

**Guided Computer Tutorials**

**Learning  
Microsoft®  
Access® 2010**

**Module 2**

**By Greg Bowden**

PUBLISHED BY

GUIDED COMPUTER TUTORIALS  
PO Box 311  
Belmont, Victoria, 3216, Australia

[www.gct.com.au](http://www.gct.com.au)

© Greg Bowden

This product is available in Single or Multi User versions.

Single-user versions are for single person use at any particular time, just as a single text book would be used. If you intend to use the notes with multiple students the single user version should be upgraded to the multi-user version.

Multi-user versions allow the school or institution to print as many copies as required, or to place the PDF files on the school network, intranet and staff laptops. A certificate of authentication is provided with multi-user versions. Bookmarks provide links to all headings and sub-headings, and individual chapters are provided.

First published 2010

ISBN: 978-0-9870674-1-8 (Module 2)  
PDF document on CD-ROM

Every effort has been made to ensure that images used in this publication are free of copyright, but there may be instances where this has not been possible. Guided Computer Tutorials would welcome any information that would redress this situation.

# Learning Microsoft Access 2010

---

## Module 2 Contents

### Chapter 9: Using Macros

Loading the Sample File .....	9-1
Looking at the Database .....	9-1
Creating the Rental Properties Macro .....	9-2
Starting the Macro .....	9-2
Inserting a Comment.....	9-3
Inserting the Actions .....	9-3
Saving the Macro.....	9-7
Running the Macro .....	9-7
Editing the Macro .....	9-9
Creating the Sale Properties Macro .....	9-11
Starting a New Macro .....	9-11
Adding the Actions .....	9-11
Saving and Testing the Macro .....	9-14
Creating the Auction Properties Macro .....	9-15
Starting a New Macro .....	9-15
Adding the Actions .....	9-16
Saving and Testing the Macro .....	9-17
Macros to Open Forms.....	9-18
Opening the Data Entry Form .....	9-18
Opening the Main Switchboard Form .....	9-20
Assigning Buttons to the Macros .....	9-23
Switching to the Data Entry Form.....	9-23
Switching to the Main Switchboard Form .....	9-25

Buttons to Display the Report Macros .....	9-27
The Auction Properties Report Button .....	9-27
The Sale Properties Report Button .....	9-29
The Rental Properties Report Button .....	9-30
The Exit Application Button .....	9-30
Formatting the Buttons .....	9-32
Setting an Autoexec Button.....	9-33
Printing the Macro Definitions .....	9-34
<b>Databases Assignment 9 .....</b>	<b>9-35</b>

## Chapter 10: Reports That Total Items

Loading the Sample File .....	10-1
Creating a Daily Sales Report .....	10-1
Adjusting the Report.....	10-5
Adjusting the Report Header.....	10-5
Adjusting the Date Header and Detail Sections.....	10-8
Reducing the Field Widths .....	10-9
Adjusting the Group Footer.....	10-11
Adjusting the Report Footer .....	10-14
Some Final Adjustments .....	10-17
Creating a Second Report .....	10-21
Copying the Report.....	10-21
Altering the Report Header .....	10-22
Changing the Grouping .....	10-22
Practice Exercise 10-1 .....	10-25
<b>Databases Assignment 10 .....</b>	<b>10-26</b>

## Chapter 11: Applying Relational Database Features

Creating a Relational Database System .....	11-1
Loading the Sample File .....	11-2
Defining the Relationship .....	11-2
Completing the Suppliers Form .....	11-6
Setting the Sub-Form Frame .....	11-6
Setting the Wizard Options .....	11-7
Adjusting the Sub-Form.....	11-8
Looking at the Form .....	11-9

Using the Main Form.....	11-11
Deleting Records.....	11-11
Allowing for Cascade Deletes.....	11-12
Deleting a Supplier.....	11-14
Deleting a Product.....	11-15
Adding a New Supplier.....	11-16
Adjusting the Sub-Form.....	11-18
Advantages of Relational Database Systems.....	11-20
<b>Databases Assignment 11.....</b>	<b>11-21</b>

## Chapter 12: Setting up an Invoice System

Loading the Sample File.....	12-3
Looking at the Tables.....	12-3
Looking at the Forms.....	12-4
Creating the Invoice Table.....	12-5
Saving the Table.....	12-7
Creating the Relationships.....	12-8
Relating the Customer Details and Invoice Details Tables.....	12-9
Relating the Invoice Details and Line Items Tables.....	12-11
Relating the Line Items and Product Details Tables.....	12-12
Calculating the Amount Sold.....	12-14
Completing the Invoice Form.....	12-17
Setting the Table.....	12-17
Setting the Default Settings.....	12-17
Inserting the Invoice Fields.....	12-18
Inserting the Customers Sub-Form into the Invoice.....	12-22
Creating the Line Items Sub-Form.....	12-26
Inserting the Line Items Sub-Form into the Invoice.....	12-29
Adding a New Invoice.....	12-32
Adding Calculations to the Invoice.....	12-33
Adding a Calculation Control in the Line Items Sub-Form.....	12-33
Placing the Calculation in the Main Form.....	12-36
<b>Databases Assignment 12.....</b>	<b>12-41</b>

## Chapter 13: Formatting Invoice Systems

Loading the File.....	13-1
Setting Lookup Values .....	13-1
Deleting the Customer Relationships.....	13-1
Setting the Customer Lookup Values .....	13-2
Looking at the Customer Lookup Settings .....	13-5
Setting the Products Popup List.....	13-6
Resetting the Customers Relationship .....	13-8
Adjusting the Invoice.....	13-10
Testing the Invoice .....	13-14
Formatting the Invoice Elements .....	13-16
The Line Items Sub-Form .....	13-16
The Total Amount Controls.....	13-19
Adding a Border to the Invoice .....	13-20
Adjusting the Sub-forms .....	13-21
Adding a Page Break .....	13-22
Setting the Tab Order.....	13-23
Previewing the Form.....	13-23
Using the Invoice.....	13-25
<b>Databases Assignment 13 .....</b>	<b>13-28</b>

## Chapter 14: Reporting From Invoice Systems

Loading the Sample File .....	14-1
Creating a Total Items Sold Report.....	14-1
Starting the Report Wizard.....	14-1
Making the Total Items Sold Report More Concise .....	14-4
Formatting the Product Name Footer .....	14-8
Aligning the Fields and Field Labels .....	14-9
Completing the Sections .....	14-11
Renaming the Report .....	14-16

Creating the Monthly Sales Report..... 14-17  
     Creating the Monthly Sales Query..... 14-17  
     Copying the Items Sold Report ..... 14-19  
     Adjusting the Grouping..... 14-20  
     Adjusting the Report ..... 14-21  
 Creating Mailing Labels ..... 14-25  
 Looking at the Mailing Labels ..... 14-27  
**Databases Assignment 14 ..... 14-28**

## Chapter 15: Enhancing Invoice Systems

Loading the Sample File ..... 15-1  
 Creating a Customers Data Entry Form ..... 15-1  
     Creating the Form..... 15-1  
     Adding Buttons to the Form..... 15-4  
     Testing the Buttons ..... 15-7  
 Creating a Products Data Entry Form..... 15-8  
 Creating a Main Switchboard ..... 15-11  
 Creating a Reports Switchboard..... 15-13  
 Creating the Macros ..... 15-14  
     Macros to Switch to the Different Forms..... 15-14  
     Macros to Preview the Reports ..... 15-15  
     An AutoExec Macro ..... 15-17  
 Setting the Buttons ..... 15-18  
     Adding Buttons to the Main Switchboard Form..... 15-18  
     Adding Buttons to the Invoice Form..... 15-21  
     Adding Buttons to the Customers and Products Forms..... 15-23  
     Adding Buttons to the Reports Switchboard Form ..... 15-24  
**Databases Assignment 15 ..... 15-29**

## Chapter 16: Useful Tools

Loading the Sample File .....	16-1
Creating Form Tabs.....	16-1
Creating the Form.....	16-1
Creating the Tab Controls.....	16-3
Placing Fields in the Form Tabs .....	16-5
Looking at the Form Tabs .....	16-7
Adjusting the Form Tabs.....	16-8
Changing the order of the Form Tabs .....	16-10
Adding Another Form Tab .....	16-11
The Calendar Control .....	16-12
Changing the Form Heading .....	16-14
Checking for Duplicate Records .....	16-15
Creating a Duplicates Query .....	16-15
Using the Duplicates Query.....	16-17
Setting a Button to Run the Query .....	16-18
Database Templates.....	16-21

## Sample Projects

# Using Macros

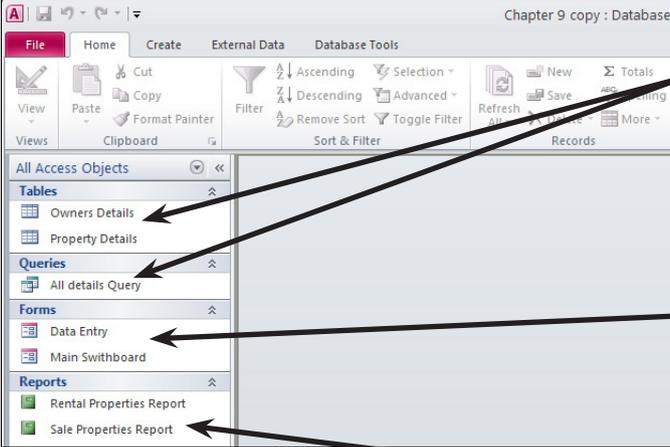
Macros are a time-saving feature within Microsoft Access. Many steps that are frequently used can be stored in a MACRO and the macro can be reused as often as required. You can also set a button to run a macro.

Your task for this activity is to create some macros for a simplified database for a real estate company. The database is similar to the one you used in Chapter 8, however, the queries to separate the rental, sale and auction properties have been removed. Macros will be used to separate data within the database.

## Loading the Sample File

- 1 Load Microsoft Access or close the current database and click on the OPEN icon in the BACKSTAGE VIEW.
- 2 Access the CHAPTER 9 folder of the ACCESS 2010 SUPPORT FILES and open the CHAPTER 9 file as an OPEN READ-ONLY file.
- 3 Click on the FILE tab and select SAVE DATABASE AS.
- 4 Access your ACCESS STORAGE folder and save the file as CHAPTER 9 COPY and click on the ENABLE CONTENT button.

## Looking at the Database



The screenshot shows the Microsoft Access interface for a database named 'Chapter 9 copy : Database'. The 'All Access Objects' pane on the left lists the following objects:

- Tables:** Owners Details, Property Details
- Queries:** All details Query
- Forms:** Data Entry, Main Swithboard
- Reports:** Rental Properties Report, Sale Properties Report

Arrows from the callout boxes point to these objects:

- Box 1 points to 'Owners Details' and 'Property Details'.
- Box 2 points to 'Data Entry' and 'Main Swithboard'.
- Box 3 points to 'Rental Properties Report' and 'Sale Properties Report'.

1 The database consists of two tables. The first table stores data about the owner of the property. The second table stores data about the property itself. A query is used to link the two tables.

2 There are 2 forms, a MAIN SWITCHBOARD form and a DATA ENTRY form.

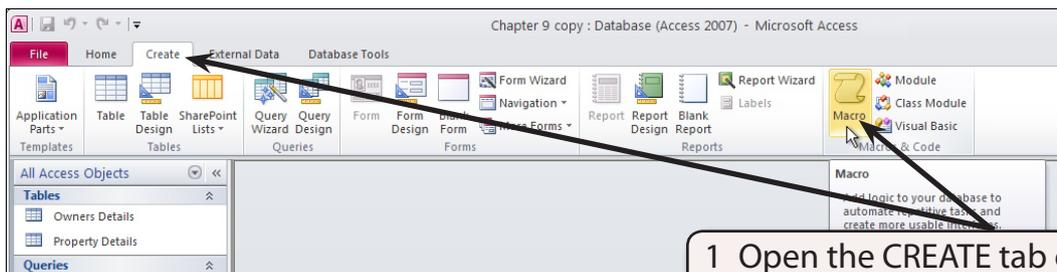
3 One report prints the RENTAL details and the second report prints either the properties for SALE or AUCTION.

## Creating the Rental Properties Macro

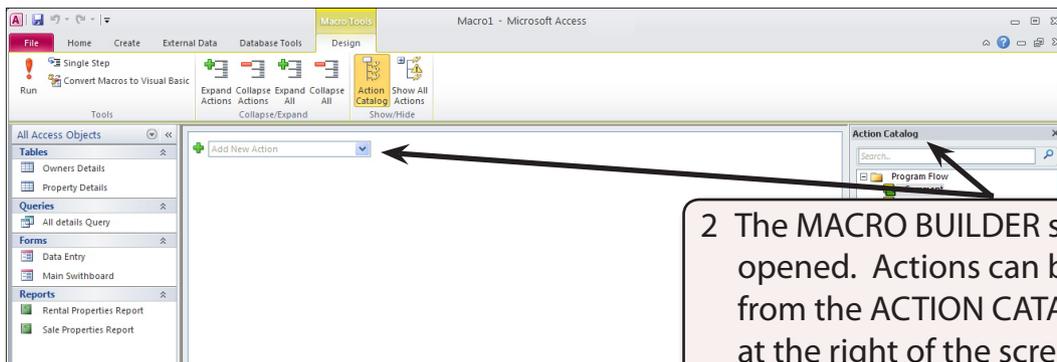
We need macros that print the reports for each of the three different types of properties (rental, auction and sale) that the company deals with.

### A Starting the Macro

For the first macro the properties for rent need to be separated.



1 Open the CREATE tab of the RIBBON and click on the MACRO icon to start a new macro.



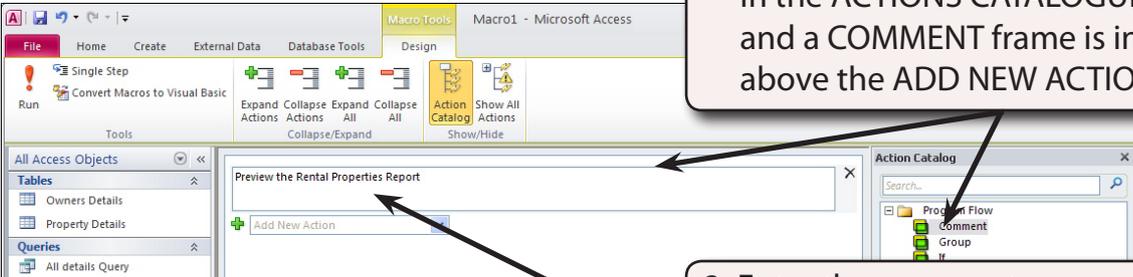
2 The MACRO BUILDER screen is opened. Actions can be inserted from the ACTION CATALOGUE pane at the right of the screen or from the ADD NEW ACTIONS box which is provided in the MACRO STEPS area.

**NOTE:**

- i The arrow at the right of the ADD NEW ACTION box is used to enter the commands of the macro. Those commands are executed in the order that you enter them.
- ii When you select an action a new ADD NEW ACTION box is added after the current action.

## B Inserting a Comment

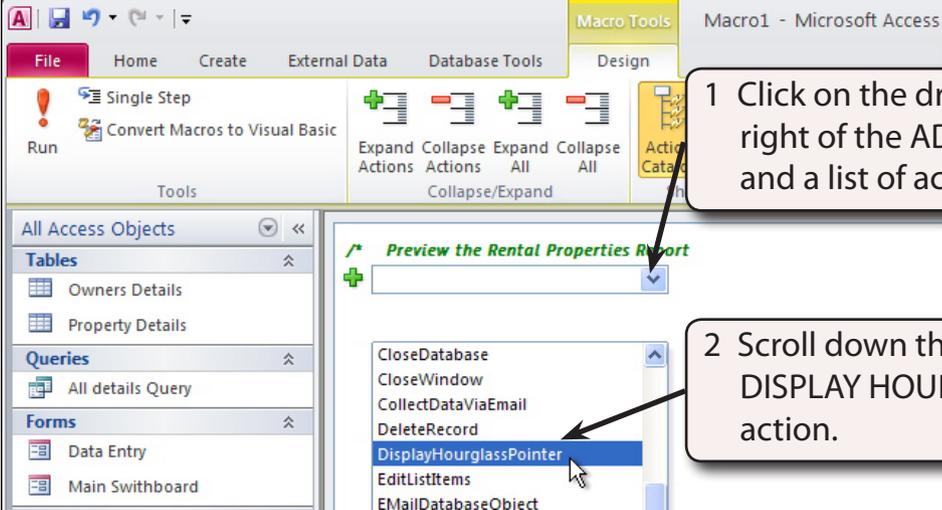
It is good practice to insert COMMENTS as you build macros. These comments don't effect the running of the macro in any way, but they help explain what the actions are doing.



1 Double click on the COMMENT icon in the ACTIONS CATALOGUE pane and a COMMENT frame is inserted above the ADD NEW ACTIONS box.

2 Enter the comment: Preview the Rental Properties Report and press the TAB key.

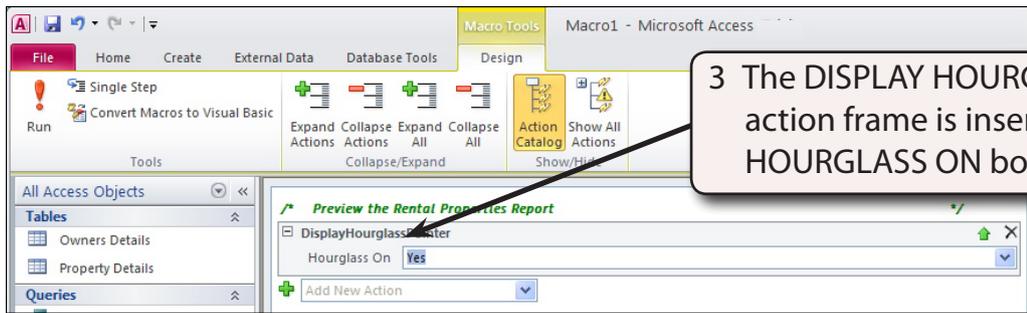
## C Inserting the Actions



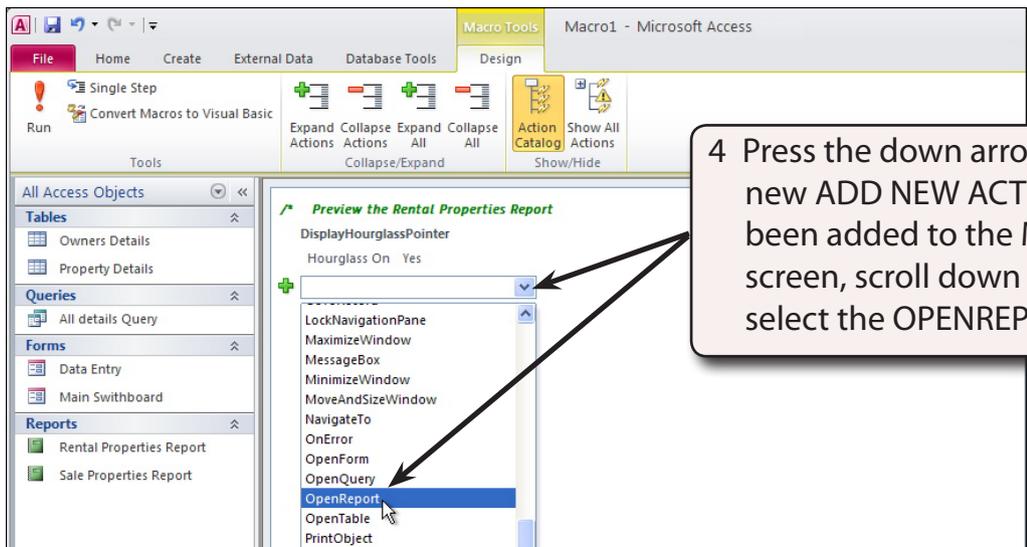
1 Click on the drop down arrow at the right of the ADD NEW ACTION box and a list of actions is displayed.

2 Scroll down the list and select the DISPLAY HOURGLASS POINTER action.

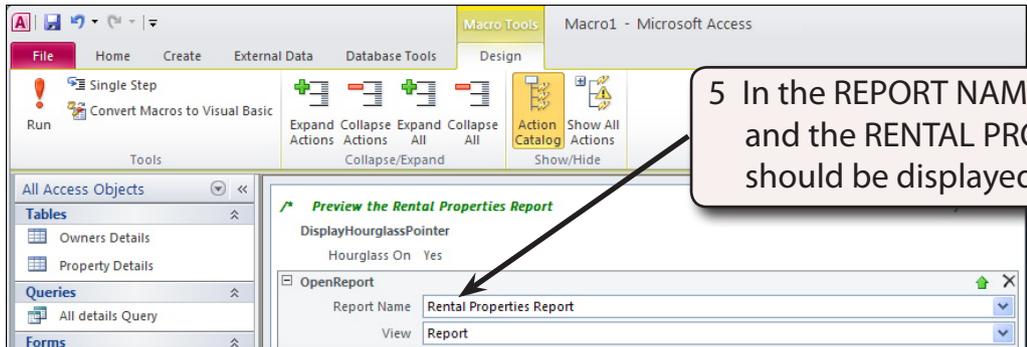
**NOTE:** You can also click in the ADD NEW ACTION box and press the DI keys to insert the action. The HOURGLASS command places the HOURGLASS cursor on the screen as the macro is operating. It lets the user know that the computer is doing something.



3 The DISPLAY HOURGLASS POINTER action frame is inserted. Leave the HOURGLASS ON box set to YES.



4 Press the down arrow key next to the new ADD NEW ACTION box that has been added to the MACRO BUILDER screen, scroll down the actions and select the OPENREPORT action.



5 In the REPORT NAME box enter R and the RENTAL PROPERTIES REPORT should be displayed.

**NOTE:** The program will suggest possible arguments for each action step from the database as you enter a few letters to help you build the macro.

# Reports That Total Items

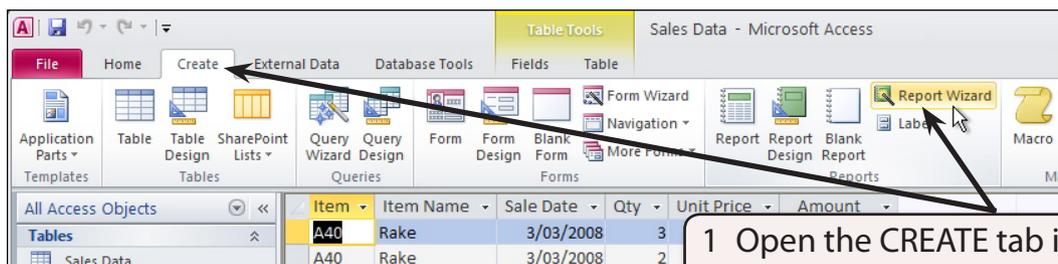
An important feature of a database is its ability to calculate and display totals of sections of data. It might be a monthly total of sales or a total of items in stock, etc. In this chapter you will produce totals and sub-totals on a prepared database.

## Loading the Sample File

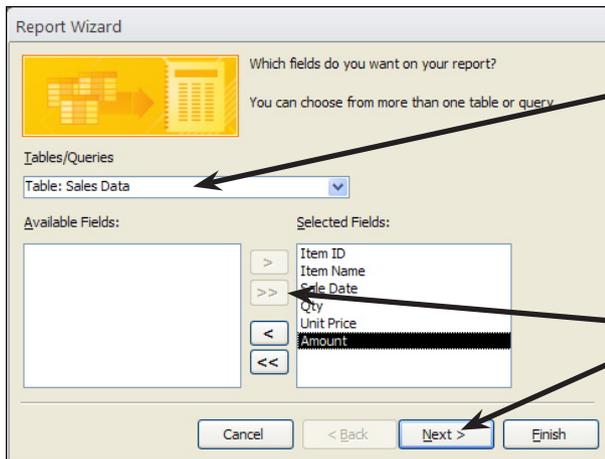
- 1 Load Microsoft Access or close the current database and click on the OPEN icon in the BACKSTAGE VIEW.
- 2 Access the CHAPTER 10 folder of the ACCESS 2010 SUPPORT FILES and open the CHAPTER 10 file as an OPEN READ-ONLY file.
- 3 Click on the FILE tab and select SAVE DATABASE AS.
- 4 Access your ACCESS STORAGE folder and save the file as CHAPTER 10 COPY.
- 5 The database has a table that stores sales of items by a hardware store with a calculated field that calculates the amount of each sale.
- 6 Enable the content and open the table to familiarise yourself with the database.

## Creating a Daily Sales Report

The database lists the sales of some items from a hardware store. Let's create a report that lists total sales at the end of each day. To do this we will need to set a GROUP that separates the sales for each day.



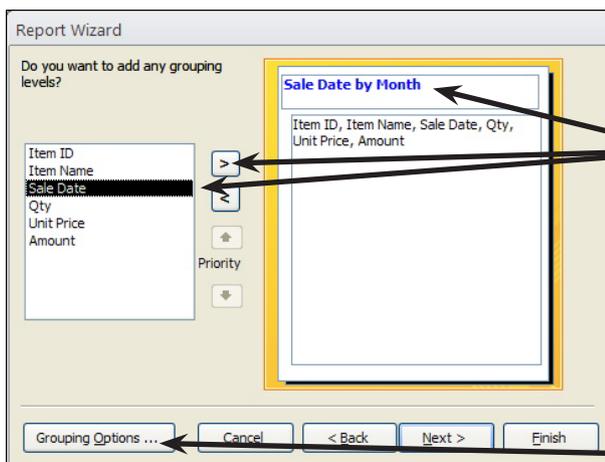
- 1 Open the CREATE tab in the RIBBON and click on the REPORT WIZARD icon.



2 In the REPORT WIZARD dialogue box the TABLES/QUERIES box should be set to the SALES DATA table.

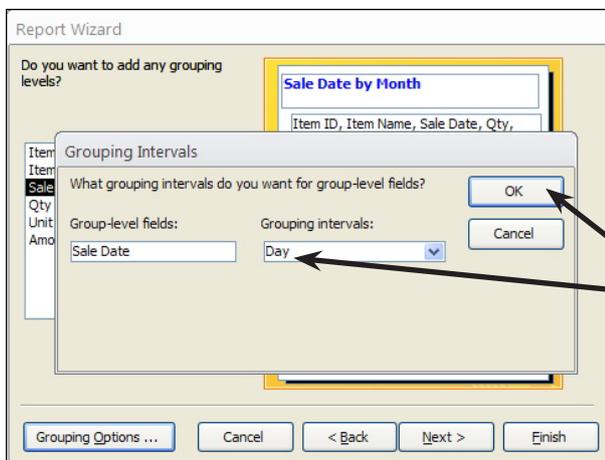
3 In this case we will use all the fields, so move all the fields into the SELECTED FIELDS frame and click on NEXT.

4 We want the program to provide us with totals at the end of each day so we need to group the data so that all the records for a particular day are together.

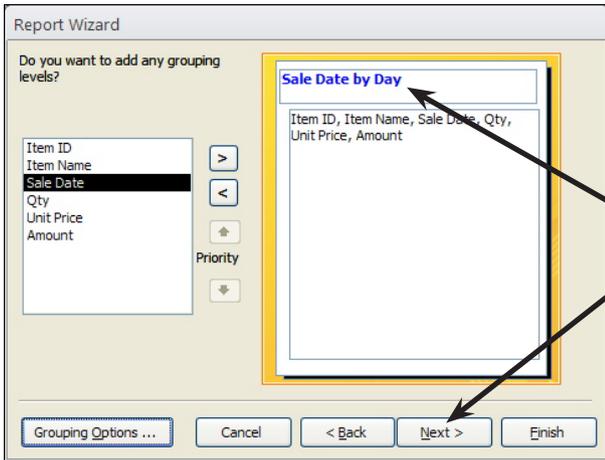


5 Click on the SALE DATE field in the left frame then click on the forward arrow to place the SALE DATE in the group frame at the right of the dialogue box. The fields in the report are listed below the DATE group.

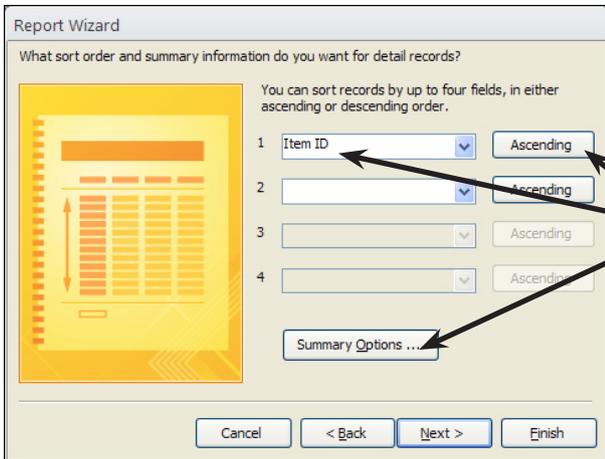
6 The default setting for the program is to group dates by MONTH (the most common date setting in reports). In this case the grouping is required by DAY so click on the GROUPING OPTIONS button.



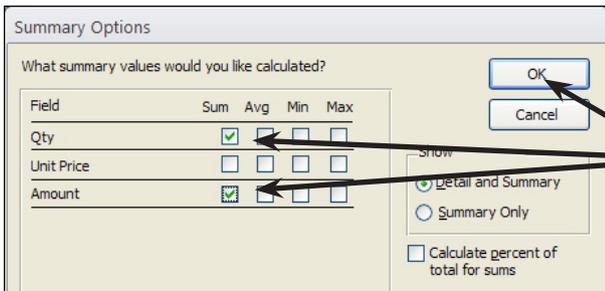
7 Set the GROUPING INTERVALS box to DAY and select OK.



8 The GROUPING is altered to BY DAY. Click on NEXT.

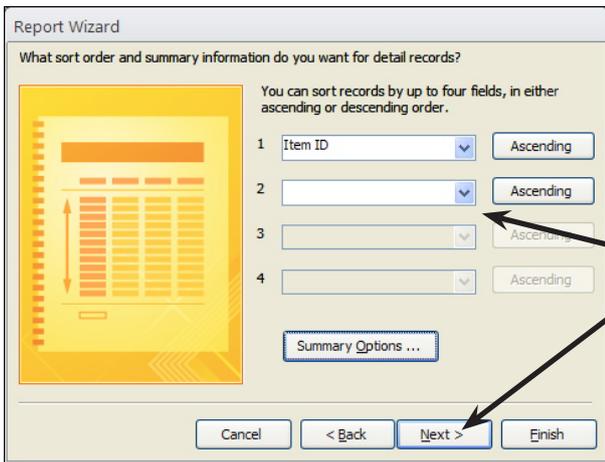


9 We will sort the daily sales within the group into ITEM ID order, so set the first SORT box to ITEM ID, leave the box next to ITEM ID as ASCENDING and click on the SUMMARY OPTIONS button.

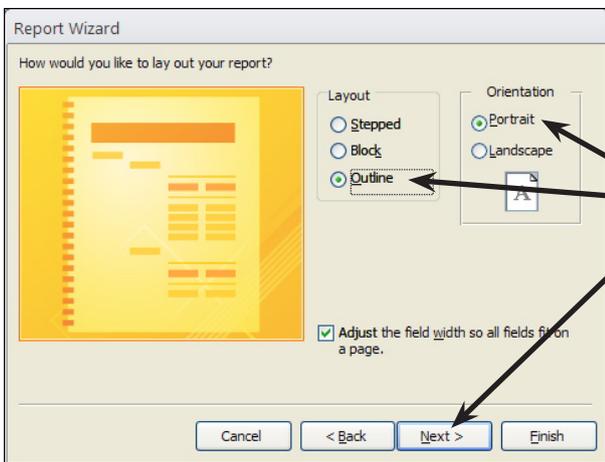


10 In this case we want to total the QTY and AMOUNT fields for each day so click on the SUM check boxes next to each of those fields, then select OK.

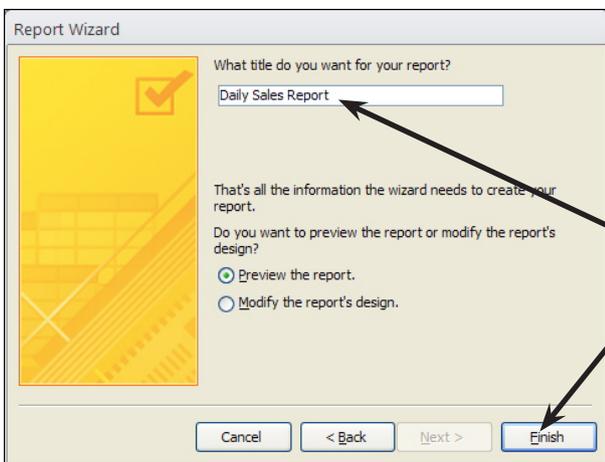
**NOTE:** The SUMMARY OPTIONS dialogue box allows you to set calculations on number type fields to add, average, find the maximum or minimum values or provide percentages on grouped data.



11 You are returned to the SORT ORDER dialogue box, click on NEXT.



12 In the report LAYOUT dialogue box, select OUTLINE in the LAYOUT frame and PORTRAIT in the ORIENTATION frame, then click on NEXT.



13 Name the report:  
**Daily Sales Report**  
and click on the FINISH button to generate the report.

14 Scroll through the report preview.

# Applying Relational Database Features

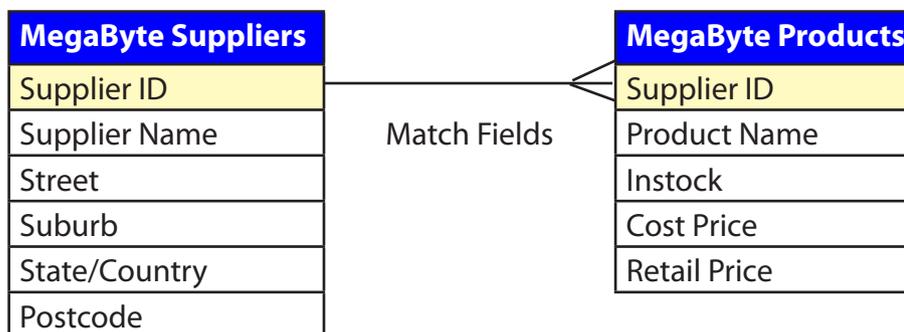
As a database system becomes more involved, it is advantageous to split the system up into numerous tables and to have those tables linked so that when data is updated in one table the data in any RELATED tables is also updated. This is the major value of relational database packages such as Microsoft Access.

## Creating a Relational Database System

To demonstrate the creation of a relational database system, we will create a simple system for a company that sells computer products. It obtains its products from a variety of suppliers. We will use two tables:

- **SUPPLIERS**, which lists the names and addresses of the suppliers of the computer products.
- **PRODUCTS**, which lists the product name, the cost and retail price, the store location of the product and how many items are in stock.

Each table has a separate form to display its data. The following diagram summarises the table structure of the database system.

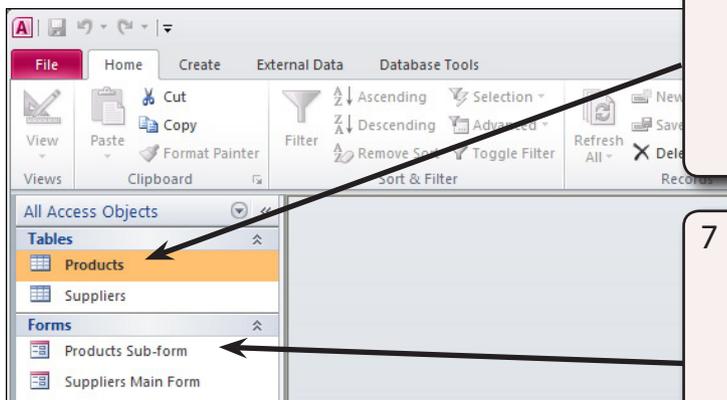


The first step in creating a relational database system is to decide what tables are required and how they will be linked. Notice that the line indicating the MATCH FIELDS (SUPPLIER ID), which will be used to link the two tables, has three lines at one end. In this case the ONE supplier can provide MANY products, but each product comes from ONE supplier. This ONE TO MANY relationship is the most common setup for a relational database system.

The SUPPLIER ID field is used to link the two tables. In the SUPPLIERS table it will be set as the PRIMARY KEY. It will be linked to the SUPPLIER ID field in the PRODUCTS table. The SUPPLIER ID field in this table is termed the FOREIGN KEY. The SUPPLIERS table can be considered to be the PARENT table and the PRODUCTS table the CHILD table.

## Loading the Sample File

- 1 Load Microsoft Access or close the current database and click on the OPEN icon in the BACKSTAGE VIEW.
- 2 Access the CHAPTER 11 folder of the ACCESS 2010 SUPPORT FILES and open the CHAPTER 11 file as an OPEN READ-ONLY file.
- 3 Click on the FILE tab and select SAVE DATABASE AS.
- 4 Access your ACCESS STORAGE folder and save the file as CHAPTER 11 COPY.
- 5 Click on the ENABLE CONTENT button so that the data can be viewed.



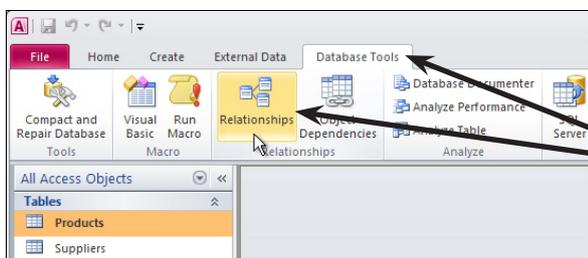
6 The database has two tables that store data about suppliers of products to a company. Open each table in turn to familiarise yourself with the database.

7 The database also has two forms. The first one displays the information about the suppliers (name, address, etc.). The second displays product name, cost price, retail price, etc.). Open each form in turn to see how the data has been set out.

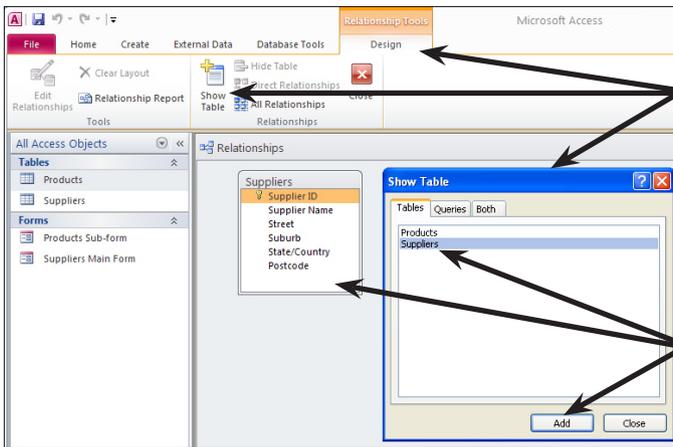
- 8 We are going to combine the information from the two forms into the one form so that this one form can be used to maintain the database.

## Defining the Relationship

The link (or relationship) between the SUPPLIERS and PRODUCTS tables must be established before the forms can be combined in the one form.

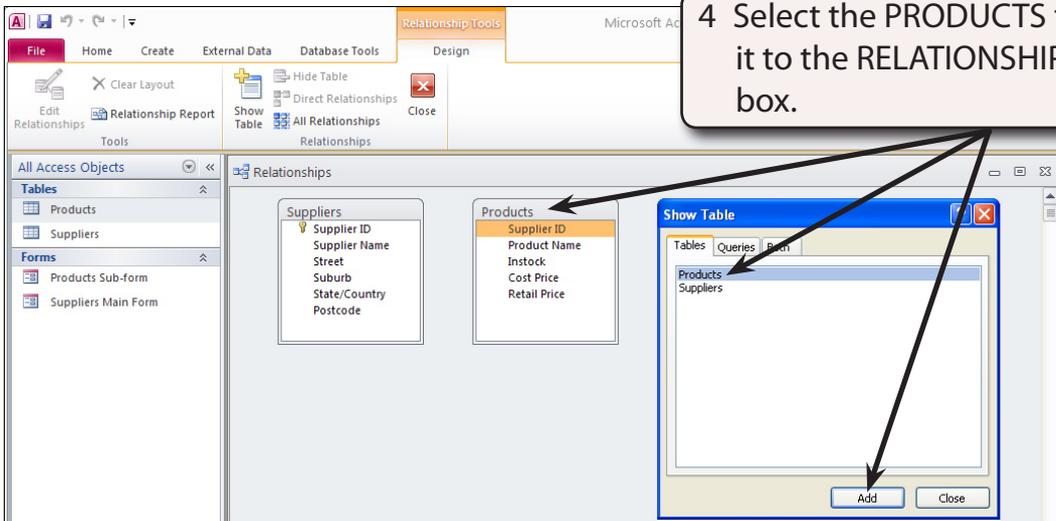


1 Open the DATABASE TOOLS tab in the RIBBON and click on the RELATIONSHIPS icon.



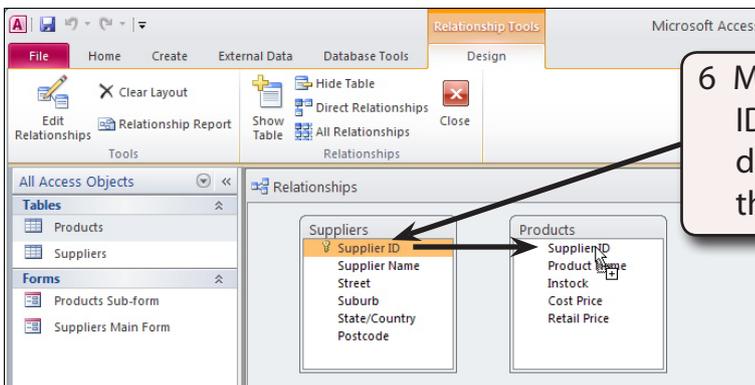
2 If the SHOW TABLE dialogue box doesn't open, click on the SHOW TABLE icon in the DESIGN tab of the RELATIONSHIP TOOLS.

3 In the SHOW TABLE dialogue box, select the SUPPLIERS table and click on the ADD button to add it to the RELATIONSHIPS dialogue box.



4 Select the PRODUCTS table and add it to the RELATIONSHIPS dialogue box.

5 Close the SHOW TABLE dialogue box.



6 Move the pointer over the SUPPLIER ID field in the SUPPLIERS table and drag it over the SUPPLIER ID field in the PRODUCTS table.

**NOTE:**

- i The SUPPLIER ID field in the SUPPLIERS table has a key symbol next to it to indicate that it is the PRIMARY key field. The SUPPLIER ID field in the PRODUCTS table is the FOREIGN KEY field.
- ii The FOREIGN KEY field can be any field that has the same values as the PRIMARY KEY field. It is normal practice to try to set the FOREIGN KEY field to have the same name as the PRIMARY KEY field.

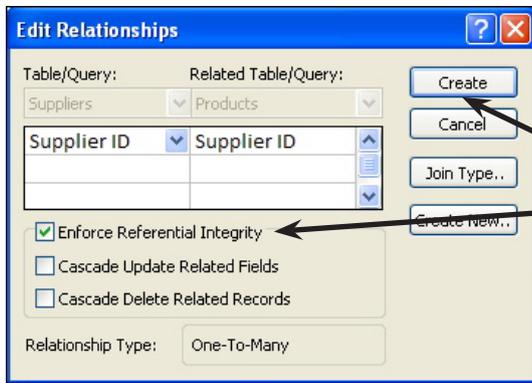


7 The relationship should be created and displayed in the EDIT RELATIONSHIPS dialogue box.

8 Click on the JOIN TYPE button to display the JOIN PROPERTIES dialogue box.



9 In this case we want to be able to display all the suppliers, but only those products that come from a particular supplier. This is option 2, so click on its radio button and select OK to set the JOIN TYPE.



10 Click on the ENFORCE REFERENTIAL INTEGRITY check box in the EDIT RELATIONSHIPS dialogue box then click on CREATE to complete the relationship.

# Setting up an Invoice System

To fully understand the value of relational databases you need to create a detailed system. In this chapter you will setup an invoicing system for a computer mail order company, PC Direct, which sells computer peripherals through the mail. The invoice system will then be completed in the following three chapters. There are three main sections to the system, customers, products and the sales invoice.

In the creation of any database system you should do some careful planning. In general there are four steps that you should undertake.

- 1 Decide how many tables you think you might need.
- 2 Decide how the tables will be related to one another.
- 3 List the fields in each table trying to avoid having the same field in more than one table. Decide which fields will be the PRIMARY KEY and FOREIGN KEY fields to link the tables.
- 4 Decide what forms and/or reports (or printouts) are required.

In the case of PC Direct an initial TABLE RELATIONSHIP diagram might be:



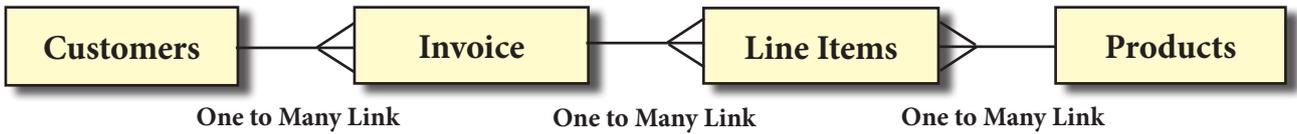
The CUSTOMERS to INVOICE section of this structure forms a ONE TO MANY relationship. The one customer can have MANY invoices sent to them over time, but there will always be ONE customer on each invoice. So the customer table is the ONE side of the relationship and the INVOICE is the MANY side. We can set a relationship to link these two tables.

There is a problem with the link between the INVOICE and the PRODUCTS tables. The one invoice can contain many products and the one product can be included in many invoices. A relational database cannot cater for a MANY TO MANY relationship as you cannot set multiple PRIMARY or FOREIGN KEY fields in the one relationship.

A further problem exists, one invoice might contain a sale of 5 of a particular item, the next invoice might contain a sale of 2 of the same item. The company needs a way of adding these sales so that it knows how many items it has sold. So this initial TABLE RELATIONSHIP will need modification.

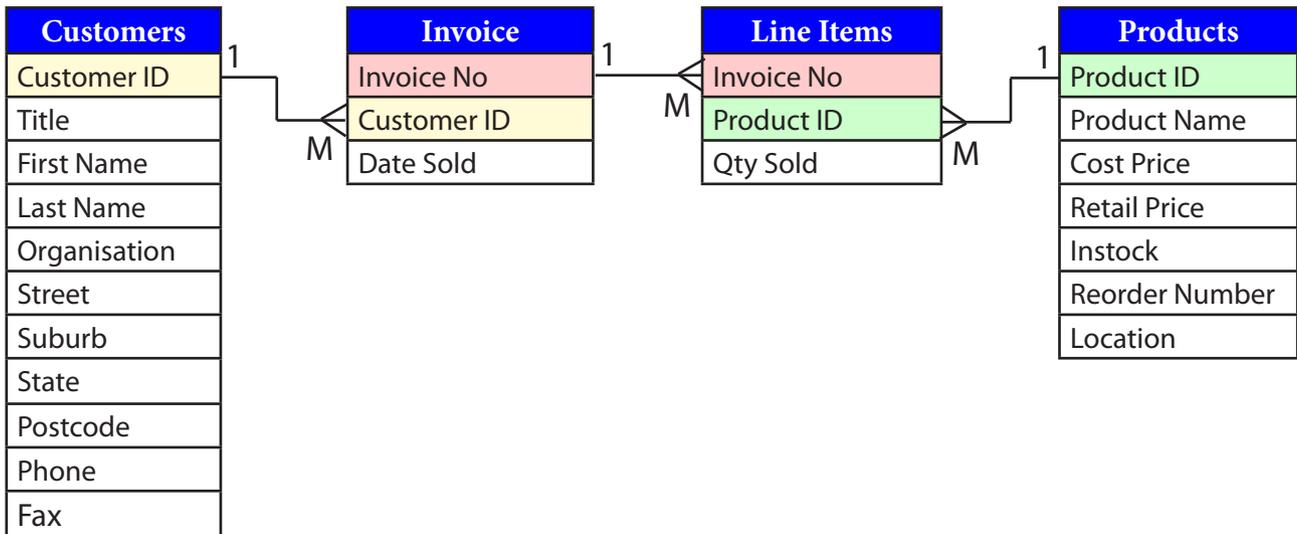
The easiest solution to these problems is to add a table between INVOICE and PRODUCTS. This table can store every item sold by the company as a single record allowing the company to keep track of every item sold. The new table can also provide data to the INVOICE table.

So a revised TABLE RELATIONSHIP diagram becomes:



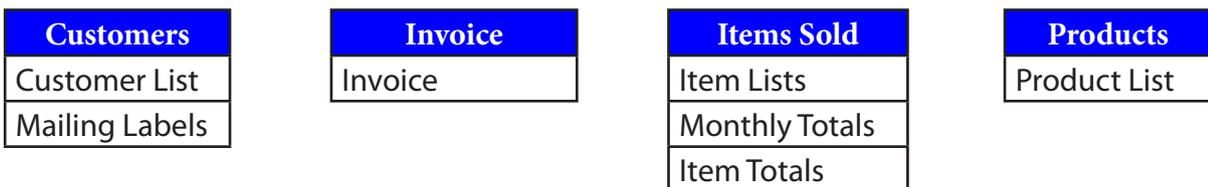
The ONE invoice can have MANY line items sold within it. The ONE product can be sold MANY times. By adding the LINE ITEMS table to the system a series of ONE TO MANY relationships are created and a relational database system can accommodate these.

The next step is to decide which fields will be placed in each table. The following TABLE STRUCTURE diagram shows one possibility. Remember, we do not want to store data more than once (except for PRIMARY KEY or FOREIGN KEY fields).



The PRIMARY KEY and FOREIGN KEY fields need to be considered. In the previous diagram you would have seen that CUSTOMER ID is used to link the CUSTOMERS and INVOICE tables, INVOICE NO is used to link the INVOICE and LINE ITEMS tables and PRODUCT ID is used to link the LINE ITEMS and PRODUCTS table. The INVOICE table is not directly linked to the PRODUCTS table, it will obtain values from the PRODUCTS table via the LINE ITEMS table.

The final consideration in the planning is what reports will be required. The following diagram shows some of the reports that could be made from the various tables. We will create some of these reports in the next chapter.

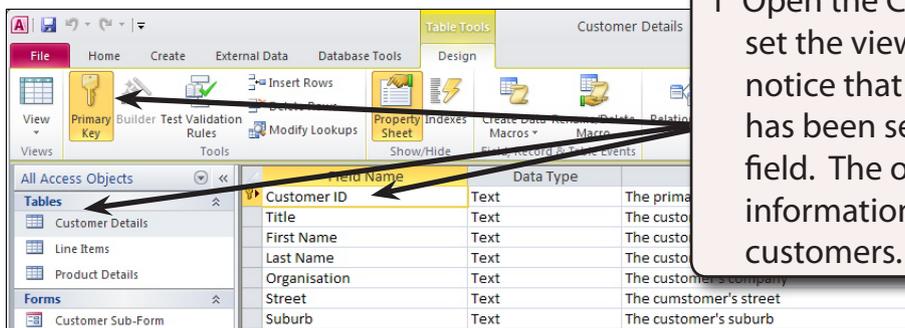


## Loading the Sample File

- 1 Load Microsoft Access or close the current database and click on the OPEN icon in the BACKSTAGE VIEW.
- 2 Access the CHAPTER 12 folder of the ACCESS 2010 SUPPORT FILES and open the CHAPTER 12 file as an OPEN READ-ONLY file.
- 3 Click on the FILE tab and select SAVE DATABASE AS.
- 4 Access your ACCESS STORAGE folder and save the file as CHAPTER 12 COPY.
- 5 Click on the ENABLE CONTENT button so that the data can be viewed.

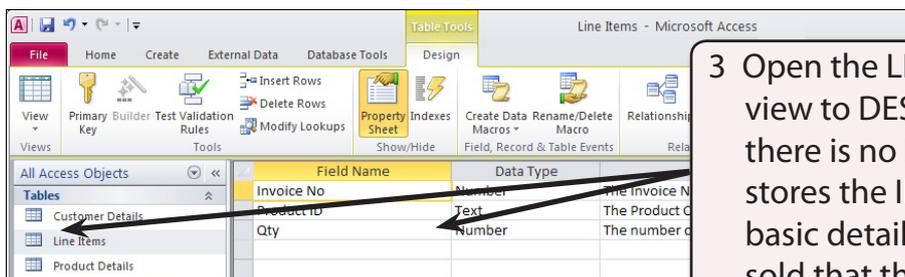
### A Looking at the Tables

The database has 3 tables at the moment, CUSTOMER DETAILS which stores data about the company's customers, LINE ITEMS which stores details of each product sold and PRODUCT DETAILS which stores a list of the products that the company provides.



- 1 Open the CUSTOMER DETAILS table, set the view to DESIGN VIEW and notice that the CUSTOMER ID field has been set to the PRIMARY KEY field. The other fields store general information about the company's customers.

- 2 Close the CUSTOMER DETAILS table.



- 3 Open the LINE ITEMS table, set the view to DESIGN VIEW and notice that there is no PRIMARY KEY field. It just stores the INVOICE NUMBER and the basic details of PRODUCT ID and QTY sold that the invoice will need.

**NOTE: The LINE ITEMS table will record each line of the invoice. It will have two main purposes:**

- (A) to list each product sold as a separate record so that the company can calculate monthly sales and carry out stock checks.
- (B) to provide product data to the invoice. If you look at the diagram at the centre of page 12-2 you will see that the PRODUCTS table is not directly connected to the INVOICE table so some data, such as Product Name and Retail Price, will need to be linked to the LINE ITEMS table via a relationship to the PRODUCTS table so that the INVOICE can display them.

4 Close the LINE ITEMS table.

5 Open the PRODUCT DETAILS table, set the view to DESIGN VIEW and notice that PRODUCT ID has been set the a PRIMARY KEY field. It will provide data to the LINE ITEMS table via this field.

Field Name	Data Type
Product ID	Text
Product Name	Text
Cost Price	Currency
Retail Price	Currency
Instock	Number
Reorder No	Number

6 Close the PRODUCT DETAILS table.

## B Looking at the Forms

Two forms have been prepared for you. The CUSTOMER SUB-FORM which displays the details from the CUSTOMER DETAILS table and the INVOICE MAIN FORM which you will need to complete.

1 Open the CUSTOMER SUB-FORM form and notice that fields have been arranged in a normal address format.

Mr	Colin	Norris
Ballarat Electrical Services		
24 Main Street	BALLARAT	VIC 3350

# Formatting Invoice Systems

---

In the previous chapter you setup the structure of an invoicing system. In this chapter that system will be formatted into an easier to use and printable invoice. This will involve setting lookup values for the customers and products so that the user doesn't need to know customer or product names. The invoice elements will be aligned so that they print in a neat fashion and a border and page break will be inserted.

## Loading the File

You will be using the invoice system from the previous chapter.

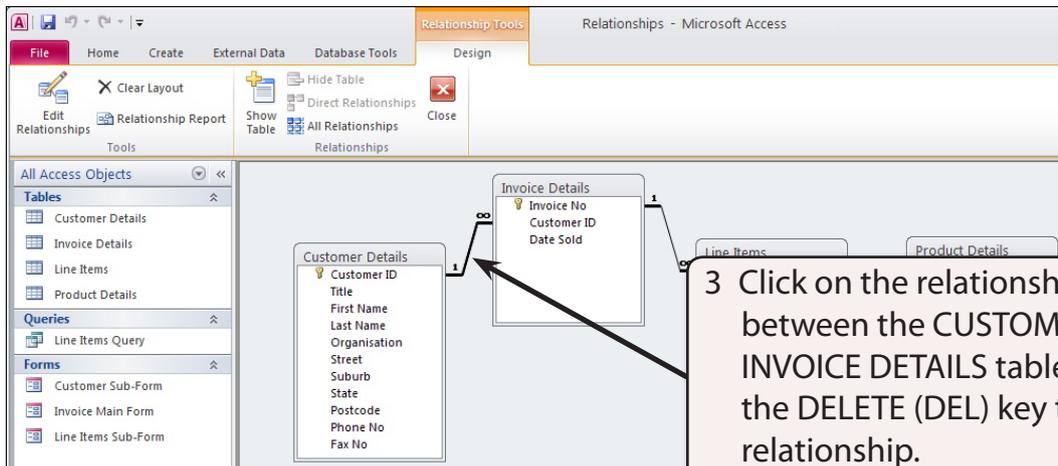
- 1 If your invoice system from the previous chapter worked well, load Microsoft Access and open the file from your ACCESS STORAGE folder.
- 2 If you would prefer to use a fresh fully operational file:
  - (A) Load Microsoft Access or close the current database and click on the OPEN icon in the BACKSTAGE VIEW.
  - (B) Access the CHAPTER 13 folder of the ACCESS 2010 SUPPORT FILES and open the CHAPTER 13 file as an OPEN READ-ONLY file.
  - (C) Click on the FILE tab and select SAVE DATABASE AS.
  - (D) Access your ACCESS STORAGE folder and save the file as CHAPTER 13 COPY.
  - (E) Click on the ENABLE CONTENT button so that the data can be viewed.

## Setting Lookup Values

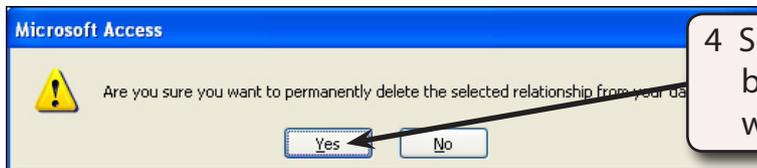
It is difficult to remember customer or product codes. We can set both of these to be lookup values. In order to use the lookup wizard any the relationships involving the fields that will be altered will need to be temporary deleted.

### A Deleting the Customer Relationships

- 1 Close any tables or forms that may be open.
- 2 Open the DATABASE TOOLS tab in the RIBBON and click on the RELATIONSHIPS icon to open the RELATIONSHIPS window.



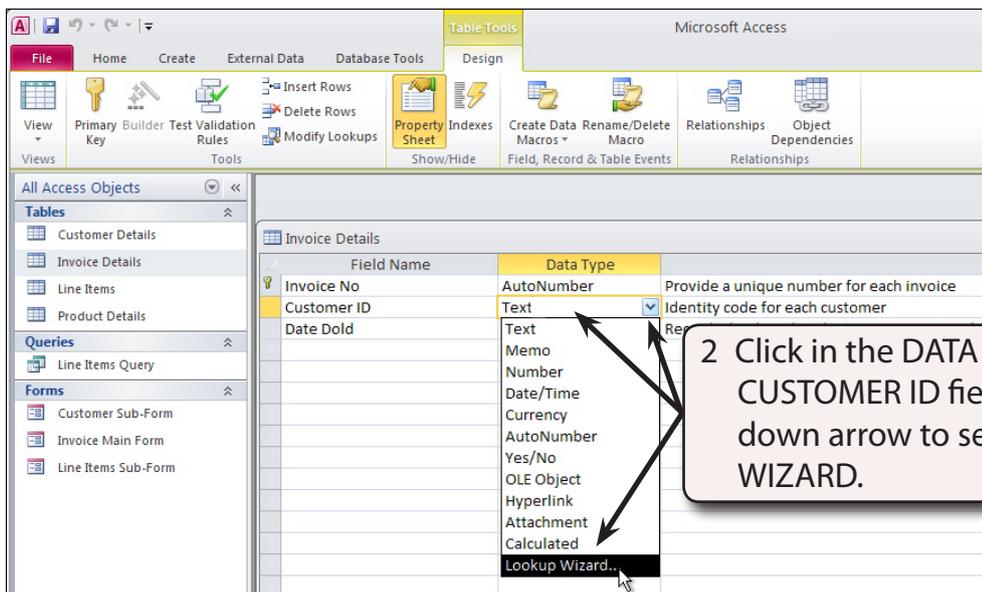
3 Click on the relationship line between the CUSTOMER DETAILS and INVOICE DETAILS tables and press the DELETE (DEL) key to remove the relationship.



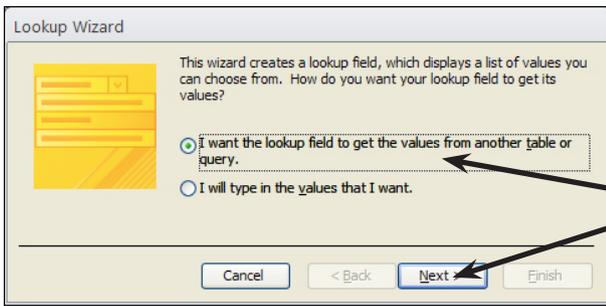
4 Select YES to the warning dialogue box and close the RELATIONSHIPS window.

## B Setting the Customer Lookup Values

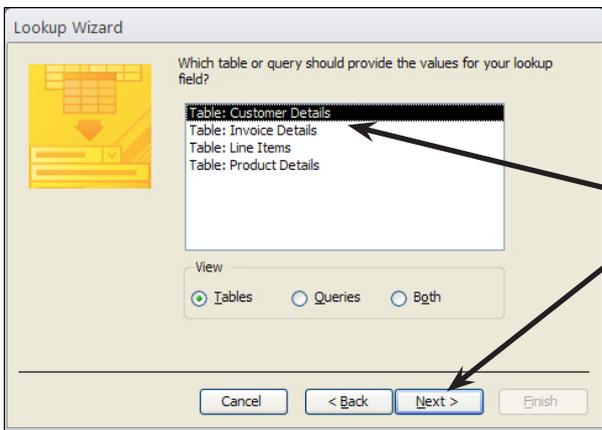
- 1 Open the INVOICE DETAILS table and set its view to DESIGN VIEW.



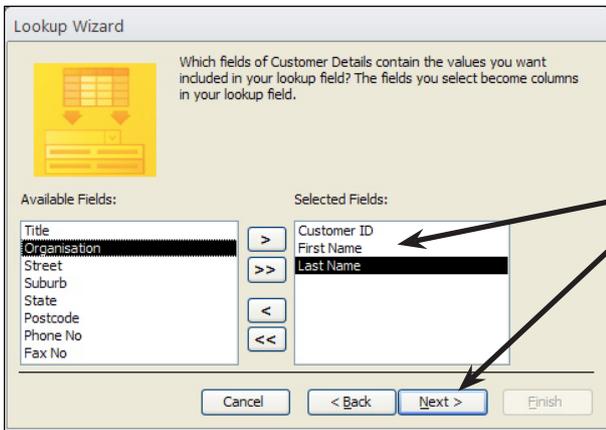
2 Click in the DATA TYPE cell for the CUSTOMER ID field and use its down arrow to set it to the LOOKUP WIZARD.



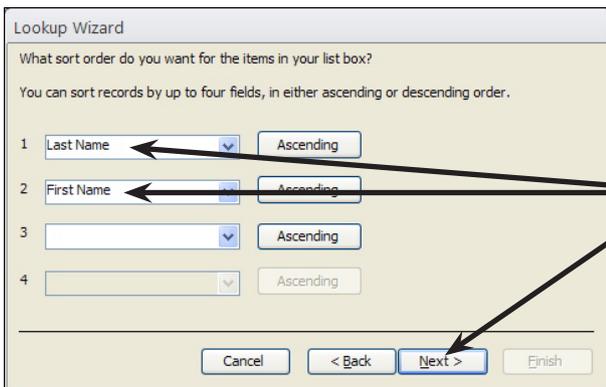
3 In the first LOOKUP WIZARD dialogue box, leave the first option (lookup values from a table or query) selected and click on NEXT.



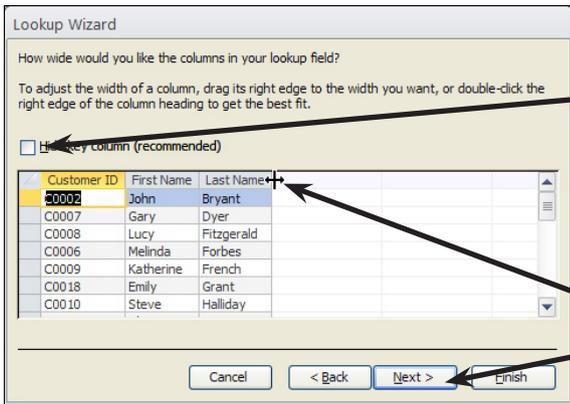
4 Leave the CUSTOMER DETAILS table selected and click on NEXT.



5 You will be asked which fields you want to be displayed in the lookup column. Move CUSTOMER ID, FIRST NAME and LAST NAME into the SELECTED FIELDS frame, then click on NEXT.

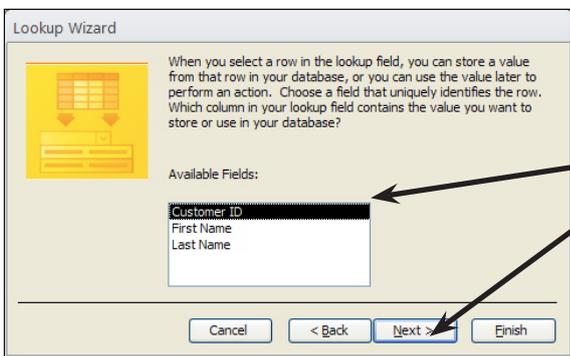


6 You will be asked about the SORT ORDER of the list. Set the first box to LAST NAME and the second box to FIRST NAME (both fields should be set to ASCENDING order), then click on NEXT.

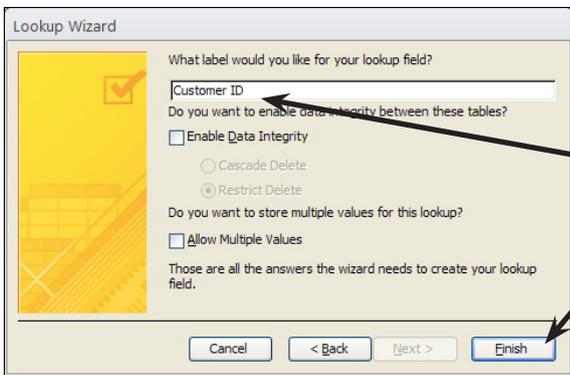


7 The width of the columns will be displayed. The CUSTOMER ID field is hidden, click on the HIDE KEY COLUMN check box to display it.

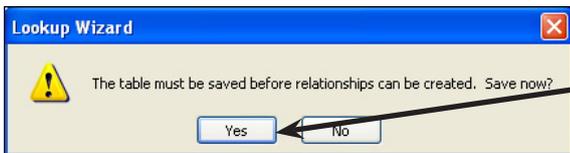
8 Reduce the width of the columns double clicking on the borders at the right of the column headings, then click on NEXT.



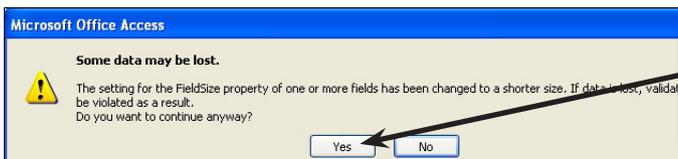
9 In the AVAILABLE FIELDS screen leave CUSTOMER ID selected. This is the value we want inserted from the popup menu, then click on NEXT.



10 Leave the label set to: Customer ID and click on the FINISH button.



11 You will now be required to save the table - click on YES.



12 If a warning box appears - select YES. This may occur if some of the column widths are too small.

# Reporting From Invoice Systems

A major advantage in setting a LINE ITEMS table in the invoice system such as the one you have set up in the past two chapters is that reports can be created from it. The company will be interested in two things. Firstly, the total number of each product that have been sold so the company can see which are the best sellers. Secondly, how much has been made each month. We will create two reports to satisfy these needs. The company will also want mailing labels based on the Customer Details to easily contact their customers.

## Loading the Sample File

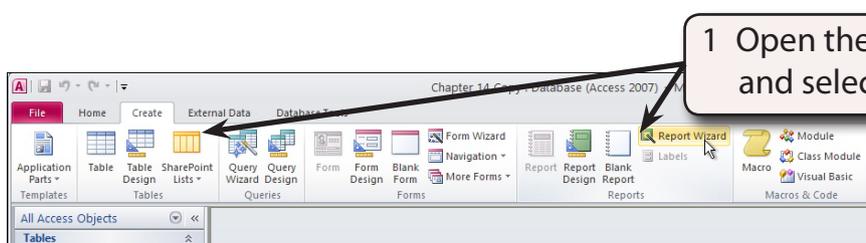
You will be using the invoice system from the previous chapter.

- 1 If your invoice system from the previous chapter worked well, load Microsoft Access and open the file from your ACCESS STORAGE folder.
- 2 If you would prefer to use a fresh fully operational file:
  - (A) Load Microsoft Access or close the current database and click on the OPEN icon in the BACKSTAGE VIEW.
  - (B) Access the CHAPTER 14 folder of the ACCESS 2010 SUPPORT FILES and open the CHAPTER 14 file as an OPEN READ-ONLY file.
  - (C) Click on the FILE tab and select SAVE DATABASE AS.
  - (D) Access your ACCESS STORAGE folder and save the file as CHAPTER 14 COPY.
  - (E) Click on the ENABLE CONTENT button so that the data can be viewed.

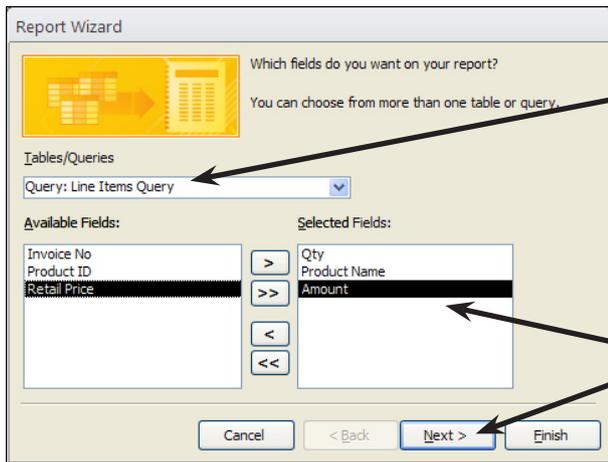
## Creating a Total Items Sold Report

A report can be created that shows how many of each product has been sold. By doing this the company can see which products are selling well and which are not by the click of a mouse button.

### A Starting the Report Wizard

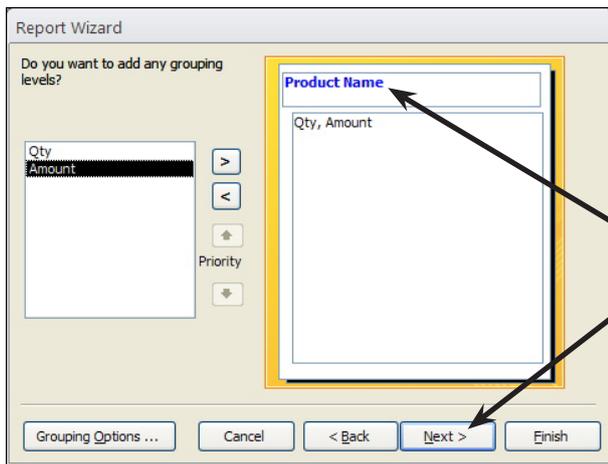


1 Open the CREATE tab of the RIBBON and select the REPORT WIZARD icon.



2 In the REPORT WIZARD dialogue box set the CHOOSE TABLE OR QUERY box to the LINE ITEMS QUERY.

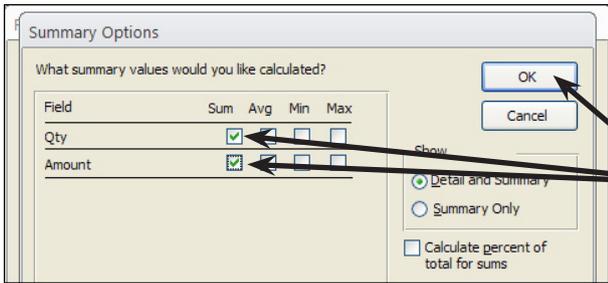
3 Move the QTY, PRODUCT NAME and AMOUNT fields into the SELECTED FIELDS frame then click on NEXT.



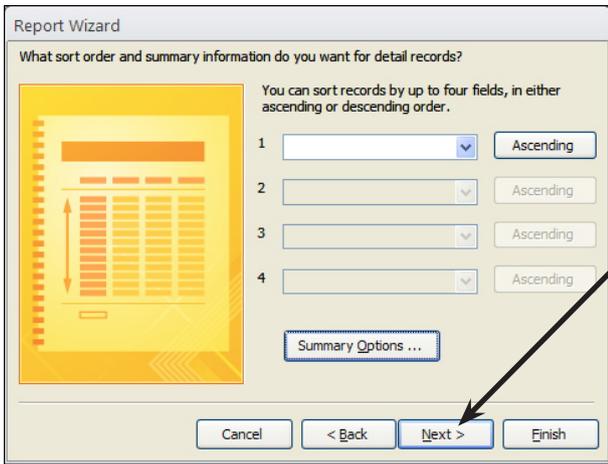
4 You will be asked about the grouping required. We want to list the totals for each product type so the PRODUCT NAME field is suitable. Select it in the left frame and move it into the GROUP frame. We will leave the GROUPING OPTIONS as normal, so click on NEXT.



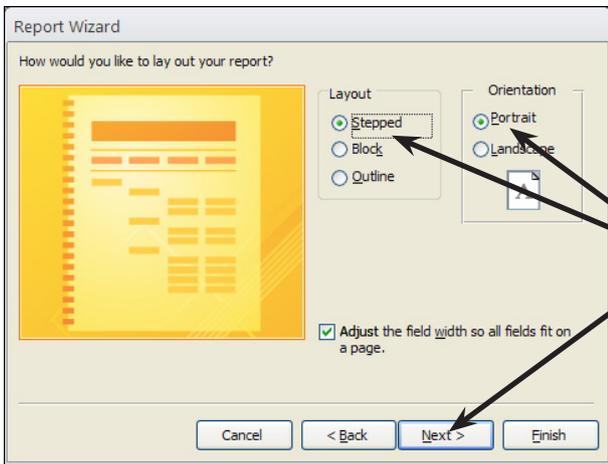
5 We won't need any sorting within the group in this case so click on the SUMMARY OPTIONS button.



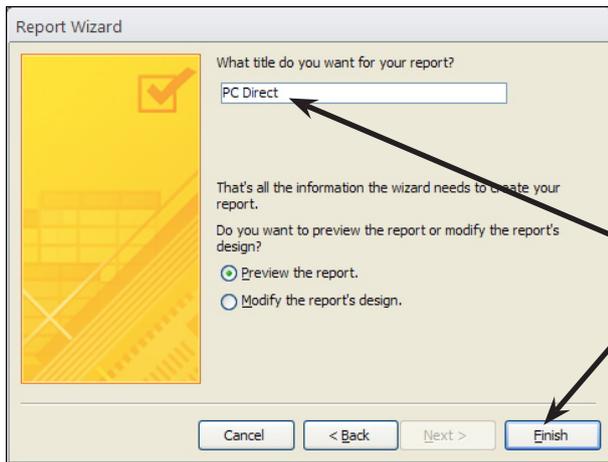
6 Set the QTY and AMOUNT fields to have their sums (sub-totals) calculated and click on OK.



7 You will be returned to the SORT section of the wizard, click on NEXT.



8 Select the STEPPED layout with PORTRAIT orientation and click on NEXT.



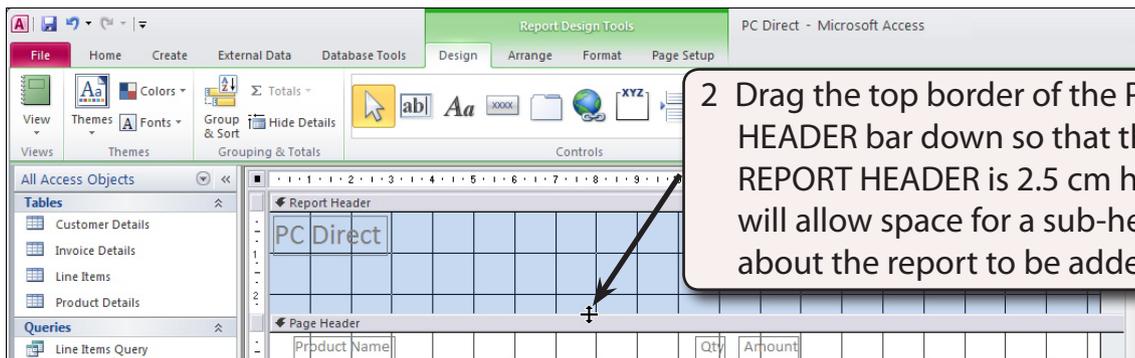
9 Enter the report title:  
PC Direct  
then click on the FINISH button to  
create the report.

**NOTE:** The report title, PC Direct, will be placed as a heading in the report. It will also be the name under which the report is saved. It is not an appropriate name for the report, so we will alter it shortly.

## B Making the Total Items Sold Report More Concise

As with most Report Wizard generated reports detailed adjustments are required. If you look through the report you will see that the report is too detailed. We don't need to know the individual sales for each invoice, just the totals.

- 1 Close the preview to return the view to DESIGN VIEW.



2 Drag the top border of the PAGE HEADER bar down so that the REPORT HEADER is 2.5 cm high. This will allow space for a sub-heading about the report to be added.

# Enhancing Invoice Systems

Over the past three chapters you have developed quite an extensive database. Switchboard forms, macros and buttons can be added to the invoice system to allow it be fully usable by people with limited knowledge of Microsoft Access.

## Loading the Sample File

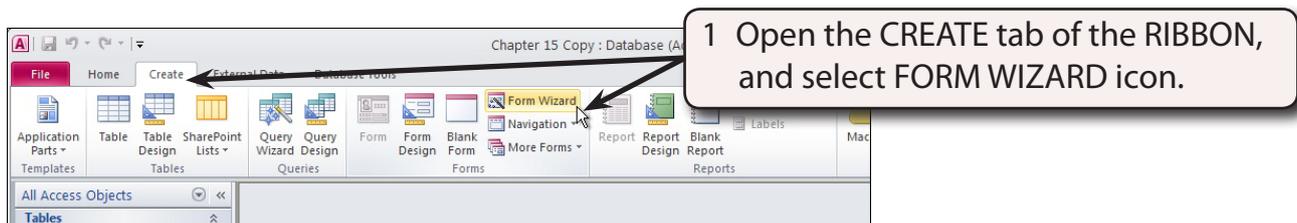
You will be using the invoice system from the previous chapter.

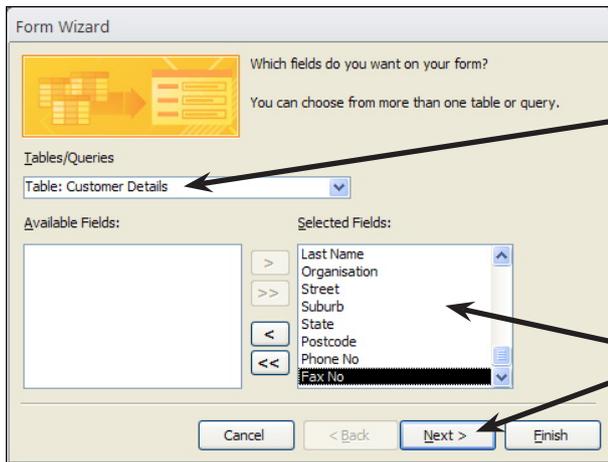
- 1 If your invoice system from the previous chapter worked well, load Microsoft Access and open the file from your ACCESS STORAGE folder.
- 2 If you would prefer to use a fresh fully operational file:
  - (A) Load Microsoft Access or close the current database and click on the OPEN icon in the BACKSTAGE VIEW.
  - (B) Access the CHAPTER 15 folder of the ACCESS 2010 SUPPORT FILES and open the CHAPTER 15 file as an OPEN READ-ONLY file.
  - (C) Click on the FILE tab and select SAVE DATABASE AS.
  - (D) Access your ACCESS STORAGE folder and save the file as CHAPTER 15 COPY.
  - (E) Click on the ENABLE CONTENT button so that the data can be viewed.

## Creating a Customers Data Entry Form

At the moment there is only a table where new customers can be entered or existing customers modified. It would be far more effective to have a DATA ENTRY form to carry out this process. We will use the FORM WIZARD to create a very quick form.

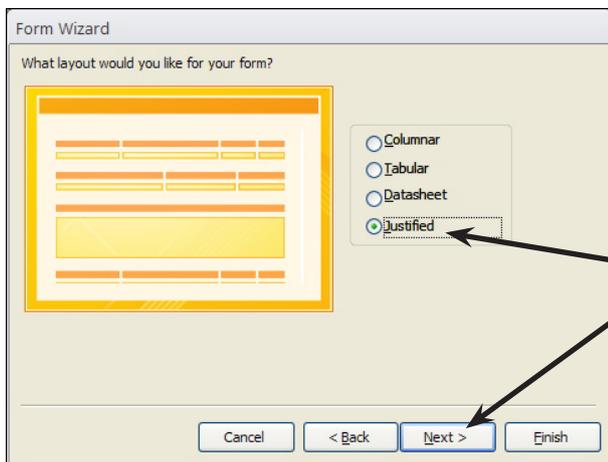
### A Creating the Form



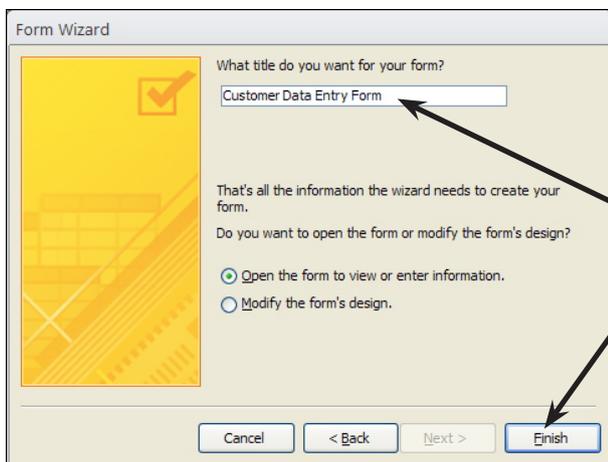


2 In the FORM WIZARD dialogue box set the CHOOSE TABLE OR QUERY box to the CUSTOMER DETAILS table.

3 Move all the fields into the SELECTED FIELDS frame and click on NEXT.

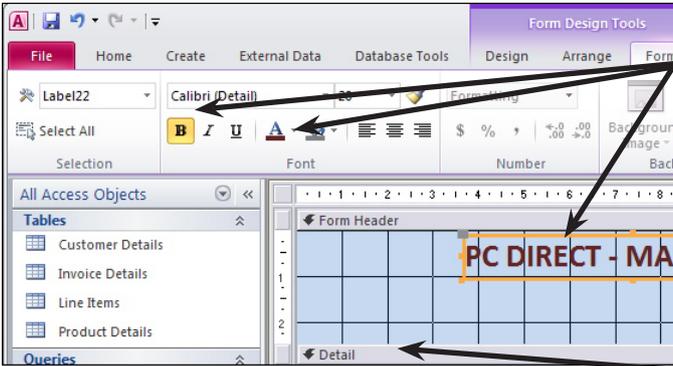


4 Select the JUSTIFIED layout and click on NEXT.



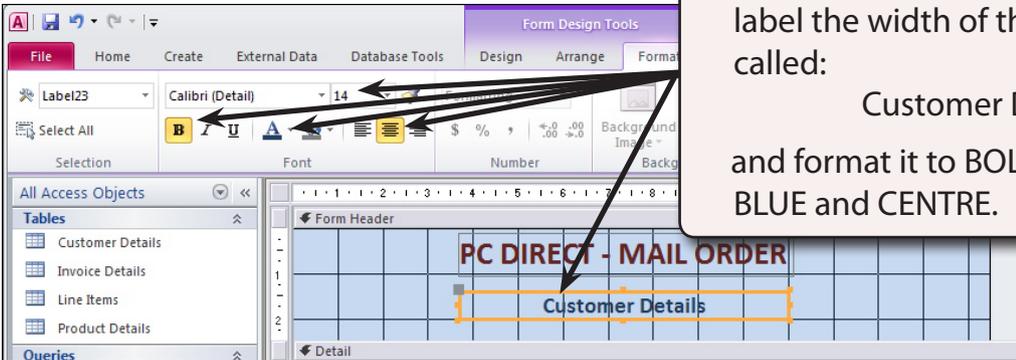
5 Name the form:  
Customer Data Entry Form  
and click on the FINISH button to create the form.

6 Set the view to DESIGN VIEW, adjust the heading to:  
 PC DIRECT - MAIL ORDER  
 press <enter>, format it to BOLD, DARK RED and double click on a handle to enclose to text and centre it over the fields.

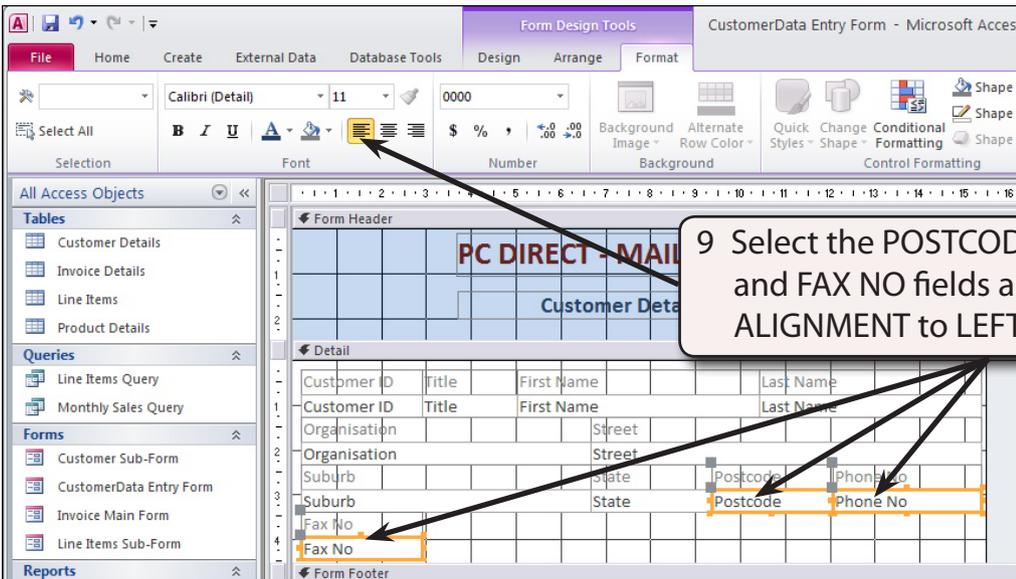


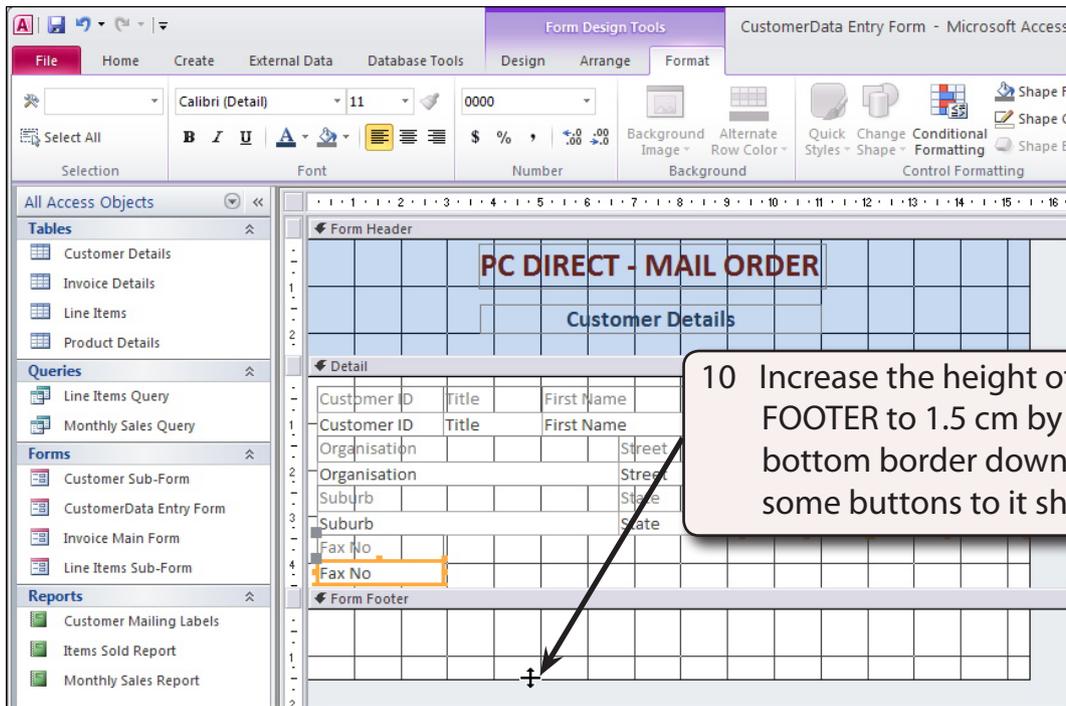
7 Increase the height of the FORM HEADER section to 2.5 cm by dragging the DETAIL border down.

8 Use the LABEL TOOL from the DESIGN tab to add a sub-heading label the width of the main heading called:  
 Customer Details  
 and format it to BOLD, 14 point, DARK BLUE and CENTRE.



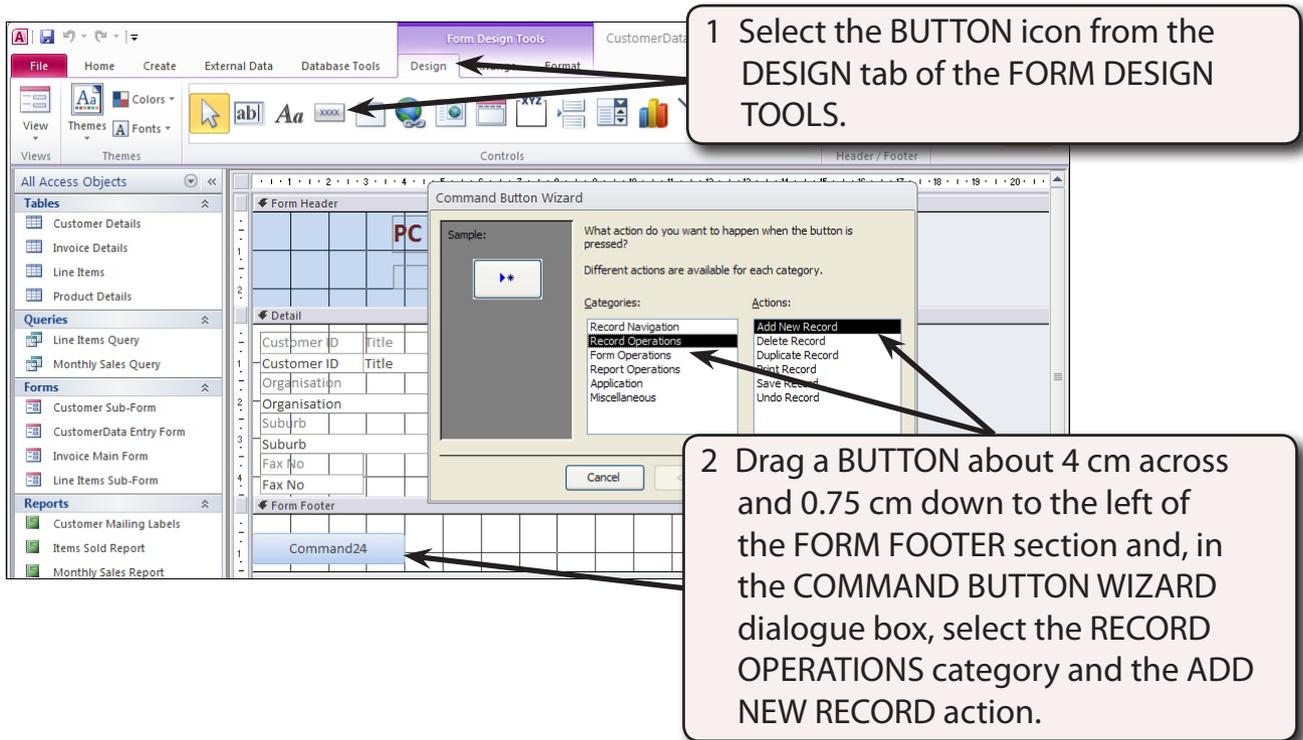
9 Select the POSTCODE, PHONE NO and FAX NO fields and set their ALIGNMENT to LEFT.





## B Adding Buttons to the Form

Some buttons can be added to automate the common tasks of the form.



# Useful Tools

Microsoft Access provides numerous useful tools that can be used in your databases. In this chapter we will look at a few of them. For example, creating tabbed data-entry forms, the calendar function, finding duplicate entries in a database and using database templates.

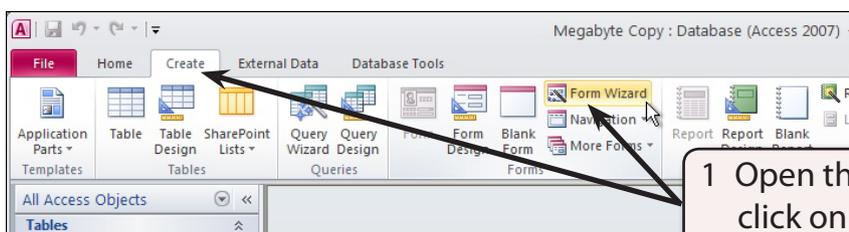
## Loading the Sample File

- 1 Load Microsoft Access or close the current database and click on the OPEN icon in the BACKSTAGE VIEW.
- 2 Access the CHAPTER 16 folder of the ACCESS 2010 SUPPORT FILES and open the MEGABYTE file as an OPEN READ-ONLY file.
- 3 Click on the FILE tab and select SAVE DATABASE AS.
- 4 Access your ACCESS STORAGE folder and save the file as MEGABYTE COPY.
- 5 Click on the ENABLE CONTENT button so that the data can be viewed.

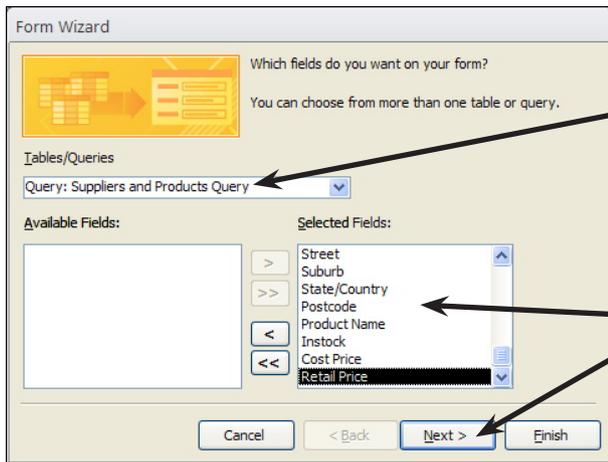
## Creating Form Tabs

You have created data entry screens before and they are a valuable tool for the accurate entering of data in a database system. Sometimes it is not possible to place all the data on one form, so FORM TABS can be used to show groups of fields and place more data on the one screen.

### A Creating the Form

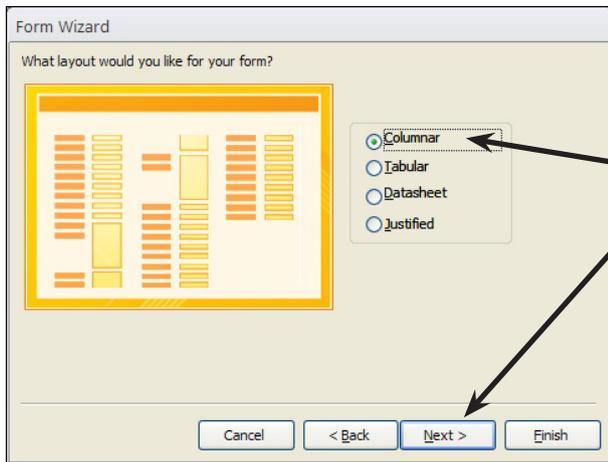


1 Open the CREATE tab of the RIBBON, click on the FORM WIZARD icon.

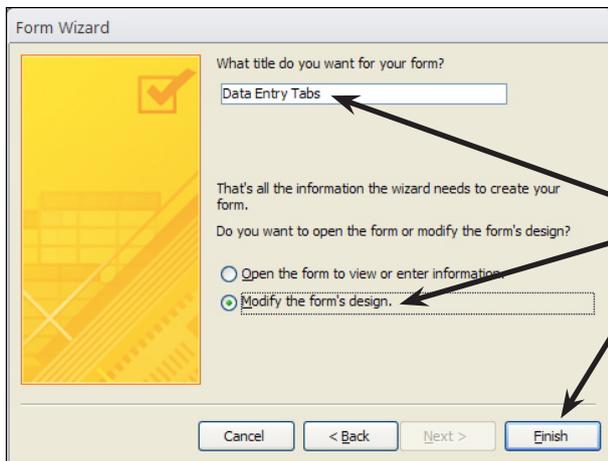


2 Set the TABLE OR QUERY box to the SUPPLIERS AND PRODUCTS QUERY.

3 Move all the fields into the SELECTED FIELDS frame and click on NEXT.



4 Leave the COLUMNAR layout selected and click on NEXT.

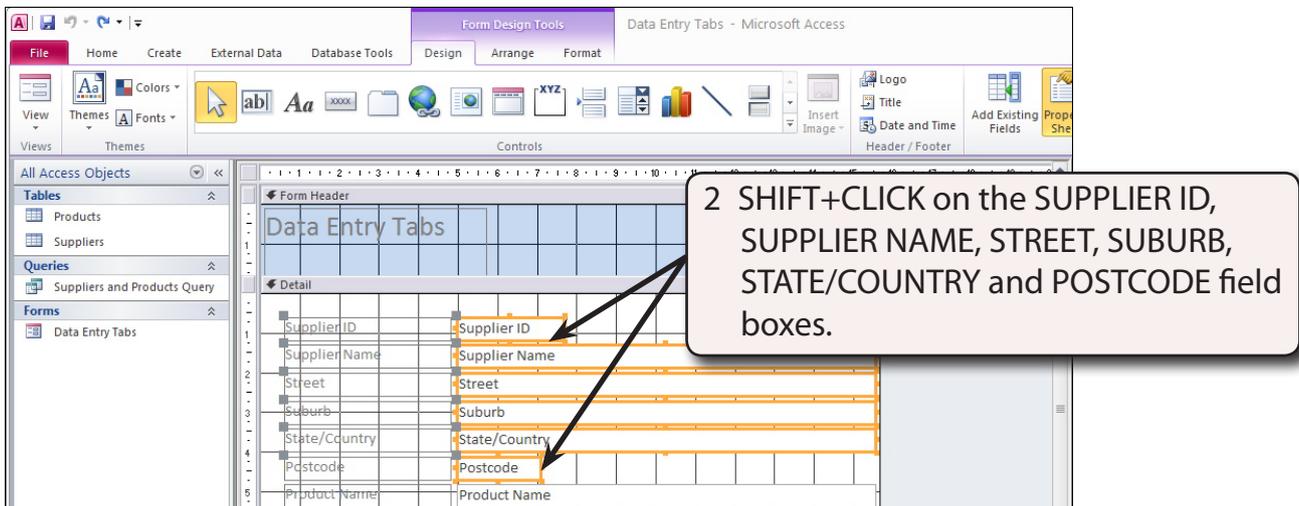


5 Name the form:  
Data Entry Tabs  
Click on the MODIFY THE FORM'S DESIGN radio button followed by FINISH to create the form to open the form in DESIGN VIEW.

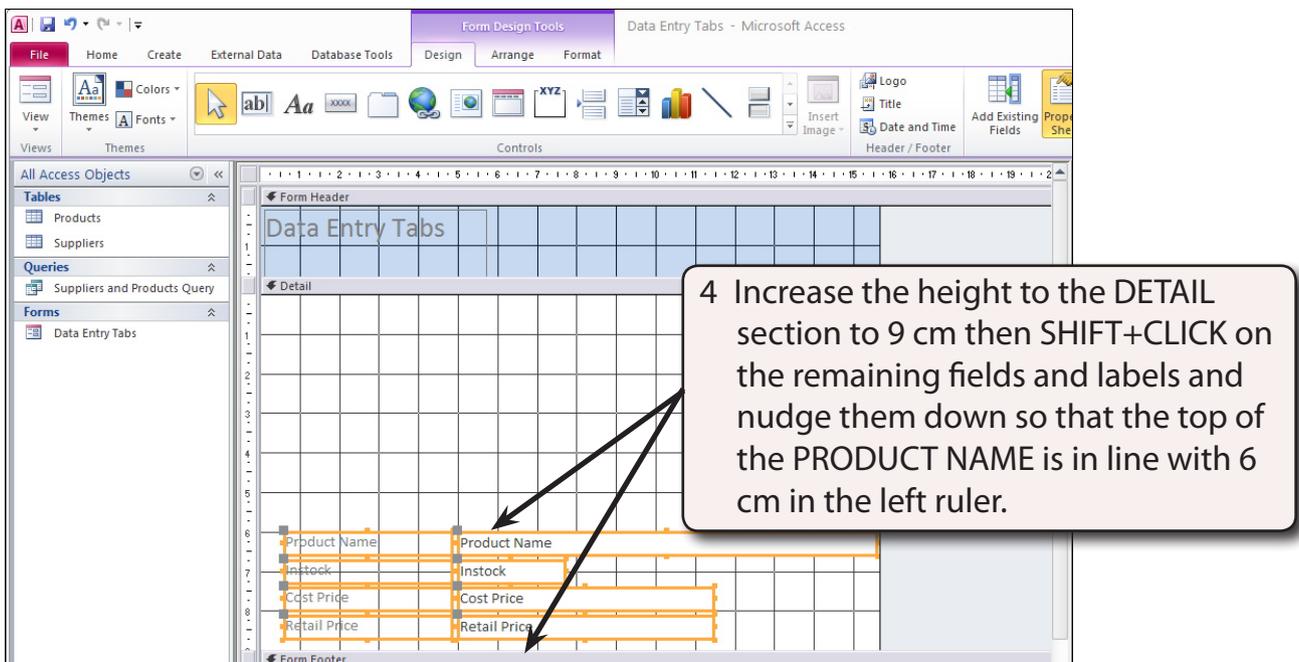
## B Creating the Tab Controls

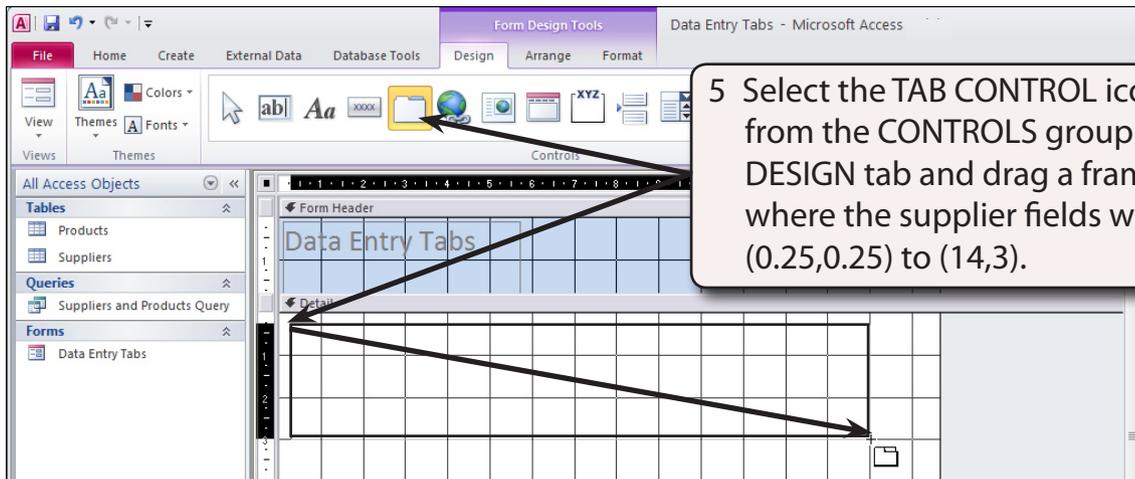
We are going to create two 'cards' that will make up the form, one for the supplier details, the other for the product details.

- 1 The form should be opened in DESIGN VIEW.



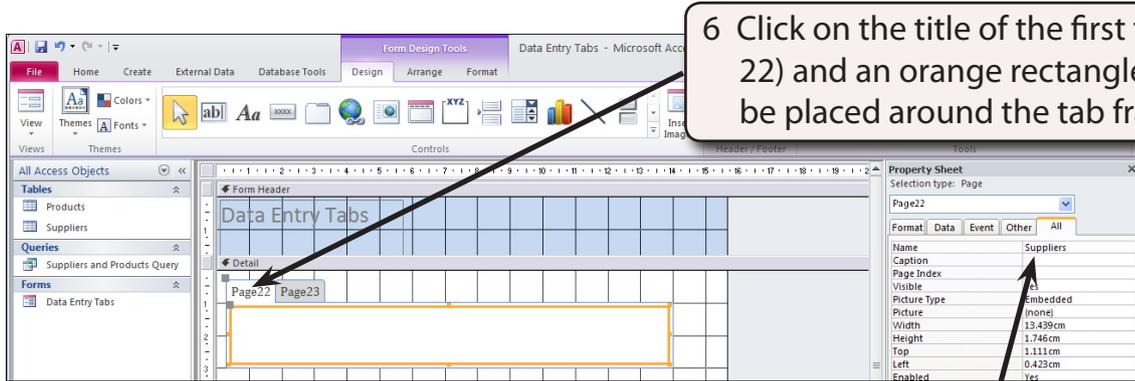
- 3 Press CTRL+X to cut the controls from the form.





5 Select the TAB CONTROL icon from the CONTROLS group of the DESIGN tab and drag a frame, where the supplier fields were, from (0.25,0.25) to (14,3).

**NOTE:** By default two tabs are provided, however, you can add more tabs as you will see shortly.



6 Click on the title of the first tab (Page 22) and an orange rectangle should be placed around the tab frame.

7 The tab can be renamed. In the PROPERTY SHEET pane open the ALL tab, set the NAME box to:  
**Suppliers**  
and press the <enter> key to set it.

# Microsoft Access Project

---

Andersons Real Estate

