Section 3

Tables

By the end of this Section you should be able to:

Move Around a Table
Change Column Width and Row Height
Freeze, Move and Hide Columns
Change the Appearance of a Table
Preview and Print a Table

Exercise 15 - Tables

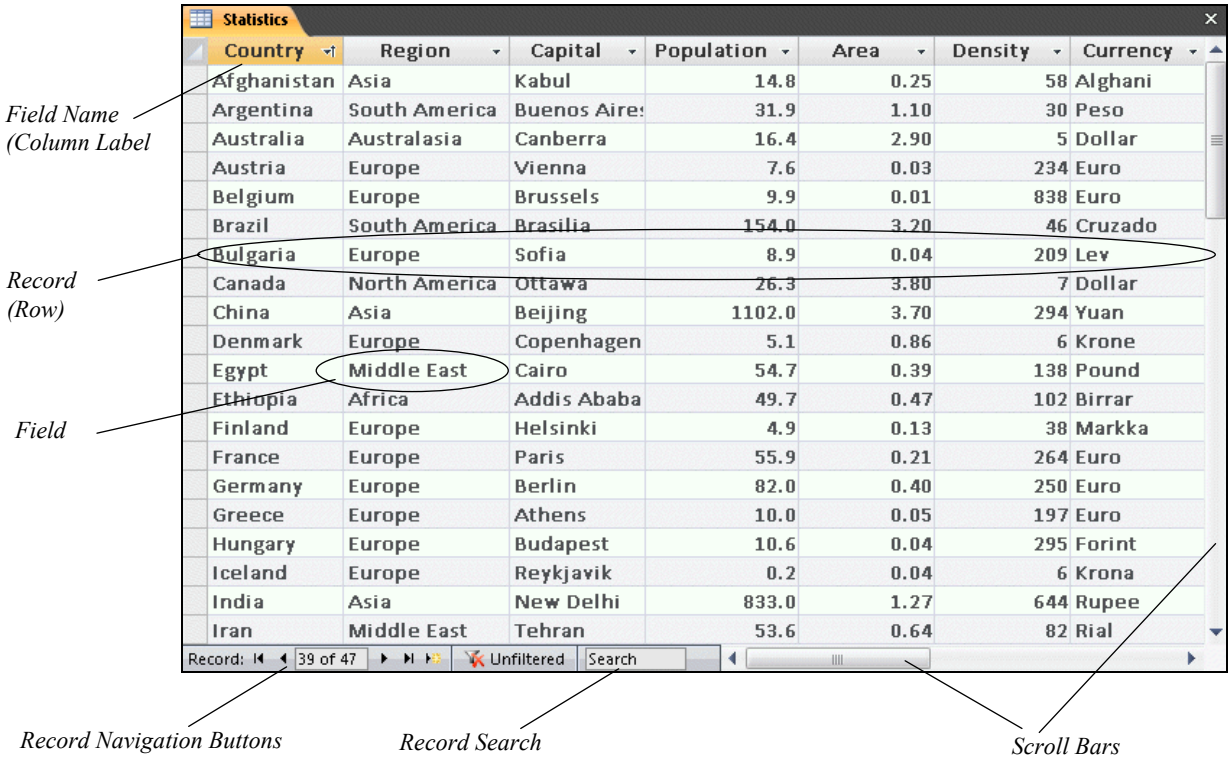
Guidelines:

The first step in creating a table is to decide what information the table is to contain. For small databases a single table may be created. Larger databases may need several small tables. Tables can be linked with relationships, ultimately forming the backbone of the database itself.

Each different item of data in a table is called a **Field**. Many fields are needed to describe what the data represents. In the following picture, the field names **Country, Region, Capital**, etc. have been created. Data that represents these fields will be seen below the appropriate field name, in a column. Data can now be entered in rows. Each row is called a **Record**. Each record is made up of the same number of fields, but not all fields in a record may contain data.

When data is entered into a table, it is automatically saved without any further intervention. Only when the design or layout of a table is changed, will it be necessary to request that the changes are saved.

The following diagram shows a table which has had its field names defined and has had data entered in rows. Each row represents a different record in the table. Each column represents a different field in the table.



Country	Region	Capital	Population	Area	Density	Currency
Afghanistan	Asia	Kabul	14.8	0.25	58	Alghani
Argentina	South America	Buenos Aires	31.9	1.10	30	Peso
Australia	Australasia	Canberra	16.4	2.90	5	Dollar
Austria	Europe	Vienna	7.6	0.03	234	Euro
Belgium	Europe	Brussels	9.9	0.01	838	Euro
Brazil	South America	Brasilia	154.0	3.20	46	Cruzado
Bulgaria	Europe	Sofia	8.9	0.04	209	Lev
Canada	North America	Ottawa	26.3	3.80	7	Dollar
China	Asia	Beijing	1102.0	3.70	294	Yuan
Denmark	Europe	Copenhagen	5.1	0.86	6	Krone
Egypt	Middle East	Cairo	54.7	0.39	138	Pound
Ethiopia	Africa	Addis Ababa	49.7	0.47	102	Birrar
Finland	Europe	Helsinki	4.9	0.13	38	Markka
France	Europe	Paris	55.9	0.21	264	Euro
Germany	Europe	Berlin	82.0	0.40	250	Euro
Greece	Europe	Athens	10.0	0.05	197	Euro
Hungary	Europe	Budapest	10.6	0.04	295	Forint
Iceland	Europe	Reykjavik	0.2	0.04	6	Krona
India	Asia	New Delhi	833.0	1.27	644	Rupee
Iran	Middle East	Tehran	53.6	0.64	82	Rial

Exercise 16 - Using the Mouse within a Table

Guidelines:

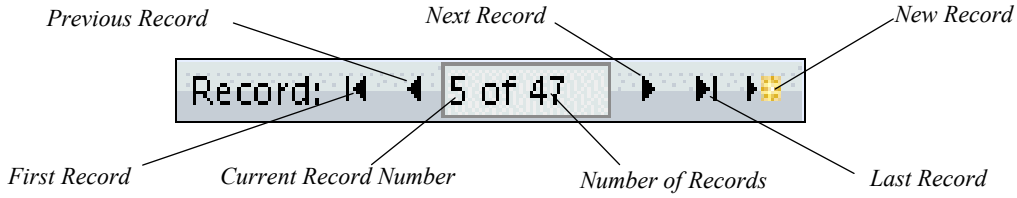
When opened in **Datasheet View**, it is possible to navigate around the whole table using the mouse together with **Navigation** buttons and scroll bars.

Actions:

1. Open the **Country** database and the **Statistics** table in **Datasheet View** (maximise the table if necessary).

2. Click anywhere in the fifth record, **Belgium**. This is now selected as the current record.

3. The **Record Navigation** buttons above the **Status bar** allow movement between the records.



4. Click the **New Record** button,  , to move to a blank record at the end of the table. A new record can be added here.

*Note: There is also a **New** button in the **Records** group on the **Home** tab of the **Ribbon**.*

5. Click the **First Record** button,  , to move to the first record of the table.

6. Practise using the navigation buttons to move around the records in the table.

7. Move the mouse pointer to the **Region** field for **Brazil** (**South America**) and double click on the word **South**. Only the word **South** is selected.

8. The mouse can also be used to select all the contents of a field. Move the cursor to the left edge of **Canberra**, this is the **Capital** field of **Australia**.

9. The mouse pointer should change to  . Click the mouse to select the entire field.

10. The **Scroll bars** at the bottom and right of the screen can be used to view more fields and records. Click on the **Right** arrow in the horizontal scroll bar to scroll right by one column. Click on the **Left** arrow in the horizontal scroll bar to bring the first column back into view.

11. Leave the **Statistics** table open for the next exercise.

Exercise 17 - Using the Keyboard within a Table

Guidelines:

The keyboard may be used to move about the table instead of the mouse. The following keys are used to move from field to field and record to record. Note that some of these keys have different effects when the entire field is selected, rather than the contents.

→	moves one field or character to the right
←	moves one field or character to the left
↓	moves one record down
↑	moves one record up
<Page Down>	moves one screen down
<Page Up>	moves one screen up
<End>	moves to end of record
<Home>	moves to start of record or field
<Tab>	moves one field to the right
<Shift Tab>	moves one field to the left
<Ctrl Home>	moves to the top left of the table
<Ctrl End>	moves to the bottom right of the table
<F2>	toggles between the entire field being selected and **Edit** mode (the cursor within the content).

In **Edit** mode, some keys produce movement within the selected field only, rather than between fields and records.

To switch to **Edit** mode, press <**F2**> or click with the mouse in the middle of the field contents.

*Note: When two keys are mentioned such as **Ctrl** and **End**, the first key (**Ctrl**) should be held down while the other key (**End**) is pressed and released.*

Actions:

1. Move the mouse over the **Country** field for the fifth record, **Belgium** and click somewhere within the text 

. The cursor will appear in the word and it can now be edited using word processing techniques.

Exercise 17 - Continued

2. Press the → key. The cursor moves on character forward.

3. Press <**F2**> to select the whole field then press → again. The next field, **Europe**, is selected.

4. Press **<Ctrl Home>** to move to the first field of the first record.

5. Press <**Tab**> repeatedly to move right to the last field, **Exports**.

Statistics

Area	Density	Currency	Language	Exports
0.25	58	Alghani	Pashtu	Carpets & Rugs
1.10	30	Peso	Spanish	Grain & Meat
2.90	5	Dollar	English	Wheat & Barley
0.03	234	Euro	German	Iron & Steel Products & Timber
0.01	838	Euro	Flemish	Machinery & Chemicals

6. Press → again and the cursor moves to the first field on the next record.

7. Press the **<PageDown>** key to move down by one screen.

8. Press <**End**> to move to the end of the current record, i.e. the last field in the record.

9. Press <**Home**> to move to the first field of the current record.

10. Press → twice to move to the **Capital** field and press <**F2**> to change to **Edit** mode with the flashing cursor now visible.

11. Press <**Home**>. The cursor moves to the beginning of the field.

12. Press <**F2**> to select the whole field and press <**Home**> again. Now the selection moves to the first field of the record.

13. Practice moving about the table using the keyboard.

14. Close the **Statistics** table.

15. Close the **Country** database.

Note: A useful technique is to use the keyboard for moving in the visible area of the screen, i.e. from record to record or field to field and use the mouse/scrollbars to move larger distances.

Exercise 18 - Changing the Column Width

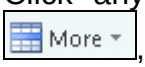
Guidelines:

Column Widths can easily be changed so that all data in a table is fully displayed and to allow data to be read more easily.

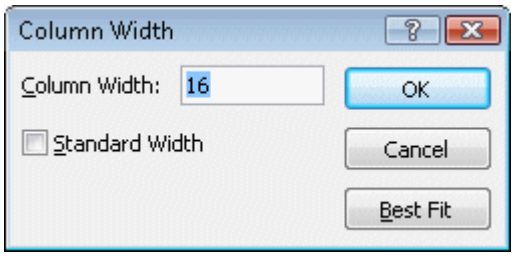
The width of columns can be set using the menus or the mouse.

Actions:

1. Open the **Premises** database and the **Commercial** table.

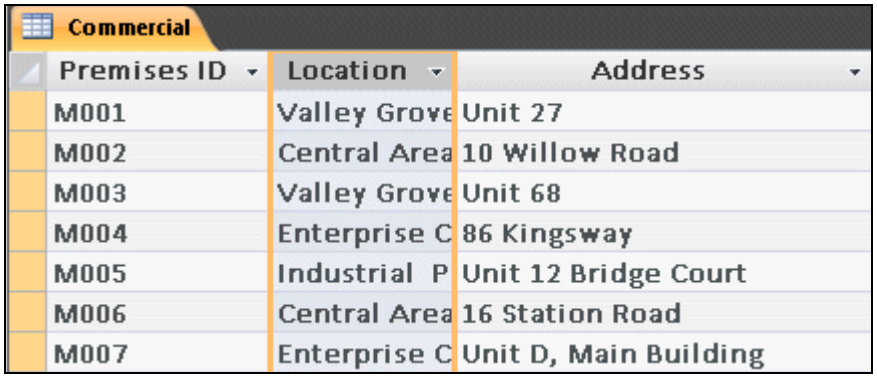
2. Click anywhere within the **Location** column. Click the **More** button, 

, in the **Records** group of the **Home** tab. Select **Column Width** from the menu.



*Note: Right clicking on the column label and selecting **Column Width**, from the shortcut menu produces the same dialog box.*

3. Enter **10** in the **Column Width** box. Click **OK**.



4. Notice how the column width has narrowed and the data is truncated. No actual data has been lost, it just cannot all be seen in the space available.

5. With the column still selected, click the **More** button again and select **Column Width**. This time click **Best Fit** from the dialog box. The column is expanded to fully display any text that appears in it. All hidden data is now seen.

Exercise 18 - Continued

6. Move the mouse pointer over the border between the **Address** and **Occupied** column labels. The mouse pointer changes as shown below.

Address	Occupied
Unit 27	No
10 Willow Road	Yes
Unit 68	Yes

7. Click and drag to the left to reduce width of the **Address** column to about half its present size, then release the mouse button.

8. Position the cursor between the **Address** and **Occupied** column labels again. Double click the left mouse button to automatically resize the **Location** column to accommodate the widest entry in the column. This is the same as selecting **Best Fit**.

9. Move the cursor over the **Type of Premises** column label. The cursor changes to a ⬇. Click and drag over the two labels to the right so that all three columns are now highlighted (selected).

Occupied	Type of Pr	Price	Unit Area	Floors
No	Store Unit	£50,000.00	78	1
Yes	Office Premi	£75,000.00	60	3
Yes	Store Unit	£45,000.00	150	1
No	Office Premi	£175,000.00	167	2

10. Right click and select **Column Width**.

11. Enter **15** into the **Column Width** box then click **OK**. All 3 columns are now the same size.

12. With the columns still highlighted position the mouse between any of the column labels until the mouse pointer changes, and double click. All columns are resized to the **Best Fit**.

13. Deselect the three columns by clicking anywhere in the table.

14. Leave the **Commercial** table open for the next exercise.

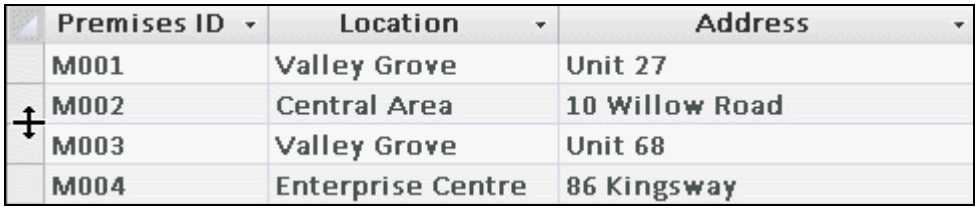
Exercise 19 - Changing the Row Height

Guidelines:

Row Heights can be altered, allowing more space to appear between each record (or row) within the table. Changing the **Row Height** affects **all** records within the table.

Actions:

1. In the **Commercial** table, move the mouse pointer between any row labels in the left margin.



Premises ID	Location	Address
M001	Valley Grove	Unit 27
M002	Central Area	10 Willow Road
M003	Valley Grove	Unit 68
M004	Enterprise Centre	86 Kingsway

2. Click and drag the mouse downwards, to change the row height to roughly twice its original height, then release the mouse button.

3. All the rows in the table now have larger row heights. This makes record information easier to read.

4. Click the **More** button, 

, in the **Records** group of the **Home** tab. Select **Row Height** from the menu.

5. To reset the row height back to the default size check the **Standard Height** box.

*Note: Right clicking the mouse on the row label and selecting **Row Height** from the menu will also display the **Row Height** dialog box.*

6. Click **OK**.

7. Close the **Commercial** table. There will be a prompt to save layout changes (resizing of columns and rows counts as a layout change). Select **No**. All changes will be lost.

8. Leave the **Premises** database open.

Exercise 20 - Freezing Columns

Guidelines:

When a table contains many fields across the page, not all of the fields may be visible on the screen. Some fields can be displayed on the screen at all times by **Freezing** their columns. The frozen columns will move to the left edge of the table and they will be permanently displayed, i.e. they will not scroll.

Actions:

1. Open the **Commercial** table from the **Premises** database.

2. Click in the **Premises ID** column heading to select the whole column.

3. Click the **More** button, 

, in the **Records** group of the **Home** tab. Select **Freeze** from the menu.

*Note: A column can also be frozen by right clicking on its heading and choosing **Freeze Columns** from the menu.*

4. Use the horizontal scroll bar to move across the table, bringing the other fields into view. The **Premises ID** field remains on the screen as other fields scroll past.

Premises ID	Glazing	Parking Spaces	Disabled Access	Comment
M001	None	35	Yes	Recent Acquisition
M002	Standard	3	No	Fully Furnished
M003	Standard	3	No	Quick Sale
M004	Tinted	25	Yes	Premier Location
M005	Double	6	No	A good relocation t

5. Click the **More** button and select **Unfreeze** to return the table to normal view.

Note: Multiple, adjacent columns can be frozen.

6. Select the **Address** column, click the **More** button, and select **Freeze** from the menu.

7. The column has moved to the left of the table so that it can be frozen. Scroll along the table. Only **Address** will remain in view.

8. Unfreeze all columns. **Address** remains on the left. The column has been moved, and unfreezing does not replace it. Because the table layout has changed there will be a prompt to save the table when it is closed.

9. Close the table without saving.

10. Leave the database open for the next exercise.

Exercise 21 - Moving Columns

Guidelines:

In a table, data in one column may have to be compared to data in another column. However, columns containing the data may not be adjacent to one another or even be visible on screen, as the table may be large. Columns can be moved in **Datasheet View** to any position in the table, so that any required column can be viewed adjacent to another. The change in layout can be saved if required again, but note that it does not affect the order in **Design View**.

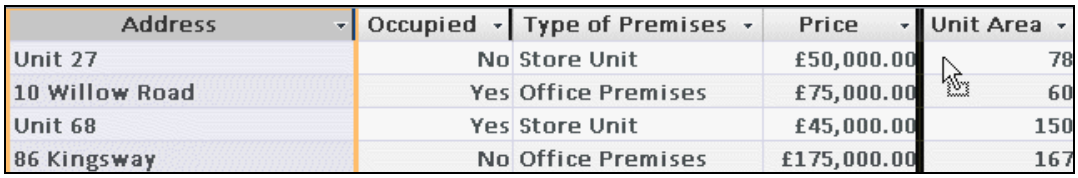
If a column was originally placed incorrectly, then the field order can be changed in **Design View**. Again, any alteration to design must be saved.

Actions:

1. Open the table **Commercial** table in the **Premises** database.

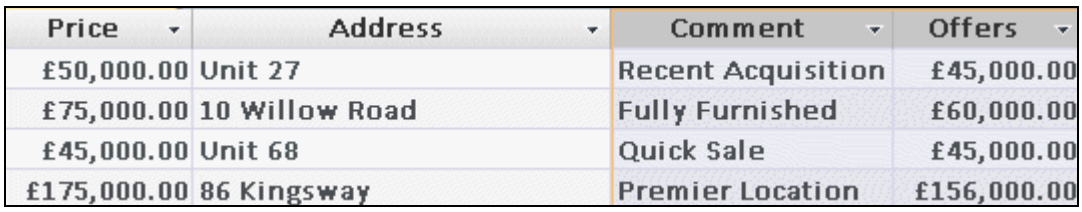
2. Click with the mouse on the label of the **Address** column to highlight the entire column, then release the mouse button.

3. Click and drag the mouse to the right. The cursor changes indicating a column move and a black line in the table indicates where the column is to be re-positioned. Position the **Address** column to the right of the **Price** column and release the mouse button.



Address	Occupied	Type of Premises	Price	Unit Area
Unit 27	No	Store Unit	£50,000.00	78
10 Willow Road	Yes	Office Premises	£75,000.00	60
Unit 68	Yes	Store Unit	£45,000.00	150
86 Kingsway	No	Office Premises	£175,000.00	167

4. Scroll to the right and click on the **Comment** column label. Hold down the <**Shift**> key and click on the **Offers** label to highlight both. Move both columns to the left at the same time and position them to the right of **Address**.



Price	Address	Comment	Offers
£50,000.00	Unit 27	Recent Acquisition	£45,000.00
£75,000.00	10 Willow Road	Fully Furnished	£60,000.00
£45,000.00	Unit 68	Quick Sale	£45,000.00
£175,000.00	86 Kingsway	Premier Location	£156,000.00

5. Close the table without saving, to reset the columns.

6. Leave the database open for the next exercise.

Exercise 22 - Hiding Columns

Guidelines:

Columns in a table may be hidden so that they are not shown in the **Datasheet View**. This is useful if a table contains private or sensitive data, which should not be seen by everyone using the table.

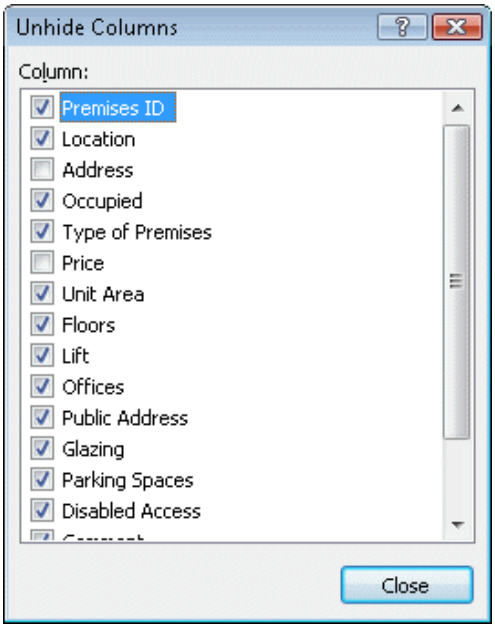
Actions:

1. Open the table **Commercial** table in the **Premises** database.
2. Click in any part of the **Address** column.
3. Click the **More** button, 

, in the **Records** group of the **Home** tab.
4. Select **Hide Columns** from the menu. The **Address** field is removed from view.

*Note: Right-clicking on the column label and selecting **Hide Columns** has the same effect.*

5. Position the cursor in the **Price** column and use the **More** button to hide this column.
6. With the cursor anywhere, click the **More** button and select **Unhide Columns** to see a list of all columns in the table. Hidden columns are unchecked.



7. Re-check the **Address** and **Price** boxes to unhide the columns.
8. Click **Close** and leave the **Commercial** table open for the next exercise.

Exercise 23 - Changing Table Appearance

Guidelines:

The appearance of a **Datasheet** may be changed by formatting its text or background. The new appearance can be applied to the current database only or set as the default for all datasheets.

Actions:

1. With the **Commercial** table still open, look at the options in the **Font** group of the **Home** tab.

2. Click the drop down arrow in the **Font Selector** box and select **Arial**.

3. Click the drop down arrow in the **Font Size** box and select **10pt**.

4. Click the **Italic** button,  .

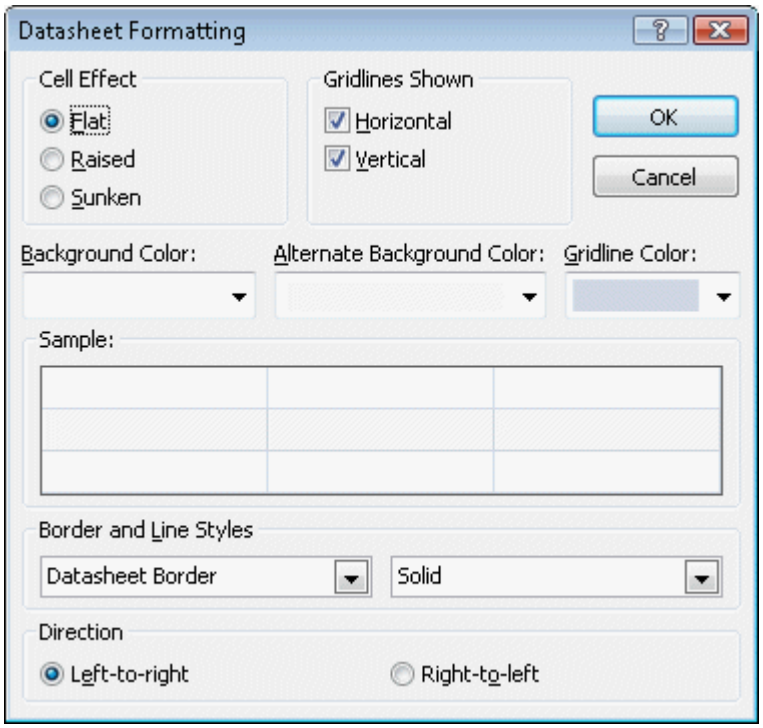
5. Click the drop down arrow in the **Font Color** button,  box and select a dark blue colour.

6. Make sure the cursor is in the first column and click the **Center** button,  . Notice that this command affects only the selected column.

Premises ID	Location	Address
M001	Valley Grove	Unit 27
M002	Central Area	10 Willow Road
M003	Valley Grove	Unit 68
M004	Enterprise Centre	86 Kingsway
M005	Industrial Park	Unit 12 Bridge Court
M006	Central Area	16 Station Road
M007	Enterprise Centre	Unit D, Main Building
M008	Riverside Complex	Suite A, The Marina
M009	Riverside Complex	2 Grey Walk

7. Background effects can also be applied from this group but as an alternative, click the **Dialog Box Launcher** button (see the diagram at step 1) to display the **Datasheet Formatting** dialog box.

Exercise 23 - Continued



8. Notice that by default, **Datasheet** view can have alternate rows in different background colours to improve readability. With the **Cell Effect** set to **Flat**, change the **Background Color**, the **Alternate Background Color** and the **Gridline Color** and observe the result in the **Sample** preview.

9. When you are happy with the effect, click **OK** to apply it to the **Datasheet** view.

10. Display the **Datasheet Formatting** dialog box again and change the **Cell Effect** from **Flat** to **Sunken**. Notice that some of the previously applied colour is lost. Click **OK** if you want to apply this to the view or click **Cancel** if you want to ignore it.

Note: The effects defined here only apply to the view of the selected table. Other tables in this database or tables in different databases are not affected.

11. To change the default appearance of all datasheet views, click the **Office Button**, click **Access Options** and select **Datasheet** from the list on the left. Settings changed here will affect all datasheets. Click **Cancel** to return without changing any settings.

12. Leave the **Commercial** table open in **Datasheet View**.

Exercise 24 - Previewing and Printing a Table

Guidelines:

Once a table has been formatted as required, it can easily be printed. A table should always be previewed before printing to check its layout. Changes can be made to the appearance of the printed page at this stage before actual printing which reduces unnecessary paper use.

Actions:

1. Using the **Commercial** table from the previous exercise, click the **Office Button**.

2. Move the mouse pointer over the **Print** option, 

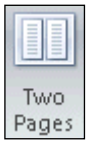
, then click **Print Preview** from the list of choices. The **Print Preview** tab is shown on the **Ribbon** and the work area shows a picture of how the table will look when printed.

3. Positioning the mouse over the page changes it to  . Click once in the page to zoom in. The default zoom setting when zoomed in is 100%.

4. The mouse pointer now changes to  . Click in the page to zoom out The default zoom setting when zoomed out is to fit a whole page in the window.

Note: The current zoom setting is shown at the right of the status bar along with a slider to vary the setting. Changing the zoom setting with this slider may affect the settings used by the  *and*  *cursors.*

5. **Zoom** settings can also be changed from the **Ribbon**. Click the drop down arrow below the **Zoom** button. Try a few different settings then finally select **Fit to Window**.


6. Change the print preview display by clicking the **Two Pages** button from the **Zoom** group on the **Ribbon**.


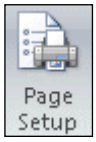
7. Click the **More Pages** button and select **Four Pages** from the list to see a different display.

8. Change the orientation of the print preview display by clicking the **Landscape** button from the **Page Layout** group on the **Ribbon**. This is the orientation that will be used when printing.


9. The previous orientation is judged to be more readable. Click the **Portrait** button to change back.

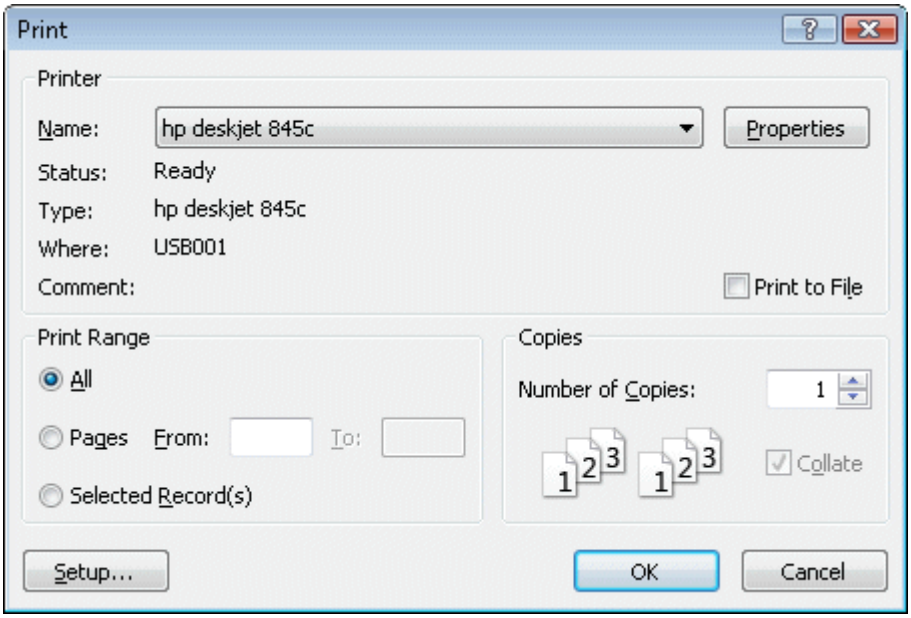
Exercise 24 - Continued

10. There are buttons on the **Ribbon** to change paper size and margins, or all settings can be changed from a dialog box. Click the **Page Setup** button.



11. Look at the options in the dialog box then click **Cancel** to return.

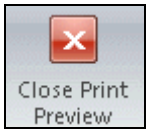
12. Click the **Print** button to display the **Print** dialog box.



13. Check the printer name is correct. If there is a choice of printer this can be made by clicking the drop down arrow.

14. Check that **Number of Copies** is set to **1** and **Print Range** is set to **All**.

15. Click **OK** to print a copy of the table.

16. Click 

to close **Print Preview** mode and return to the **Datasheet** view of the table.

17. Close the **Commercial** table without saving any changes.

18. Close the **Premises** database.

Exercise 25 - Revision: Tables

1. Open the database **Staff**. This database contains two related tables: **Personnel List** and **Course List**.
2. Double click on the **Personnel List** table to open it in **Datasheet View**.
3. Adjust the width of the **Surname** column to accommodate the text.
4. Increase the height of the rows until about eight rows are visible on the screen.
5. Return the row height to standard height.
6. Change the **font** style, size and colour to a selection of your choice.
7. Remove the horizontal and vertical gridlines using the **Datasheet Formatting** dialog box.
8. Apply a background colour or effect to the datasheet.
9. Change the **Paper Orientation** to **Landscape** and **Print** the table.
10. **Hide** the **Salary** column.
11. Show both the **Horizontal** and **Vertical** gridlines and print the table again.
12. Close the **Personnel List** table without saving the changes.
13. Close the **Staff** database.