



Training for ECDL
**Advanced
Databases**

A Practical Course in Windows XP and Office 2007

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Blackrock Education Centre, 2010

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ISBN 978-0-9559436-3-8

Published by
Blackrock Education Centre, Kill Avenue, Dún Laoghaire, Co. Dublin, Ireland.

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E-mail: becbooks@blackrockec.ie
www.becpublishing.com and www.blackrockec.ie

First published, 2010

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Note to Reader

The Manual

Advanced Databases for Microsoft Office 2007 for ECDL offers a practical, step-by-step guide for those who wish to upgrade their databasing skills to acquire a thorough competence in this application. Similar to the other Blackrock Education Centre training materials, it has been designed as either a stand-alone study guide or for use in a tutor-led environment. However, as is characteristic of Blackrock Education Centre training materials, the content of this manual offers additional support information through explanations, demonstrations and practical exercises as well as a support website, www.becpublishing.com.

Design

Every use has been made of the expertise we have gained training students in ICT over many years. The knowledge and skills of our substantial pool of trainers hugely influenced the content and layout of the material.

- The manual is written in plain English.
- There are step-by-step, detailed explanations and action sequences.
- Particular attention is given to relating what is seen on the pages of the manual to what is seen on the computer screen.
- The A4 size of the manual and the side-by-side layout of graphics and text, combine to make it an ideal training manual.

Exercises

At the end of each section, there are two kinds of exercises. There are self-check questions designed to jog your memory of important details. There are also practical exercises that have been designed to revise some of the more important skills associated with using Microsoft Access.

In successfully completing each set of exercises, the student can be confident, that progress in learning more sophisticated skills has been achieved.

Web Support

Support material is available on the CD enclosed in the manual and on the internet at www.becpublishing.com.

This manual was produced – text, design and layout – using only the Microsoft Office suite of programs and the skills described in the manual. The screen shots were captured using a small utility program and most were inserted directly onto the page.

Before you can add data to a database table, it must be designed. This involves deciding which field headings to use and the type of data associated with each field. For example, a **first name** field will hold textual data and so can be formatted as text, whereas an **amount owed** field will hold numerical or financial data, and so will need to be formatted differently. A date field will also need to be formatted as a **date/time** data type with a specific date format.

When designing a database, it is important to ensure that the correct format is applied to fields in order to facilitate searching and sorting data within the table at a later date. For example, if a numerical field is formatted as text, it will not sort properly.

The example below shows numerical data formatted as text and then sorted in ascending order.

1
10
11
12
2
3
4
5
6
7
8
9

This data is sorted in ascending order but, because the fields have been formatted as text fields, the sort order is incorrect (1 and 0 is perceived as a lower number than 2).

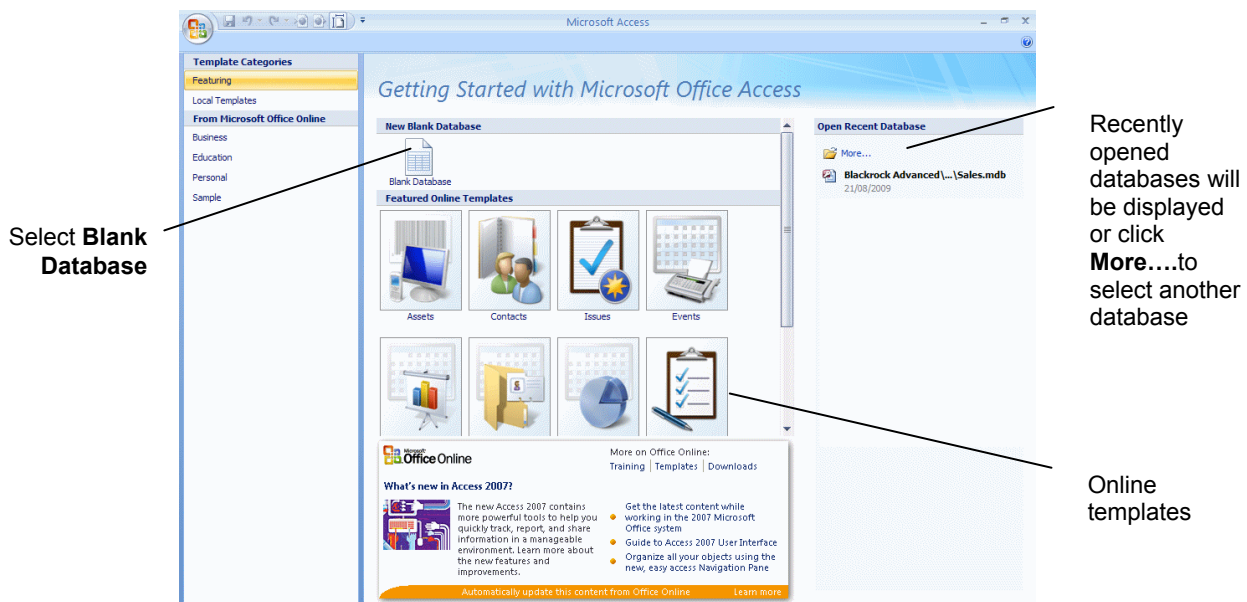
2

1.1 Database Design

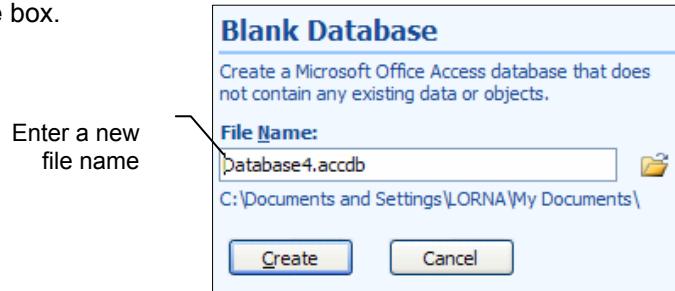
In order to enter field headings and to select data types and properties of a field, a database table must first be opened in Design View. The design can be altered in an existing table or created within a new database table. The instructions below refer to both methods: creating a new database and opening an existing database.

1.1.1 Creating a New Database

- Double-click the **Microsoft Access** icon on the desktop or select **Start** and then **All Programs**.
- Select the **Microsoft Office** folder.
- Select **Microsoft Office Access 2007**.
- The **Getting Started** window will open (to display this window, select the **Office Button** and then **New**).



- Under the heading **New Blank Database**, select **Blank Database**.
The **Blank Database** section appears on in the **Getting Started** window. A filename is supplied by Access but this can be changed to a more meaningful file name.
- Enter a file name into the **File Name** box.



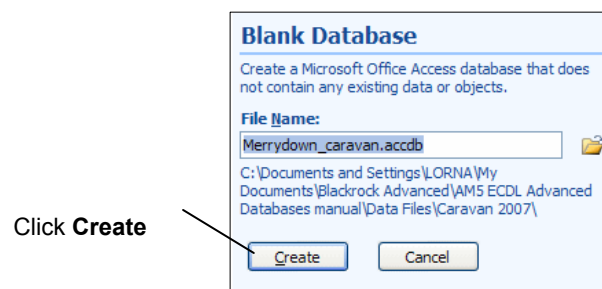
- Check that the database will save in the correct drive/folder (the save location will be displayed under the filename).

note To change the location the database will be saved in, do the following:

- Click the yellow folder icon (**Browse**).

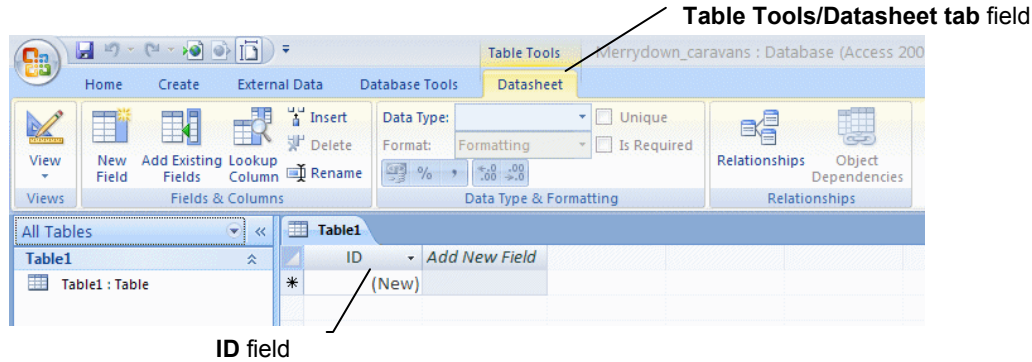
- Ensure that the correct drive and/or folder is selected from the **Look in** box.
- Click **OK**.

- Click the **Create** button.



The **Table Datasheet** window opens. This window displays a new table with the default name **Table1**.

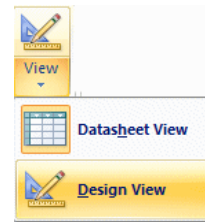
A table contains rows and columns. The 'contextual' tab on the ribbon **Table Tools/Datasheet** becomes available for use.



The new blank table contains a ready named field called ID. New fields can be added by right clicking **Add New Field** and then selecting **Rename Column**.

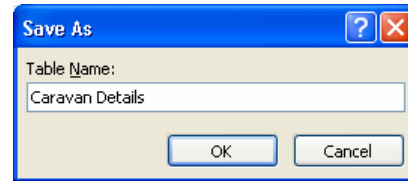
To design the table with different field names and data types, do the following:

- On the Datasheet tab, select the **View** button.
- Select **Design View** from the drop-down menu.

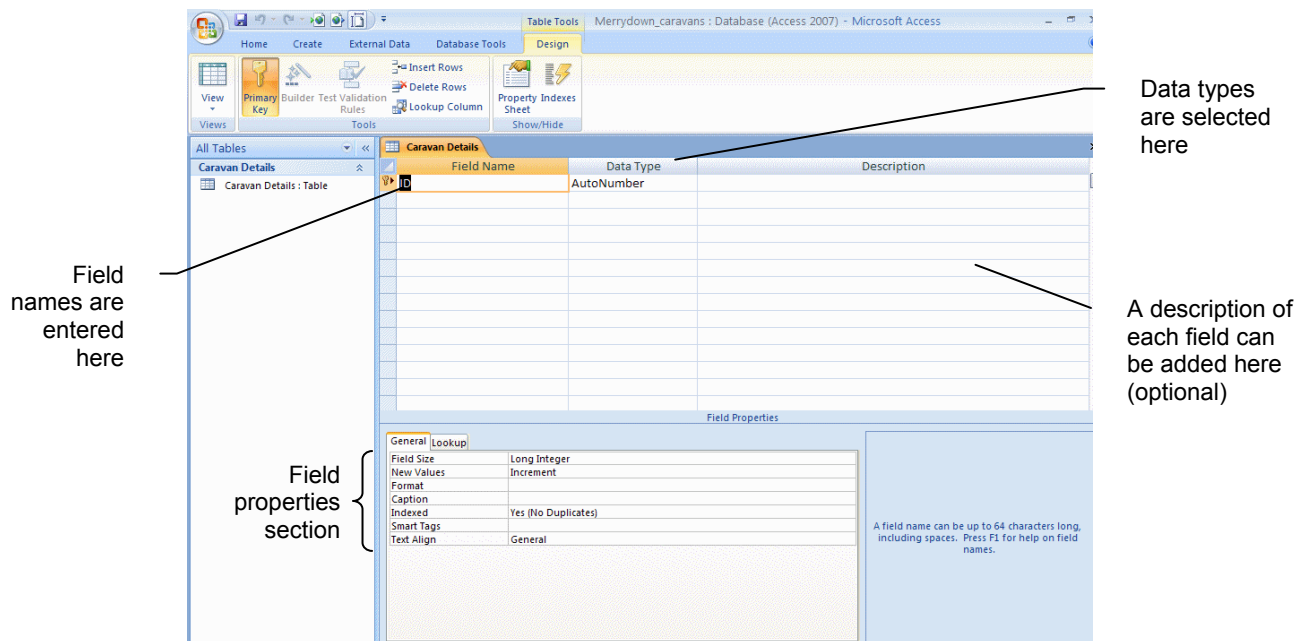


The **Save Table** message opens.

- Enter a name for the table.
- Click OK.



The table design window opens with the **Table Tools/Design** tab on the ribbon available for use. The table design window enables you to enter field names, select appropriate data types and alter field properties.



Practice Sequence

For the purposes of this practice sequence, a database, containing 4 tables, has already been created.

Please note that the database is based on a used caravan sales company. All caravans have a VIN code (Vehicle Identification Number), which, from 1992 onwards, consists of a 17-character, alphanumeric international standard code. For the purposes of this task, the caravan ID is a fictitious 5-character code for ease of use.

Please note that, for build-up purposes, this practice sequence also tests existing skills gained in ECDL Level 2.

To practice changing the design of a table, you will use the **Caravan Details** table and alter the data type/properties as requested in the numbered questions below.

- 1 Open the database entitled **Merrydown_Caravans** and then open the **Caravan Details** table in Design View. The table below displays the data types and field properties required for each of the fields in the table.

Field Name	Data Type	Properties
Caravan ID (primary key)	Text	Field size: 5 Input Mask: LL000
Make	Lookup	Field Size: 20 Lookup values: Lunar, Abbey, Sterling, Bailey, Avondale, Coachman, Abi, Ace, Sprite, Fleetwood, Hobby, Swift, Elddis
Model	Text	Field Size: 15
Details	Memo	Format: lower case (<)
Sales contact	Hyperlink	Format: lower case Required field
Year	Text	Field Size: 4
Berth	Number	Integer
Price	Currency	Euro. 2 Decimal Places Validation Rule: must be €5000 or below
Date delivered	Date/Time	Short date format Validation Rule: Must be 2008 or later

- 2 Change the field size for the **Caravan ID** field to **5** and the field size for the **Model** field to **15**. *If you need help:*

With the **Caravan ID** field selected, press **F6** and delete the existing field size of 50. Enter **5** as the new field size for this field. Repeat this procedure for the Model field, entering 15 as the field size.

- 3 Create an input mask for the **Caravan ID** field so that any caravan ID code will follow the same data entry format: **LL000**. Ensure that this field will display in upper case. *If you need help:*

With the **Caravan ID** field selected, position the cursor in the **Input Mask** field in the Field Properties section. Enter the following input mask >LL000 (where > dictates upper case, the L stands for a letter and 0 for number).

- 4 Create a Lookup field for the **Make** field. *If you need help:*

Select the **Data Type** arrow for the **Make** field and then select **Lookup Wizard**. Select the option button for **I will type in the values that I want** and then click **Next**. Enter the lookup values shown above in the table for this field. Click **Next**. Ensure that the name **Make** is displayed in the Label box and click **Finish**.

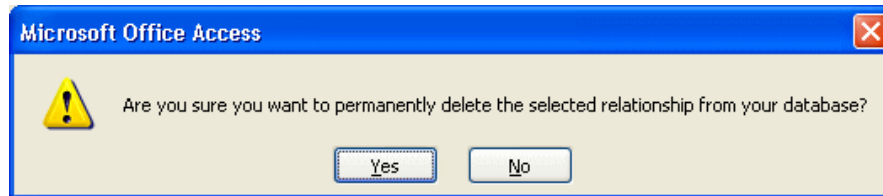
5	<p>Change the Details data type to Memo. Ensure that the details will appear in lower case. <i>If you need help:</i></p> <p>Select the Data Type arrow for the Details field and then select Memo. Position the cursor in the Format field in the Field Properties section and enter < (to ensure that data will be displayed in lower case, regardless of how it is entered).</p>	<input type="checkbox"/>
6	<p>Change the Sales Contact data type to Hyperlink. Ensure that the sales contacts will appear in lower case. Also make this field a mandatory field. <i>If you need help:</i></p> <p>Select the Data Type arrow for the Sales Contact field and then select Hyperlink. Position the cursor in the Format field in the Field properties section and enter < (to ensure that data will be displayed in lower case, regardless of how it is entered). Select the arrow in the Required field and select Yes.</p>	<input type="checkbox"/>
7	<p>Change the Year field to a Text data type with a field size of 4. Change the Berth field to Number with no decimal places. Also ensure that the default number in blank fields will display as 1. <i>If you need help:</i></p> <p>Select the Data Type arrow for the Year field and select Text. Press F6 and type over the existing default field size with the new size (4). Select the Data Type arrow for the Berth field and then select Number. Press the F6 key and click the Field Size arrow. Choose Integer. Position the cursor in the Default Value field and enter 1.</p>	<input type="checkbox"/>
8	<p>Change the Price data type to Currency with 2 decimal places and the euro currency symbol. <i>If you need help:</i></p> <p>Select the Data Type arrow for the Price field and then select Currency. Press the F6 key and click the Format arrow. Choose Euro. Position the cursor in the Decimal Places field and select the arrow. Choose 2.</p>	<input type="checkbox"/>
9	<p>Enter a Validation Rule to prevent prices over €5,000 being entered into this field. Ensure that a message will be displayed if this rule is violated. <i>If you need help:</i></p> <p>Ensure that the Price field is selected. Position the cursor in the Validation Rule field and enter <=5000. Position the cursor in the Validation Text field and enter Must be below €5,000.</p>	<input type="checkbox"/>
10	<p>Change the Date Delivered data type to a Date type. Ensure that dates will display in short date format (00/00/0000). <i>If you need help:</i></p> <p>Select the data type arrow for the Date Delivered field and select Date/Time. Press F6 and then select the Format arrow. Choose Short Date format.</p>	<input type="checkbox"/>
11	<p>Enter a Validation Rule to prevent dates before 2008 being entered into this field. Ensure that a message will be displayed if this rule is violated. <i>If you need help:</i></p> <p>Ensure that the Date Delivered field is selected. Position the cursor in the Validation Rule field and enter >=01/01/2008. Position the cursor in the Validation Text field and enter No dates before 2008 allowed.</p>	<input type="checkbox"/>
12	<p>Apply a primary key to the Caravan ID field. <i>If you need help:</i></p> <p>Select the Caravan ID field. Select the Primary Key button on the ribbon.</p>	<input type="checkbox"/>
13	<p>Save the table. View the edited table in Datasheet View and check that the data is displayed correctly. <i>If you need help:</i></p> <p>Select Save from the Office Button. A warning message will be displayed informing you that some data may be lost to shorter field sizes and asking if you want to continue. Click Yes. A further message will be displayed asking if you want existing data to be tested with the new rules. Click No. Select the View button and then DataSheet View.</p>	<input type="checkbox"/>
14	<p>Close the table.</p>	<input type="checkbox"/>

15	Open the Customer Details table and, in the Cust ID field add an input mask to restrict data entry to two letters followed by two numbers (LL00)	<input type="checkbox"/>
16	In the Post Code field, add an input mask to restrict entry to the following format: letter, letter, number space number, letter, letter (LL0#0LL)	<input type="checkbox"/>
17	Save and close the Customer Details table.	<input type="checkbox"/>
18	Open the Sales Accounts table and add a Validation Rule to the Purchase Date field so that dates before 2008 are not allowed. Ensure that a message will be displayed if the rule is violated.	<input type="checkbox"/>
19	<p>Change the data type for the Cust ID field to a Lookup and ensure that the values will be taken from the Cust ID field in the Customer Details table. Also ensure that the data type for the Caravan ID field is a Lookup with values taken from the Caravan ID field in the Caravan Details table. <i>If you need help:</i></p> <p>Select the Data Type arrow and choose Lookup Wizard. The Lookup Wizard will begin. Select the option button for I want the lookup column to look up values in a column or query. Select Next>. Select the Customer Details table and click Next. Select Cust ID in the Available Fields list and then click the > button to add it to the Selected Fields list. Click Next. Do not add a sort order but click Next to go to the next step. Adjust the width of the column if necessary by dragging with the mouse and then click Next. Enter a label (if not already displayed) and click Finish. A message will appear requesting whether you wish to save the table (a relationship is automatically created between the main table and the table containing the lookup values). Click Yes to save the table. Repeat this procedure to lookup values from the Caravan ID field in the Caravan Details table.</p>	<input type="checkbox"/>
20	Save and close the Sales Accounts table. Close the database	<input type="checkbox"/>

- Select **Delete** from the pop-up menu.
A confirmation window opens.



- Select **Yes** to permanently delete the relationship between the tables.



Alternatively, in the Design/Relationship Tools tab, select **Clear Layout** to delete all relationships. Click **Yes** in the confirmation window that opens to complete the deletion.



2.2 Referential Integrity (5.2.2.3)

Referential integrity preserves the relationship between tables when data is added or deleted. For example, when a record is added to one table, the related table is automatically updated with the same data. The same applies when deleting a record in a related table. Enforcing referential integrity between related tables ensures that data cannot accidentally be changed or deleted.

In order to set referential integrity, the following rules must be followed in the database: the matching field is a primary key field in the primary table or the related fields have the same data types.

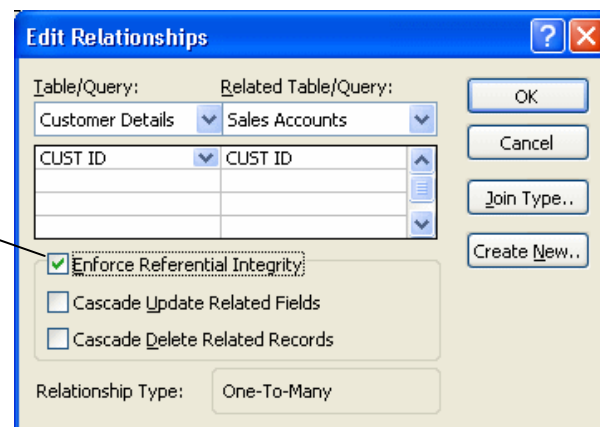
The following rules also apply:

- Values cannot be entered into the foreign field of a table if the same values don't exist in the related primary field.
- A record cannot be deleted in a primary table if a matching record exists in a related table.
- Values in the primary field cannot be altered if the same values exist in a related table.

To enforce referential integrity, do the following:

- In the **Database Tools** tab on the ribbon, select the **Relationships** button.
- Select the **Edit Relationships** button.
Alternatively, right-click the relationship join line between the related tables and select **Edit Relationship** from the pop-up menu.
The **Edit Relationships** window opens.
- Click the **Enforce Referential Integrity** checkbox to place a tick in the box.
- Select **OK**.

Tick the **Enforce Referential Integrity** checkbox




2

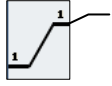
note The relationship type will be indicated by the symbols that appear on the relationship join line.

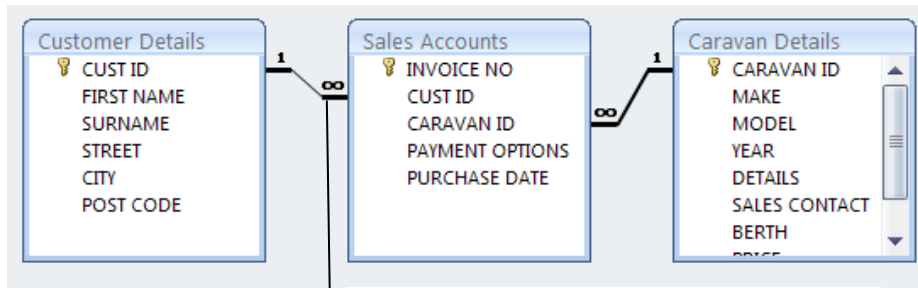
The **1** and **∞** (infinity symbol ∞) represent a one-to-many relationship and the **1** and **1** symbols represent a one-to-one relationship.

One to Many relationships after referential integrity applied



One to One relationships after referential integrity applied

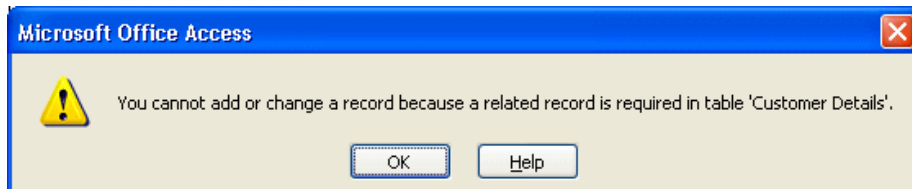





The 1 and ∞ (infinity symbol) represent a one-to-many relationship.


In the above example, a one-to-many relationship exists between the Customer Details table (1) and the Sales Accounts table (many). A one-to-many relationship also exists between the Caravan Details table (1) and the Sales Accounts table (many). This means that only one record can exist for each customer in the Customer Details table, and only one record can exist for each caravan in the Caravan Details table. The Sales Accounts table containing the foreign keys can, however, display many records for the same customer or caravan. Referential integrity ensures that the integrity of the data is maintained and that data cannot be added or deleted accidentally in the related tables.

A message appears when referential integrity is not maintained between related tables.



If a record is added in the foreign table (in the example above, this is the Sales Accounts table), this message appears because a related record is required in the primary table (Customer Details in the example above).

note When a relationship is created between tables, the primary table displays the **Expand**  **Datasheet** button beside each of the records.

When clicked, the Expand button displays the related record from the foreign table and displays as .

Caravan Details				
CARAVAN ID	MAKE	MODEL	YEAR	
AA100	Ace	Award	1989	good condition

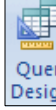
CARAVAN ID	MAKE	MODEL	YEAR									
AA100	Ace	Award	1989	good condition								
<table border="1" style="border-collapse: collapse; width: 100%;"> <thead> <tr> <th>INVOICE NO</th> <th>CUST ID</th> <th>PAYMENT OPTION</th> <th>PURCHASE DATE</th> </tr> </thead> <tbody> <tr> <td>BB02</td> <td>HP</td> <td></td> <td>02/03/2008</td> </tr> </tbody> </table>					INVOICE NO	CUST ID	PAYMENT OPTION	PURCHASE DATE	BB02	HP		02/03/2008
INVOICE NO	CUST ID	PAYMENT OPTION	PURCHASE DATE									
BB02	HP		02/03/2008									

2.2.1 Using Wildcards in a Query

For this task, you will use a variety of wildcards from the ANSI-89 character set to find information in a query.

To use wildcards in a query, do the following:

Using ?

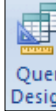
- Select the **Create** tab and then select the **Query Design** button from the **Other** group. 
- The **Show Table** window opens.
- Select the relevant table. In this example, select the Customers Details table.
- Click **Add**.
- Select more tables if required.
- Close the **Show Table** window.
- Add the fields required to display in the results to the query grid. In this example, add First name, Surname and Street.
- Add the ? wildcard criterion to the **Criteria** row of the query grid under the **Surname** field. In this example, enter **Like "Dow?ing"**.

Field:	FIRST NAME	SURNAME	STREET
Table:	Customer Details	Customer Details	Customer Details
Sort:			
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:		Like "Dow?ing"	
or:			

This will find surnames such as **Downing** or **Dowling**.

FIRST NAME	SURNAME	STREET
Darren	Dowling	5 Vernon Street
*		

Using *

- Select the **Create** tab and then select the **Query Design** button from the **Other** group. 
- The **Show Table** window opens.
- Select the relevant table. In this example, select the Customers Details table.
- Click **Add**.
- Select more tables if required.
- Close the **Show Table** window.
- Add the fields required to display in the results to the query grid. In this example, add First name, Surname and Street.
- Add the * wildcard criterion to the **Criteria** row of the query grid under the **Street** field. In this example, to find addresses beginning with 7, enter **Like "7*"**.

FIRST NAME	SURNAME	STREET
Customer Details	Customer Details	Customer Details
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Like "7*"

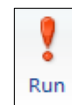
This will find all addresses starting with 7.

FIRST NAME	SURNAME	STREET
Ben	Singh	7 Browning Close
Gareth	Howell	7 Fern Avenue
Sandra	Murphy	7 Black Rock Road
Liam	Brennan	7 Mason street
Joanne	Hampton	7 Carters Yard

Running Queries

To run a query, do the following:

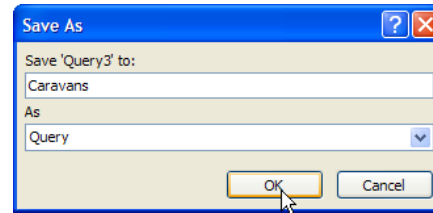
- Select the **Run** button from the **Results** group.



Saving Queries

To save a query, do the following:

- Select **Save** from the **Office button**.
- Enter a name into the **Save as** window.
- Click **OK**.



Closing Queries

To close a query, do the following:

- Close a query by selecting the **Close** button.

Below are more examples using the * wildcard.

To find any address containing the word **Avenue** at the end, do the following:

- Add **Like "**Avenue"** to the **Criteria** row of the query grid under the **Street** field.

FIRST NAME	SURNAME	STREET
Customer Details	Customer Details	Customer Details
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Like "**Avenue"

This will find all addresses with **Avenue** in them.

FIRST NAME	SURNAME	STREET
Andrew	Collins	1 Telford Avenue
Bill	Branton	12 Merton Avenue
Carol	Fowler	4 Astral Avenue
Gareth	Howell	7 Fern Avenue

To find any caravan record containing the word **awning** in the description of the caravan, regardless of the location of the word, do the following:

- Add **awning*** to the **Criteria** row of the query grid under the **Details** field.

CARAVAN ID	MAKE	DETAILS
Caravan Details	Caravan Details	Caravan Details
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		awning

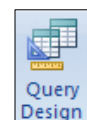
This will find all records with the word **awning** in the description of the caravan.

CARAVAN ID	MAKE	DETAILS
AO100	Avondale	awning, gas cooker and fridge and electric hookup/hot and cold
CV100	Coachman	oven, hob, grill, full awning, shower, 19ft long
BB100	Bailey	all accessories, full awning, good condition,
AA100	Ace	good condition for age, full awning and cassette toilet, 14 ft
SA100	Sprite	oven, full awning, shower and cassette toilet, good condition, 2 owners from
AD100	Avondale	awning, cooker, shower and toilet, blow air heating, hob and grill
FG100	Fleetwood	awning, cooker, shower and toilet, blow air heating, hob and grill
LC100	Lunar	full awning, shower and cassette toilet, oven, hob and grill, fridge
AD101	Ace	full awning, shower and cassette toilet, oven, hob and grill, fridge
FG101	Fleetwood	full awning and all accessories

Using

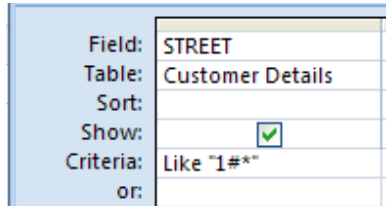
The # wildcard is used in place of a single number, such as the number in an address.

- Select the **Create** tab and then select the **Query Design** button from the **Other** group.



The **Show Table** window opens.

- Select the relevant table. In this example, select the Customers Details table.
- Click **Add**.
- Add more tables if required.
- Close the **Show Table** window.
- Add the fields required to display in the results to the query grid. In this example, add Street.
- Add the # wildcard criterion to the **Criteria** row of the query grid under the **Street** field. In this example, enter **Like "1#"**.



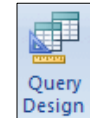
This will find all records with addresses starting with 1, e.g. 11, 12, etc.



Using []

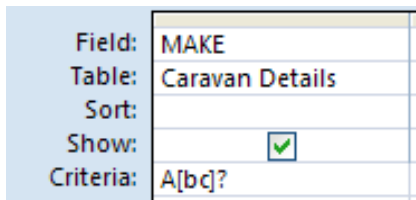
The [] wildcard is used to match any single character within the brackets.

- Select the **Create** tab and then select the **Query Design** button from the **Other** group.

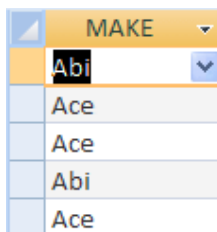


The **Show Table** window opens.

- Select the relevant table. In this example, select the Caravan Details table.
- Click **Add**.
- Add more tables if required.
- Close the **Show Table** window.
- Add the fields required to display in the results to the query grid. In this example, add Make.
- Add the [] wildcard criterion to the **Criteria** row of the query grid under the **Make** field. In this example, enter **A[bc]?**.



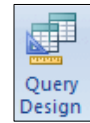
This will find the makes of caravan that begin with **A** and include **b** or **c**.



Using !

The ! wildcard, used with the [] wildcard, is used to match any single character not within the brackets.

- Select the **Create** tab and then select the **Query Design** button from the **Other** group.



The **Show Table** window opens.

- Select the relevant table. In this example, select the Caravan Details table.
- Click **Add**.
- Add more tables if required.
- Close the **Show Table** window.
- Add the fields required to display in the results to the query grid. In this example, add Make and Model.

- Add the ! wildcard criterion to the **Criteria** row of the query grid under the **Model** field. In this example, enter **D[!i]***. Using the * wildcard does not limit the number of characters that come after the first two characters.

Field:	MAKE	MODEL
Table:	Caravan Details	Caravan Details
Sort:		
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:		D[!i]*
or:		

This will find the makes of caravan that begin with **D** and that do not include **i**.

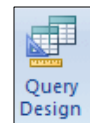
MAKE	MODEL
Abi	Daystar
Avondale	Dart

3

Using –

The - wildcard, used with the [] wildcard, is used to match any one of the range of characters within the brackets.

- Select the **Create** tab and then select the **Query Design** button from the **Other** group.



The **Show Table** window opens.

- Select the relevant table. In this example, select the Caravan Details table.
- Click **Add**.
- Add more tables if required.
- Close the **Show Table** window.
- Add the fields required to display in the results to the query grid. In this example, add Make and Model.

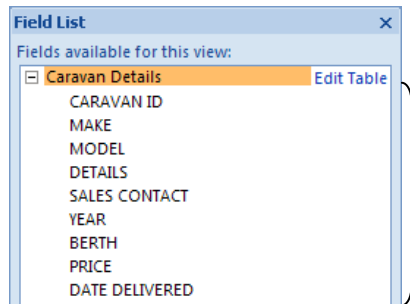
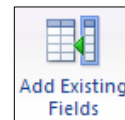
- Add the - wildcard criterion to the Criteria row of the query grid under the Make field. In this example, enter **A[b-c]***. Using the * wildcard does not limit the number of characters that come after the first two characters.

Field:	MAKE
Table:	Caravan Details
Sort:	
Show:	<input checked="" type="checkbox"/>
Criteria:	A[b-c]*
or:	

This will find the makes of caravan that begin with A with either b or c as the second letter of the make.

MAKE	MODEL
Abi	Daystar
Ace	Award
Ace	Airstream
Abi	Northstar
Ace	Diplomat
Abbey	Vogue

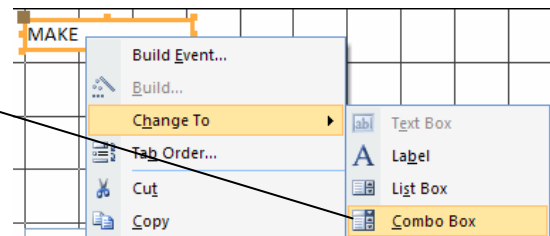
- Open the **Field List** by clicking the **Add Existing Fields** button.
- Double-click or drag the field to be used as the control source from the Field List.



Select a field

- Right-click the control and select **Change To**.
- Select **Combo Box** from the pop-up menu.

Select Combo Box

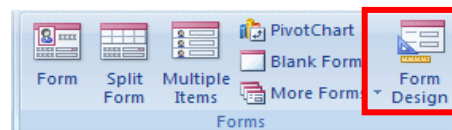


1.1.3 Using the Wizard to Create a Combo Box

The previous tasks have used manual methods to create a combo box. It is also possible to create combo boxes by using a wizard. A wizard is a powerful tool in Access, which guides a user through step-by-step instructions that appear in each window. The user navigates the wizard by selecting/deselecting or skipping unwanted options.

To use the wizard to create a combo box, do the following:

- Open the table or query to which you want to connect the bound control.
- From the **Create** tab and the **Forms** group, select the **Form Design** button.



- From the **Form Design Tools/Design** tab and the **Controls** group, ensure that the **Use Control Wizards** command is **on**.
- Select the **Combo Box** command.
- The cursor displays the combo box icon.



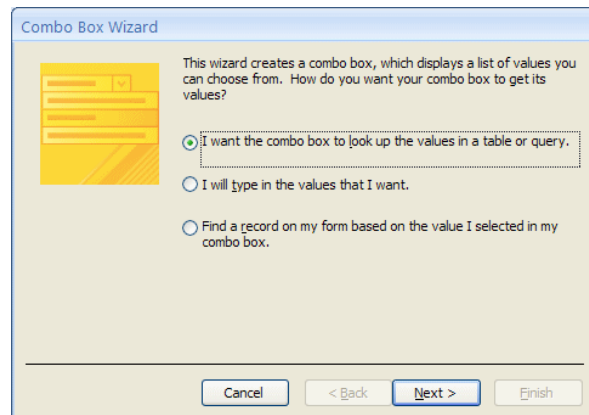
- Click the Combo box icon in the required position on the form.
- If a security message appears at this point, click **Open**.

The **Combo Box Wizard** starts.

- There are three options:
 - ▶ Look up list values in a table or query.
 - ▶ Type in the values that you want to appear in the list.
 - ▶ Find a record on the form based on the value you selected in the combo box.



The last option only appears if there are records currently displayed on the form. If you are creating a combo box on a blank form, this option will not be displayed in the Combo Box Wizard window.



Look Up List Values in a Table or Query

This option allows you to look up values from a different table or query and display them in a combo box. For example, you may have two tables: Orders and Accounts. The Orders table may contain details of products ordered by customers and the Accounts table may contain payment details. A new form based on the Orders table may require users to select values from a field which exists in the Accounts table. The easiest way to do this is to create a combo box which looks up those values from the Accounts table.

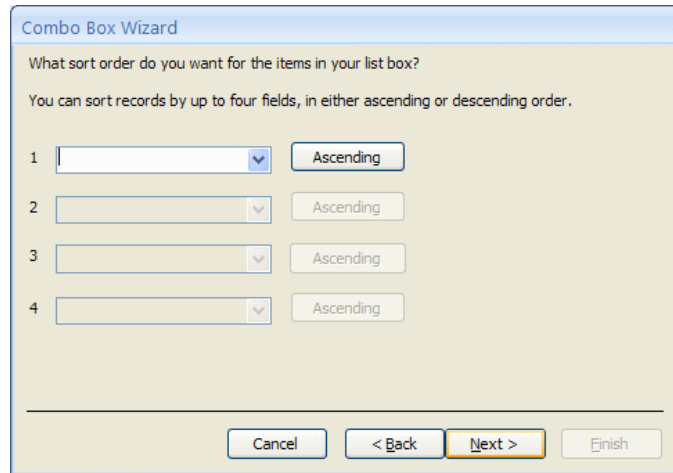
To look up list values in an existing table or query, do the following:

- Select the **I want the combo box to look up values in a table or query** option.
- Click **Next**.

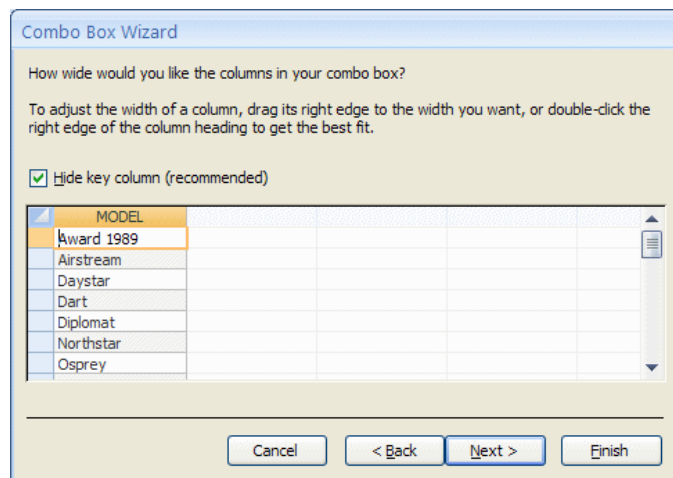
- Select the required option button: tables, queries, both.
- Select the table or query that will provide the values for the combo box list.
- Click **Next**.

- Select the required field from the **Available Fields** pane.
- Click > to display the chosen field in the **Selected Fields** pane.
- Click **Next**.

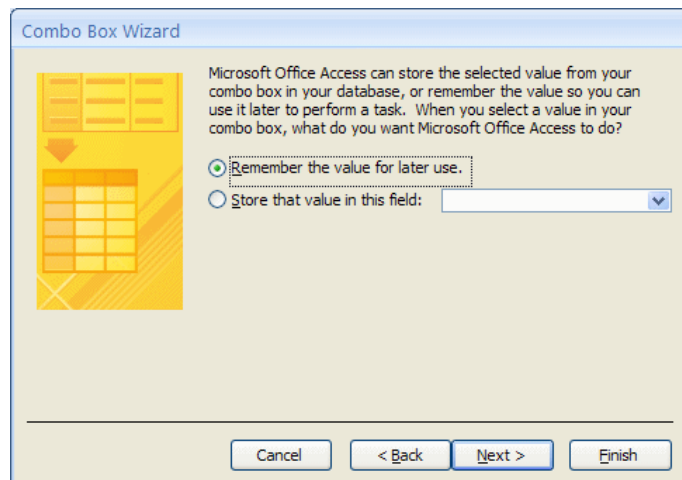
- Select a sort order.
- Click **Next**.



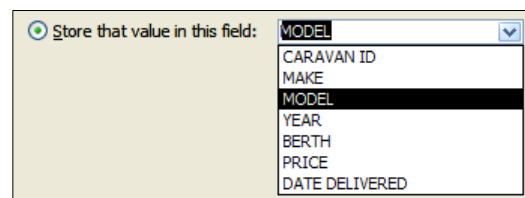
- Adjust the column width by dragging the column's right edge to the required width.
- Click **Next**.



- Choose an option button for the following:
 - **Remember the value for later use** (creates an unbound control).
 - **Store that value in this field** (creates a bound control).



- To ensure that the combo box is a **bound** control, select the latter option.
- Click the arrow and choose the field in which the value will be stored.
- Click **Next**.



- Enter a name for the combo box label.
- Click **Finish**.

Type in Values to Appear in the List

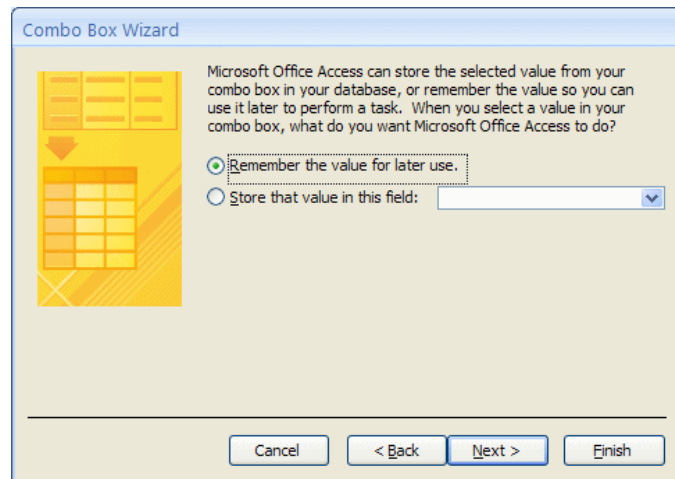
Use this option if you want to type the values which will be displayed in the drop-down menu. An advantage of this option is that the values can be easily edited in the Property Sheet.

- Select the **I will type in the values that I want** option button.
- Click **Next**.

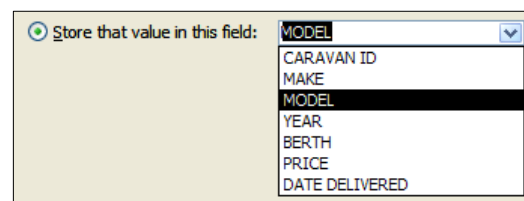
4

- Enter the number of columns required in the lists.
- Enter values for the combo box in each cell.
- Click **Next**.

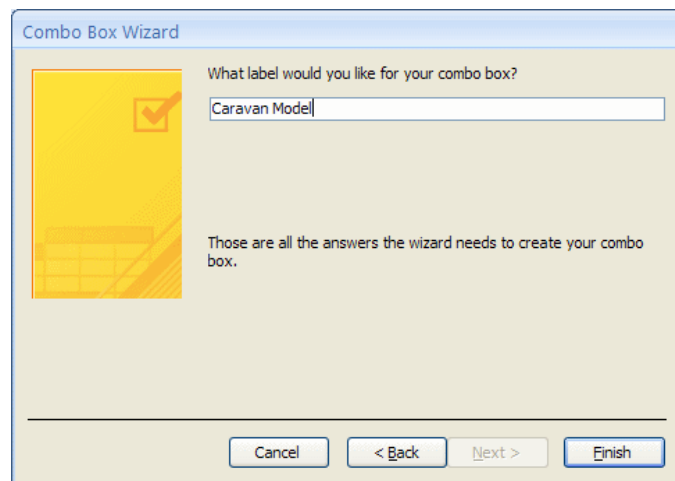
- Choose an option button for the following:
 - ▶ **Remember the value for later use** (creates an unbound control).
 - ▶ **Store that value in this field** (creates a bound control).



- To ensure that the combo box is a **bound** control, select the latter option.
- Click the arrow and choose the field in which the value will be stored.
- Click **Next**.



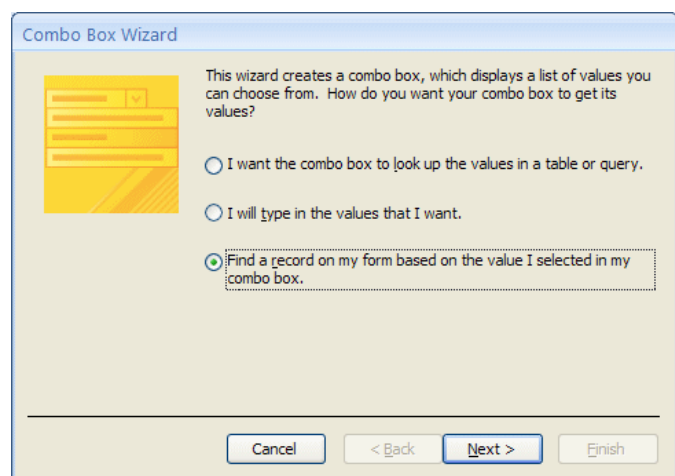
- Enter a name for the combo box label.
- Click **Finish**.



Find a Record from Values on the Form

Use this option if you want to find records based on values selected on the form. To ensure that values are not duplicated in the combo box, select a primary key field.

- Select the **Find a record on my form based on the value I selected in my combo box** option button.
- Click **Next**.



- Select an **Available Field** (a primary key field is advisable as it will ensure that values are not duplicated).
- Select **Next**.

Combo Box Wizard

Which fields contain the values you want included in your combo box? The fields you select become columns in your combo box.

Available Fields:

MAKE
MODEL
SALES CONTACT
YEAR
BERTH
PRICE
DATE DELIVERED
FULL PAYMENT?

Selected Fields:

CARAVAN ID

Buttons: Cancel, < Back, Next >, Finish

- If necessary, adjust the width of the column.
- Click **Next**.

Combo Box Wizard

How wide would you like the columns in your combo box?

To adjust the width of a column, drag its right edge to the width you want, or double-click the right edge of the column heading to get the best fit.

CARAVAN ID			
AA 100			
AA 101			
AB 100			
AD 100			
AD 101			
AN 100			
AO 100			

Buttons: Cancel, < Back, Next >, Finish

- Enter a title for the combo box.
- Click **Finish**.

Combo Box Wizard

What label would you like for your combo box?

Find Caravans

Those are all the answers the wizard needs to create your combo box.

Buttons: Cancel, < Back, Next >, Finish



When a value is selected from the drop down menu, the record associated with that value will be displayed.

1.1.4 List Box

When a field is selected from the Field List in a form it is automatically displayed with an accompanying label. This is a bound control. The label can be edited, deleted, resized separately to the text box. There are 3 different methods that can be used to create a bound list box.



Self-Check Exercises

1 Which of the following statements about a combo box is true?

- A combo box is displayed as either on/off or yes/no.
- A combo box displays values in a drop down menu and are only displayed in full when the menu is displayed.
- The values in a combo box can only be selected by scrolling through a list.

2 An *unbound* control is attached to a field. True or false?

- True.
- False.

3 Which of the following statements is true?

- Limit to List restricts the user to selecting values from a list.
- Limit to List ensures that only distinct values are displayed in a list.

4 Which of the following is a logical expression?

- +.
- IIF.
- *.
- >.

5 The tab order in a form affects the way that controls are *displayed* in a form. True or false?

- True.
- False.

6 A control that groups check boxes or option buttons together is called?

- Option group.
- Check Box group.
- Tab group.
- Control group.

7 A linked subform can be inserted into a new main form by using which of the following?

- Subform Wizard.
- Form Wizard.

1.1.1 Report Views

A report can be viewed in Design View, Layout View, Report View or Print Preview. The commands to make modifications to a report are in Layout View and Design View.

In Layout View, a grouped report can be formatted and modified by using the commands from the **Report Layout Tools** tabs – **Design**, **Arrange** and **Page Setup**. This is the easiest view in which to make modifications as you can see the results of any changes made on the data. If, however, further modifications are required that cannot be made in Layout View, such as creating calculated controls, then Design View should be selected.

Design View

Report Header									
Caravan Sales									
Page Header									
MAKE	CARAVAN ID	MODEL	PRICE						
MAKE Header									
MAKE									
Detail									
	CARAVAN ID	MODEL	PRICE						
MAKE Footer									
			Total =Sum([PRICE])						
Page Footer									
=Now()								=Page " & [Page] & " of " & [Pages]	
Report Footer									
Grand Total			=Sum([PRICE])						

Layout View

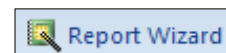
Caravan Sales			
MAKE	CARAVAN ID	MODEL	PRICE
Abbey	AV100	Vogue	€2,950.00
		Total	€2,950.00
Abi	AB100	Daystar	€1,950.00
	AN100	Northstar	€2,400.00
		Total	€4,350.00

5

1.1.2 Creating a Grouped Report (5.5.2.2)

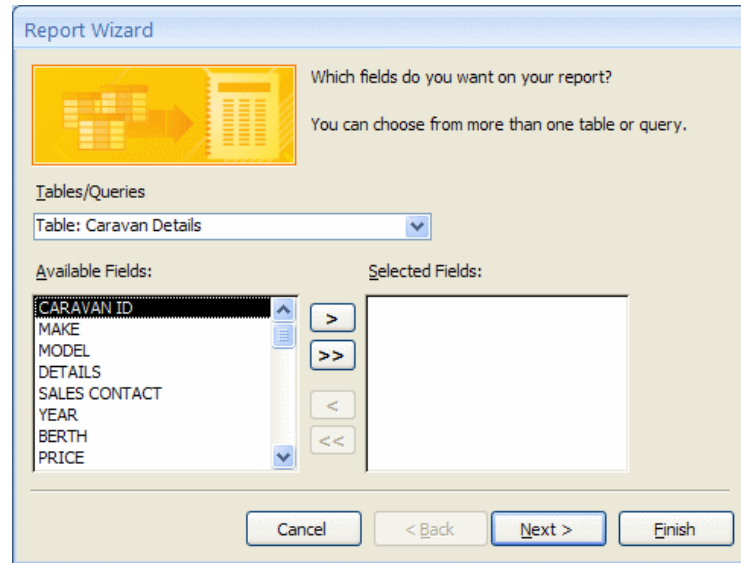
To create a grouped report by field, do the following:

- From the **Create** tab and the **Reports** group, select the **Report Wizard** button.



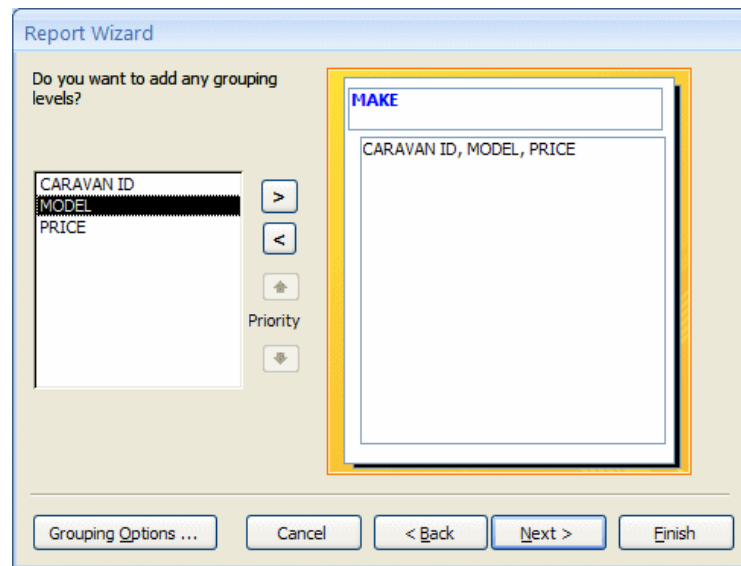
The **Report Wizard** starts.

- At step 1 of the wizard, you need to choose the record source for the report.
- Select the table or query on which the report will be based.
- Next choose the available fields that will appear on the report (click a field and then click > to select individual fields or click >> to select **all** fields).
- Click **Next**.



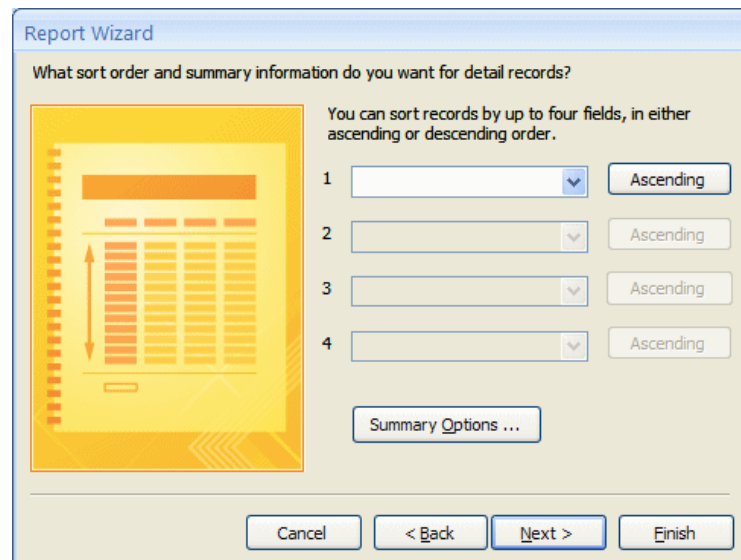
Group Records

- At step 2 of the wizard, choose a grouping level by selecting a field by which to group the data.
- Click the > button.
- Click **Next**.

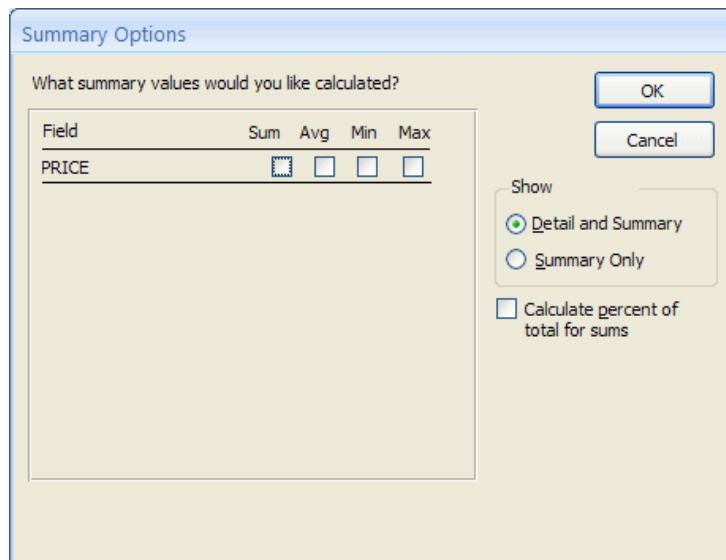


Sort and Summarise Data

- At step 3 of the wizard, choose a sort order.
- To summarise the grouped data (e.g. find the total, average, maximum or minimum price in each group) select the **Summary Options** button. The **Summary Options** window opens.

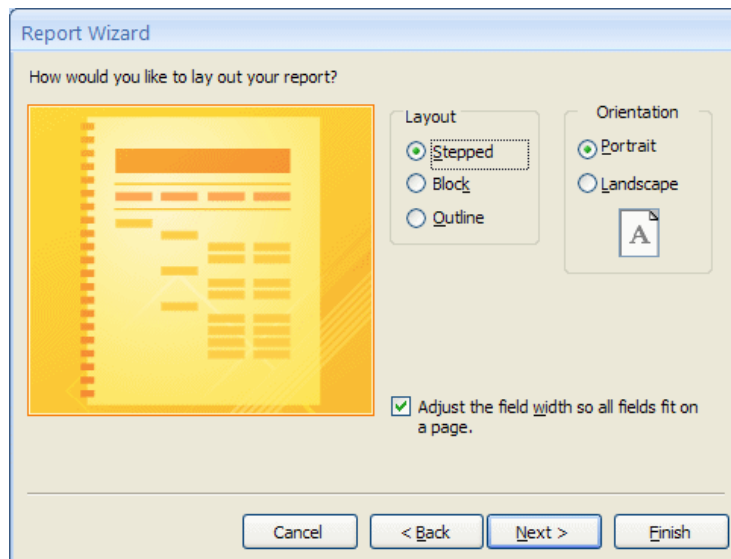


- Choose a function by which to summarise the displayed field or fields (only numeric fields that be calculated will be displayed here).
- Choose to show the **Detail and Summary** or only the **Summary**.
Click OK to close the Summary Options window.
- Click **Next** in the Report Wizard window.



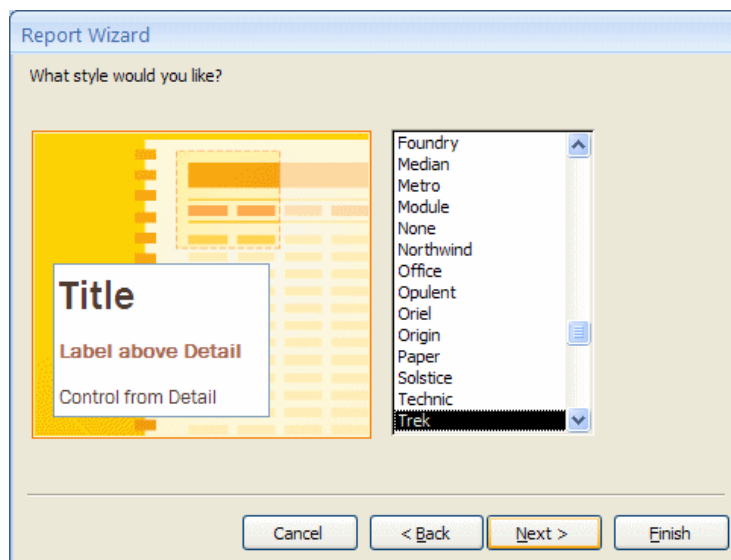
Styles and Layout

- At step 4 of the wizard, choose a layout for your report.
- Select the most appropriate orientation for the report based on the data that is to the displayed (e.g. multiple fields will be better presented in landscape as it is wider).
- Select a layout option button.
- Click the check box to ensure that field widths will be adjusted so all fields fit on the page.
- Click **Next**.



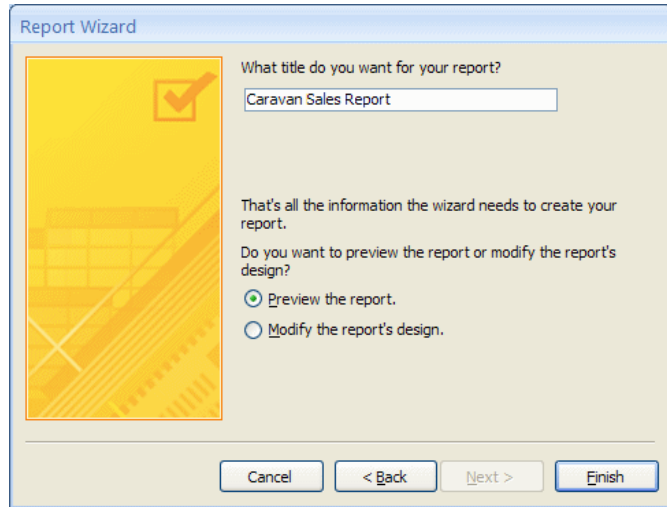
5

- At step 5 of the wizard, choose a style for the report.
- Click **Next**.



Complete the Report

- At step 6 of the wizard, enter a name for the report.
- Choose whether to preview the report or modify the report's design.
- Click **Finish**.



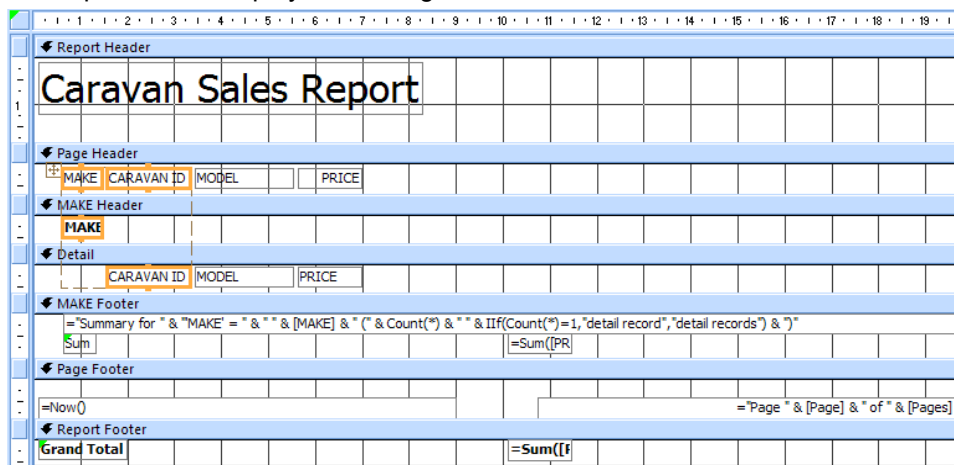
Modifying the Report's Design

The finished report will be displayed in **Print Preview** if the **Preview the report** option button was selected, or displayed in **Design View** if the **Modify the report's design** option button was selected.

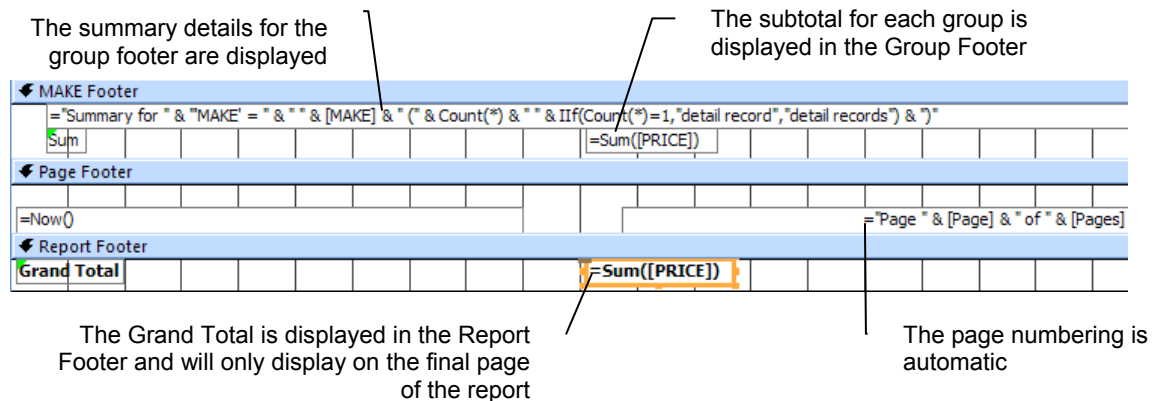
To exit Print Preview, do the following:

- Click the **Close Print Preview** button.
- Select **Design View** from the **View** command.

The report will be displayed in Design View.



The Summary Details for the selected field are displayed in the group footer along with the calculated control and label.

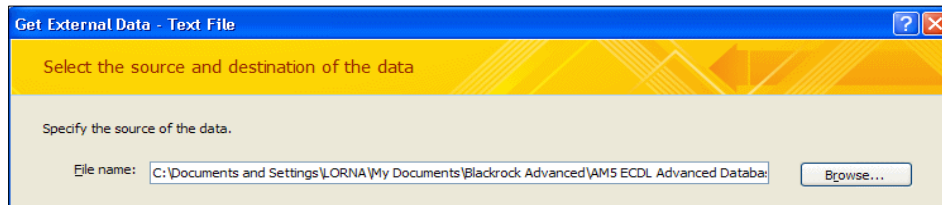
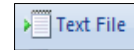


1.2.2 Text (txt/csv)

Importing a text file into a database will not create a link between the source file and the imported table. Therefore, changes made to the source file will **not** be reflected in the imported table within the database. A text file may contain data that is separated by tabs or by commas (referred to as a csv file or a comma separated values file).

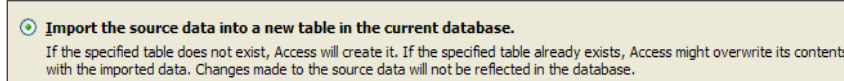
To import a text file to a database, do the following:

- Select the **External Data** tab.
- Select the **Text File** button from the **Import** group.
- To specify the source of the data, select the **Browse** button.



The **File Open** window opens.

- Locate the source of the data.
- Select the file.
- Click **Open** to close the **File Open** window.
- In the Get External Data window, select the **Import the source data into a new table in the current database** button.

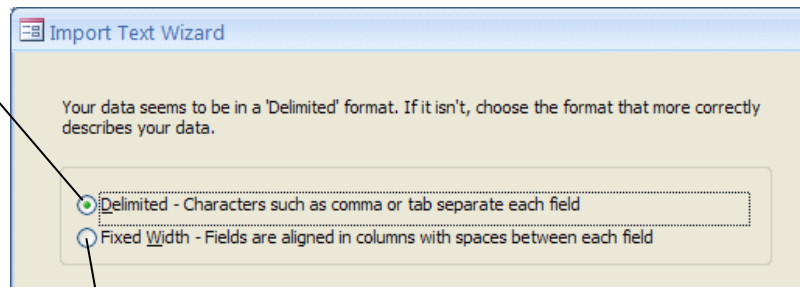


- Select **OK** (if a security notice appears, click Open).

The **Import Text Wizard** opens.

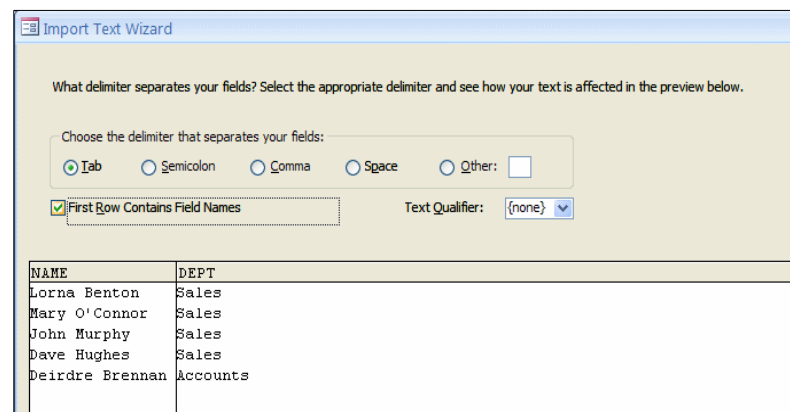
- Select **Delimited** if tabs or commas separate each field. The **Fixed Width** option is used if fields are aligned in columns with spaces between each field.
- Select **Next**.

Select Delimited for data that is separated by tabs or commas



Select Fixed Width for data that is separated by spaces

- In the next window, select the **Delimiter** option button, e.g. **Tabs** or **Commas**.
- Ensure that the **First Row Contains Field Names** check box is **selected**.
- Click **Next**.



- In the next window, you can choose to do the following:
 - ▶ Choose a different data type for the selected field name if required.
 - ▶ Index a field or remove an index.
 - ▶ Exclude fields from the source file by selecting the **Do not import field (Skip)** check box.

The selected field name is displayed

Change the data type for the selected field if required

NAME	DEPT
Lorna Benton	Sales
Mary O' Connor	Sales
John Murphy	Sales
Dave Hughes	Sales
Deirdre Brennan	Accounts

If you want to exclude a field from the data source, select **Do not import field (Skip)**

- Select **Next**.
- In the next window, you can choose to do the following:
 - ▶ Let Access add a primary key.
 - ▶ Choose your own primary key.
 - ▶ Exclude a primary key.

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

Let Access add primary key.
 Choose my own primary key.
 No primary key.

ID	NAME	DEPT
1	Lorna Benton	Sales
2	Mary O' Connor	Sales
3	John Murphy	Sales
4	Dave Hughes	Sales
5	Deirdre Brennan	Accounts

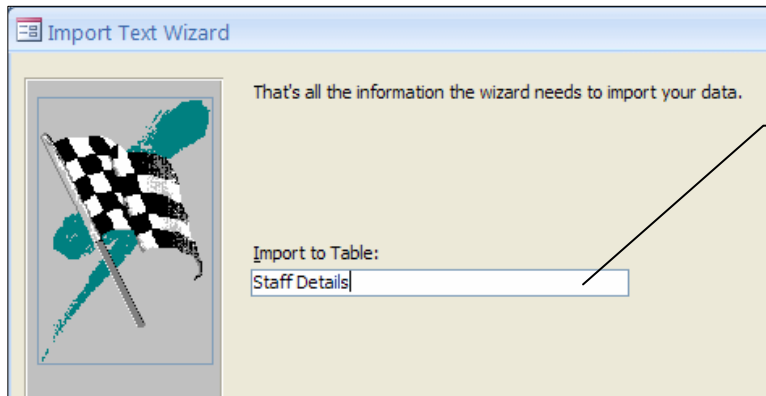
6

- To **choose** a primary key from the existing fields in the table, select the **Choose my own primary key** option button and then select a field from the drop-down list.
- To **exclude** a primary key from the imported data, select **No primary key**.

Choose **No Primary Key** to exclude a primary key

Select a field as a primary key

- Select **Next**.
- In the next window, enter a name for the imported table.
- Click **Finish**.



Enter a relevant name for the imported table

A message will appear, stating that the importing process has been completed.

note

The importing process that you have just performed can be saved to enable the same steps to be repeated quickly at a later date without using the wizard. The window for this option opens when the Import Spreadsheet Wizard has finished.

To enable this, do the following:

- Select the **Save import steps** check box (do not select if you later want to reuse the wizard to repeat the import operation).
- Select **Close**.

Select this check box only if you want to save the import steps without having to use the wizard. To continue using the wizard, ensure that the box is **deselected**

The imported text file will display as a table within the navigation pane.

Changes made to the source file will **not** be reflected in the imported text file

