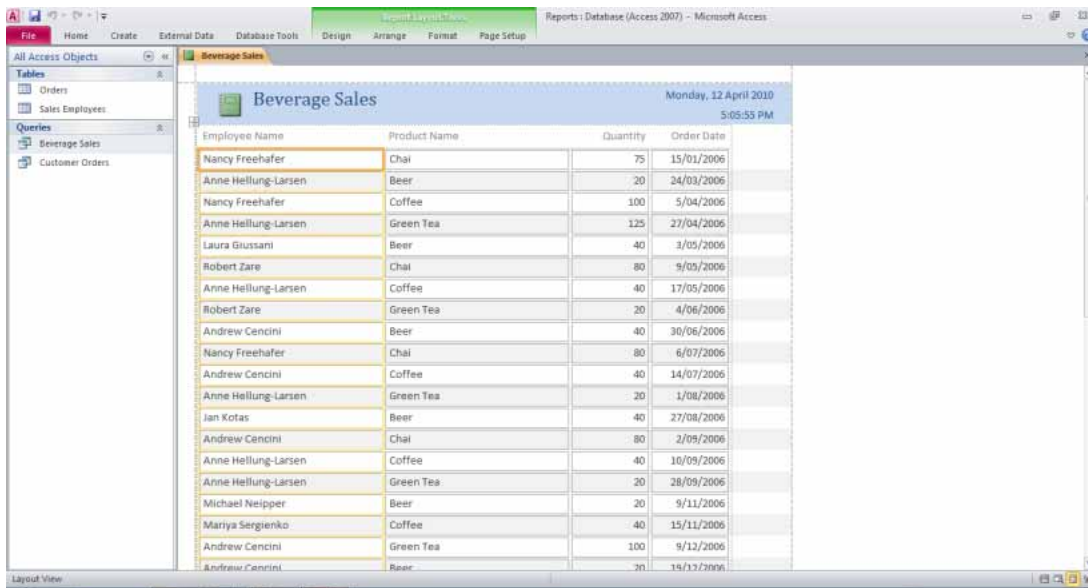
- In the Navigation Pane, click once on the **Beverage Sales** query to highlight the query, but do not open it.



- Click on the **Create** tab and from within the **Reports** group, click on the **Report** button.



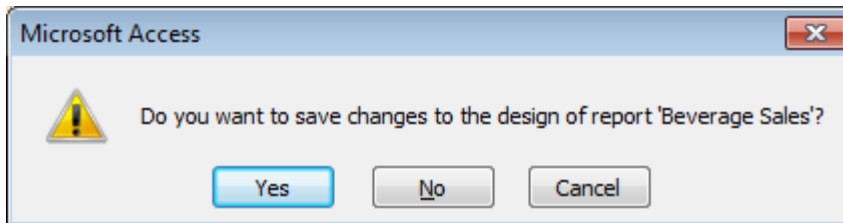
- A report based on the **Beverage Sales** query is displayed on your screen.



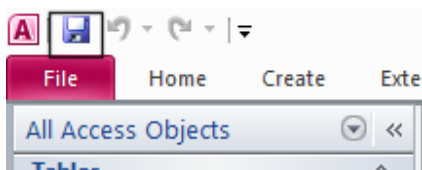
- The simple report is displayed for any modifications that may be required. Editing and modifying a report is similar to editing a form. The title, field text labels and logo images can all be resized, moved or deleted as necessary. Even the style can be

altered at the click of a button using the pre-set styles in the **AutoFormat** group.

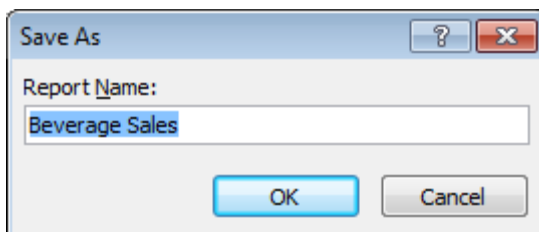
- Simple reports are not saved until you either click on the **Save** button in the **Quick Access** toolbar or attempt to close the report, at which point Access will prompt you to save the report.



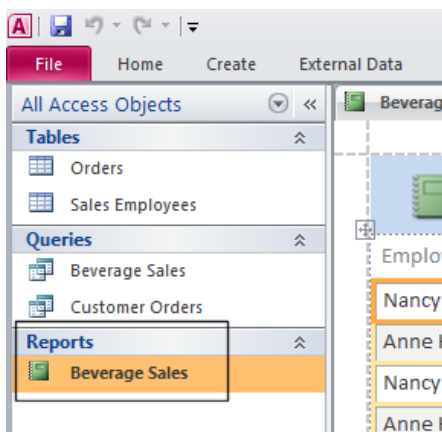
- Click on the **Save** button.



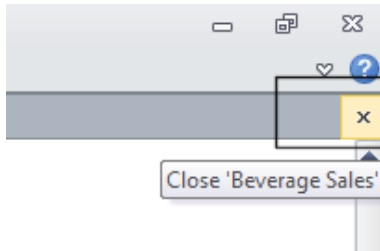
- The **Save As** dialog box is displayed.



- Click on the **OK** button. The new report is displayed in the Navigation Pane.

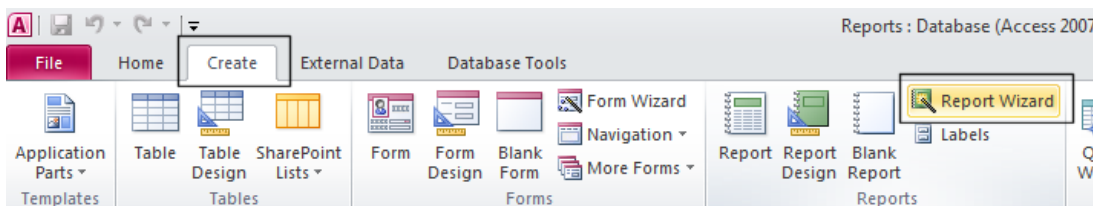


- Click on the **Close** button towards the top right of the report window, to close the report.

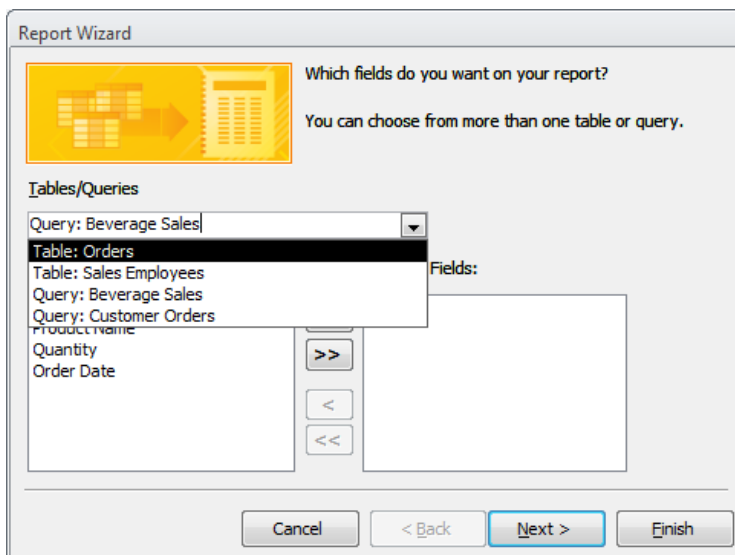


Using the Report Wizard

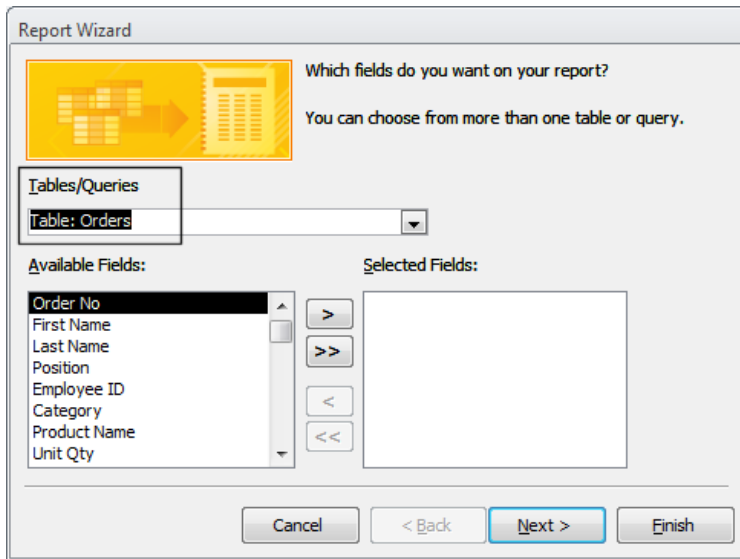
- Click on the **Create** tab and from within the **Reports** group click on the **Report Wizard** button.



- First fields from one or more table must be selected. Click on the **Tables/Queries** dropdown list and select the **Table: Orders**.

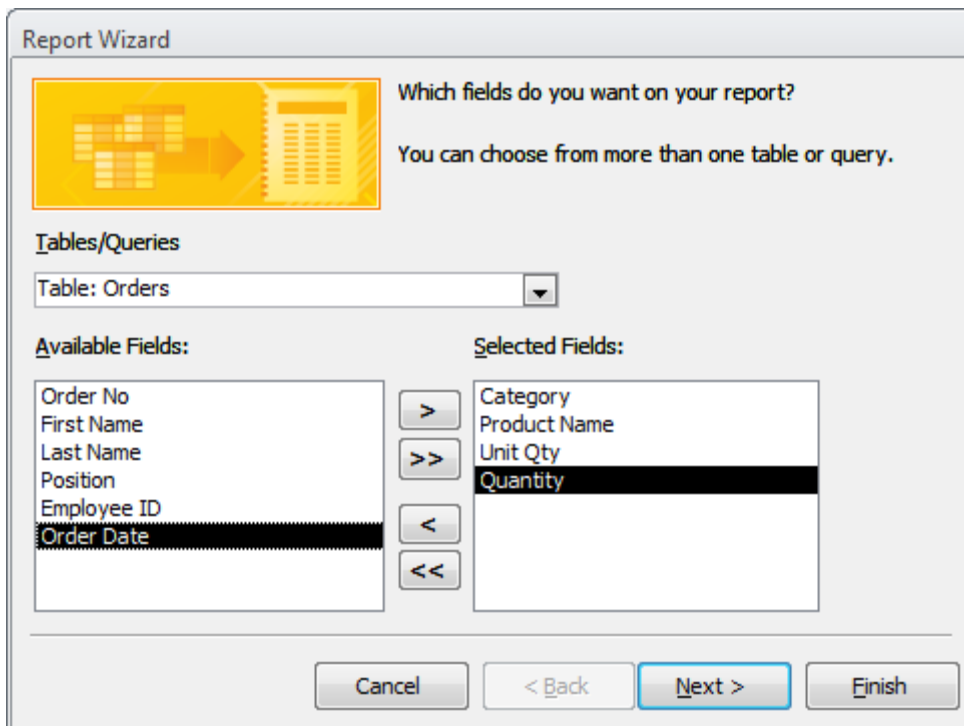


- The dialog box will now look like this.

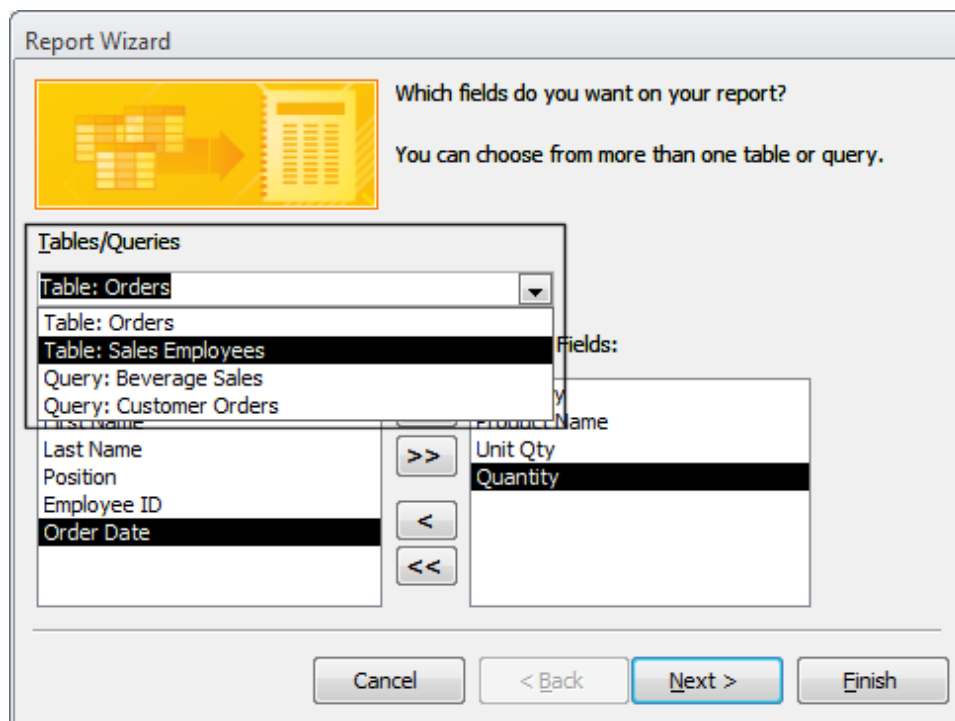


- From the **Available Fields**, double click each of the follow fields:

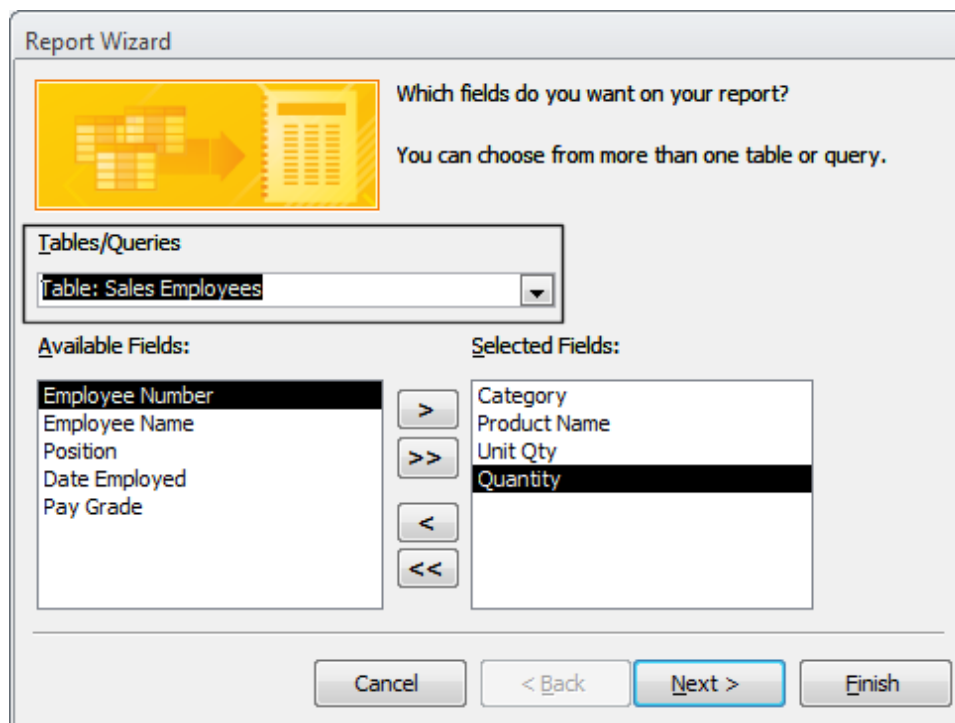
Category
Product Name
Unit Qty
Quantity



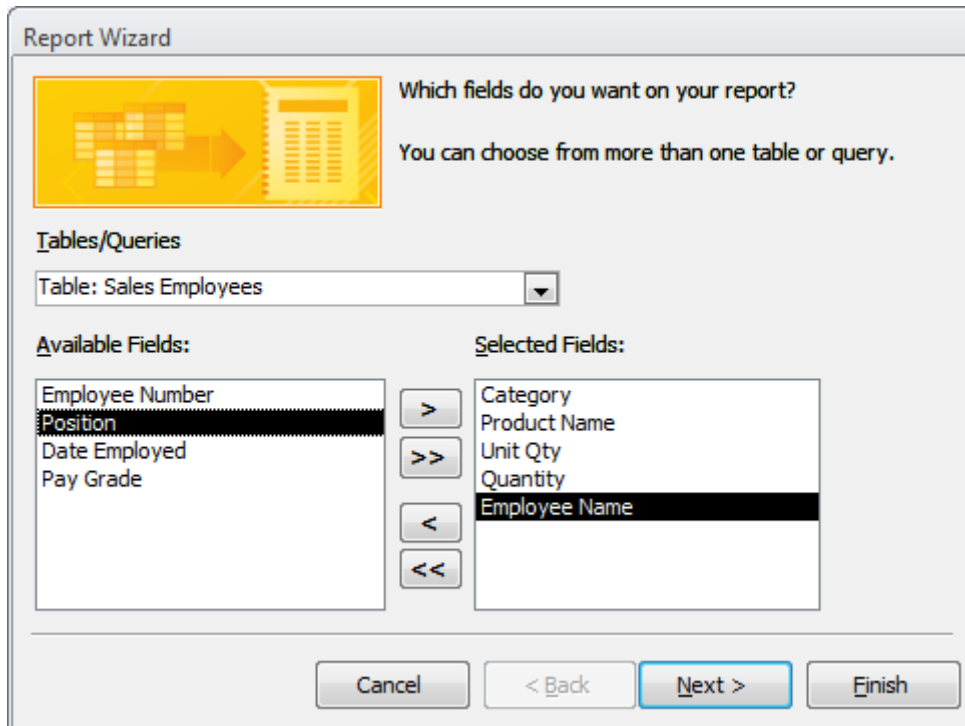
- Click on the **Tables/Queries** drop down list and select the **Table: Sales Employees**.



- The dialog box will now look like this.



- From the **Available Fields**, double click on the **Employee Name** field.



Report Wizard

Which fields do you want on your report?
You can choose from more than one table or query.

Tables/Queries
Table: Sales Employees

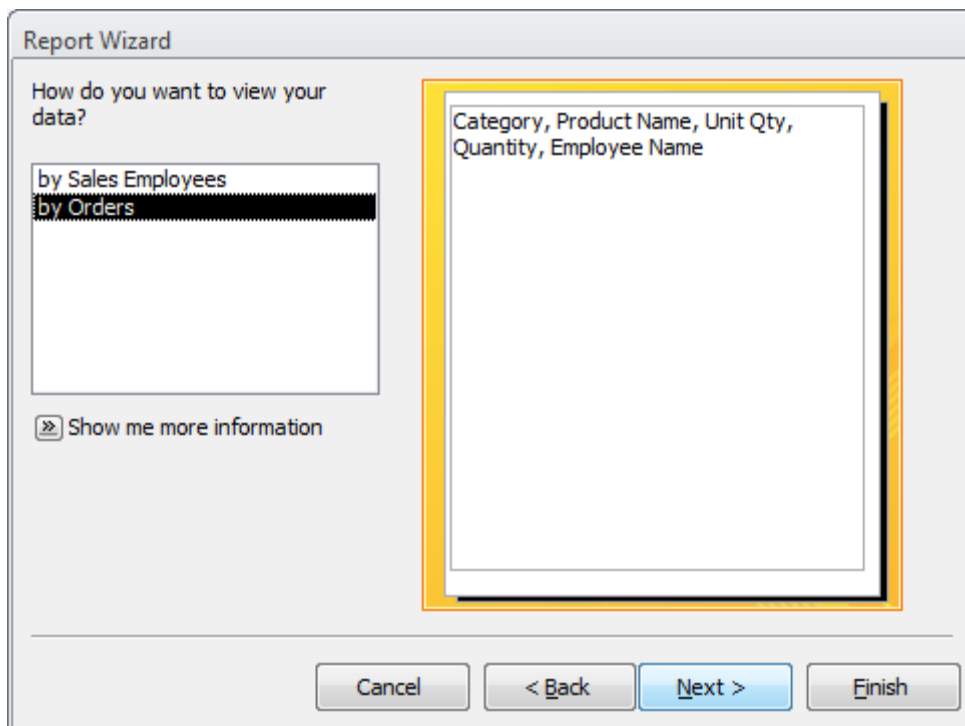
Available Fields:
Employee Number
Position
Date Employed
Pay Grade

Selected Fields:
Category
Product Name
Unit Qty
Quantity
Employee Name

Buttons: Cancel, < Back, Next >, Finish

NOTE: The report will now use information from the **Orders** table and also from the **Sales Employees** table.

- Click on the **Next** button.



Report Wizard

How do you want to view your data?

by Sales Employees
by Orders

Show me more information

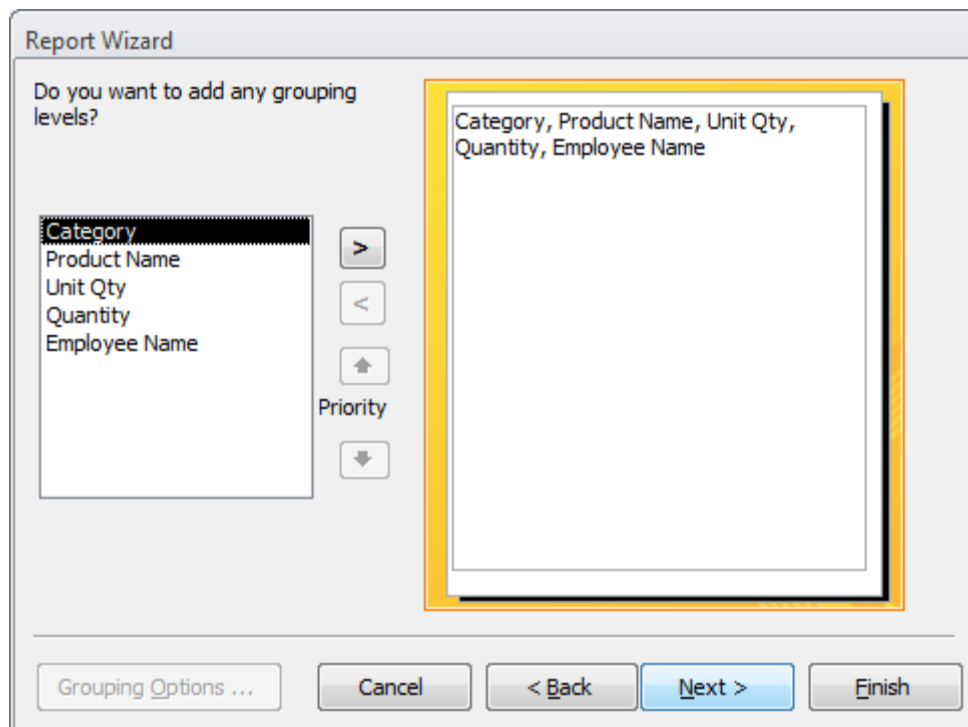
Category, Product Name, Unit Qty, Quantity, Employee Name

Buttons: Cancel, < Back, Next >, Finish

- Leave the default **by Orders** selected.

NOTE: When the report is complete, because **by Orders** is selected, information will be grouped according to a field or fields in the **Orders** table. This field or fields will be selected in the next section of the wizard. For example, the ideal field to use to group information in the report is the **Category** field. If **by Sales Employees** was selected instead, the employees names would take priority in the report and products would be grouped under each employee.

- Click on the **Next** button.



NOTE: When the report is complete, you will see that the report is broken down into **Categories** first, then **Products**, **Quantities**, **Dates** and finally **Employees**.

- Select **Category**, and then click on the right arrowed button to add the grouping level.



- The dialog box will now look like this.

Report Wizard

Do you want to add any grouping levels?

Category

Product Name, Unit Qty, Quantity, Employee Name

Product Name
Unit Qty
Quantity
Employee Name

>
<
↑
↓
Priority

Grouping Options ... Cancel < Back Next > Finish

- Click on the **Next** button.

Report Wizard

What sort order and summary information do you want for detail records?

You can sort records by up to four fields, in either ascending or descending order.

1 [] Ascending
2 [] Ascending
3 [] Ascending
4 [] Ascending

Summary Options ...


Cancel < Back Next > Finish

- In the **Sort Order** dialog box, click on the drop **down arrow** and select **Product Name**.

Report Wizard

What sort order and summary information do you want for detail records?

You can sort records by up to four fields, in either ascending or descending order.



1	(None)	Ascending
2	Product Name	Ascending
3	Unit Qty	Ascending
4	Quantity	Ascending
	Employee Name	

Summary Options ...


Cancel < Back Next > Finish

- The dialog box will look like this.

Report Wizard

What sort order and summary information do you want for detail records?

You can sort records by up to four fields, in either ascending or descending order.



1	Product Name	Ascending
2		Ascending
3		Ascending
4		Ascending

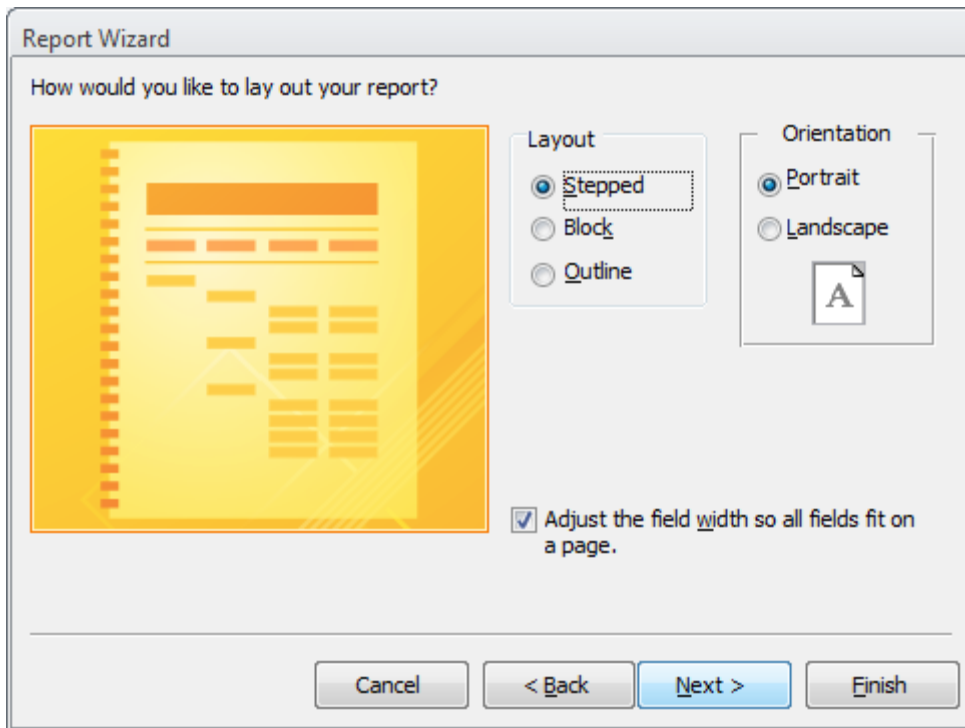
Summary Options ...

Cancel < Back Next > Finish

NOTE: By selecting a field, in this case the **Product Name** field, when the report is complete, information will be organized in **Ascending** order of **Product Name**,

within each category.

- Click on the **Next** button. Leave the **Layout** as the default setting.



NOTE: The three **Layout** options control how the report will be laid out when finished. Depending upon the number of fields included in a report, consideration should be given to the report **Orientation**. If there are too many fields for a single page width, select **Landscape**, otherwise (in this case) **Portrait** will be sufficient. Orientation can be changed at any stage before printing.

- Click on the **Next** button.

Report Wizard

What title do you want for your report?

Orders

That's all the information the wizard needs to create your report.

Do you want to preview the report or modify the report's design?

☒ Preview the report.

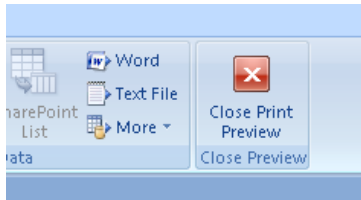
☐ Modify the report's design.

Cancel < Back Next > Finish

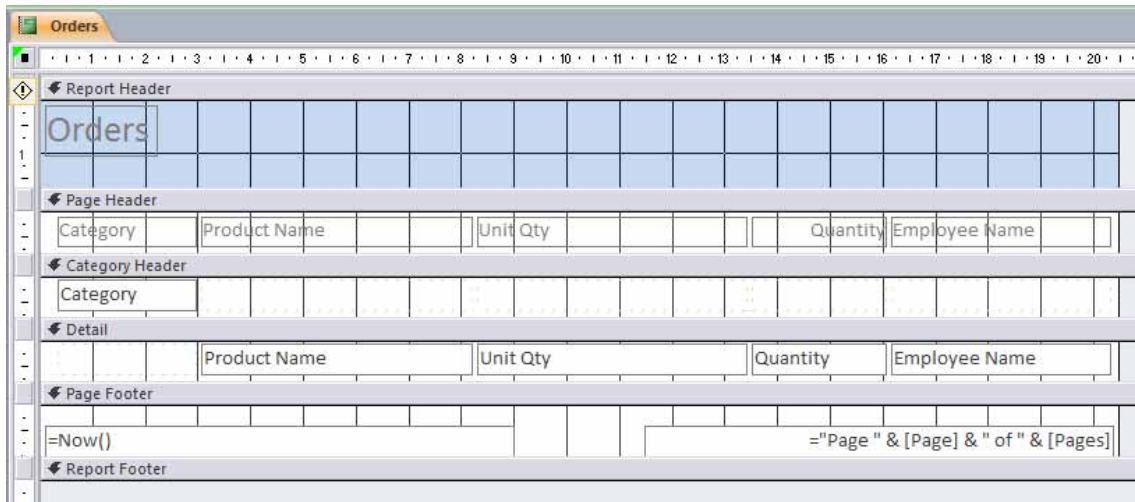
- Access has given the report the name **Orders**. Click on the **Finish** button to accept the name and complete the wizard. The report is now displayed in Print Preview view. Take a while to see what has been produced.

Orders				
Category	Product Name	Unit Qty	Quantity	Employee Name
Baked Goods &				
	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	Nancy Freehafer
	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	Nancy Freehafer
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Laura Giussani
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Anne Hellung-Larsen
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Laura Giussani
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Jan Kotas
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Mariya Sergienko
	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	Michael Neipper
	Scones	12 boxes	60	Robert Zare
	Scones	24 pkgs. x 4 pieces	40	Nancy Freehafer
	Scones	24 pkgs. x 4 pieces	100	Mariya Sergienko
	Scones	24 pkgs. x 4 pieces	40	Nancy Freehafer

- Click on the **Close Print Preview** button.



- The report will be displayed in Design View.



Modifying the layout of a report

- Click on the **Layout View** button, displayed at the bottom-right of the screen.



- The report will be displayed as illustrated below.

Category	Product Name	Unit Qty	Quantity	Employee Name
Baked Goods &	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	Nancy Freehafer
	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	Nancy Freehafer
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Laura Giussani
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Anne Hellung-Larsen
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Laura Giussani
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Jan Kotas
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Mariya Sergienko
	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	Michael Neipper
	Scones	12 boxes	60	Robert Zare
	Scones	24 pkgs. x 4 pieces	40	Nancy Freehafer
	Scones	24 pkgs. x 4 pieces	100	Mariya Sergienko
	Scones	24 pkgs. x 4 pieces	40	Nancy Freehafer
	Scones	12 boxes	60	Anne Hellung-Larsen

Widening a report column

- We need to widen the **Category** column as some of the items within the column are wider than the column. To do this click on the **Category** field name to first select the column.

Category	Product Name	Unit Qty
Baked Goods &	Chocolate Biscuits Mix	10 boxes x 12 pie
	Chocolate Biscuits Mix	10 boxes x 12 pie
	Chocolate Biscuits Mix	12 - 12 oz jars
	Chocolate Biscuits Mix	12 - 12 oz jars

- Move the pointer to the dotted line running down the right side of the **Category** column. When the pointer changes to a horizontal line with arrows on each end, click and drag the line to the right, increasing the width of the column until it is wide enough to display all categories.



- The columns will now look like this

Orders		
Category	Product Name	Unit Qty
Baked Goods & Mixes	Chocolate Biscuits Mix	10 boxes x 12 pieces
	Chocolate Biscuits Mix	10 boxes x 12 pieces
	Chocolate Biscuits Mix	12 - 12 oz jars
	Chocolate Biscuits Mix	12 - 12 oz jars
	Chocolate Biscuits Mix	12 - 12 oz jars
	Chocolate Biscuits Mix	12 - 12 oz jars
	Chocolate Biscuits Mix	12 - 12 oz jars

Modifying the report title

- Click once on the report title (**Orders**).

Orders		
Category	Product Name	Unit Qty
Baked Goods & Mixes	Chocolate Biscuits Mix	10 boxes x
	Chocolate Biscuits Mix	10 boxes x
	Chocolate Biscuits Mix	12 - 12 oz jars

- Double click to highlight and select the word **Orders**.

Orders		
Category	Product Name	
Baked Goods & Mixes	Chocolate Biscuits Mix	

- Type in the following to replace the existing label and press the **Enter** key to complete the modification.

Product Orders by Category

Product Orders by Category		
Category	Product Name	Unit Qty
Baked Goods & Mixes		
	Chocolate Biscuits Mix	10 boxes
	Chocolate Biscuits Mix	10 boxes

- Position the pointer over the report title box again, this time until the pointer changes to crosshair.

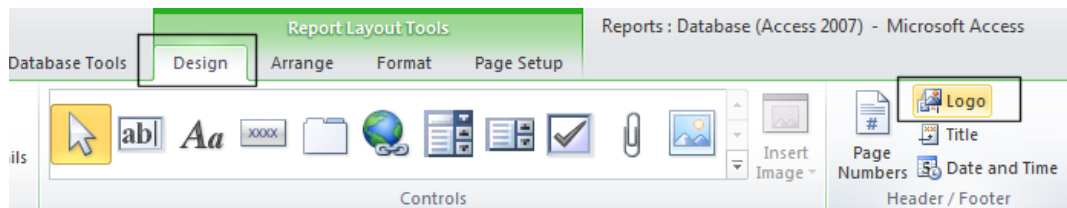


- Click and drag the report title box to the right as illustrated below.

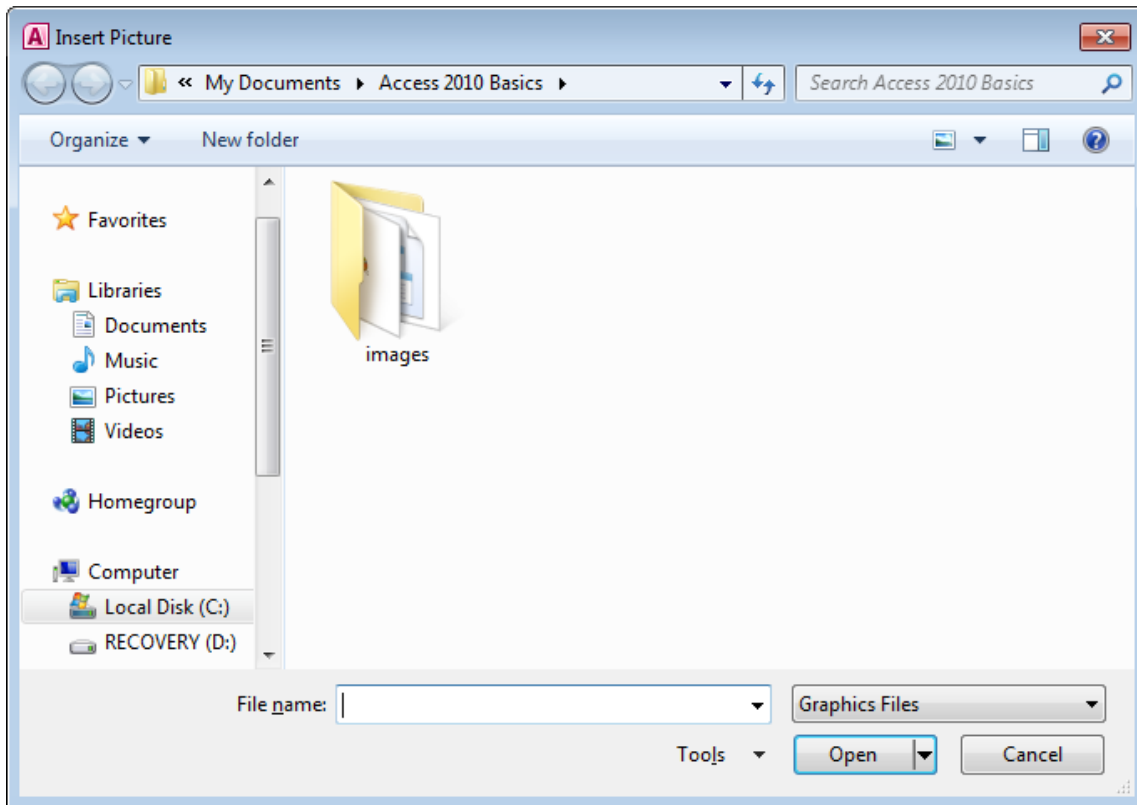
Product Orders by Category				
Category	Product Name	Unit Qty	Quantity	Employee Name
Baked Goods & Mixes				
	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	Nancy Freehafer
	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	Nancy Freehafer
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Laura Giussani
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Anne Hellung-Larson
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Laura Giussani
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Jan Kotas

Adding a logo to a report

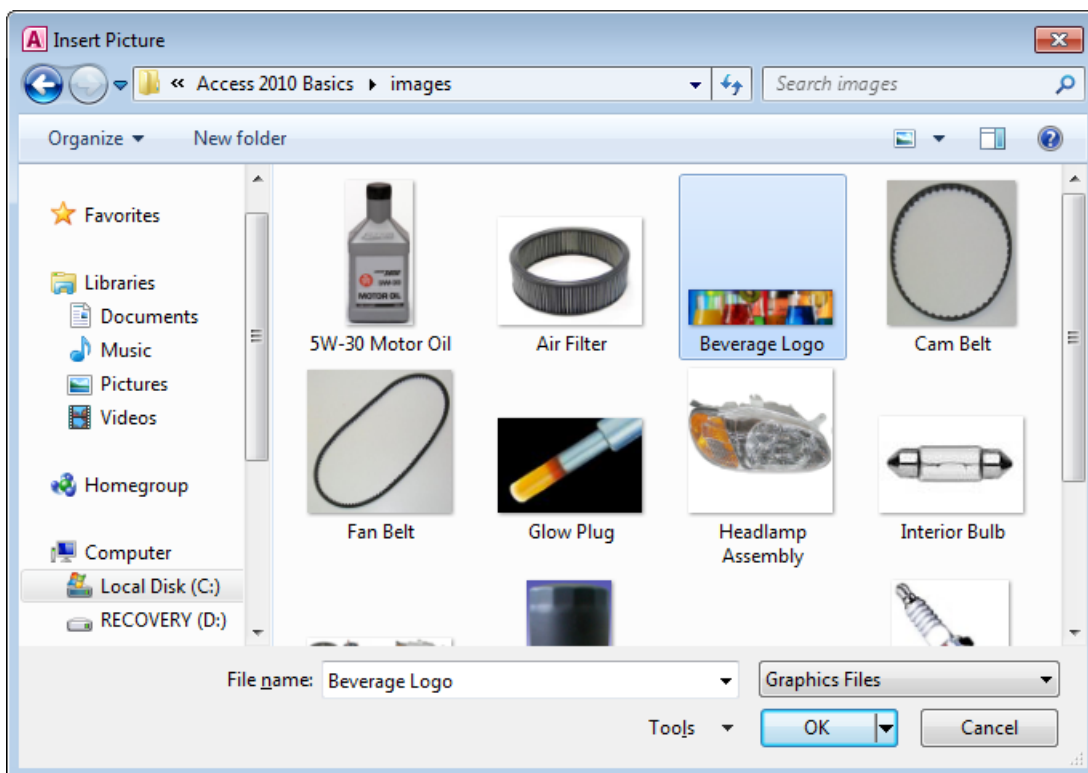
- Click on the **Design** tab and from within the **Header / Footer** group click on the **Logo** button.



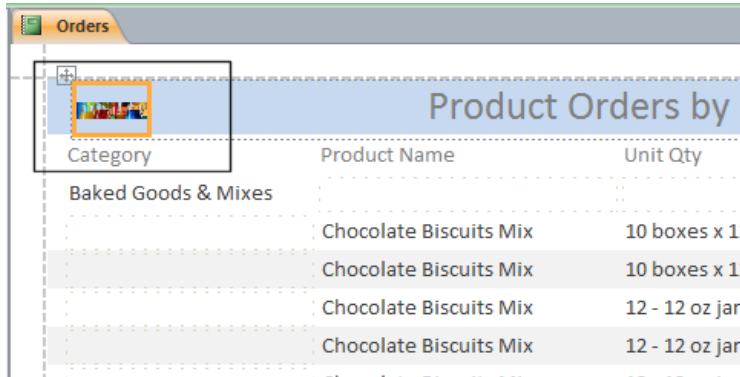
- The **Insert Picture** dialog window is displayed.



- Double click on the **Images** folder to display your sample images.



- Double click on the **Beverage Logo** file to add the image to the report.



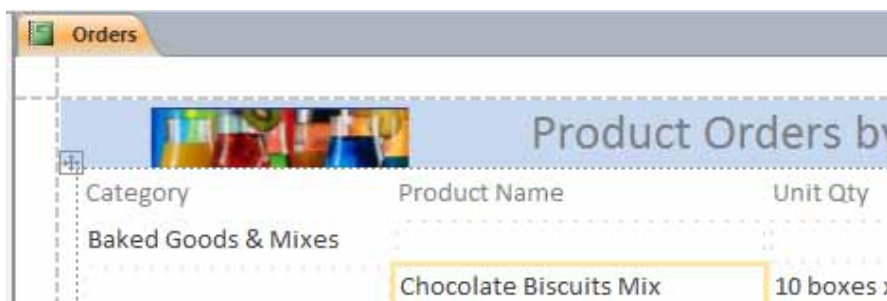
- The new image is too small. Position the pointer over the right edge of the logo box until the pointer displays an arrow.



- Click and drag the right side of the box to the right (expand size). Expand the box a small amount and let go of the mouse button.
- As the box expands, the image increases in size. Keep expanding the box until the image fits in the box from top to bottom.
- With the logo resized, position the pointer over the report title box again, this time until the pointer changes to crosshair.

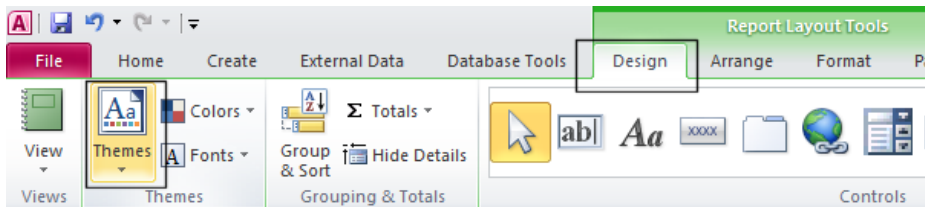


- Click and drag the title box to the left until there is a small gap between the title and the new logo, as illustrated below.

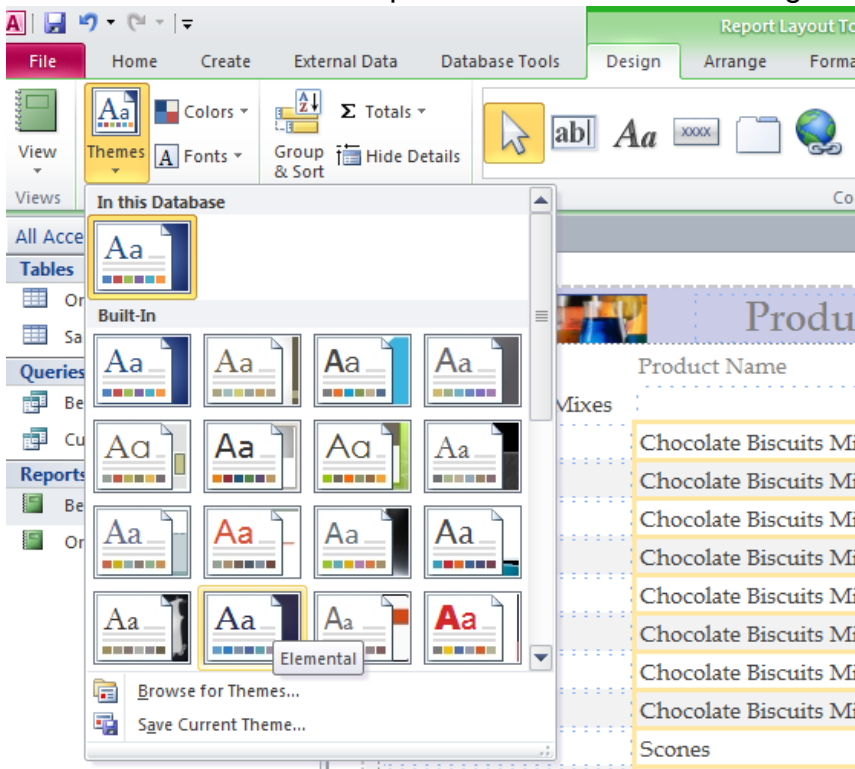


Formatting a form using themes

- Click on the **Design** tab and within the **Themes** group, click on the **Themes** button.



- A drop down theme menu will be displayed. As you move the mouse pointer over each theme the format will preview the theme formatting.



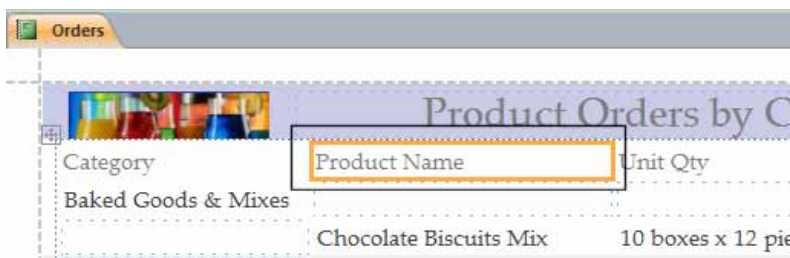
- Click on any one of the themes and the theme will be applied to the form.



Category	Product Name	Unit Qty	Quantity	Employee Name
Baked Goods & Mixes	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	Nancy Freshafer
	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	Nancy Freshafer
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Laura Giussani
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Anne Hellung-Larsen
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Laura Giussani
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Jan Kotas
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Mariya Sergienko
	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	Michael Neipper
	Scones	12 boxes	60	Robert Zare
	Scones	24 pkgs. x 4 pieces	40	Nancy Freshafer
	Scones	24 pkgs. x 4 pieces	100	Mariya Sergienko
	Scones	24 pkgs. x 4 pieces	40	Nancy Freshafer
	Scones	12 boxes	60	Anne Hellung-Larsen
	Scones	12 boxes	40	Michael Neipper

Modifying field names within a report

- Click on the **Product Name** field title.



Category	Product Name	Unit Qty
Baked Goods & Mixes	Chocolate Biscuits Mix	10 boxes x 12 pie

- Double click on the word '**Name**' and press the **Del** key.



Category	Product	Unit Qty
Baked Goods & Mixes	Chocolate Biscuits Mix	10 boxes x 12
	Chocolate Biscuits Mix	10 boxes x 12

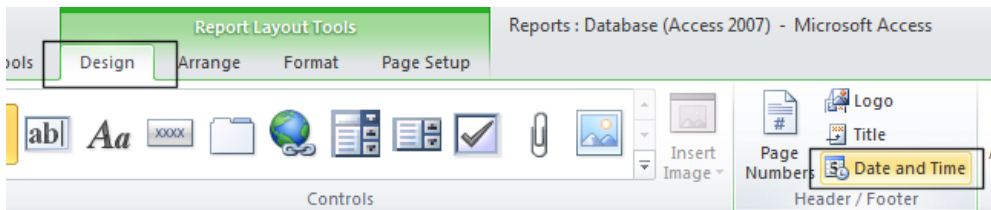
- Press the **Enter** key. The column will now be called **Product**, rather than **Product Name**.



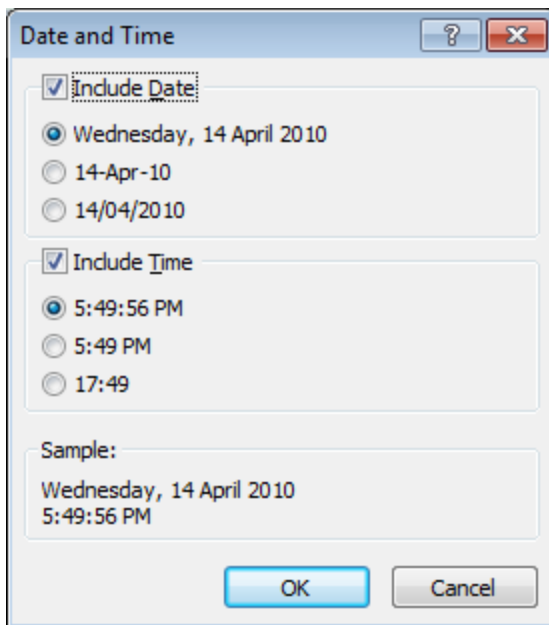
Category	Product	Unit	Qty
Baked Goods & Mixes	Chocolate Biscuits Mix	10 boxes x 12 p	
Baked Goods & Mixes	Chocolate Biscuits Mix	10 boxes x 12 p	

Inserting and formatting the date & time

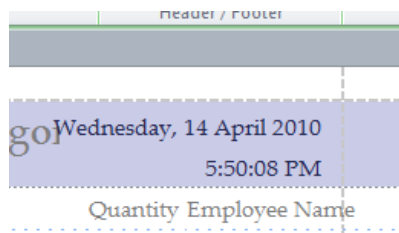
- Within the **Design** tab you will see the **Header / Footer** group. Click on the **Date and Time** button.



- The **Date and Time** dialog box is displayed.



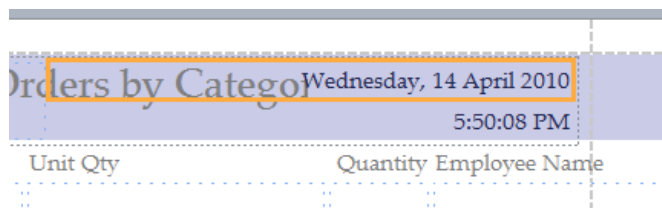
- Click on the **OK** button.



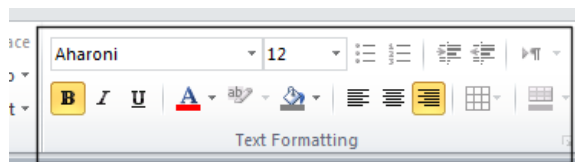
- The date and time are inserted into the top (header) section of the report to the right of the report title but are **very** hard to read as they are displayed using a dark colored font, on a dark background.

NOTE: The date and time are inserted separately; therefore each will require individual modification.

- Click once on the **date** to select it.



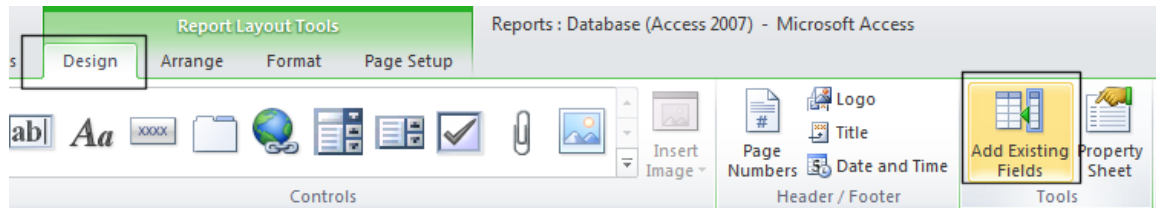
- Within the **Home** tab you will see the **Text Formatting** group.



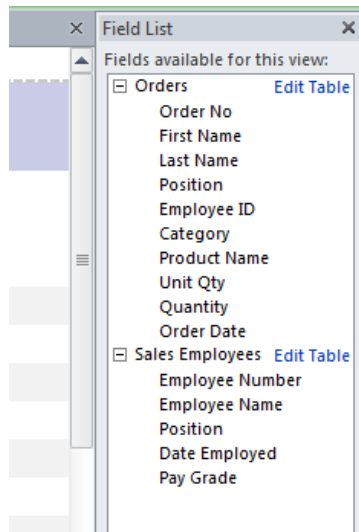
- Use the normal font formatting techniques to make the date display using bold. Also increase the font size and maybe use a different font type.
- Repeat the steps to modify the time.

Adding existing fields to a report

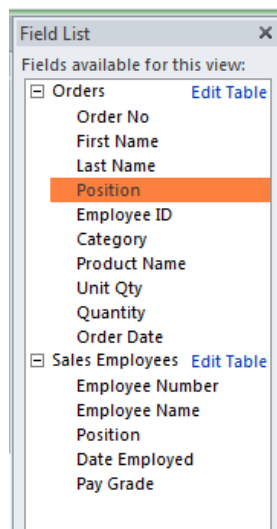
- Click on the **Design** tab, and within the **Tools** group, click on the **Add Existing Fields** button.



- The **Field List** opens (to the right of your form) and displays the tables within the database and the available fields.



- Click within the **Employee Name** column.
- In the **Fields List**, double click on the **Position** field to add it to the report.

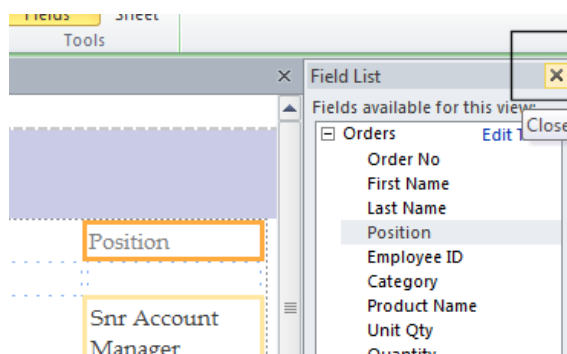


- The new field will be displayed as illustrated.

t Orders by Category			
Wednesday, 14 April 2010			
6:02:50 PM			
Unit Qty	Quantity	Employee Name	Position
10 boxes x 12 pieces	40	Nancy Freehafer	Snr Account Manager
10 boxes x 12 pieces	40	Nancy Freehafer	Purchasing Representative
12 - 12 oz jars	40	Laura Giussani	Snr Account Manager
12 - 12 oz jars	40	Anne Hellung-Larsen	Purchasing Representative
12 - 12 oz jars	40	Laura Giussani	Accounting Assistant
12 - 12 oz jars	40	Jan Kotas	Purchasing Representative
12 - 12 oz jars	40	Mariya Sergienko	Purchasing Representative
10 boxes x 12 pieces	40	Michael Neipper	Purchasing Representative
12 boxes	60	Robert Zare	Accounting

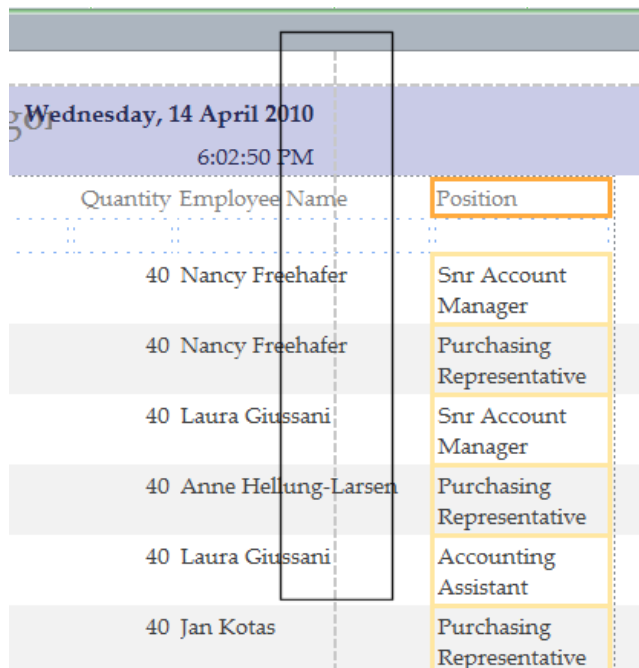
NOTE: When adding fields to an existing report, the new field is added to the right of whichever field (column) is selected. For example, if the **Employee Name** was selected, the **Position** field would have been inserted to the right of **Employee Name**.

- Click on the **Close** button to close the **Field List**.



Resizing reports for printing

- With the field list closed and the **Unit Qty** field added to the report, it is possible that you may see a dotted line running down and through the field displayed at the extreme left of the report.



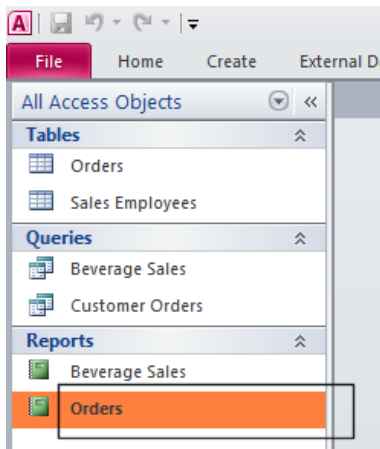
Quantity	Employee Name	Position
40	Nancy Freehafer	Snr Account Manager
40	Nancy Freehafer	Purchasing Representative
40	Laura Giussani	Snr Account Manager
40	Anne Hellung-Larsen	Purchasing Representative
40	Laura Giussani	Accounting Assistant
40	Jan Kotas	Purchasing Representative

NOTE: This line represents print guidelines (margins) and in this case, indicates that part of the field will fall outside of the printing area. If printed, the report would be two pages wide, instead of one.

- The fields need to be resized to fit within the dotted line.
- Click in each of the field name at the top of each column and one by one, use the normal drag and drop techniques to resize each column so that you will be able to print on a single page.
- Save and changes you have made and close the Access program.

Totals

- Start Access.
- Open a database called **Totals**.
- Double click on a report called **Orders**.



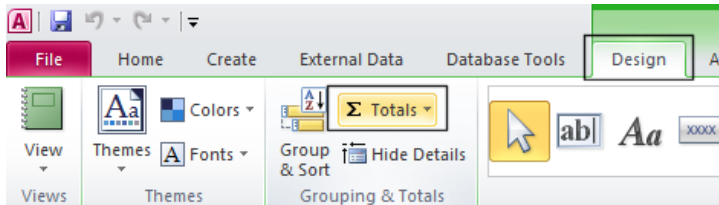
- The screen will look like this.

Category	Product	Unit Qty	Quantity	Employee Name	Position
Baked Goods & Mixes	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	Nancy Freehafer	Snr Account Manager
	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	Nancy Freehafer	Purchasing Representative
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Laura Giussani	Snr Account Manager
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Anne Hellung-Larsen	Purchasing Representative
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Laura Giussani	Accounting Assistant
	Chocolate Biscuits Mix	12 - 12 oz jars	40	Jan Kotas	Purchasing

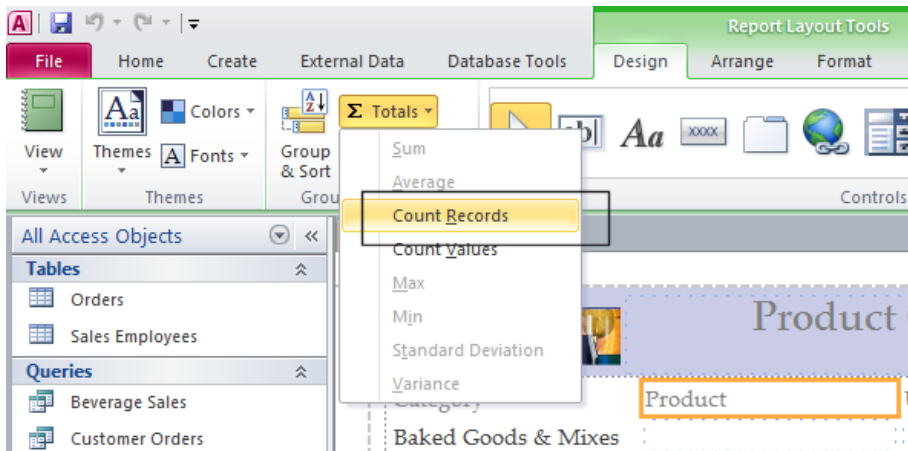
- The report is to include the total number of items sold and the number of sales in each category.
- Click on the **Product** field name.

Category	Product	Unit Qty
Baked Goods & Mixes	Chocolate Biscuits Mix	10 boxes x 12 pieces
	Chocolate Biscuits Mix	10 boxes x 12 pieces

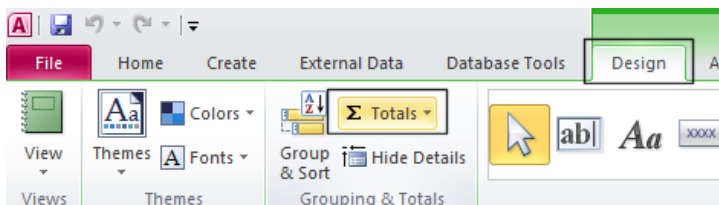
- Click on the **Totals** button, located under the **Design** tab within the **Grouping & Tools** group



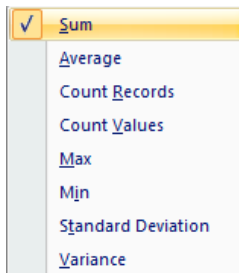
- From the drop down list displayed, select **Count Records**.



- Click on the **Quantity** field name.
- Click on the **Totals** button, located under the **Design** tab within the **Grouping & Tools** group



- From the list displayed select the **Sum** command.



- Below each group (category) a value is displayed in both the **Product Name** and **Quantity** columns.

Orders				
Scones	24 pkgs. x 4 pieces	100	Mariya Sergienko	Accounting Assistant
Scones	24 pkgs. x 4 pieces	40	Nancy Freehafer	Purchasing Representative
Scones	12 boxes	60	Anne Hellung-Larsen	Accounting Assistant
Scones	12 boxes	40	Michael Neipper	Purchasing Representative
Scones	24 pkgs. x 4 pieces	40	Laura Giussani	Accounting Assistant
Scones	12 boxes	100	Andrew Cencini	Sr Account Manager
Scones	12 boxes	60	Mariya Sergienko	Accounting Assistant
Reverages		17		
Beer	12 - 550 ml bottles	40	Anne Hellung-Larsen	Sr Account Manager

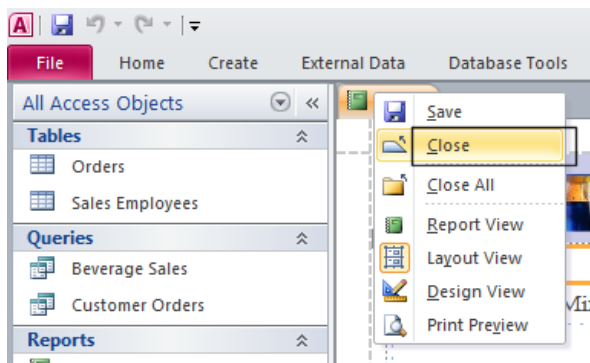
- On the last page of the report, grand totals of all groups are also displayed.

Orders				
Clam Chowder	40 - 100 g pkgs.	40	Anne Hellung-Larsen	Purchasing Representative
Clam Chowder	40 - 100 g pkgs.	60	Mariya Sergienko	Purchasing Manager
Clam Chowder	40 - 100 g pkgs.	40	Mariya Sergienko	Purchasing Representative
		9		
		240		
Wednesday, 21 April 2010				
Page 1 of 1				

NOTE: The format of the totals can be modified by selecting them first, then from the **Font** group in the **Home** ribbon tab, selecting a different size, font or simply making them bold.

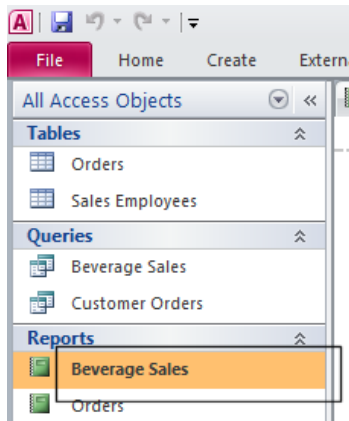
Closing a report

- Right click on the **Orders** report tab. Select the **Close** command from the list displayed, to close the report.

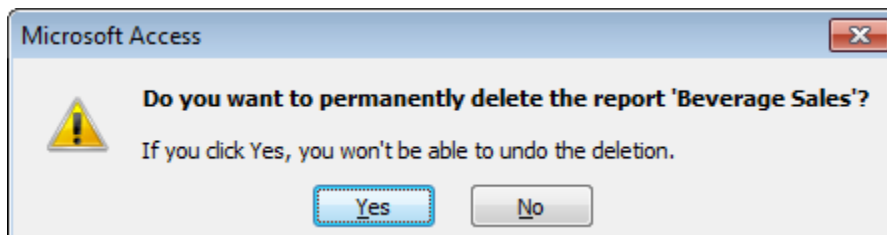


Deleting a report

- In the Navigation Pane, click once on the **Beverage Sales** report to highlight.



- Press the **Delete** key to delete the report. Access prompts for confirmation.



- Click on the **Yes** button. The report is deleted from the database.

Exporting

What does exporting data mean?

- When you save data you save it to disk in the same file format used by the application, in this case Microsoft Access. Exporting data means saving the data in a different format. For instance we could save our database in a spread sheet format (such as Microsoft Excel format), or as text or in XML format.

It is important to note that you cannot use the Access **Save As** command to save the database in an alternative format such as an Excel workbook, text file or XML file. You need to export the file.

What is a spread sheet format?

- The file is actually stored as a workbook and each workbook can contain many worksheets (which contains the tables of data). A typically example is Microsoft Excel.

What is text only and CSV format?

- As the name implies, if you export a database in text only format, then only text will be saved. You will lose all formatting and other non-text information.

A common text format is called a CSV format. This is short for Comma Separated Vales. A CSV file maintains the record and field database structure by inserting a comma after each field within the file. You could then import the CSV formatted files into a database or spread sheet and it would be able to delimit, i.e. separate, the rows and columns to correctly display the basic data. CSV files will not retain any formatting or other non-text related information.

What is a PDF file?

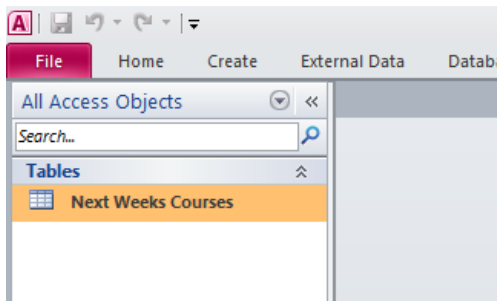
- The Adobe Acrobat PDF file format is useful because if you save your objects as PDF files these can be viewed by other people who may not have access to the Access program. The PDF files can also be displayed within web sites or attached to emails and send to colleges.
- The Adobe Acrobat Reader program is required to view PDF formatted files and is available as a free download from the Adobe web site.

What is an XML file?

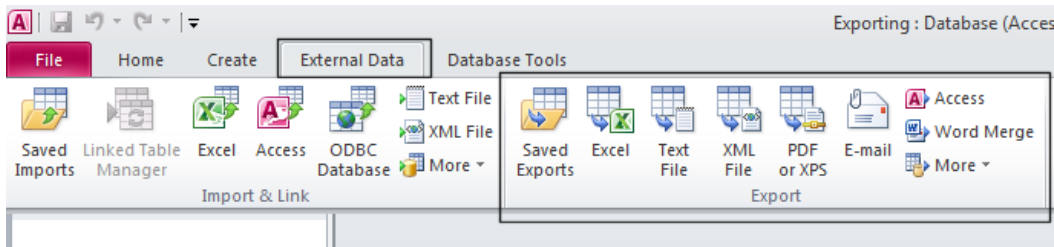
- XML is short for 'Extensible Mark-up Language'. It is a general-purpose mark-up language that allows you to share data created by different hardware and software via the Internet.

Exporting a table as an Excel file

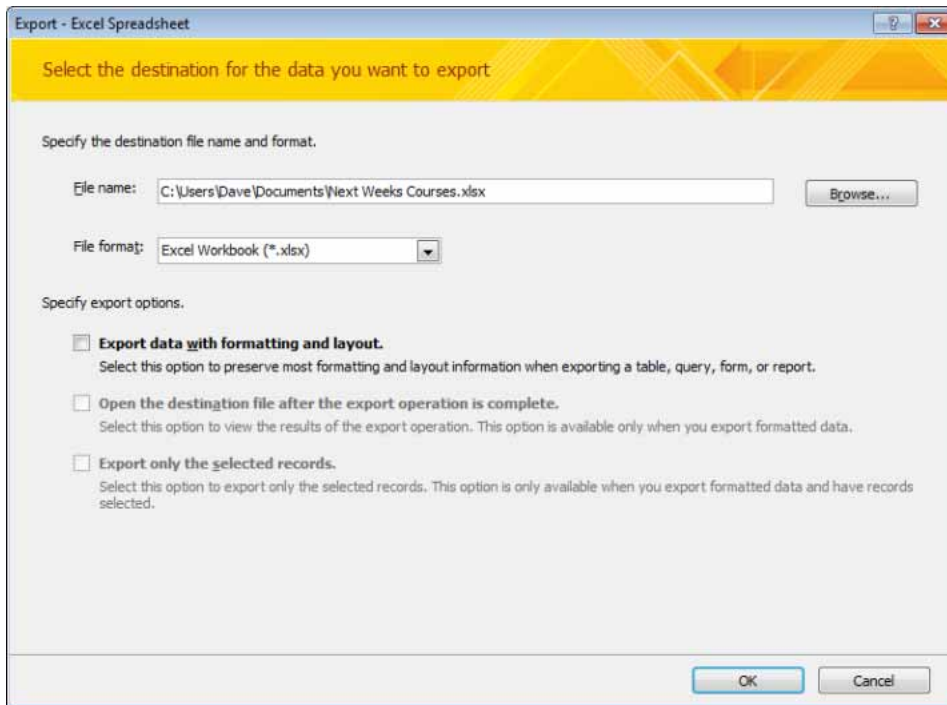
- Start the Access program.
- Open a database called **Exporting**.
- Select but do not open the table called **Next Weeks Courses**.



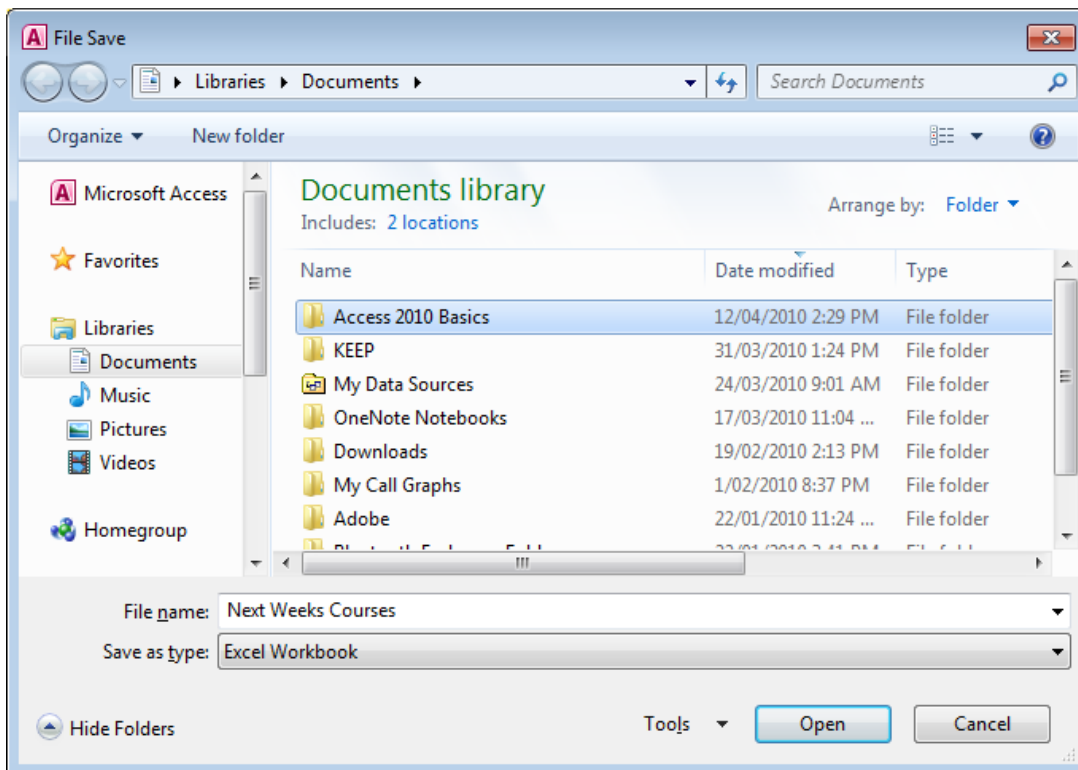
- Click on the **External Data** tab and from within the **Export** group, click on the **Excel** button.



- You will see the following dialog box.

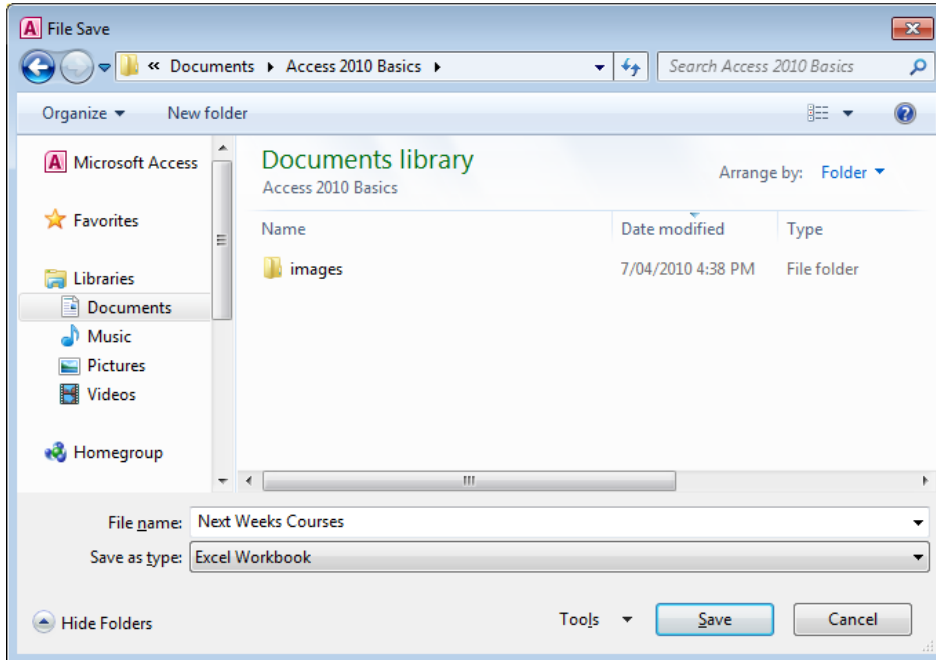


- Click on the **Browse** button.

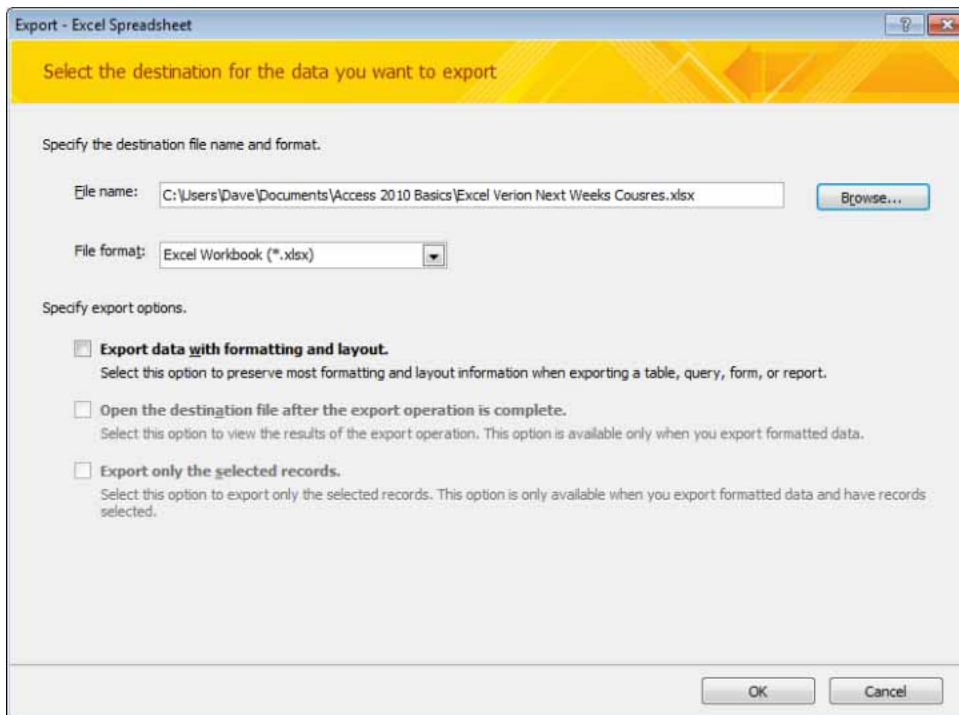


- You should see the **Access 2010 Basics** folder displayed within the right section of the dialog box. Double click on the **Access 2010 Basics** folder to change to that

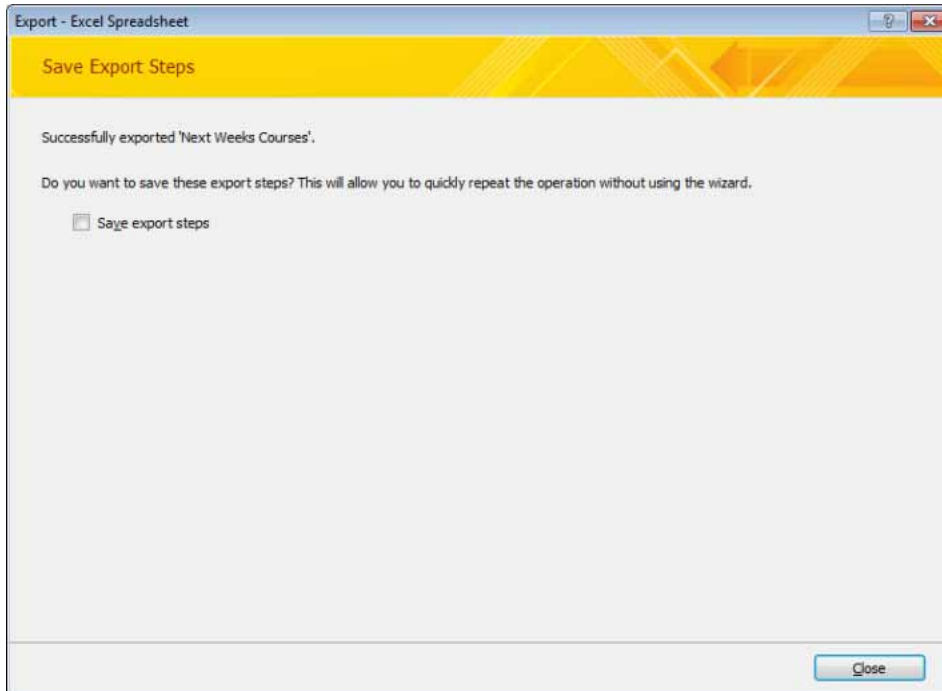
folder. The dialog box will now look like this.



- Enter a file name such as **Excel Version Next Weeks Courses**.
- Click on the **Save** button and you will see the following dialog box displayed.



- Click on the **OK** button to save the database table in an Excel file format. You will see a final dialog box displayed, click on the **Close** button to close the dialog box.



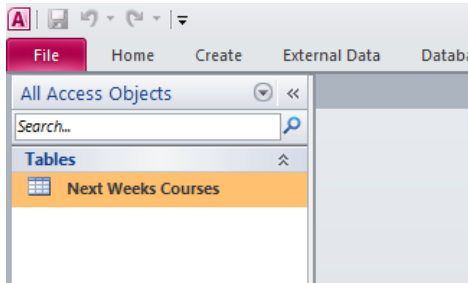
- Don't actually do this now, but if you used the **Windows Explorer** program to view the contents of your **Access 2010 Basics** folder you would see the new Excel file listed as illustrated.



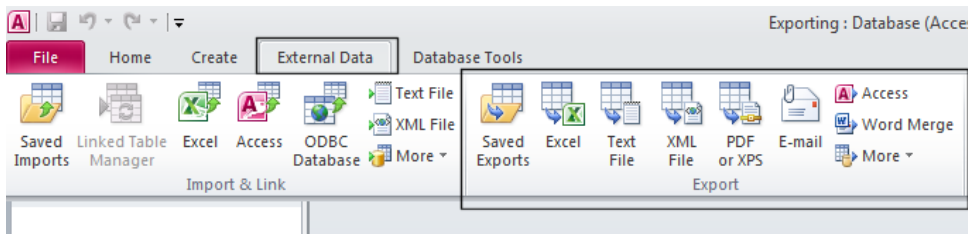
- Close the Access program.

Exporting a table as a text file (keeping data format & layout)

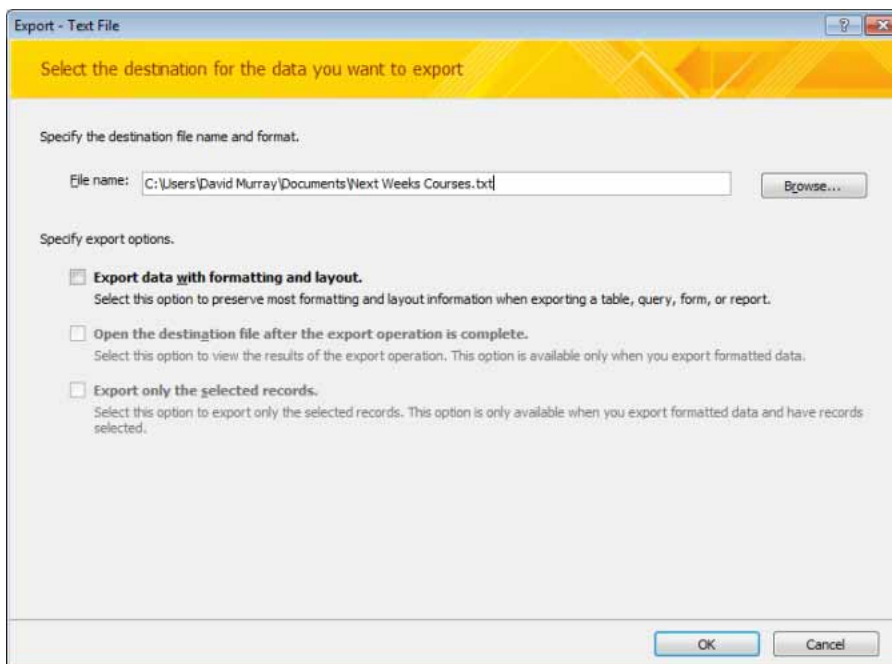
- Start the Access program.
- Open a database called **Exporting**.
- Select but do not open the table called **Next Weeks Courses**.



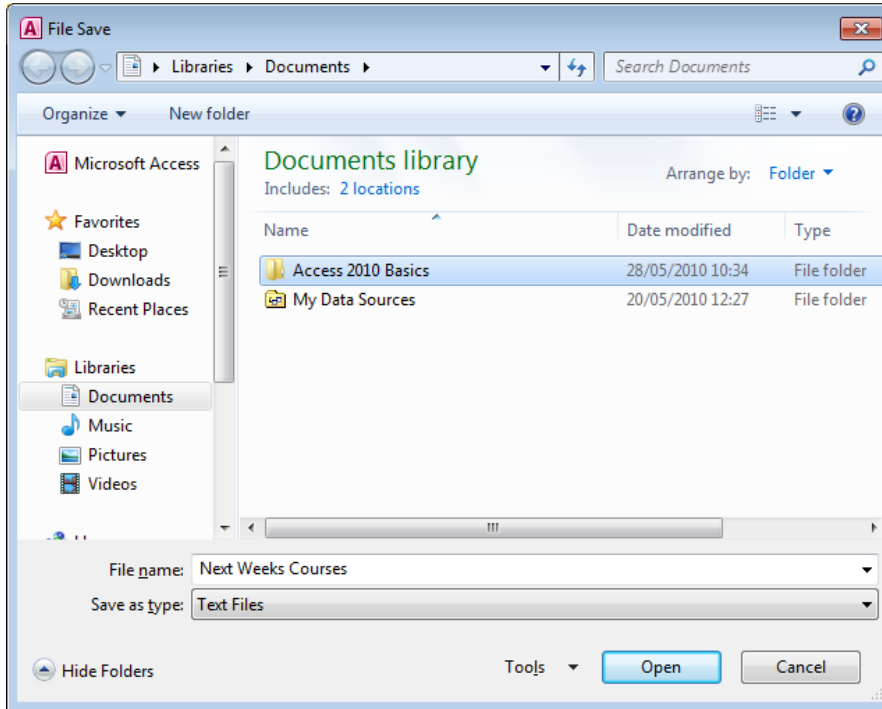
- Click on the **External Data** tab and from within the **Export** group, click on the **Text File** button.



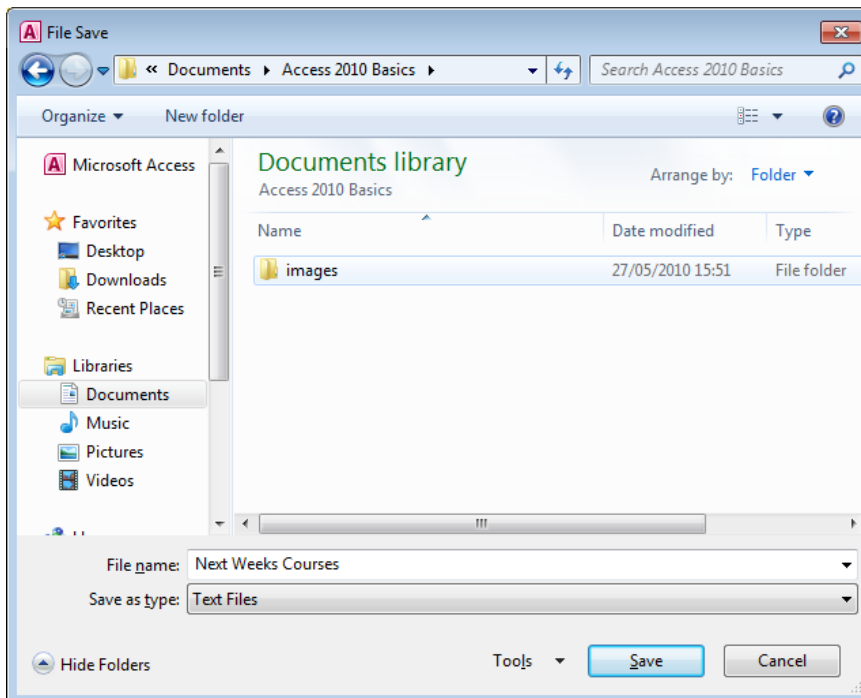
- You will see the following dialog box.



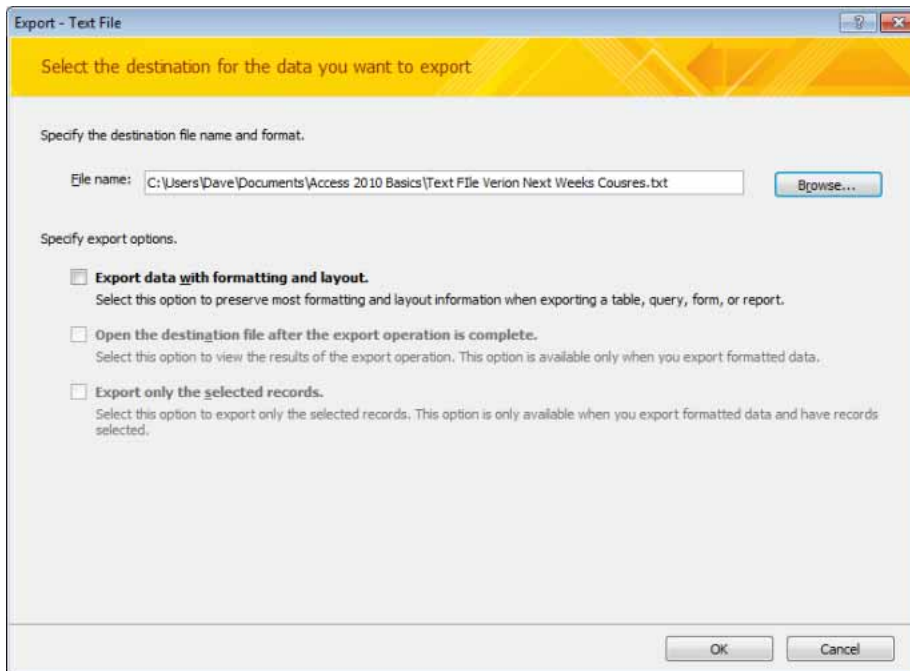
- Click on the **Browse** button.



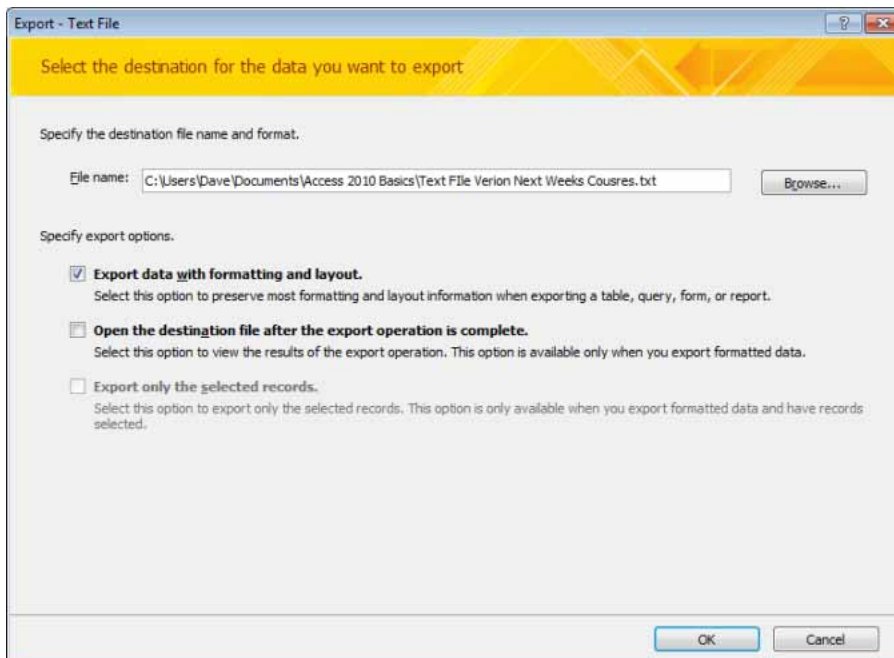
- You should see the **Access 2010 Basics** folder displayed within the right section of the dialog box. Double click on the **Access 2010 Basics** folder to change to that folder. The dialog box will now look like this.



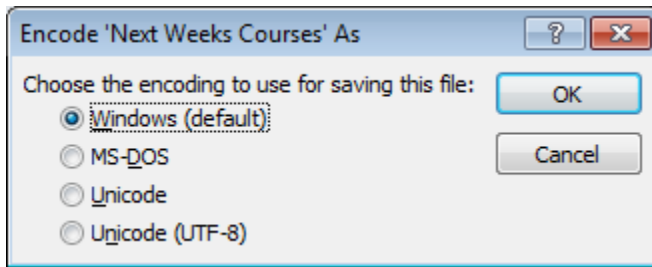
- Enter a file name such as **Text File Version Next Weeks Courses**.
- Click on the **Save** button to export the table to a text file. You will see the following dialog box.



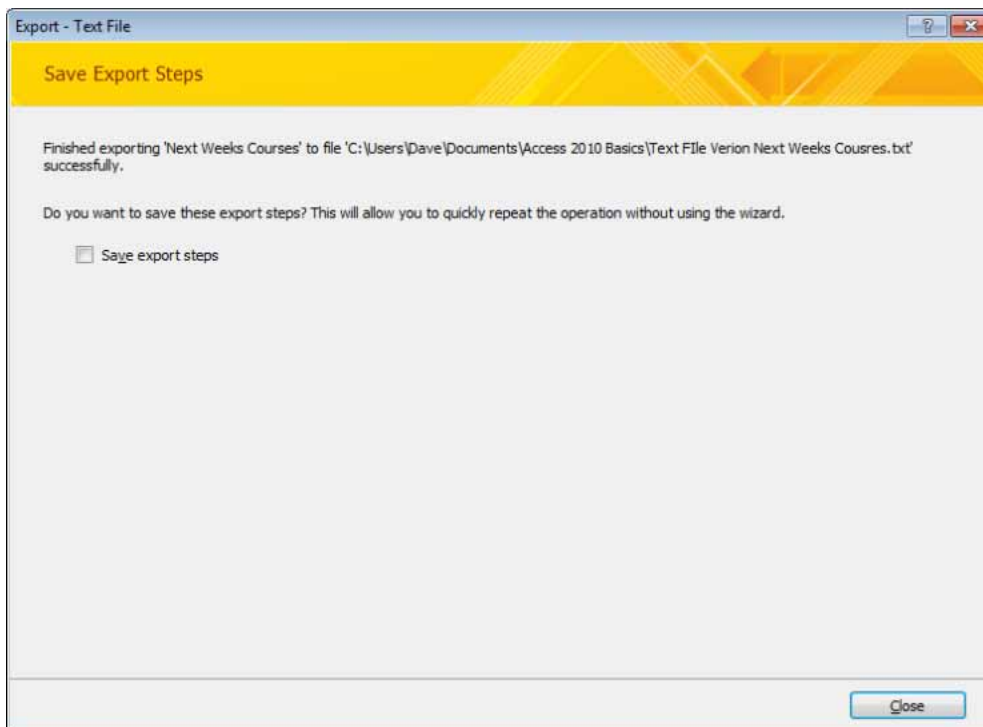
- Select the first option which will keep the column structure intact.



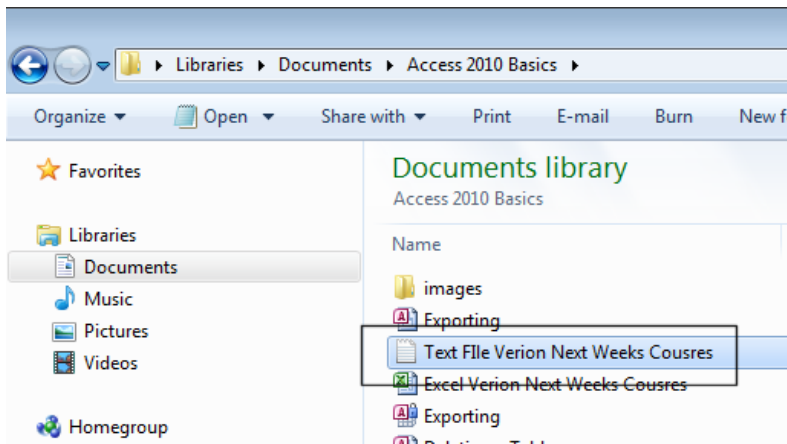
- Click on the **OK** button and you will see the following dialog box displayed.



- Use the default encoding option and click on the **OK** button. The following dialog box will be displayed.



- Click on the **Close** button.
- Don't actually do this now, but if you used the **Windows Explorer** program to view the contents of your **Access 2010 Basics** folder you would see the new Excel file listed as illustrated.



- If you were to open the file to a text only editing program, such as Notepad, the data would look like this.

The screenshot shows a Notepad window titled 'Text File Verion Next Weeks Courses - Notepad'. The text content is as follows:

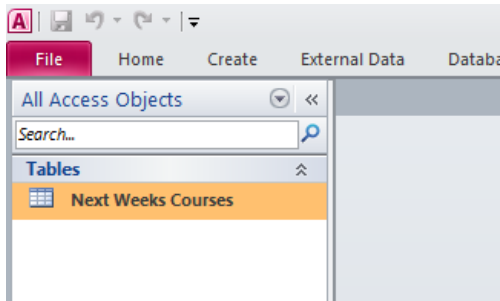
ID	Course Name	Course	Price	Places Left	Course Date	Dt
1	word 2010	Basics	\$200.00	5	3/03/2010	
2	Excel 2010	Advanced	\$400.00	2	3/03/2010	
3	PowerPoint 2010	Basics	\$200.00	4	3/03/2010	
4	PowerPoint 2010	Advanced	\$400.00	1	3/03/2010	
5	Outlook 2010	Basics	\$200.00	4	3/03/2010	
6	Access 2010	Basics	\$200.00	3	3/03/2010	
7	Access 2010	Advanced	\$400.00	1	3/03/2010	

NOTE: This format is NOT what many programs will expect when importing data from Access. Normally you would save to a text file in **CSV** format.

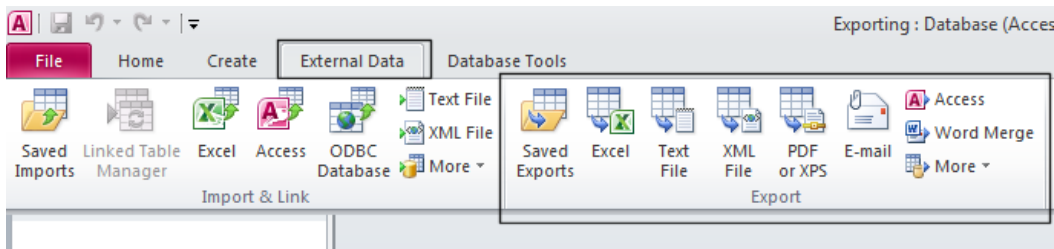
- Close the Access program.

Exporting a table as a text CSV formatted file

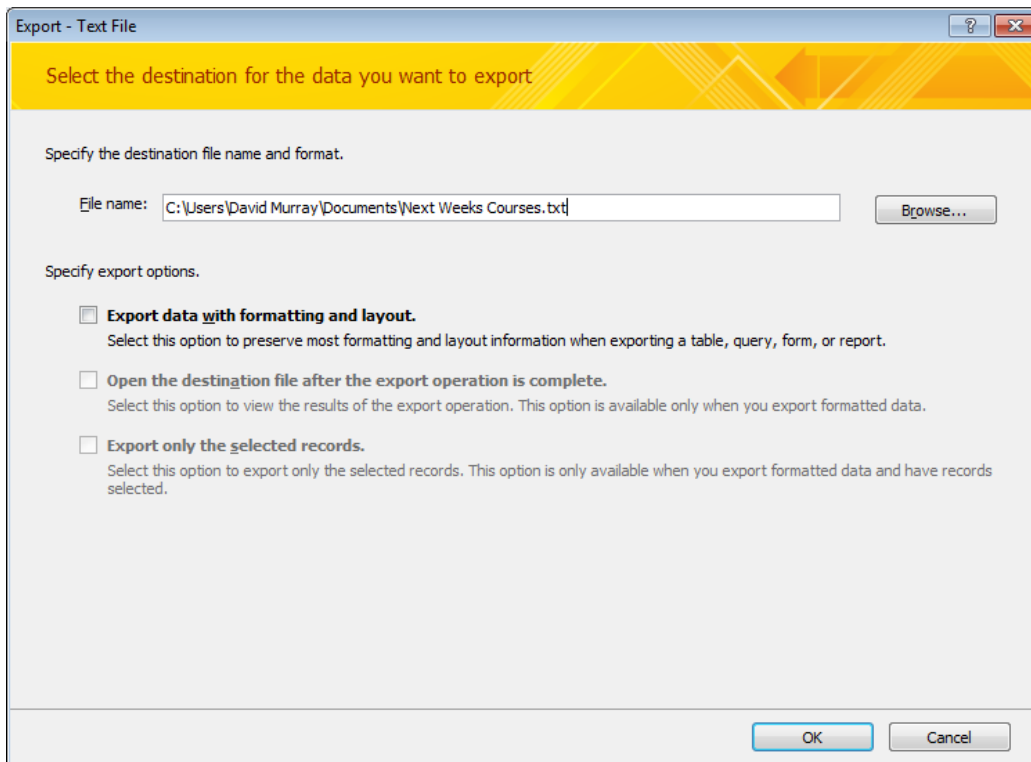
- Start the Access program.
- Open a database called **Exporting**.
- Select but do not open the table called **Next Weeks Courses**.



- Click on the **External Data** tab and from within the **Export** group, click on the **Text File** button.

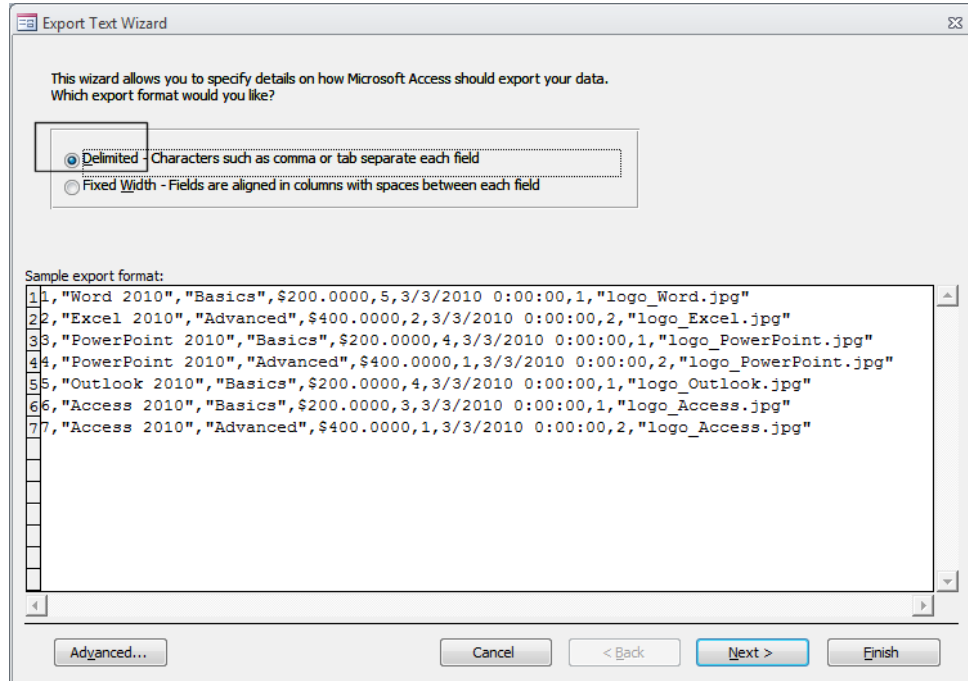


- You will see the following dialog box.

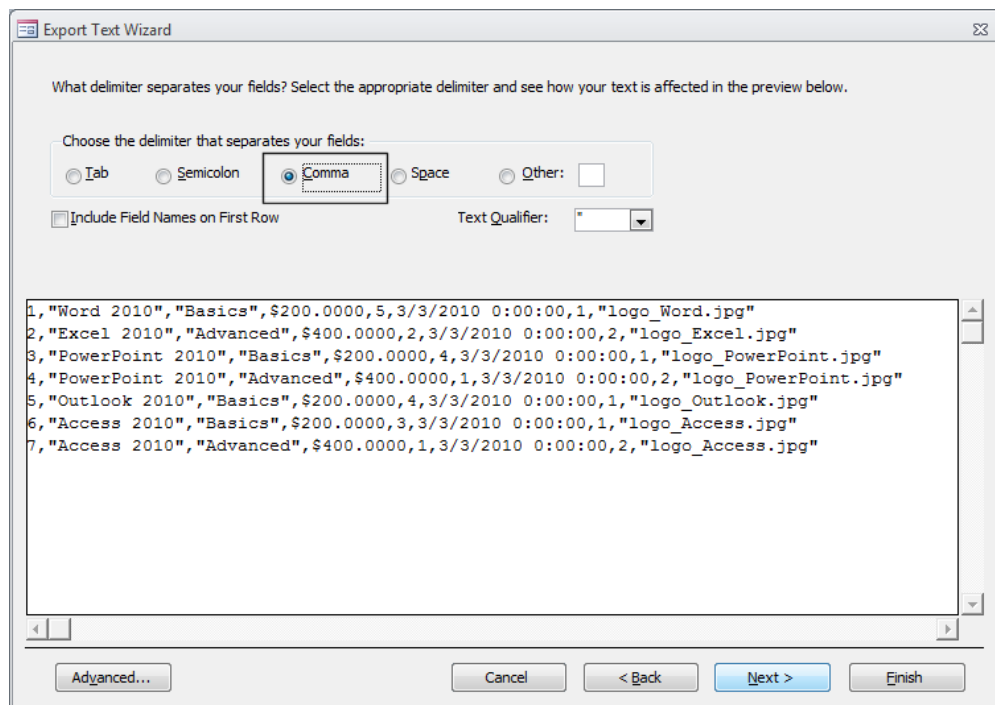


- Do not select one of the three export options, but simply click on the **OK** button to continue. You will see the following dialog box displayed. Make sure that the

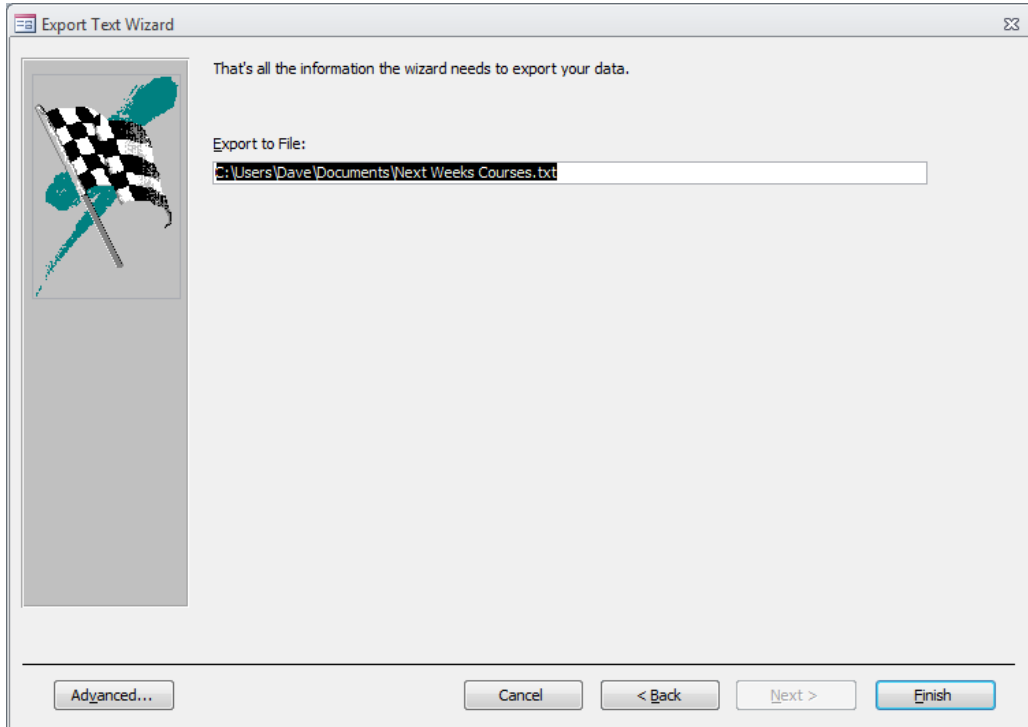
Delimited option is selected.



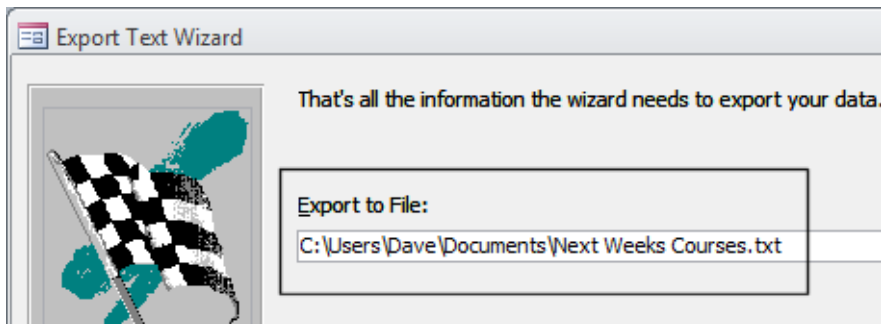
- Click on the **Next** button. You will see a dialog box allowing you to specify delimitation type. Make sure that the **Comma** option is selected.



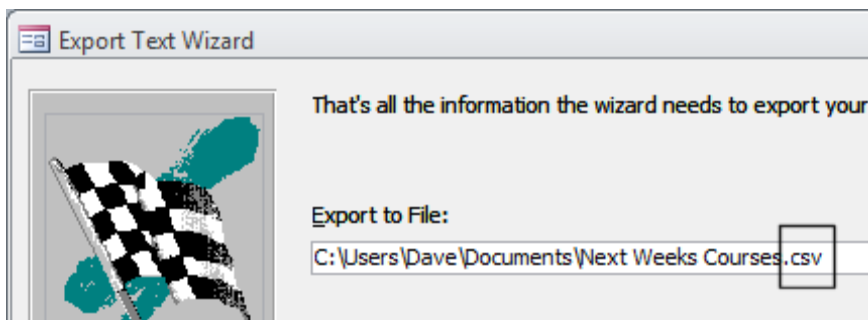
- Click on the **Next** button. The following dialog box will be displayed.



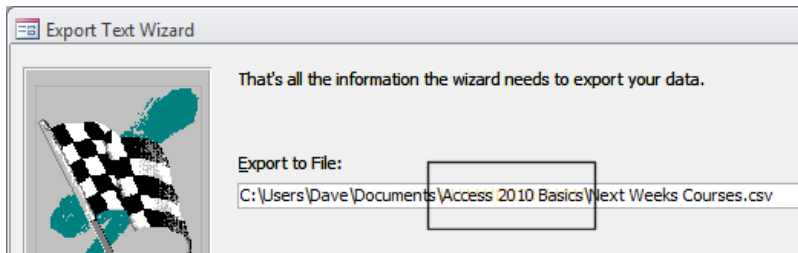
- You will notice that the default file name extension is **.TXT**.



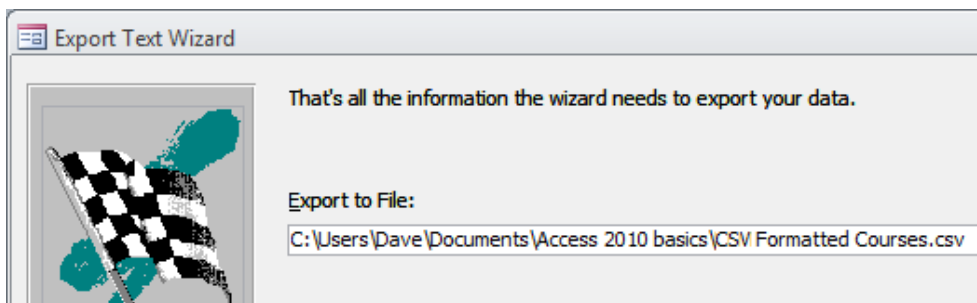
- You can change this to **CSV**.



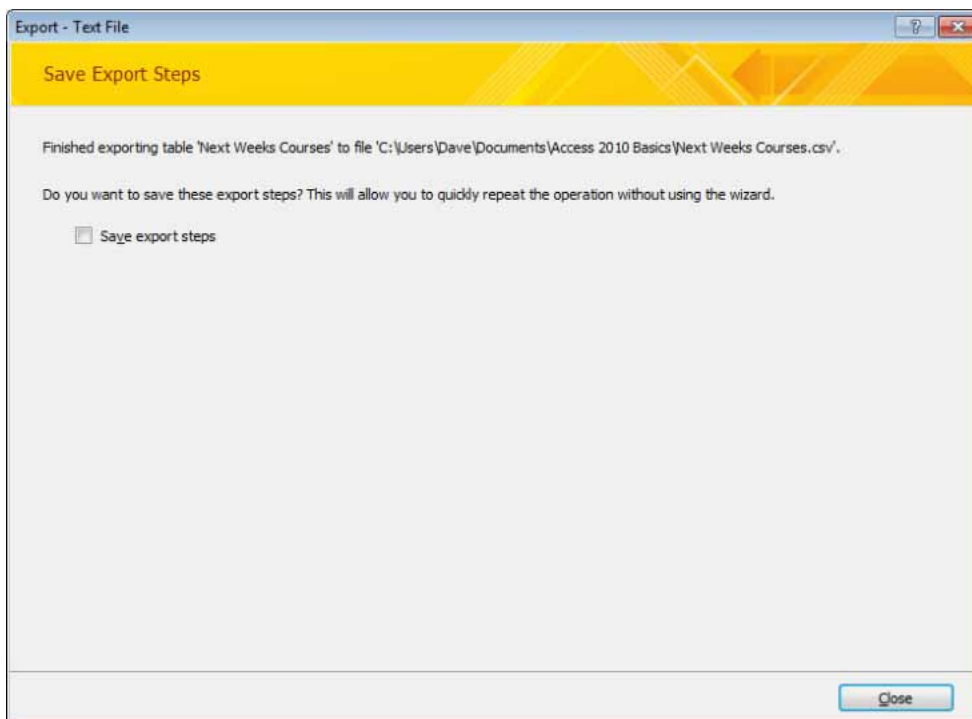
- You can also manually modify the save location, as illustrated, to save the file in the same folder as your other sample files.



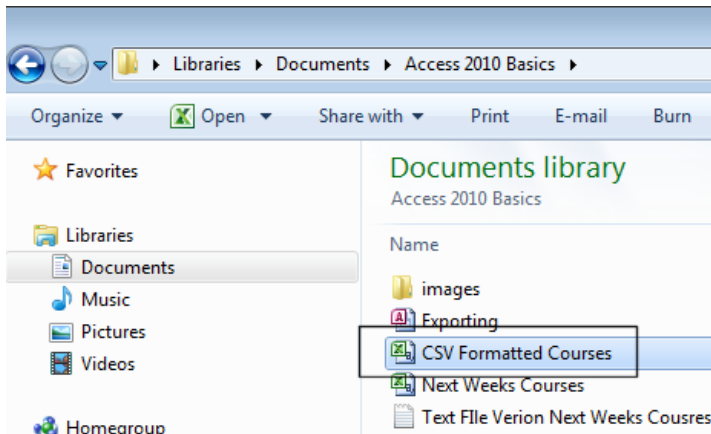
- Finally you could change the actual file name from **Next Week Courses** to **CSV Formatted Courses**. The dialog box should now look like this.



- Click on the **Finish** button and you will see the following dialog box displayed.



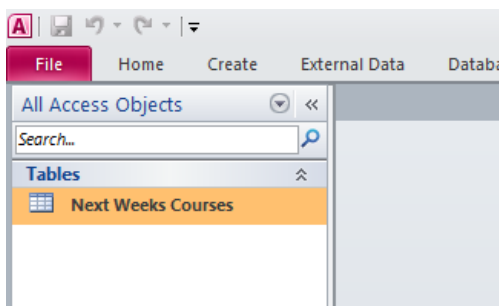
- Click on the **Close** button.
- Don't actually do this now, but if you used the **Windows Explorer** program to view the contents of your **Access 2010 Basics** folder you would see the new CSV file listed as illustrated.



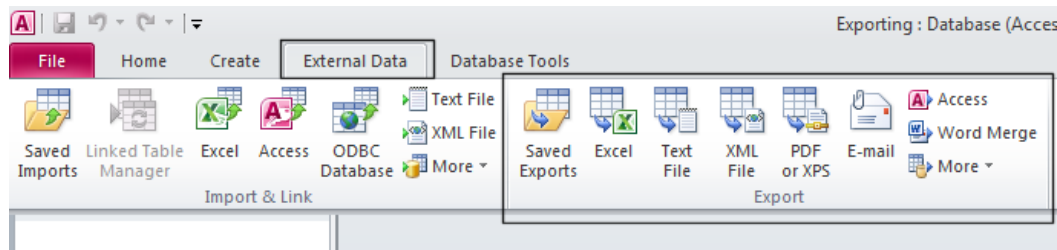
- Close the Access program.

Exporting a table as a PDF formatted file

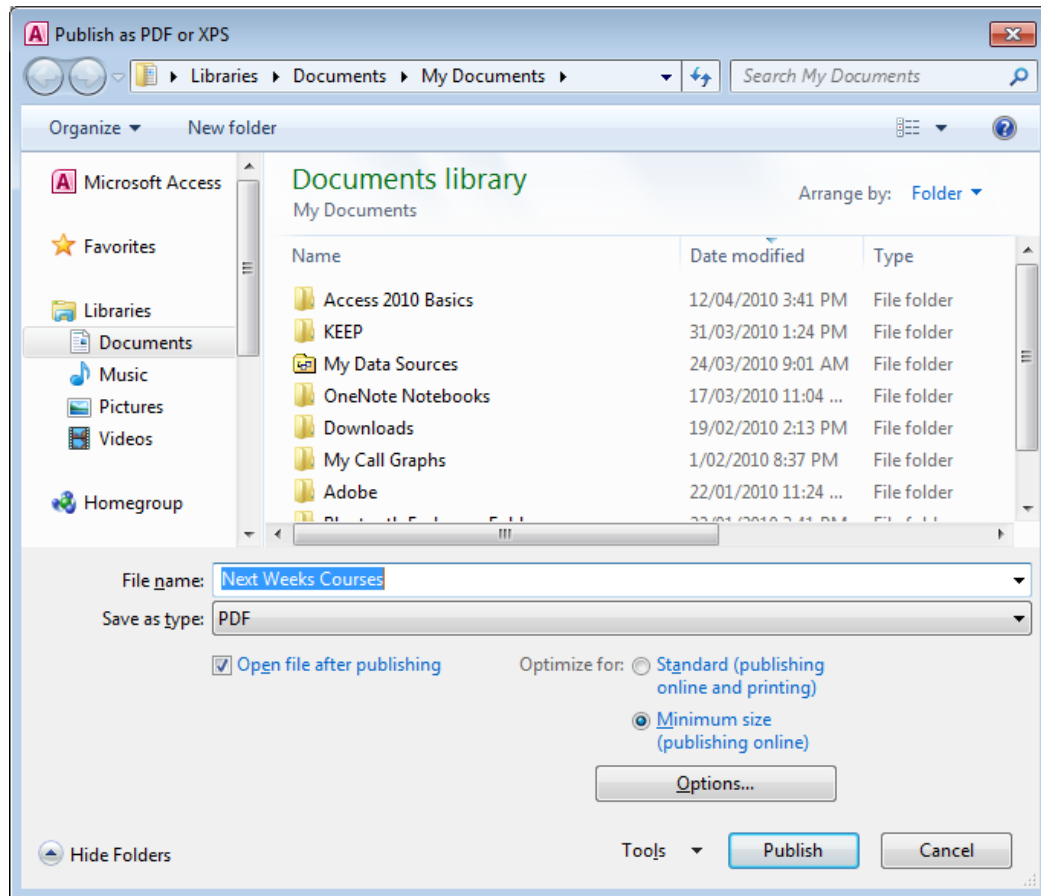
- Start the Access program.
- Open a database called **Exporting**.
- Select but do not open the table called **Next Weeks Courses**.



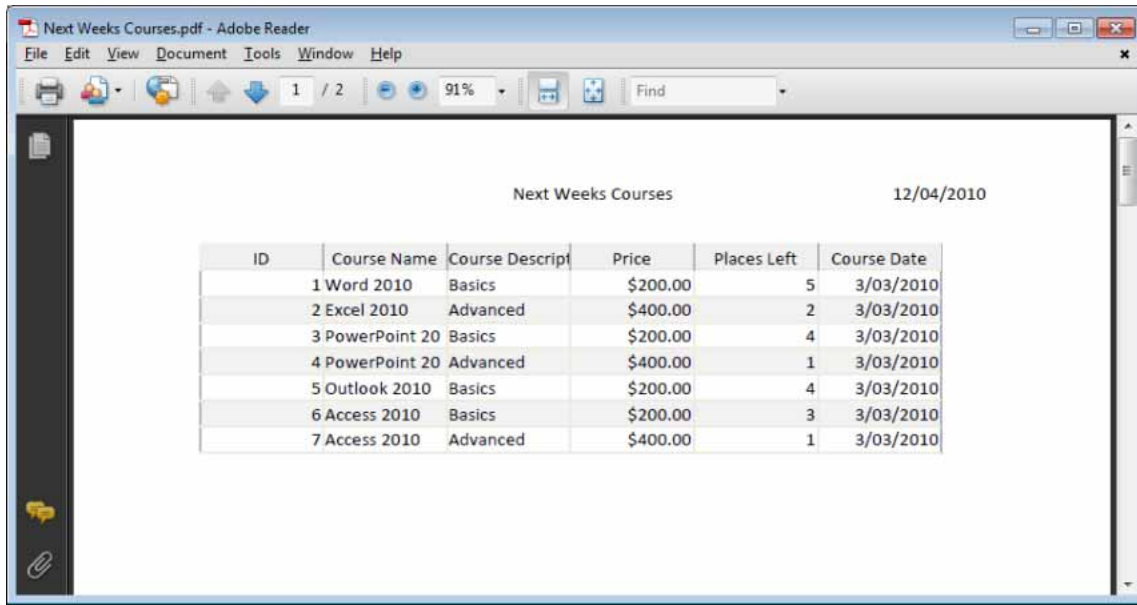
- Click on the **External Data** tab and from within the **Export** group, click on the **PDF or XPS** button.



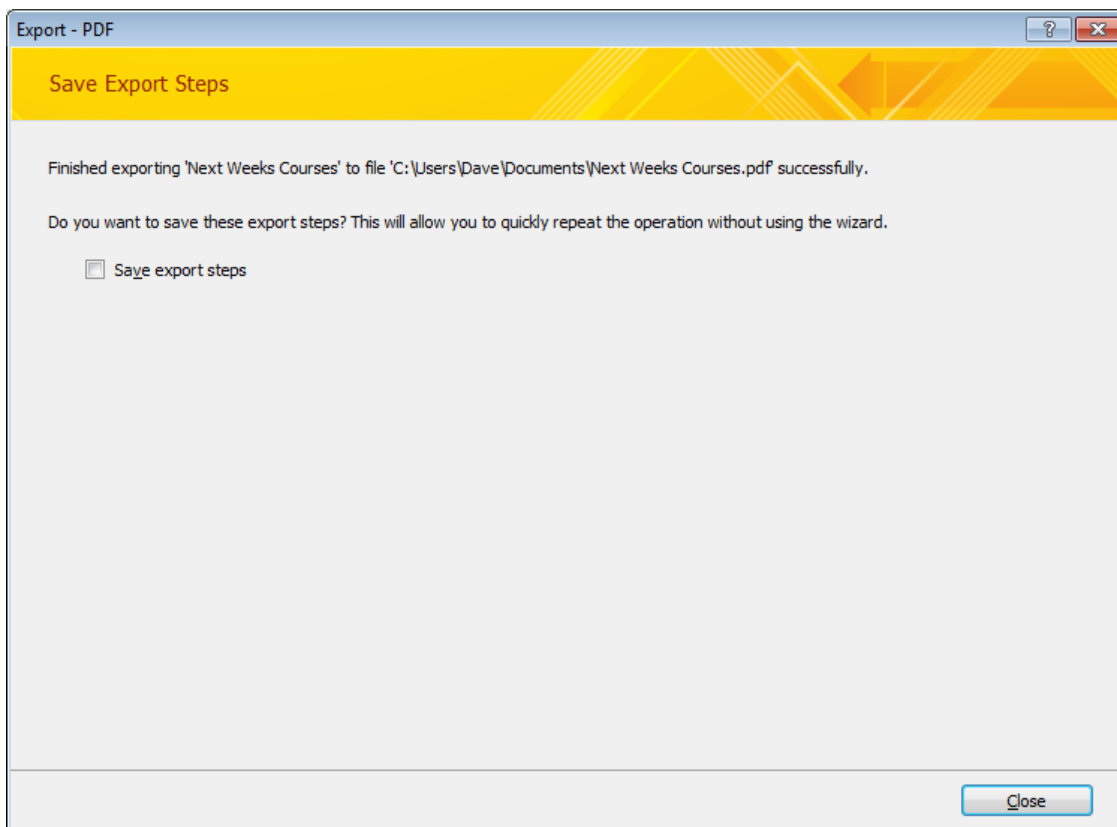
- This will display the following window.



- Change to the **Access 2010 Basics** folder, by double clicking on the folder.
- In the **Save as Type** section make sure that **PDF** is selected.
- Click on the **Publish** button. If you have the Adobe PDF Reader program installed you may see the file displayed, as illustrated.

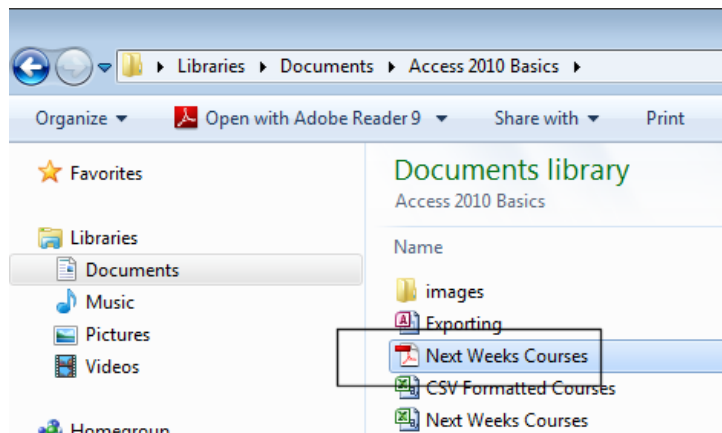


- Close the PDF Reader program.
- Close the **Export – PDF** window by clicking on the **Close** button.



- Don't actually do this now, but if you used the **Windows Explorer** program to view the contents of your **Access 2010 Basics** folder you would see the new Adobe PDF

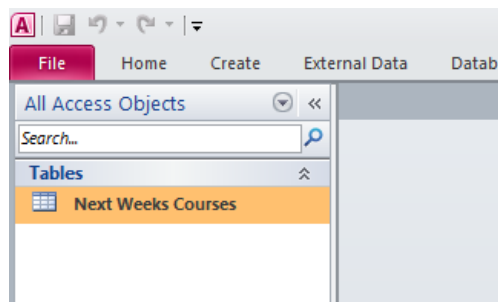
file listed as illustrated.



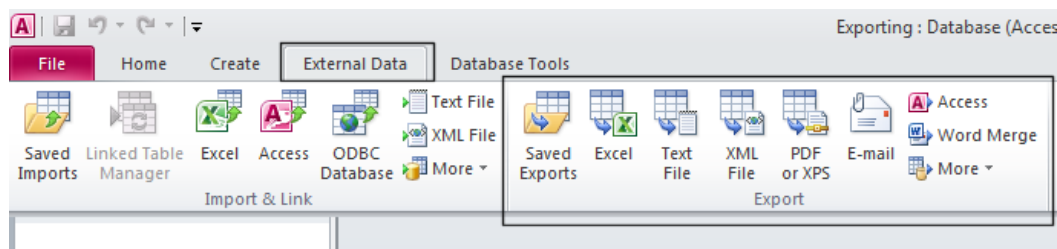
- Close the Access program.

Exporting a table as an XML formatted file

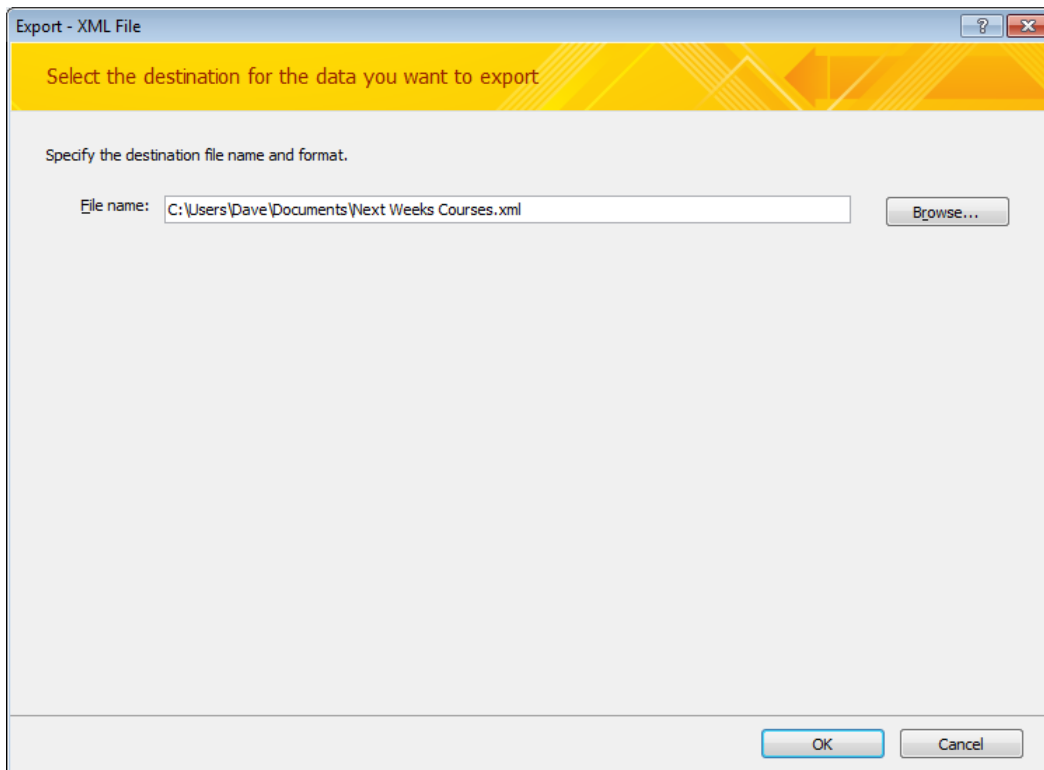
- Start the Access program.
- Open a database called **Exporting**.
- Select but do not open the table called **Next Weeks Courses**.



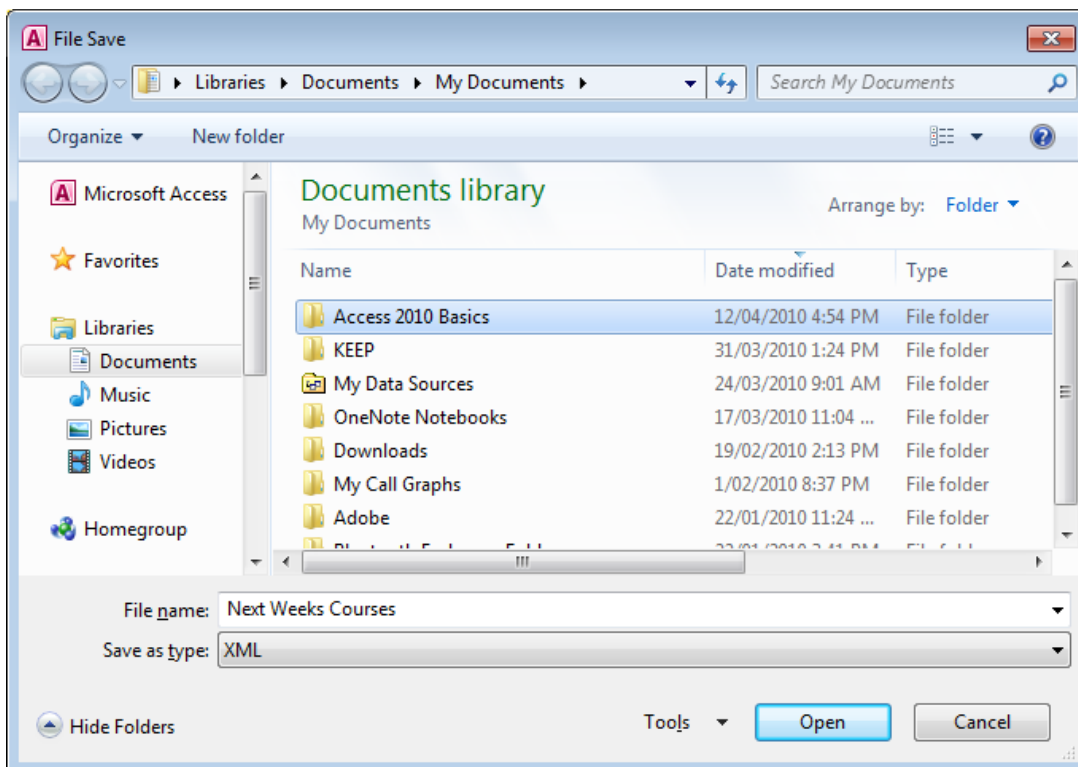
- Click on the **External Data** tab and from within the **Export** group, click on the **Excel** button.



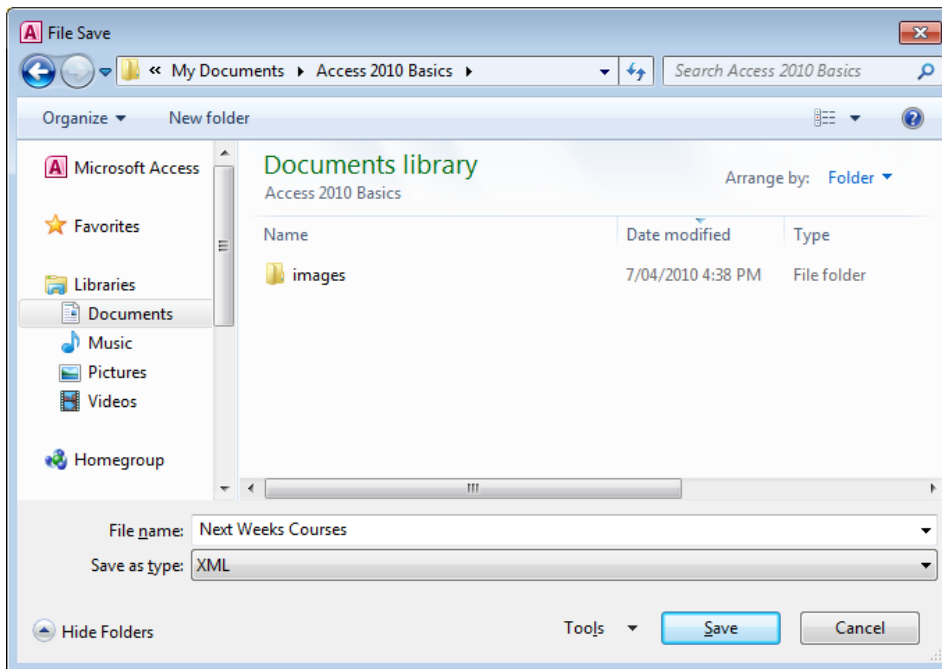
- You will see the following dialog box.



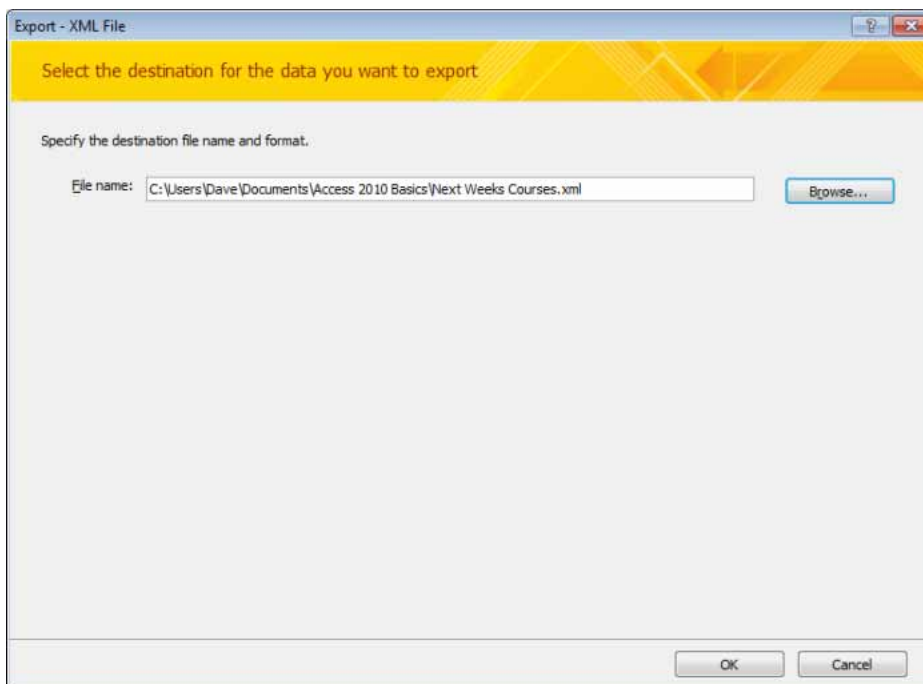
- Click on the **Browse** button.



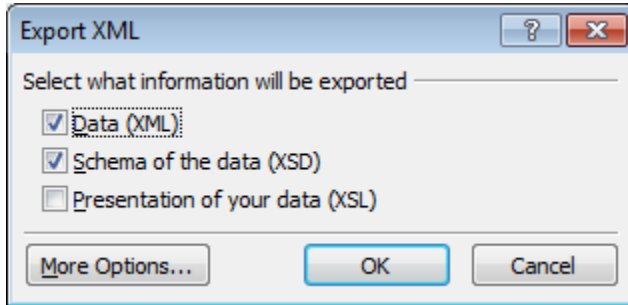
- You should see the **Access 2010 Basics** folder displayed within the right section of the dialog box. Double click on the **Access 2010 Basics** folder to change to that folder. The dialog box will now look like this.



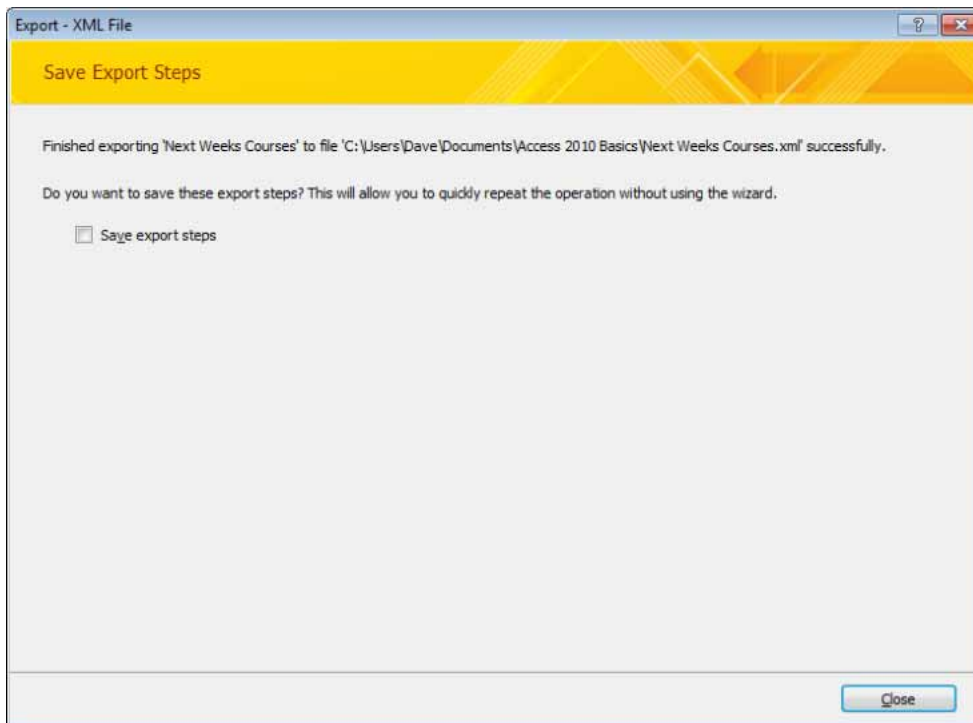
- Click on the **Save** button and you will see the following dialog box displayed.



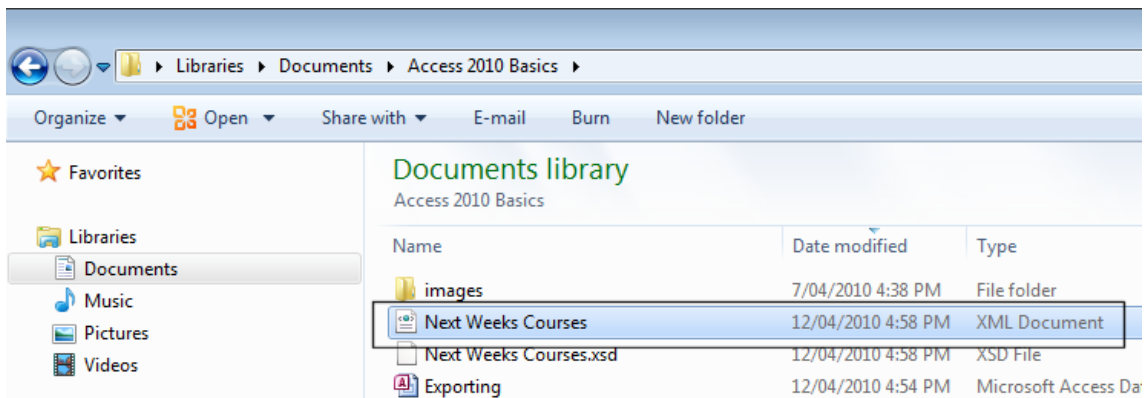
- Click on the **OK** button and you will see the following dialog box.



- Click on the **OK** button. You will see a final dialog box displayed, click on the **Close** button to close the dialog box.



- Click on the **Close** button.
- Don't actually do this now, but if you used the **Windows Explorer** program to view the contents of your **Access 2010 Basics** folder you would see the new XML file listed as illustrated.



- Close the Access program.

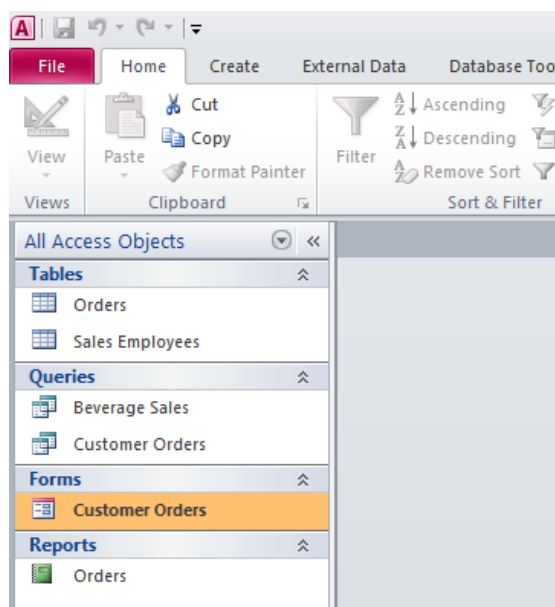
Printing

Considerations before printing

- Tables, queries and reports all use a grid layout which includes columns and rows. It is therefore important to consider the number and width of columns when it comes to printing.
- If the number of fields can be kept to a single sheet (width), either portrait or landscape, it will save on the number of pages you need to print.
- Although information can be printed directly from a table, consider using a query to extract only the fields and records that are actually required.

Print previewing

- Print Preview view shows how the report, table, etc. will look when printed. This includes the layout of columns (fields) on the page(s), how many pages are required to print the information, the margin sizes, titles, page numbers, etc.
- Before you can preview your print job, the object must either be selected within the Navigation Pane or open in the object window. To print only selected records from a table, the table would have to be open first to select the records.
- Open Access and open a file called **Printing**. You will see the following.

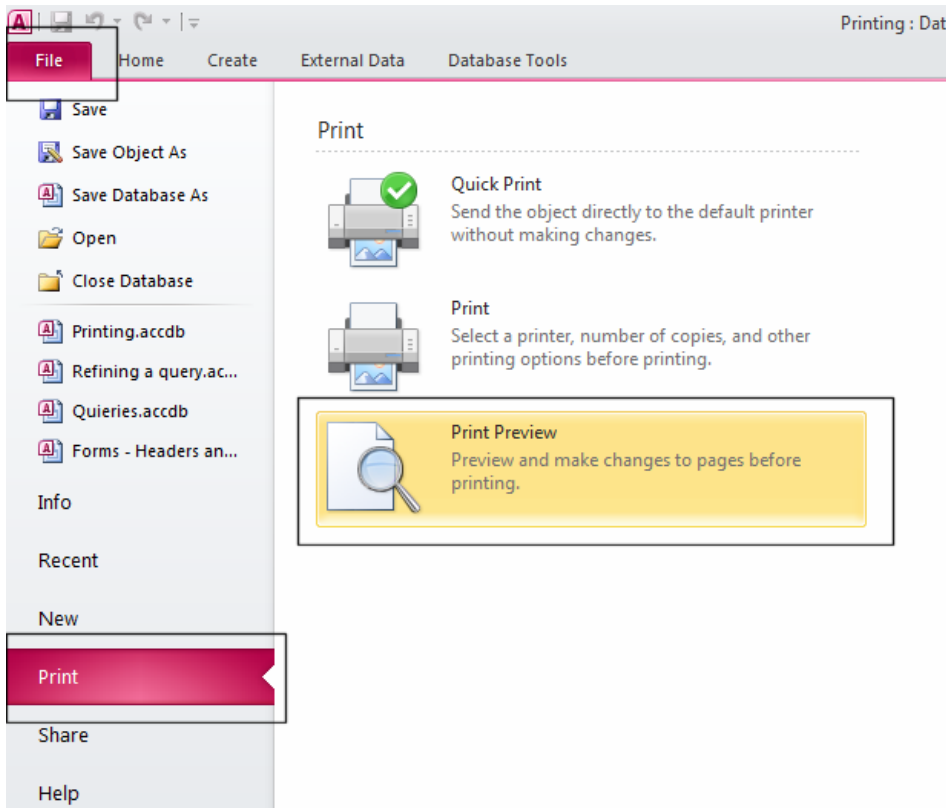


- Double click on the **Orders** report to open it, as illustrated.

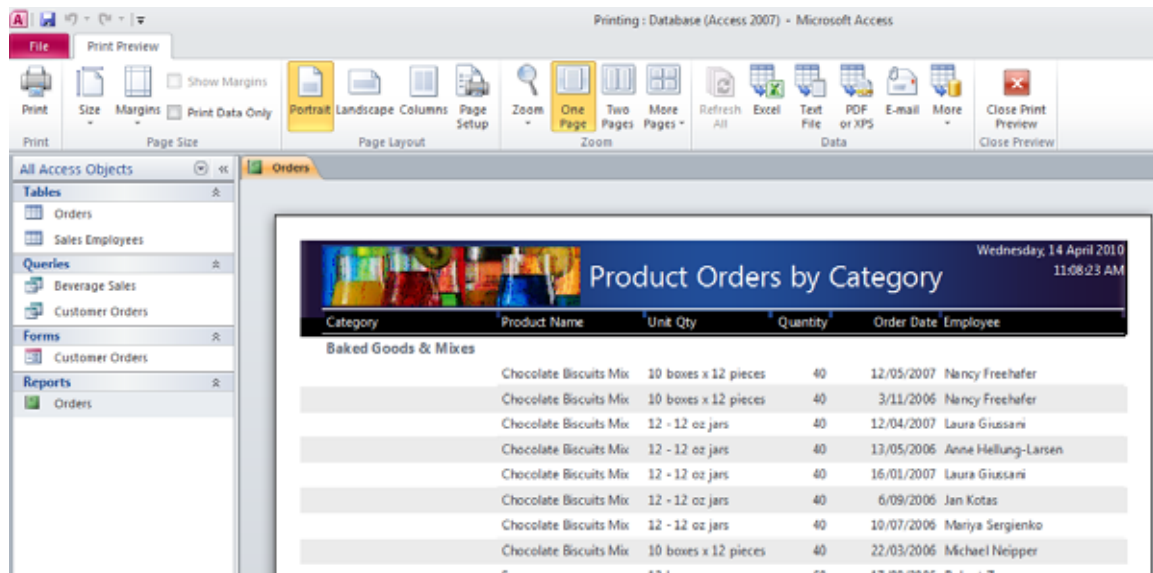


Category	Product Name	Unit Qty	Quantity	Order Date	Employee
Baked Goods & Mixes	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	12/05/2007	Nancy Freehafer
	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	3/11/2006	Nancy Freehafer
	Chocolate Biscuits Mix	12 - 12 oz jars	40	12/04/2007	Laura Giussani
	Chocolate Biscuits Mix	12 - 12 oz jars	40	13/05/2006	Anne Hellung-Larsen
	Chocolate Biscuits Mix	12 - 12 oz jars	40	16/01/2007	Laura Giussani
	Chocolate Biscuits Mix	12 - 12 oz jars	40	6/09/2006	Jan Kotas
	Chocolate Biscuits Mix	12 - 12 oz jars	40	10/07/2006	Mariya Sergienko
	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	22/03/2006	Michael Neipper
	Scones	12 boxes	60	17/08/2006	Robert Zare
	Scones	24 pkgs. x 4 pieces	40	16/05/2007	Nancy Freehafer
	Scones	24 pkgs. x 4 pieces	100	11/06/2007	Mariya Sergienko

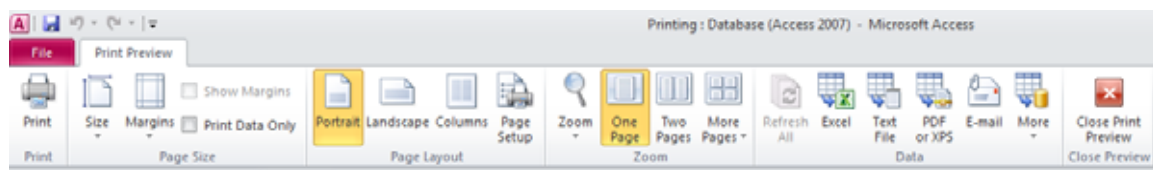
- To use Print Preview, click on the **File** tab and from the drop down list displayed, click on the **Print** button. Click on the **Print Preview** button.



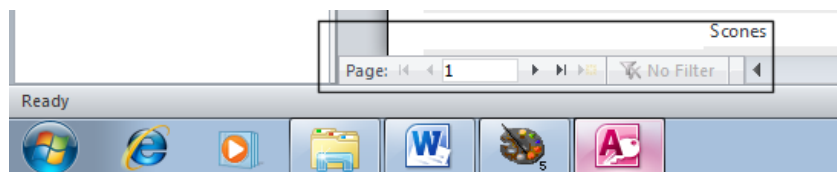
- The screen will now look like this.



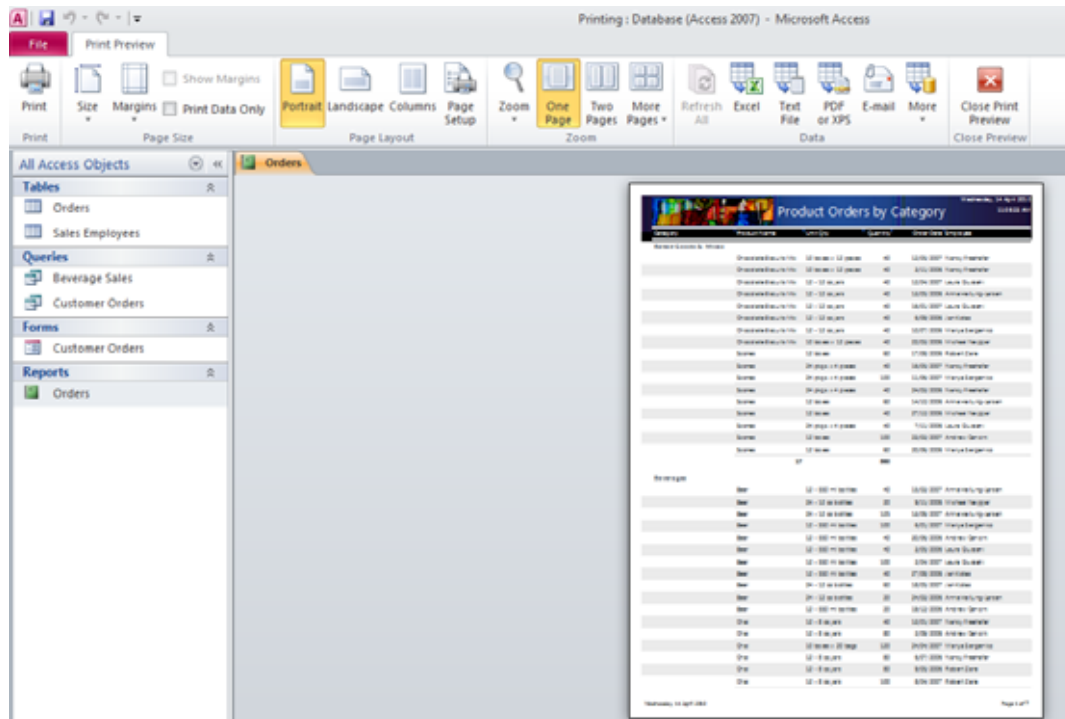
- A previously unseen **Print Preview** ribbon appears, offering you the most common tools required to adjust and modify the layout of you object to achieve the best printing results.



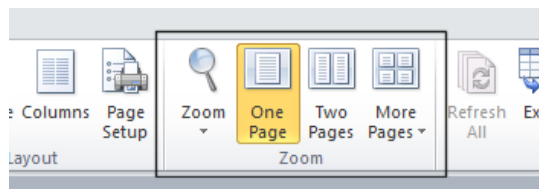
- A **Page Navigation Bar**, similar to the **Record Navigation Bar** used in tables, queries and forms can be seen at the bottom-left of the object window.



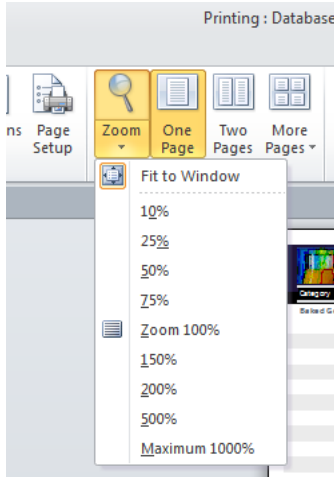
- When you first run Print Preview, the document displayed may appear unreadable. By placing the pointer over the document, the pointer changes to a magnifying glass. One click will zoom in to make the document readable and another click zooms out again.



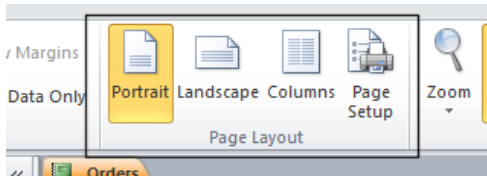
- The **Zoom** group also offers further tools to enhance the focus and view of the document when working within Print Preview.



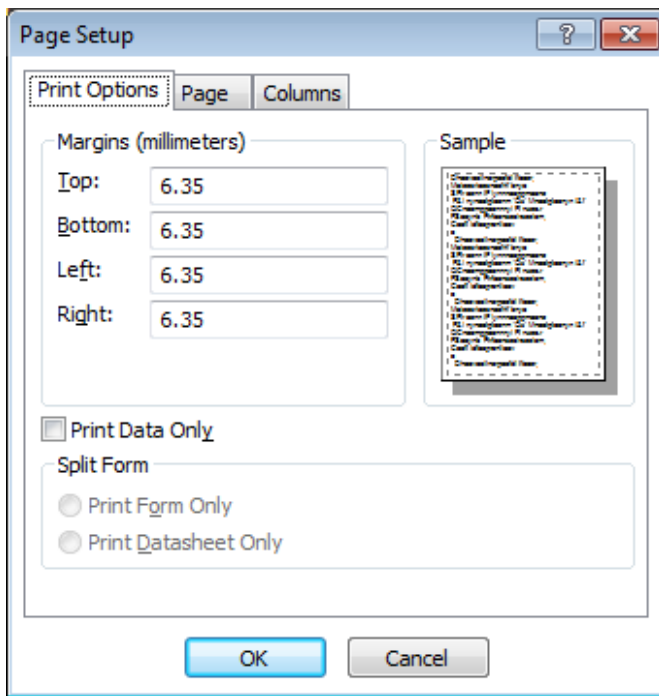
- The **Zoom** button offers zoom pre-sets in percentages and the three pages per view options offer the chance to preview multiple pages at once. This is useful when you are more interested in the layout than the actual data content.



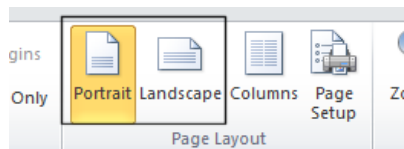
- In the **Page Layout** group the buttons control page size and page orientation, as well as margin sizes.



- Clicking on the **Page Size** button displays a dialog box listing common International pages sizes.



- By default, Access previews pages in portrait orientation. If you are unsure which orientation you are viewing, look at the **Layout** group in the ribbon. Whichever of the two orientation buttons is active, i.e. brightly shaded, indicates the current page orientation.
- When the **Portrait** button is selected and active, the page orientation is Portrait



- The page will look like this.

Category	Product Name	Unit Qty	Quantity	Order Date	Employee
Baked Goods & Mixes	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	12/05/2007	Nancy Freshwater
	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	2/11/2006	Nancy Freshwater
	Chocolate Biscuits Mix	12 x 12 oz jars	40	12/04/2007	Laure Guisani
	Chocolate Biscuits Mix	12 x 12 oz jars	40	12/05/2006	Anna Heilung-Jensen
	Chocolate Biscuits Mix	12 x 12 oz jars	40	10/01/2007	Laure Guisani
	Chocolate Biscuits Mix	12 x 12 oz jars	40	6/08/2006	Jan Kotlos
	Chocolate Biscuits Mix	12 x 12 oz jars	40	10/07/2006	Mariya Sargeniko
	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	22/02/2006	Michael Haggner
	Scones	12 boxes	60	17/08/2006	Robert Zane
	Scones	24 pigs x 4 pieces	40	16/05/2007	Nancy Freshwater
	Scones	24 pigs x 4 pieces	100	11/06/2007	Mariya Sargeniko
	Scones	24 pigs x 4 pieces	40	24/03/2006	Nancy Freshwater
	Scones	12 boxes	60	14/10/2006	Anna Heilung-Jensen
	Scones	12 boxes	40	27/12/2006	Michael Haggner
	Scones	24 pigs x 4 pieces	40	7/11/2006	Laure Guisani
	Scones	12 boxes	100	22/02/2007	Andrew Candoni
	Scones	12 boxes	60	20/06/2006	Mariya Sargeniko
			17	880	
Beverages	Beer	12 x 550 ml bottles	40	15/05/2007	Anna Heilung-Jensen
	Beer	24 x 12 oz bottles	20	9/11/2006	Michael Haggner
	Beer	24 x 12 oz bottles	125	12/06/2007	Anna Heilung-Jensen
	Beer	12 x 550 ml bottles	100	6/01/2007	Mariya Sargeniko
	Beer	12 x 550 ml bottles	40	20/06/2006	Andrew Candoni
	Beer	12 x 550 ml bottles	40	2/05/2006	Laure Guisani
	Beer	12 x 550 ml bottles	100	2/04/2007	Laure Guisani
	Beer	12 x 550 ml bottles	40	27/08/2006	Jan Kotlos
	Beer	24 x 12 oz bottles	60	18/05/2007	Jan Kotlos
	Beer	24 x 12 oz bottles	20	24/03/2006	Anna Heilung-Jensen
	Beer	12 x 550 ml bottles	20	10/12/2006	Andrew Candoni
	Chai	12 x 8 oz jars	40	12/01/2007	Nancy Freshwater
	Chai	12 x 8 oz jars	80	2/09/2006	Andrew Candoni
	Chai	10 boxes x 20 bags	100	24/04/2007	Mariya Sargeniko
	Chai	12 x 8 oz jars	80	6/07/2006	Nancy Freshwater
	Chai	12 x 8 oz jars	80	9/05/2006	Robert Zane
	Chai	12 x 8 oz jars	100	8/04/2007	Robert Zane

- When the **Landscape** button is selected and active. The page orientation is Landscape. The screen will look like this.

Product Orders by Category					
Wednesday, 14 April 2010 11:18:07 AM					
Category	Product Name	Unit Qty	Quantity	Order Date	Employee
Baked Goods & Mixes					
	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	12/05/2007	Nancy Freehafer
	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	3/11/2006	Nancy Freehafer
	Chocolate Biscuits Mix	12 - 12 oz jars	40	12/04/2007	Laura Giussani
	Chocolate Biscuits Mix	12 - 12 oz jars	40	13/05/2006	Anne Hallung-Larsen
	Chocolate Biscuits Mix	12 - 12 oz jars	40	16/01/2007	Laura Giussani
	Chocolate Biscuits Mix	12 - 12 oz jars	40	6/09/2006	Jan Kotas
	Chocolate Biscuits Mix	12 - 12 oz jars	40	10/07/2006	Mariya Sergienko
	Chocolate Biscuits Mix	10 boxes x 12 pieces	40	22/03/2006	Michael Neipper
	Scones	12 boxes	60	17/08/2006	Robert Zare
	Scones	24 pils. x 4 pieces	40	16/05/2007	Nancy Freehafer
	Scones	24 pils. x 4 pieces	100	11/06/2007	Mariya Sergienko
	Scones	24 pils. x 4 pieces	40	24/03/2006	Nancy Freehafer
	Scones	12 boxes	60	14/10/2006	Anne Hallung-Larsen
	Scones	12 boxes	40	27/12/2006	Michael Neipper
	Scones	24 pils. x 4 pieces	40	7/11/2006	Laura Giussani
	Scones	12 boxes	100	23/03/2007	Andrew Cancini
	Scones	12 boxes	60	20/06/2006	Mariya Sergienko
		17	860		
Beverages					
	Beer	12 - 550 ml bottles	40	15/03/2007	Anne Hallung-Larsen
	Beer	24 - 12 oz bottles	20	9/11/2006	Michael Neipper
	Beer	24 - 12 oz bottles	125	13/06/2007	Anne Hallung-Larsen
	Beer	12 - 550 ml bottles	100	6/01/2007	Mariya Sergienko
	Beer	12 - 550 ml bottles	40	30/06/2006	Andrew Cancini
	Beer	12 - 550 ml bottles	40	3/05/2006	Laura Giussani
	Beer	12 - 550 ml bottles	100	2/04/2007	Laura Giussani

- Close the Access program and save any changes you may have made.

Which orientation, portrait or landscape?

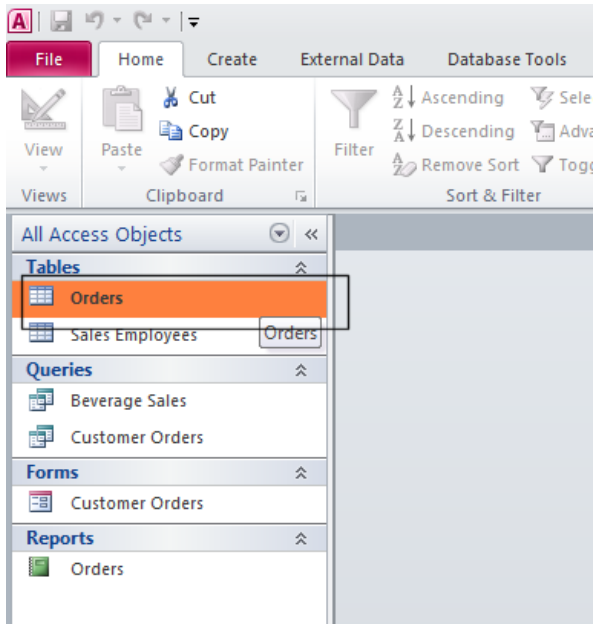
- When printing portrait pages, the advantage, assuming the report is only one page wide, is that more records can be printed per page, resulting in less pages being printed.

Landscape orientation on the other hand is useful when the table, report, etc. has more fields (columns) than a portrait page can accommodate.

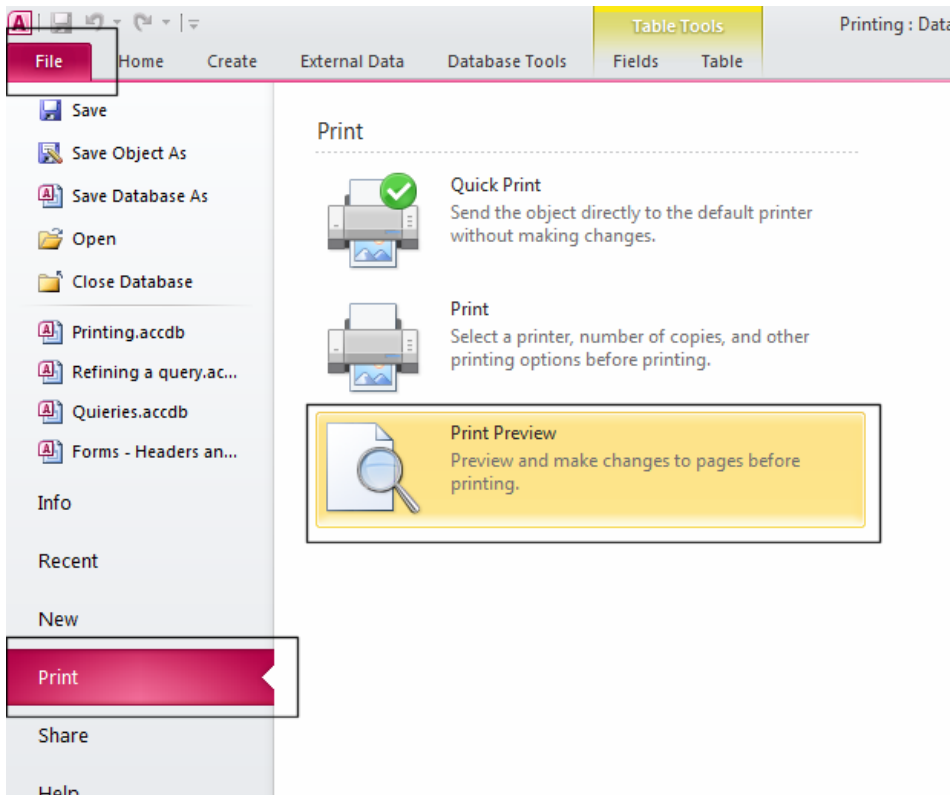
NOTE: When columns overflow the first page, a second page is used, in effect creating a two page wide printout. If those who the printouts are intended for are to make good use of the printouts, reports, etc., it is recommended that the printouts be kept to a manageable size.

Adjusting layout in Print Preview

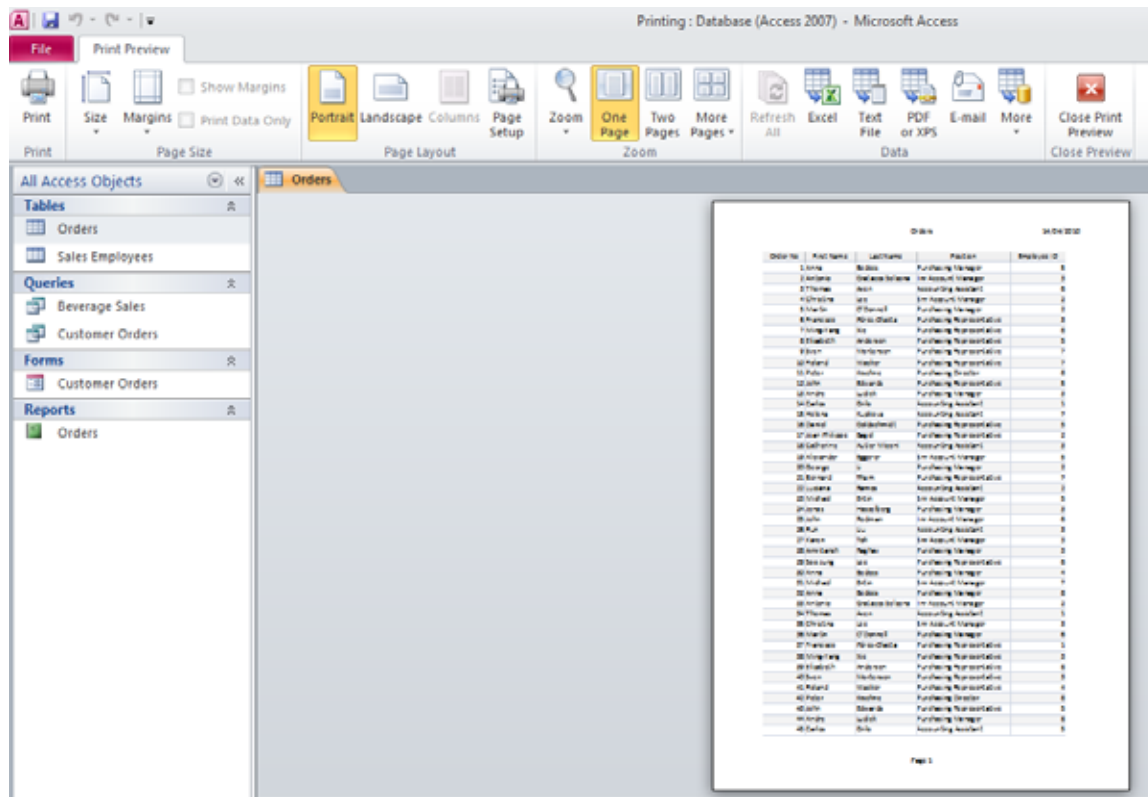
- Start the Access program.
- Open the database called **Printing**.
- Double click on **Orders** in the Navigation Pane to open the **Orders** table.



- Click on the File tab and then click on the Print button. Click on the **Print Preview** button.



- The displayed is illustrated below.



- The **Page Navigation Bar** is displayed below the table preview.



- Click on the right arrowed button once.

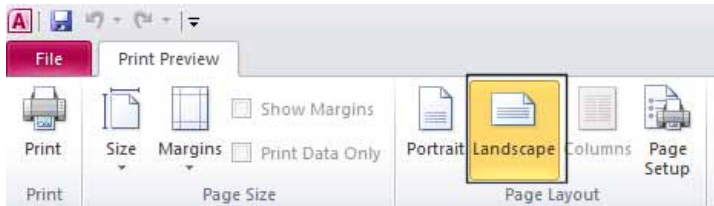


Make a note of the fields in **page 2** and then click on the right arrowed button again and note which fields are in **page 3**.



Currently, a print of this table would be 3 pages wide, multiplied by the number of pages require to print all or selected records.

- Click on the **Landscape** button.

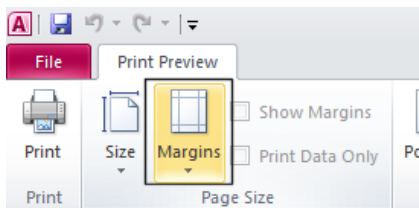


- In Landscape orientation, the printout only requires two pages (width), again multiplied by the number of pages require to print all or selected records.

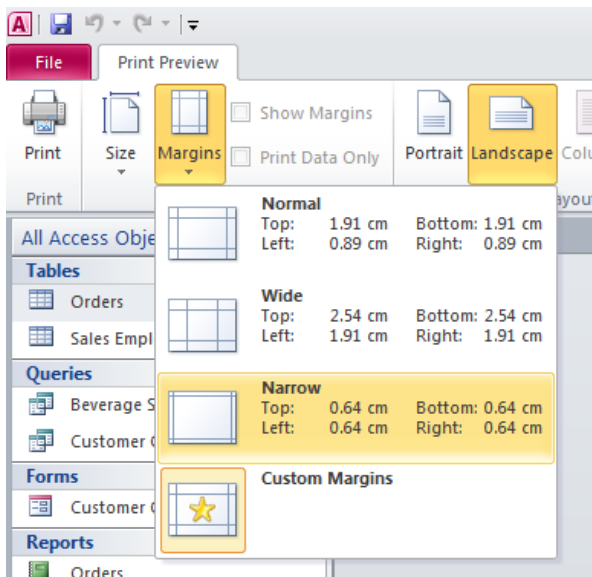
NOTE: You use the same page orientation techniques for tables, forms, query output and reports.

Setting margins

- Next, click on the **Margins** button within the Ribbon.



- This will display some pre-set options.



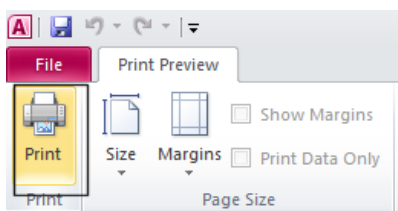
- Select the **Narrow** option from the list. More records are visible in the preview and this could result in fewer pages being printed.

Order No	First Name	Last Name	Position	Employee ID	Category	Product Name	Unit Qty
37	Francisco	Pérez-Olaeta	Purchasing Representative		1 Candy	Chocolate	12 - 1 lb pkgs.
38	Ming-Yang	Xie	Purchasing Representative		3 Baked Goods & Mixes	Chocolate Biscuits Mix	12 - 12 oz jars
39	Elizabeth	Andersen	Purchasing Representative		8 Soups	Clam Chowder	40 - 100 g pkgs.
40	Sven	Mortensen	Purchasing Representative		3 Beverages	Coffee	15.25 OZ
41	Roland	Wacker	Purchasing Representative		4 Canned Meat	Crab Meat	10 boxes x 12 pieces
42	Peter	Krschne	Purchasing Director		8 Sauces	Curry Sauce	30 gift boxes
43	John	Edwards	Purchasing Representative		5 Dried Fruit & Nuts	Dried Apples	24 pkgs. x 4 pieces
44	Andre	Ludick	Purchasing Manager		8 Dried Fruit & Nuts	Dried Pears	24 - 12 oz bottles
45	Carlos	Grilo	Accounting Assistant		5 Dried Fruit & Nuts	Dried Plums	24 - 4 oz tins
46	Helena	Kupkova	Accounting Assistant		4 Canned Fruit & Vegetables	Fruit Cocktail	12 - 12 oz cans
47	Daniel	Goldschmidt	Purchasing Representative		3 Pasta	Gnocchi	16 - 500 g tins
48	Jean Philippe	Bagel	Purchasing Representative		3 Cereal	Granola	10 pkgs
49	Catherine	Autier Miconi	Accounting Assistant		6 Beverages	Green Tea	50 - 300 g pkgs.
50	Alexander	Eggerer	Snr Account Manager		4 Sauces	Hot Pepper Sauce	16 - 2 kg boxes
51	George	Li	Purchasing Manager		7 Grains	Long Grain Rice	24 - 250 g pkgs.
52	Bernard	Tham	Purchasing Representative		8 Jams, Preserves	Marmalade	24 - 250 g pkgs.
53	Luciana	Ramos	Accounting Assistant		2 Dairy Products	Mozzarella	32 - 8 oz bottles
54	Michael	Ertin	Snr Account Manager		1 Condiments	Mustard	24 - 8 oz jars
55	Jonas	Hasselberg	Purchasing Manager		3 Oil	Olive Oil	24 - 200 g pkgs.
56	John	Rodman	Jnr Account Manager		6 Pasta	Ravioli	5 kg pkg.
57	Run	Liu	Accounting Assistant		1 Baked Goods & Mixes	Scones	12 boxes
58	Karen	Toh	Snr Account Manager		3 Condiments	Syrup	1 lb bag
59	Amritansh	Raghav	Purchasing Manager		8 Sauces	Tomato Sauce	20 bags per box
60	Soo Jung	Lee	Purchasing Representative		3 Dried Fruit & Nuts	Walnuts	10 per box
61	Anna	Bedeles	Purchasing Manager		4 Dried Fruit & Nuts	Almonds	10 boxes x 20 bags
62	Antonio	Gratacos Solsona	Jnr Account Manager		8 Beverages	Beer	12 - 550 ml bottles
63	Thomas	Axen	Accounting Assistant		5 Jams, Preserves	Boysenberry Spread	48 - 6 oz jars
64	Christina	Lee	Snr Account Manager		8 Condiments	Cajun Seasoning	36 boxes
65	Martin	O'Donnell	Purchasing Manager		5 Beverages	Chai	12 - 8 oz jars
66	Francisco	Pérez-Olaeta	Purchasing Representative		4 Candy	Chocolate	12 - 1 lb pkgs.
67	Ming-Yang	Xie	Purchasing Representative		1 Baked Goods & Mixes	Chocolate Biscuits Mix	12 - 12 oz jars
68	Elizabeth	Andersen	Purchasing Representative		3 Soups	Clam Chowder	40 - 100 g pkgs.
69	Sven	Mortensen	Purchasing Representative		8 Beverages	Coffee	15.25 OZ
70	Roland	Wacker	Purchasing Representative		3 Canned Meat	Crab Meat	10 boxes x 12 pieces
71	Peter	Krschne	Purchasing Director		4 Sauces	Curry Sauce	30 gift boxes
72	John	Edwards	Purchasing Representative		8 Dried Fruit & Nuts	Dried Apples	24 pkgs. x 4 pieces

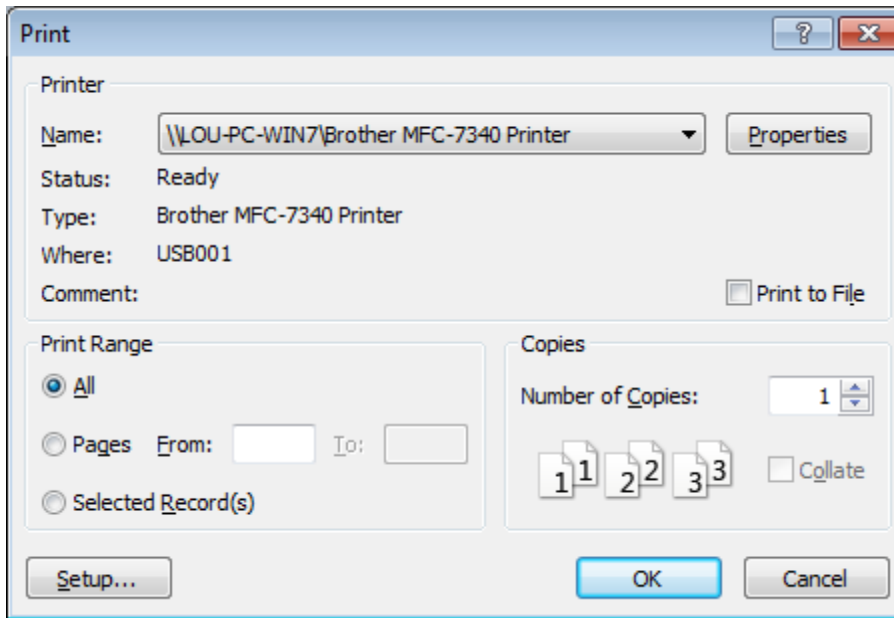
NOTE: Another option to help further reduce the number of pages required to print a table, is to resize and reduce column widths or even hide columns not necessary to the printout.

Printing a complete table

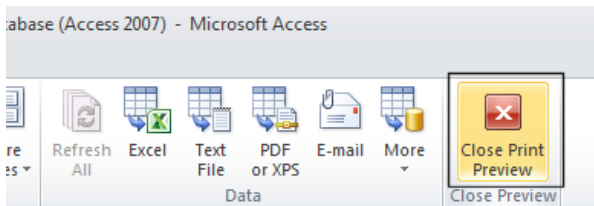
- When the layout has been optimized in Print Preview and the table is ready to be printed, click on the **Print** button.



- This displays the **Print** dialog box.



- In the **Print** dialog box, make sure the correct printer name is selected. To print the whole table, leave the **Print Range** set to **All** and click on the **OK** button to print.
- Exit from the Print Preview by click on the **Close Print Preview** button within the ribbon.

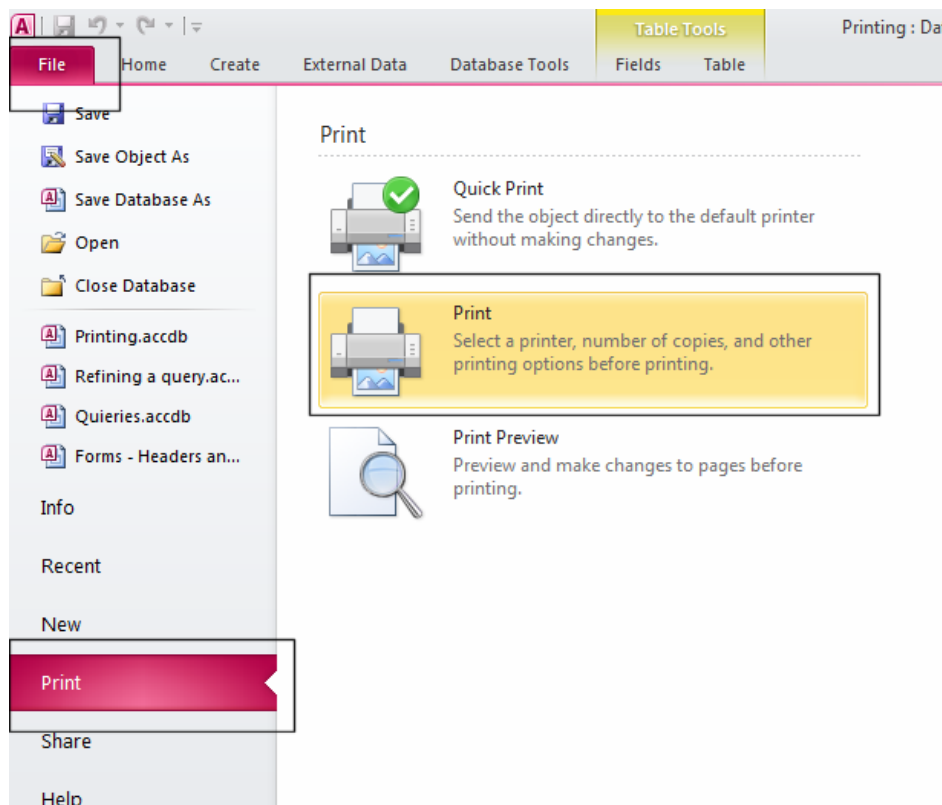


Printing selected records

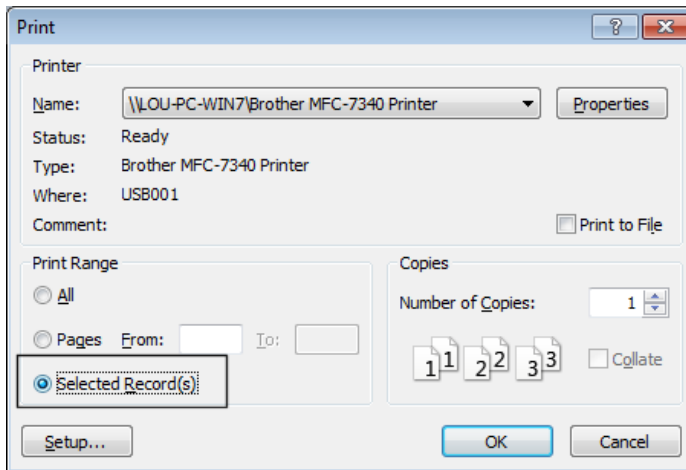
- Instead of printing the whole table, Access is able to print selected records.
- First select a few records by click on the vertical bar to the left of the records and then drag up or down the screen.

Orders				
Order No	First Name	Last Name	Position	Employee ID
1	Anna	Bedecs	Purchasing Manager	5
2	Antonio	Gratacos Solsona	Jnr Account Manager	3
3	Thomas	Axen	Accounting Assistant	6
4	Christina	Lee	Snr Account Manager	2
5	Martin	O'Donnell	Purchasing Manager	2
6	Francisco	Pérez-Olaeta	Purchasing Representative	3
7	Ming-Yang	Xie	Purchasing Representative	8
8	Elizabeth	Andersen	Purchasing Representative	5
9	Sven	Mortensen	Purchasing Representative	7
10	Roland	Wacker	Purchasing Representative	7
11	Peter	Krschne	Purchasing Director	8
12	Jake	Eduardo	Purchasing Representative	5

- Click on the **File** tab and then click on the **Print** button.



- This will display the **Print** dialog box. Click on the **Selected Record(s)** button.



- If you click on the **OK** button only the selected records will be printed.
- Close the table.

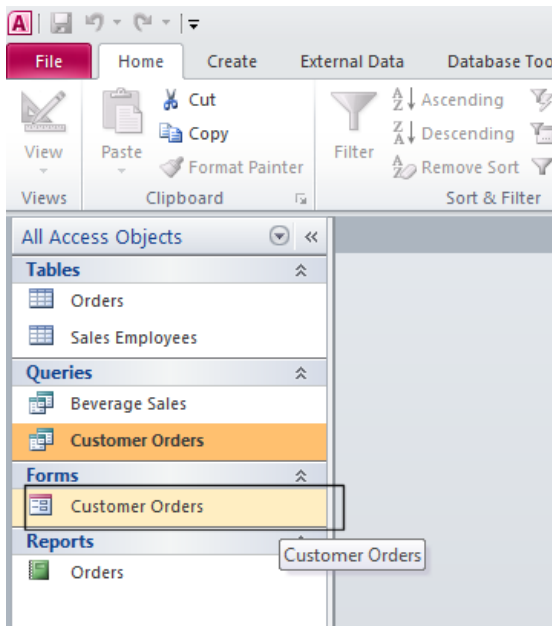
Printing a query or reports

- Follow the same steps used when printing tables. Reports have the obvious advantage over tables and queries, in that reports are specifically designed to be printed, therefore a report layout can be modified even before previewing.

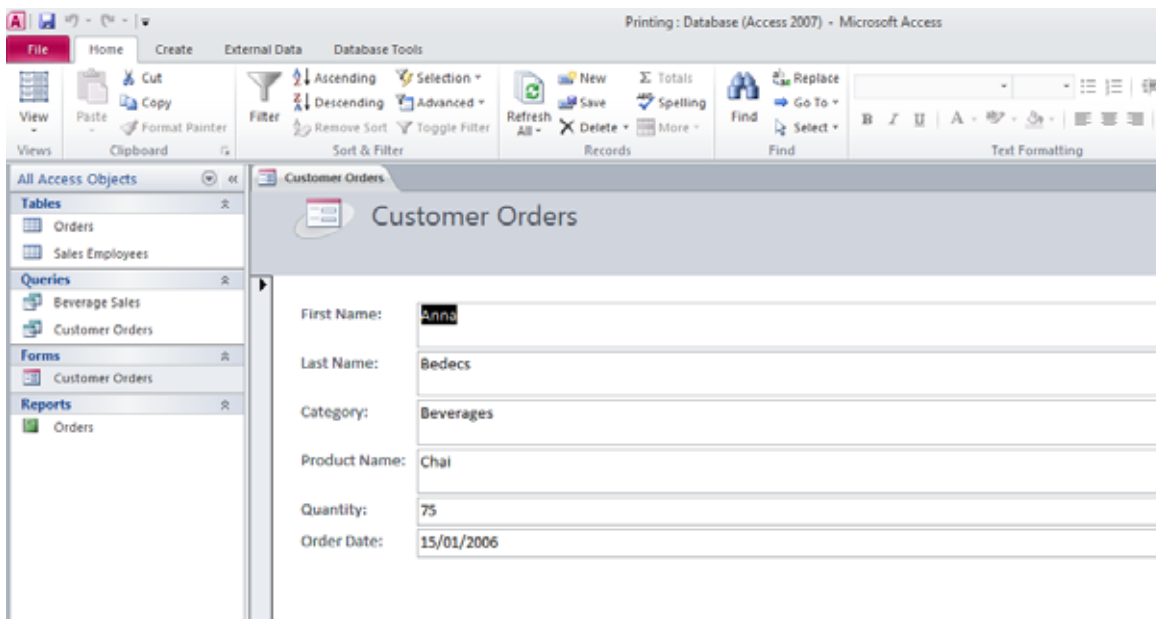
Printing forms

- In Access, it is possible to print from a form, in the same way as you would from a table. The only difference is in the layout of the data.
- Open the **Customer Orders** form, by double clicking on **Customer Orders** as illustrated below.

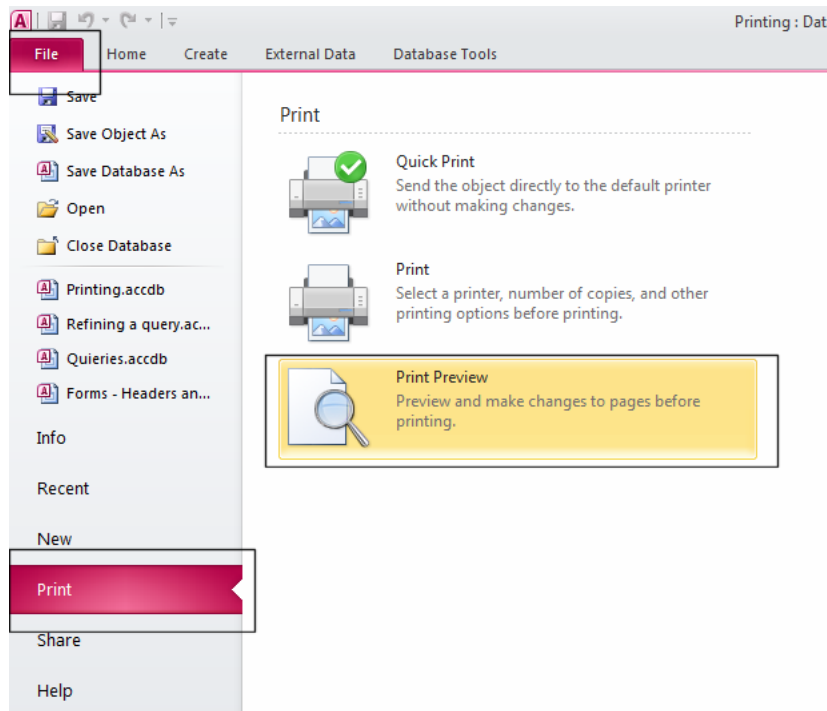
NOTE: Be careful to open the **Customer Orders** form, **NOT** the **Customer Orders** query



- This will display the **Customers Order** form as illustrated below.



- With the form open, click on the File tab and then click on the print button. Click on the **Print Preview** button.

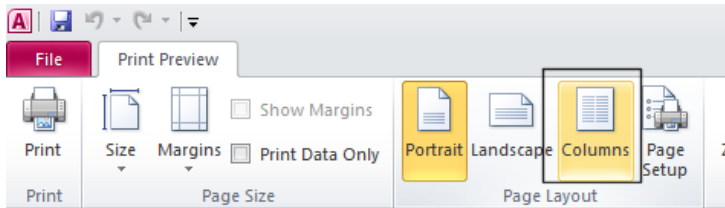


- In Print Preview, the layout of data on the page is similar to that of the form itself.

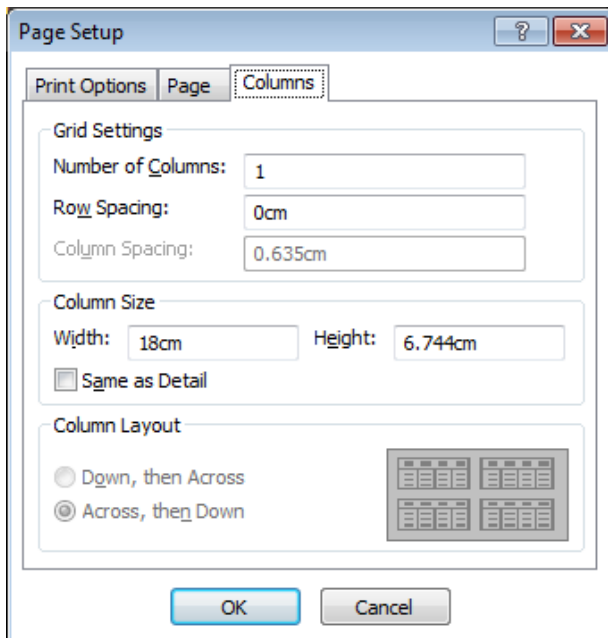
The screenshot shows the 'Customer Orders' form in Print Preview mode. The form displays a list of customer orders with the following data:

First Name	Last Name	Category	Product Name	Quantity	Order Date
Anna	Boles	Beverages	Chai	75	15/01/2006
Antonio	Ortiz-Soto	Condiments	Syrup	40	20/01/2006
Thomas	Asen	Condiments	Cajun Seasoning	100	22/01/2006
Christina	Lee	Oil			

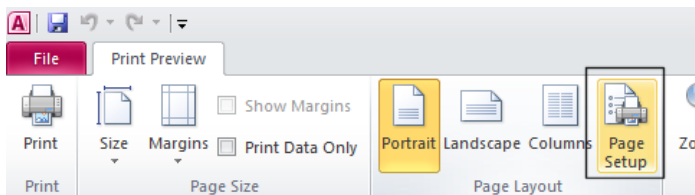
- If the form column spills over into a second page, click on the **Columns** button in the **Page Layout** group.



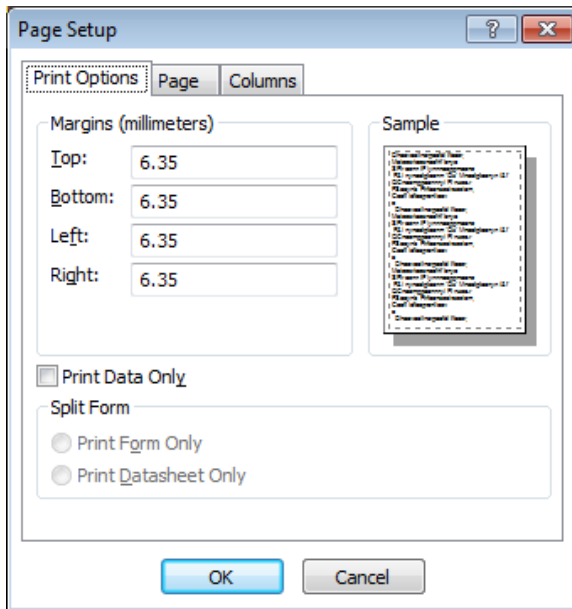
- You will now see the **Page Setup** dialog box allowing you to adjust the number of columns, if required.



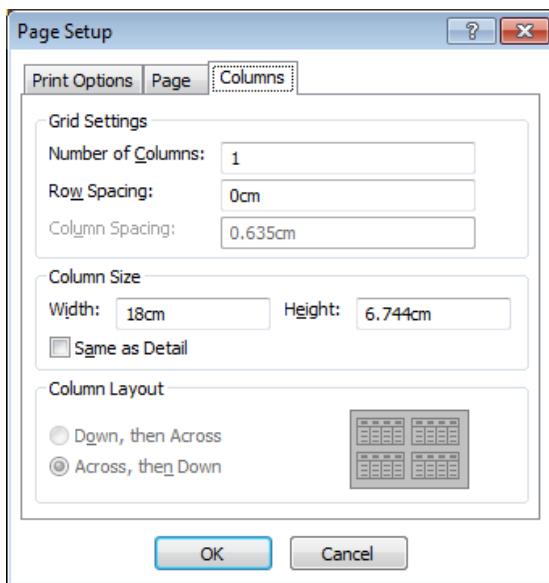
- Close the dialog box.
- Within the **Print Preview** Tab, in the **Page Layout** section click on the **Page Setup** button.



This will display the **Page Setup** dialog.



- You can adjust margins as required using this dialog box. Experiment.
- Click on the **Columns** tab within the **Page Setup** dialog box and you can also experiment with setting column sizes.



- When you have finished experimenting close the dialog box.
- Save any changes you have made and close Access.

Reference: The Access 2010 Interface

Opening the Access 2010 program

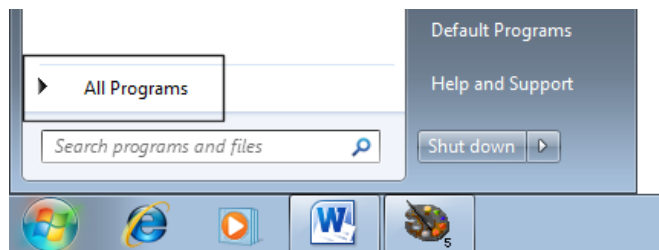
- Opening Access 2010 installed on Windows XP, Windows Vista or Windows 7 will visually look different, however the steps required to open Access are identical in most versions of Windows systems.

NOTE: These instructions use Windows 7.

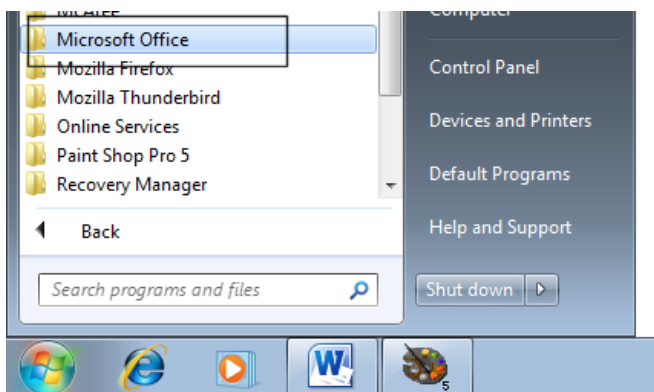
- Click on the **Start** button (bottom left of screen).



- Select All Programs.



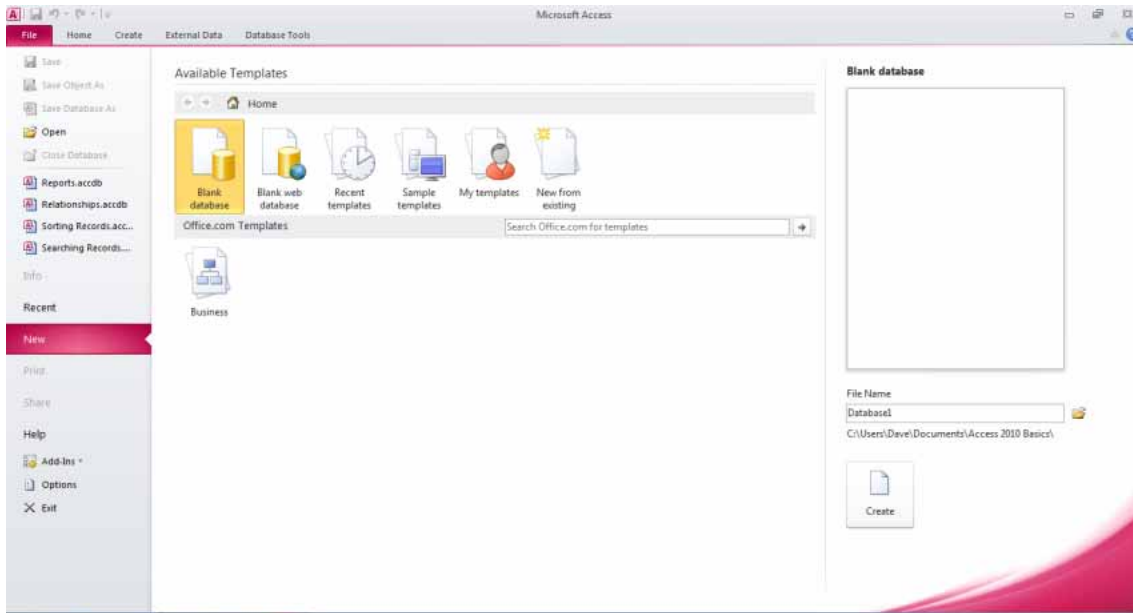
- Scroll through the list until you locate the **Microsoft Office** folder button and click to select.



- Finally click on the **Microsoft Access 2010** icon.

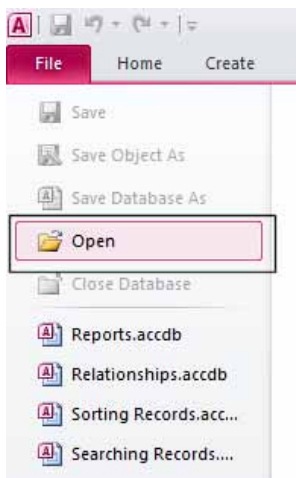


- The Access program window will open as illustrated.

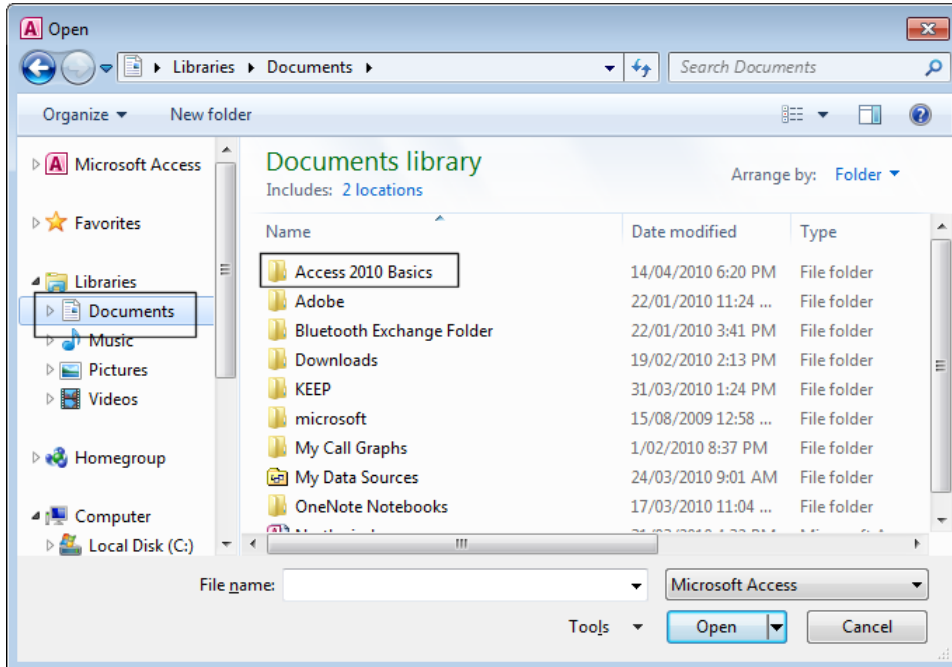


Opening a database within your samples folder

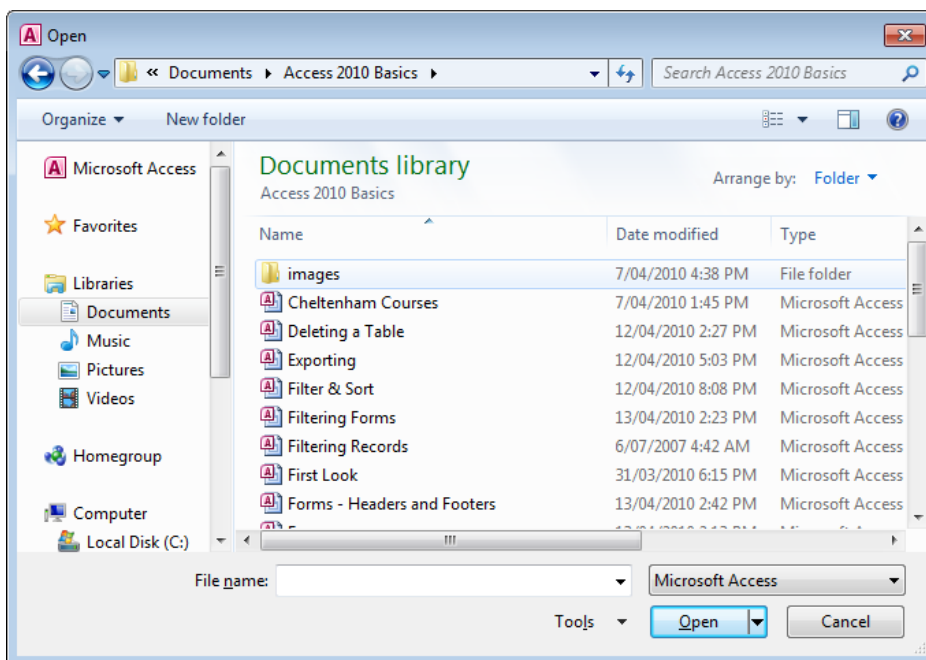
- The sample files for this course are stored in a folder called **Access 2010 Basics**, which in turn is stored under the **Documents** folder. You will now open to a database file called **First Look**. To do this, click on the **Open** button, which you will find under the **File** tab.



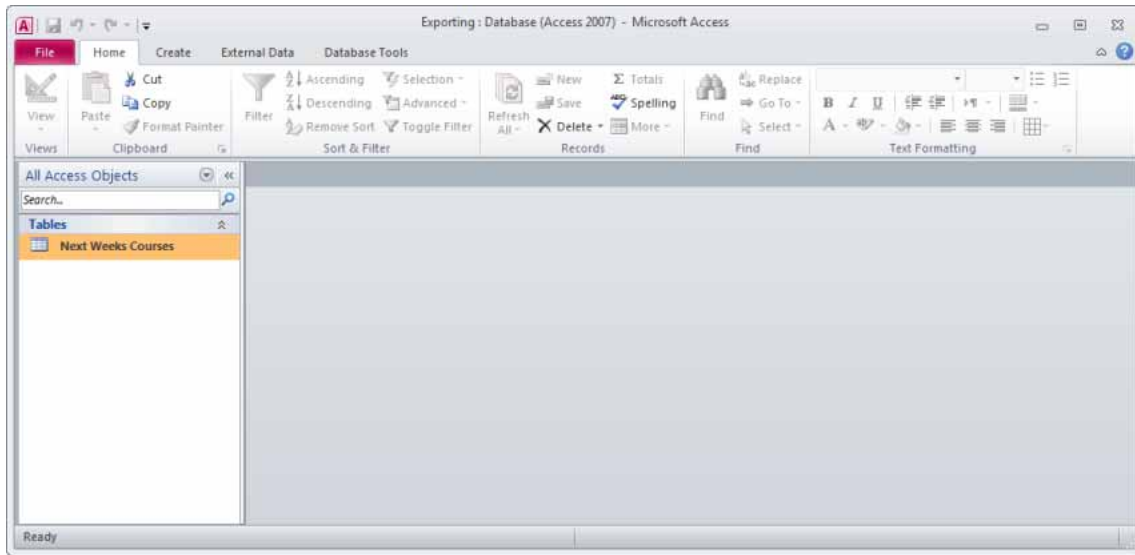
- This will display the **Open** dialog box.



- If necessary select the **Documents** folder within the left section and within the right section of the window select the **Access 2010 Basics** folder. Double click on the **Access 2010 Basics** folder to see the sample files.

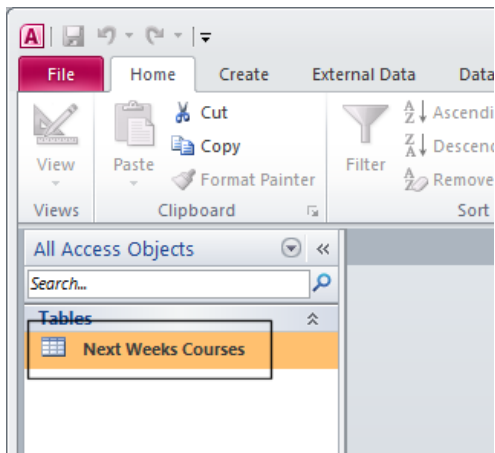


- Double click on a file to open the file. You will see the database displayed.



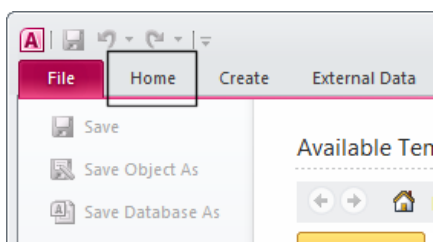
Opening a table

- To open a table, such as **Next Weeks Courses** in the example illustrated, double click on the table.

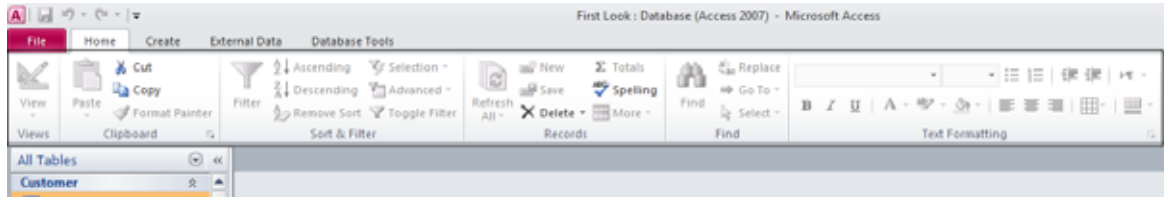


The Ribbon (Toolbar)

- If necessary, click on the **Home** tab.



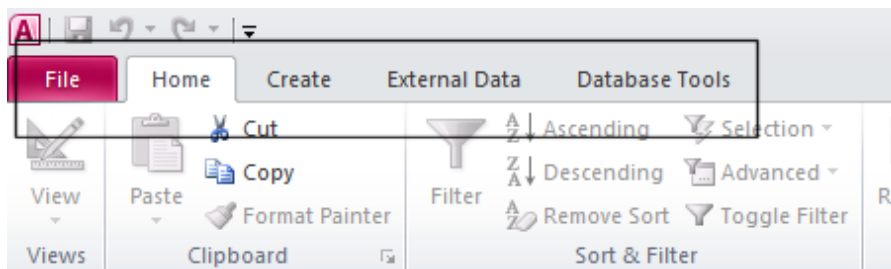
- You will see the Access ribbon displayed, as illustrated.



- The Ribbon has been designed to offer a standardized layout across all Microsoft Office applications and help users quickly locate frequently used functions.
- The Ribbon is designed to display the most appropriate tools / functions according to the task at hand and each is divided into **Groups**. As you work with various objects and views within Access, the Ribbon will change accordingly, displaying the options considered most useable at that point.

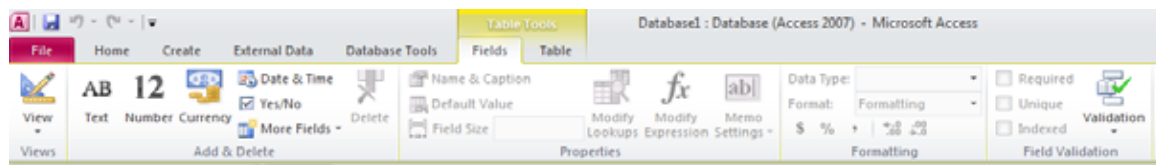
Ribbon tabs

- Ribbon tabs separate functions across different Ribbons according to the Object or View you are working in. Undertaking different tasks within the database, i.e. editing an object or switching between Datasheet / Design views generally causes the Ribbon tabs and consequently Ribbons to auto select or display additional options (Contextual tabs). Ribbon tabs can also be selected manually, however only active items will function.



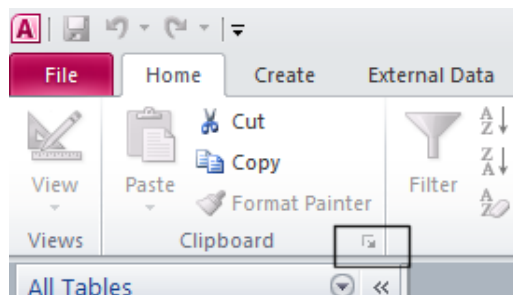
Groups

- All functions are clustered into groups and set out across the Ribbon. Groups have been designed to help identify tools quickly. An example is illustrated below. If you look at the groups under the **Home** tab that are displayed on your screen you will see the following groups displayed. In the example illustrated these include, **Views**, **Add & Delete**, **Properties**, **Formatting** and **Field Validation**.



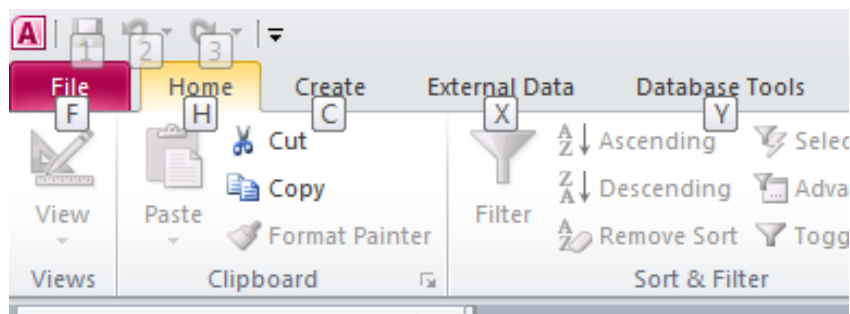
Dialog box launcher

- A Dialog Box launcher is available in some groups and when clicked the **Dialog Box Launcher** displays additional features within a dialog box. Currently this option may be grayed out, as it is currently unavailable.



Navigating - Quick keys (shortcut keys)

- Shortcut or quick keys provide an alternative means of navigating the Ribbon, Ribbon tabs and Quick Access Tool Bar. By pressing the '**Alt**' once Office will display the shortcut characters associated with the various Ribbon tabs or 'Quick Access Toolbar' functions.



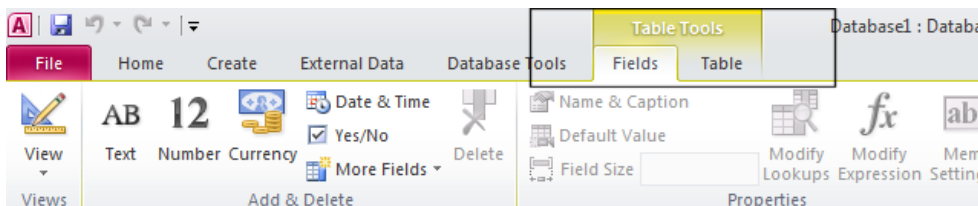
- Having identified the number / letter, selecting it on the keyboard will activate the functions or tab associated with the quick key. In certain circumstances, Quick key characters continue to display until another Quick key is selected, the '**Alt**' key is pressed again or the '**Esc**' key is used.

Navigating – Pointer keys & quick keys

- Pressing the '**ALT**' once displays the shortcut letters associated with the various Ribbon tabs or 'Quick Access Toolbar' functions. This operation also engages a select zone and by using the 'left' and 'right' pointer keys, you will be able to navigate through the Ribbon tabs. Use the 'up' pointer key to jump to the Quick Access Toolbar and use the 'down' pointer key to return to the Ribbon tabs again.

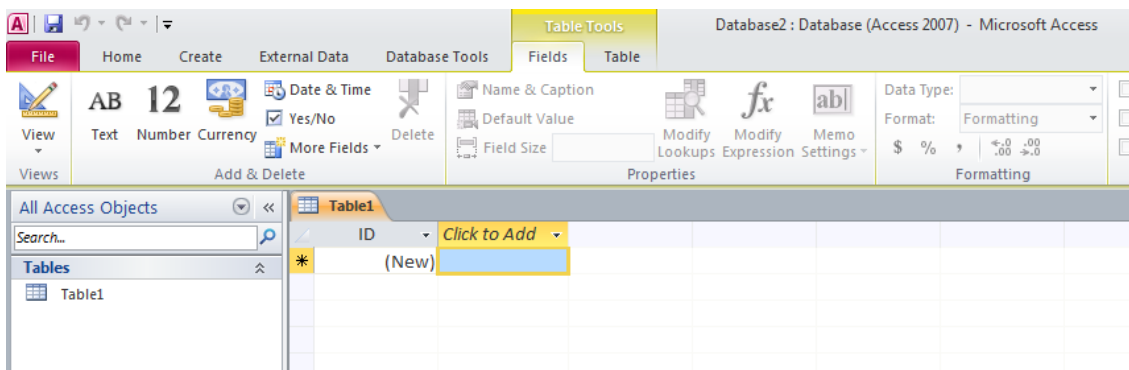
Contextual tabs

- Contextual tabs provide additional functionality and will only be displayed when required. When working on tables for example, the Contextual tab **Table Tools** appears to the right of the Ribbon tab.

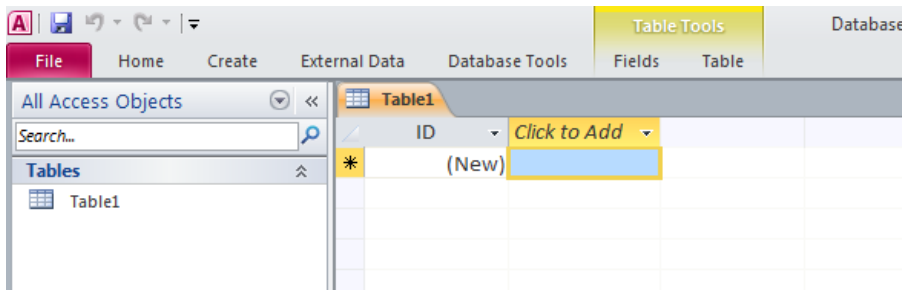


Minimizing the Ribbon

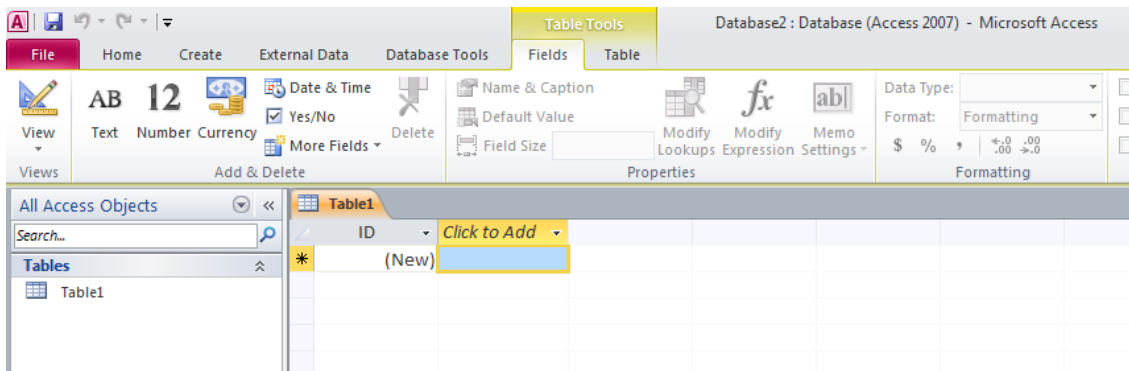
- Normally the Ribbon will look something like this.



- Double clicking on a Ribbon tab minimizes the Ribbon, offering a greater work area.



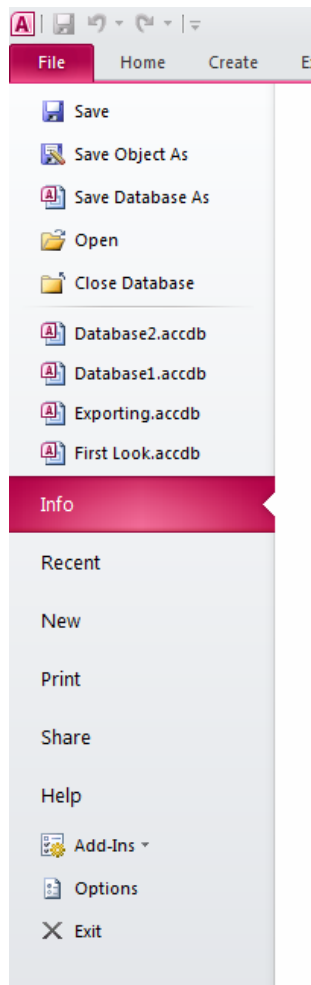
- To make selections from a minimized ribbon, click on a ribbon tab. The ribbon expands for you to make your selection, then minimizes again.



- To restore the ribbon to a fixed state, double click on any of the ribbon tabs.

The File tab

- The **File tab** (new to Office 2010 products) provides many of the options previously found under the **File** drop down menu in earlier versions of Microsoft Office, or under the **Microsoft Office** button, within Access 2007.



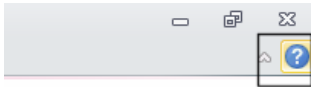
- Commands include:

Command	Description
New	Create a Blank Database or select a Template to work with
Open	Open an existing database file
Save	Save the open database
Print	Print from Tables, Reports and other Objects
Close	Closes the open database (not the Access application)
Exit	Closes the database and quits Access

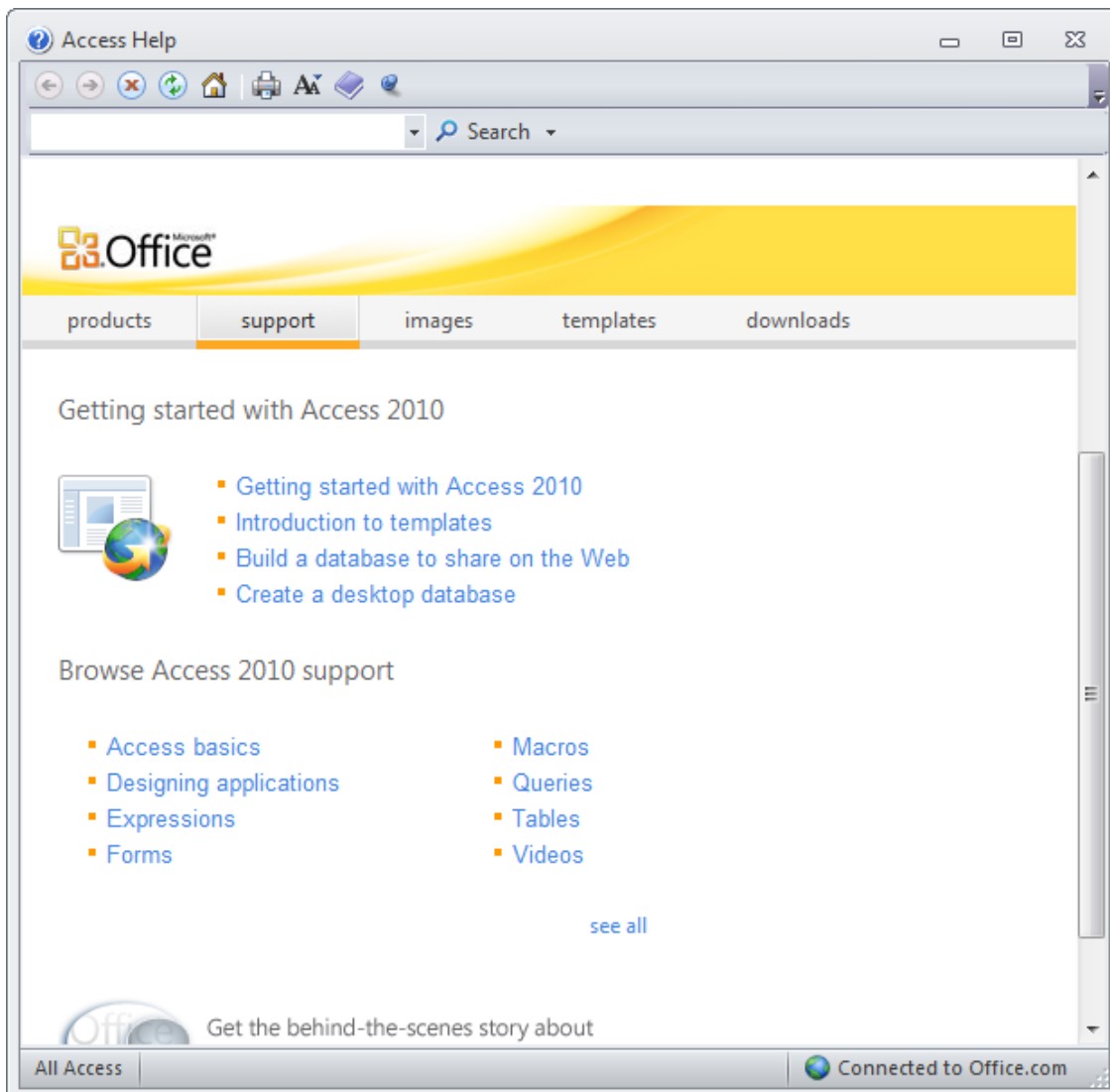
NOTE: The **Save Object As** command is used to save copies of Objects (Tables, Forms, etc.) within the database, not the database itself. If you need to rename the database filename or create a copy of the file, this needs to be done using other methods.

Microsoft Access Help

- As with all Microsoft applications, Help is always available. In the upper right-hand corner of the application window, is a **Help** button.



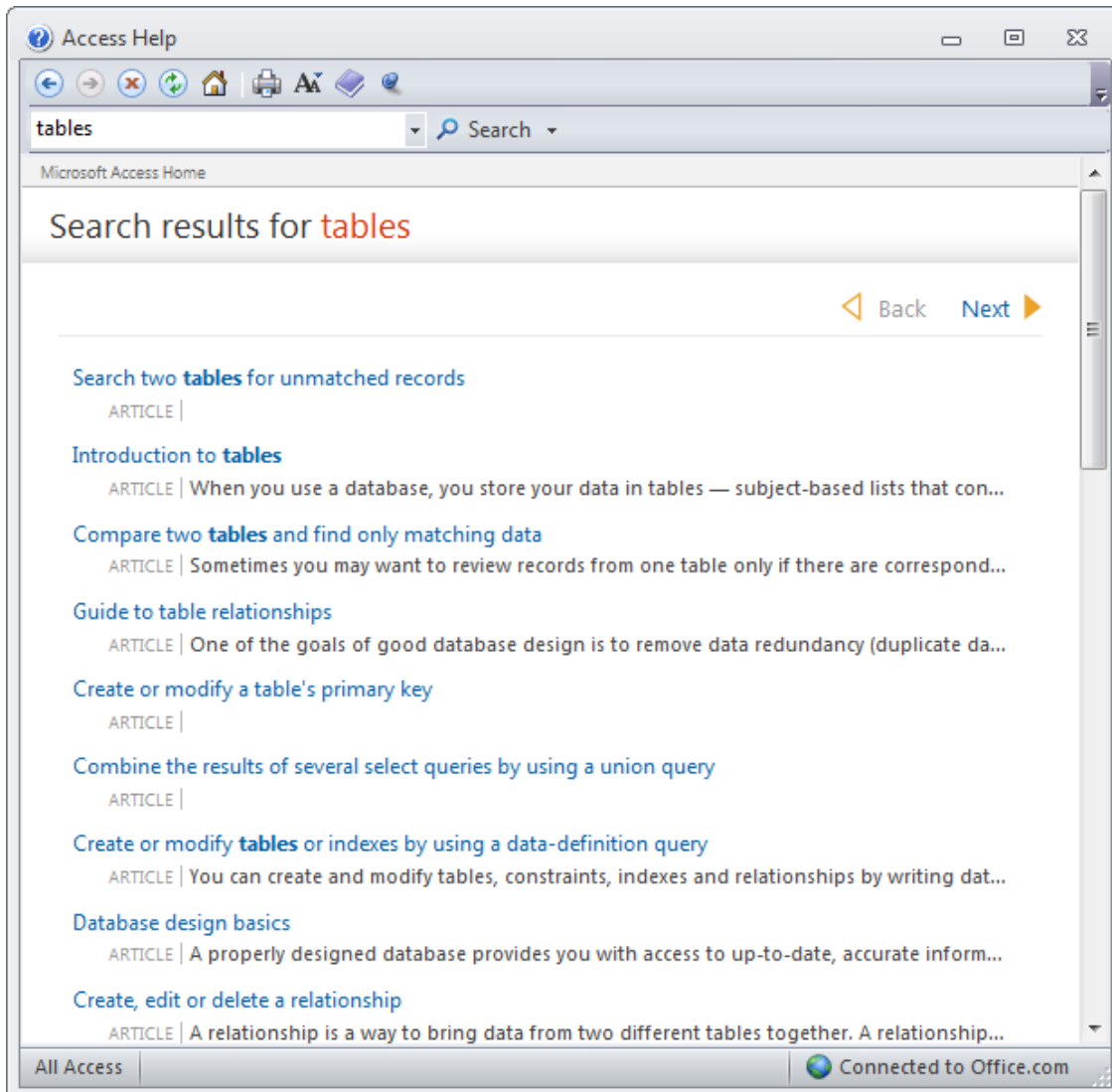
When clicked, it will open the Access Help window. Alternatively, pressing the **F1** function key, normally located in the top row of the keyboard, will also activate the help window.



- From the help window, you will be able to select and click on the topics listed or type in a word or words into the **Search** box and have Access Help search the files for all matching help topics.

Search

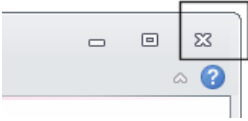
- As an example of using Help, type in the subject you need help with, such as **tables** and then press the **Enter** key on the keyboard or click on the **Search** button.



- Then click on the links displayed to get detailed help.

Closing Access 2010

- To close the Access program click on the **Close** icon at the top-right corner of the program window. This icon contains a small **X** shape.



TIP: The keyboard shortcut for closing Access is **Alt+F4**.