11 File management

In this chapter you will learn how to:

- identify different file types and their uses
- describe the need for a hierarchical file/folder structure
- use a hierarchical file/folder structure to save work
- save files using appropriate file names
- save and print files in a variety of formats
- describe why generic file formats are needed
- export data into package-specific file formats and generic file formats
- describe the need to reduce file sizes for storage or transmission
- identify when it is necessary to reduce file sizes for storage or transmission
- reduce file sizes using file compression.

For this chapter you will need this source file from the CD:

- remora.jpg.

11.1 What is a generic file type?

Generic file formats allow you to save files so that they can be opened on any platform. The files may not contain all of the formatting that can be saved in a package-specific format. Using generic formats allows files created on a PC to be read/imported on an Apple Mac and vice versa.

Some file types, such as those used by *Microsoft Office* – for example *Excel* spreadsheets (.xlsx), *Word* documents (.docx) and *Access* databases (.accdb) – are not generic. It is not always possible to open files from these packages on other platforms.

Common generic text files include:

- **comma separated values**: these files have a **.csv** file extension. This file type takes data in the form of tables (that could be used with a spreadsheet or database) and saves it in text format, separating data items with commas.
- **text**: these files have a **.txt** file extension. A text file is not formatted and can be opened in any word processor.
- **rich text format**: these files have a **.rtf** file extension. This is a text file type that saves some of the formatting within the text.

Common generic image files include:

- **graphics interchange format**: these files have a **.gif** file extension. This format stores still or moving images and is an efficient method of storing images using a smaller file size, particularly where there are large areas of solid colour. It is widely used in web pages.
- **joint photographic expert group**: these files have a **.jpg** (or sometimes a .jpeg) file extension. This format stores still images only, not moving images. It is an efficient method of storing images using a smaller file size and is widely used in web pages.
- **portable document format**: these files have a **.pdf** file extension. This is a document that has been converted into an image format. It allows documents to be seen as an image so that they can be read on most computers. The pages look just as they would when printed but can contain clickable links and buttons, form fields, video and audio. You can protect a document in pdf format to stop others from editing it. Text can be copied and pasted into a word processor or sometimes edited using PDF writing software.

- **portable network graphics**: these files have a **.png** file extension. It is a file format that compresses graphics (image) files without any loss of image quality. It was created to replace graphics interchange format and is now the most-used **lossless compression** format used for images on the internet.
- **moving picture experts group layer 4**: these files have a **.mp4** file extension. It is not a single file format; it is a multimedia **container** that is used for storing video files, still images, audio files, subtitles and so on. This container is often used to transfer video files on the internet.

Common generic audio files include:

- **moving picture experts group layer 3**: these files have a **.mp3** file extension. It is a compressed file format used for storing audio files. This format cannot store still or moving images. The file sizes are relatively small but have near CD quality, which makes them suitable for use on the internet.

Common generic files used for website authoring include:

- **cascading stylesheet**: these files have a **.css** file extension. This is a stylesheet that is saved in cascading stylesheet format and attached to one or more web pages (often written in HTML) to define the pages' colour scheme, fonts and so on.
- **hyper text markup language**: these files have a **.htm** (or sometimes a .html) file extension. This text-based language is used to create markup that a web browser will be able to display information as a web page.

Common generic compressed files include:

- **Roshal archive**: these files have a **.rar** file extension. This is a container that can hold almost any file types in a compressed format. It is used to reduce the number of bytes needed to save a file, either to save storage space or to reduce transmission time when sent from one device to another. It was developed for Windows by Russian software engineer Eugene Roshal (and takes its acronym from 'roshal archive').
- **zip**: these files have a **.zip** file extension. This is a container that can hold almost any file types in a compressed format. It is used to reduce the number of bytes needed to save a file, either to save storage space or to reduce transmission time when sent from one device to another.

11.2 Manage files effectively

11.2.1 Locate and open stored files

Make sure that you are familiar with the file structure of your local system. If you are using a stand-alone computer, files are likely to be stored on local hard disks or SSD drives. If you are using a networked system, files are likely to be stored on a network drive, usually in a secure area where only you have access. Each system is different and you must use the 'This PC' icon from the *Windows 8* Start Screen to access these drives.

The path to your current location is shown at the top of the window.

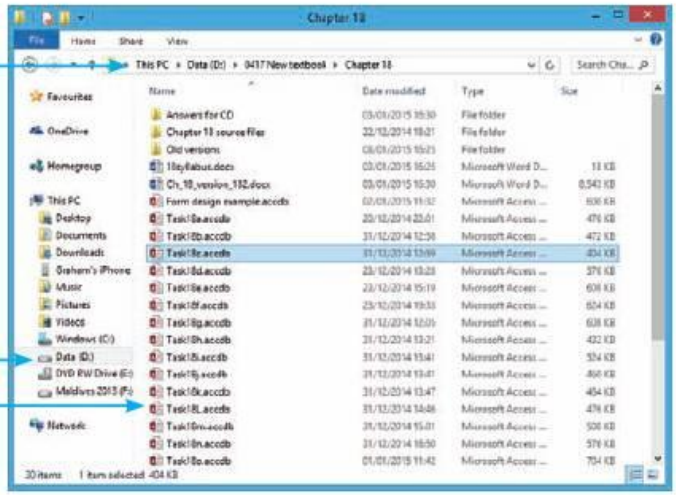
The left pane is used to locate the drive that you wish to use.

The right side of the window shows the files and subfolders in this folder. It also gives you other useful information such as the date the file was saved and the file type. Some of this information will be used later in this book.

You can use these elements and the scroll bars to locate your stored files.

On most computers, double clicking on the file icon will open the file in the most suitable application. There are times when you may wish to use other programs to open a file; for example, in the website authoring section you may wish to open a file in both a browser and in *Notepad*. In this case you can either:

- open the application and load the file from there
- drag the file into an open application, or
- right mouse click on the filename and use **Open with...**.

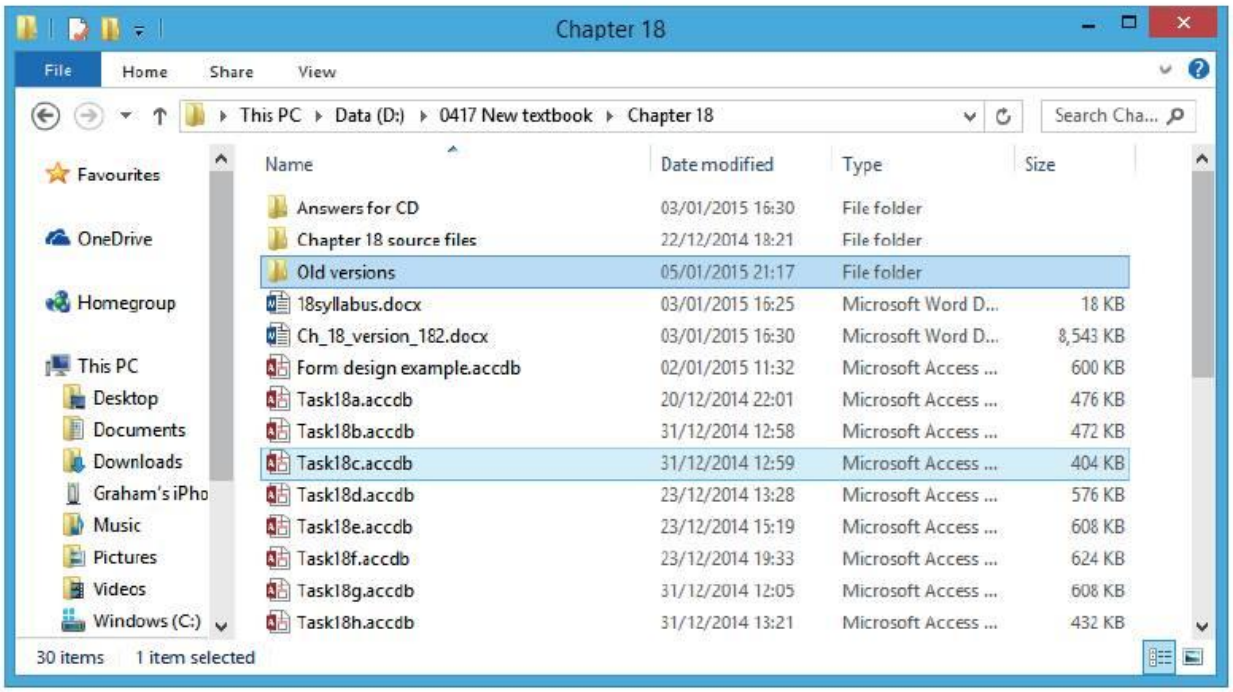


Advice

In some schools, network managers may have disabled some of these methods of opening files. This is to help increase the network security and keep your work safe. If this is the case, use one of the other methods to open files.

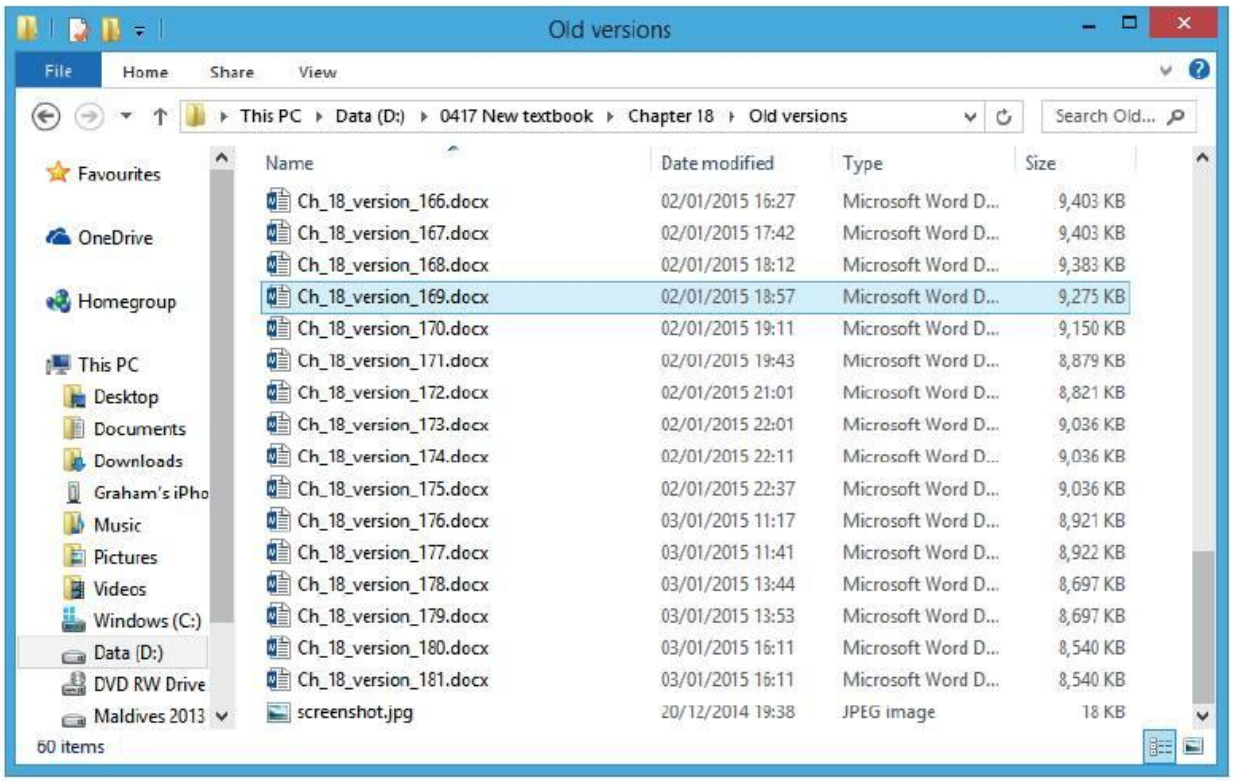
11.2.2 Save your work

Work should always be saved using a planned folder structure. Here is an example of part of a folder from the development of Chapter 18 of this book.



You can see that separate folders are used to hold each different area of the development. The answers for the teacher's CD are stored in a subfolder, as are the source files. There's also a folder for old versions of the files created during the chapter's development; this has been used so that the working folder does

not get filled with lots of copies of the same file – the old versions of the files are dragged into the 'Old versions' folder at the end of each work period.

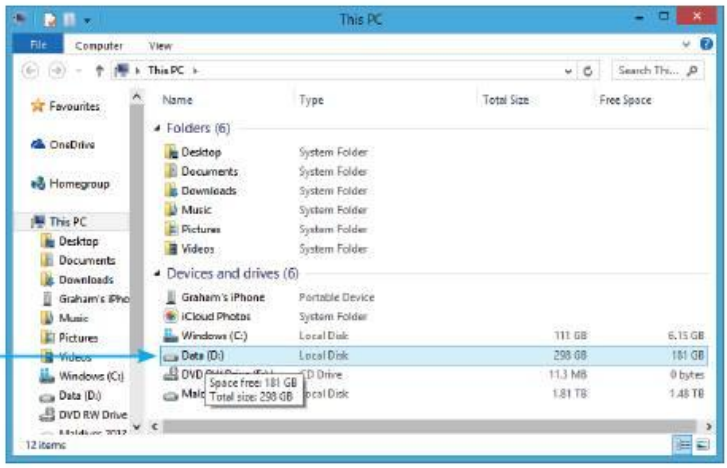


This is a small part of the 'Old versions' folder. You can see that different versions of the same file have been saved as it was worked on. In some cases, where major additions or deletions were made, there are even two files with different names saved less than a minute apart. You can see that each file has been saved with a meaningful filename that includes a version number. This is really useful if you need to go back and look at your previous work. When the folders get very full, I keep the last 20 versions of a file, plus every fifth file from the early versions (versions 5 and 10, and so on). I then archive the other files before deleting them from the hard disk drive. Choose meaningful file names which give clues as to the contents of the file. This makes it easier for you to find the work in your user area when you look back at a later date.

Task 11a

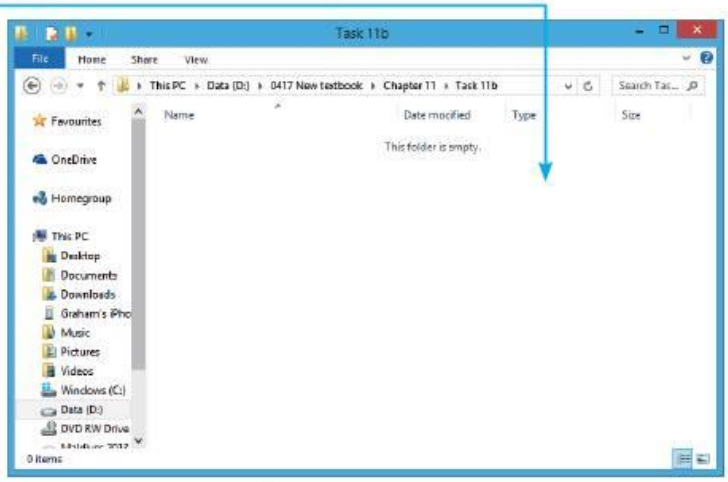
Create a new folder to store your work for this chapter in. Call this folder Task11b.

Open the File Explorer window by pressing the <Windows> and <E> keys together. Click the left mouse button to select the drive that you will use as your work area.



Then click on the New folder icon and name this folder Chapter 11. The location of this will depend on the structure of the system you are using. Go into this folder and create new subfolders for the other task in this chapter. Call this folder Task11b.

Make sure you are in the folder Task11b. This is where you will save your work later in the chapter.

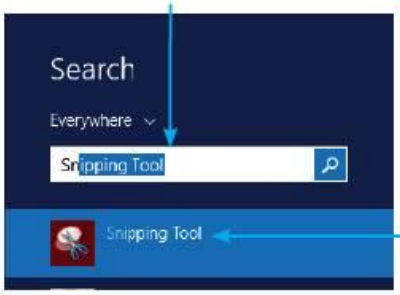


11.2.3 Save, export and print in different formats

Most of the details for this section of the syllabus are covered in the following chapters. Although there are similarities in the methods of saving, exporting and printing, these have been covered in detail for each application package used.

Where evidence of how you answered a question is required, you can always take a screen shot and submit that as evidence. The Snipping Tool is very useful. Select the search bar with the keyboard by pressing the <Windows> and <F> keys together. Select the Everywhere search.

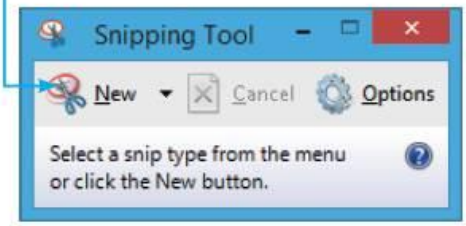
Enter the text Snip into the search box. The result should look similar to this.



Click on the Snipping Tool icon, which opens a small window on the screen. Click on New.

The screen will change colour. Drag the cursor over the area to be snipped. The snipped image can now be copied and pasted as evidence of your method.

If you use screen shots, make sure that each screen shot shows all the information. Your name, Centre number and candidate number must be on all work and, if items such as a 'browser view' are required, you must show that your web page is displayed in a browser and not in an editing package.



From the File tab in most *Microsoft Office Suite* packages, you have option to:

- Save – to save the current file with the same filename
- Save As – to save the current file with a new name, and/or new file type, and/or in a new location
- Print – to print the current file
- Export – to export, save a copy in .pdf format, or to change the file type in some packages.

11.3 Reduce file sizes for storage or transmission

11.3.1 Why reduce file sizes?

All computer systems have a limited storage capacity so the most efficient use of that storage space is important. The speed at which files are transmitted (sent) between one device and another also depends on the size of the data being transmitted. This does not just affect transmission speeds on the internet, but also between computers and devices such as printers and network servers, and so on. This is important when sending files as email attachments. The larger the file size, the more time it takes to transmit.

11.3.2 Reduce file sizes

The largest files stored and transmitted are often image files. Still images can vary in size: images with lower-resolution graphics, which are often used for web pages to speed up the loading time of the page, can be very small but, the higher the image resolution, the larger the file. Video files (because they contain thousands of still images) tend to be the largest files stored and transmitted. There are exceptions to this rule however. Large database management systems, such as that used by the Driver and Vehicle Licensing Agency (DVLA) in the United Kingdom, require immense amounts of storage. These systems continue to grow, especially as organisations start to hold digital images (such as drivers' photographs) within their systems. File sizes must be kept as small as possible, but not to the point where images become so pixelated that they are not clear.

This will mean resizing and/or resampling image files so that they require less storage space and take less time to load. Resizing changes the physical dimensions (width and height) of an image, while resampling changes the quality of an image.

Resize an image

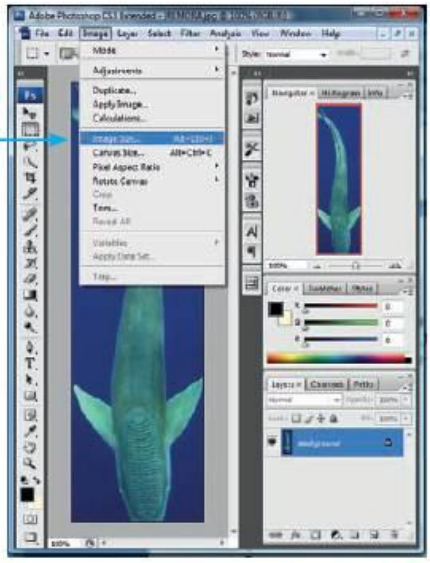
This method is used to physically resize an image in a graphics package and then to save the new image (usually with a new filename). This method has the advantage of reducing the file size of an image so that a web page will be displayed more quickly. It has the disadvantage of using lower-resolution images, which can appear pixelated, particularly if you wish to enlarge them.

Task 11b

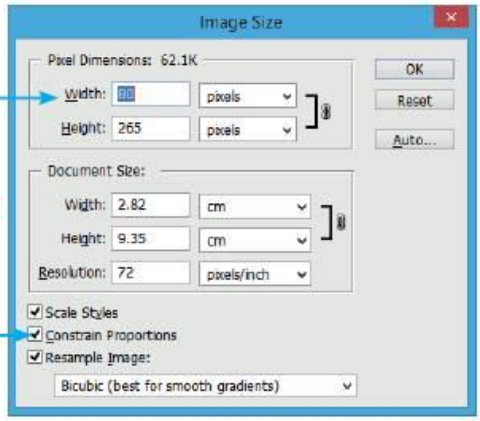
Open the file **remora.jpg**. Save a copy of this file in your Task11b folder. Resize this file to 80 pixels wide. Save it as **remora1.jpg**. Reduce the resolution of the image further by downsampling and save the new image as **remora2.jpg**.

Open your Task11b folder in the File Explorer window. In a File Explorer window open the source CD and click on the file you need; hold down the left mouse button and drag it from the folder on the source CD into the Task11b folder.

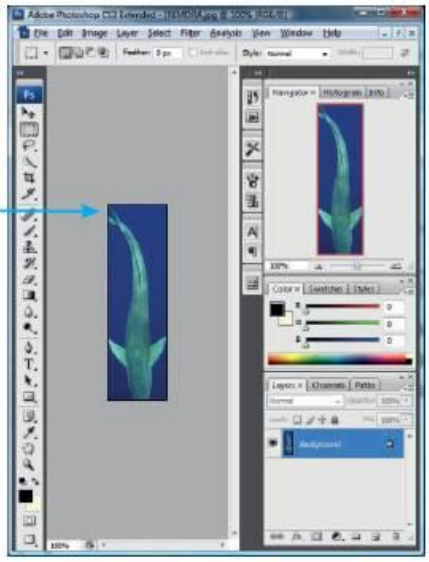
Open the image **remora.jpg** in your graphics manipulation package. In *Adobe Photoshop* images are resized using the **Image** menu, followed by the **Image Size...** option.



This opens the **Image Size** window. To set the image width to 80 pixels, change the value in the **Width:** box.

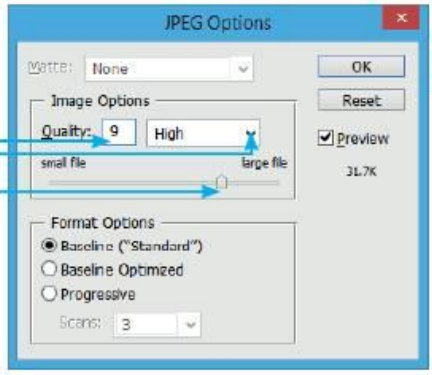


The image will maintain its aspect ratio as long as there is a tick in the **Constrain Proportions** box. To intentionally distort an image you would remove this tick and enter a height as well as a width for the image. Click on OK .This will alter the size of the image within the package, like this.



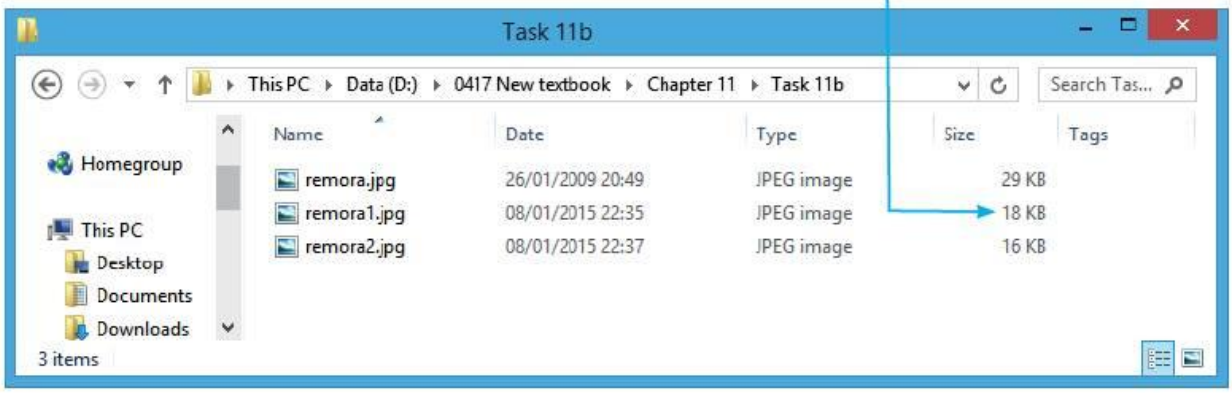
To save the new image, select **File**, then **Save As...** and enter the new filename **remora1.jpg** before clicking on Save .

As this image will be saved in **JPEG** format, you are given options on the image quality that you require. These can be selected by typing a number between 1 and 12, using the slide bar, or selecting from the drop-down menu: 1 is the smallest file size that you can have and gives the poorest quality images; 12 is the highest quality but results in large file sizes, which are much slower to download over the internet.



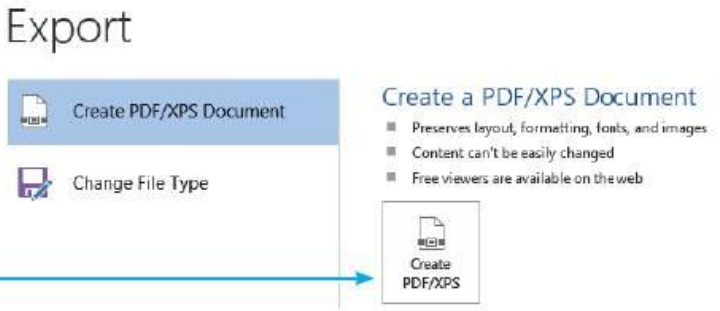
Resample an image

The process of changing the quality of an image is called resampling. Images can be downsampled, meaning fewer pixels are used for the image, as you have just done by reducing the image quality. Images can also be upsampled by adding more pixels. Downsampling reduces the file size and therefore makes the web page load more quickly. Save the same image again, downsampling it by lowering the resolution when saving. If you look at your Task11b folder you should see that the file sizes have decreased at each stage.



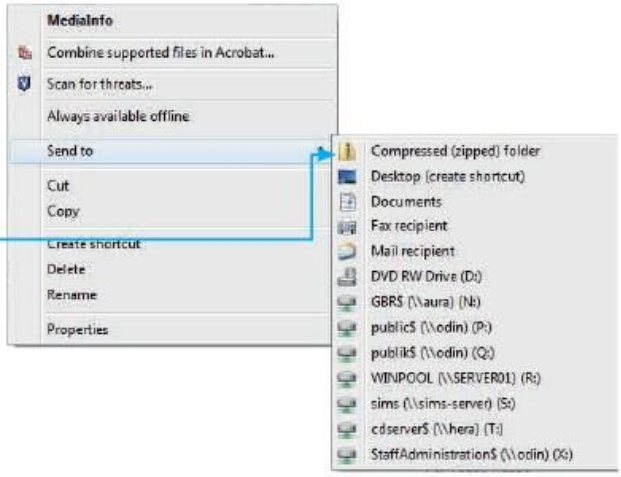
Use file compression

If a document contains lots of formatting or lots of images, its file size tends to be quite large. To reduce the file size for transmission (if the file is not to be edited), you can turn the file into portable document format using the **FILE** tab, followed by **Export**. Select the **Create PDF/XPS** button.



Enter the new filename and click on Publish to create a pdf which, because it is an image, should have a smaller file size, like this.

If you need to send multiple files, the most efficient way is to compress the files together as a single zip file. To do this you must open **File Explorer** by pressing the **<Windows>** and **<E>** keys. Hold down **<Ctrl>** and select the files to be zipped. With these files selected, click the right mouse button to get the menu. Move the cursor down to the **Send to** option and a second menu appears. Click the left mouse button on **Compressed (zipped) folder**.



Edit the name of the folder if appropriate.

12 Images

In this chapter you will learn how to:

- place images into documents and presentations
- resize an image
- wrap text around an image
- place an image with precision
- place a border around an image
- rotate an image
- crop an image
- reflect an image
- adjust the colour depth of an image
- adjust the brightness and contrast of an image
- maintain the aspect ratio of an image
- adjust the aspect ratio of an image to distort an image where appropriate.

Other syllabus sections on images covered in this chapter include:

- understanding the need to reduce image resolution to increase transmission speed
- reducing the resolution of an image to reduce its file size.

For this chapter you will need the following source files from the CD:

- dog.png
- snow.rtf
- snowangel.png
- snowball.jpg
- snowman.jpg
- trees.jpg
- winter.pptx.

12.1 Software tools

You will need to know how to place image files into different application packages. Where this is required in a web page please refer to Section 21.2.7. Images are unlikely to be included in the spreadsheets and databases elements of the course. However, images will be placed in both word-processed documents and presentations. First you must select images appropriate for the document's audience.

Task 12a

A short news article is to be given to young adults aged 15–25.

Open the document **snow.rtf**. Insert a suitable image from clip art and the images **snowball.jpg** and **trees.jpg** at the end of the document.

Open the Search window by pressing the <Windows> and <F> keys together. Use the drop-down arrow to select Everywhere.

This task requires a document rather than a presentation, although the methods shown are identical in both packages. Type Word into the search box and select Word 2013.

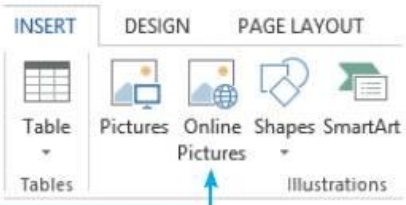
This opens *Microsoft Word*. Open the file **snow.rtf** and replace the text <Your Name> with your name, Centre number and candidate number. Create a new folder called Task12a. Save your document in this folder with the filename Task12a as a *Word* document (*.docx).

12.1.1 Use images in a document or presentation

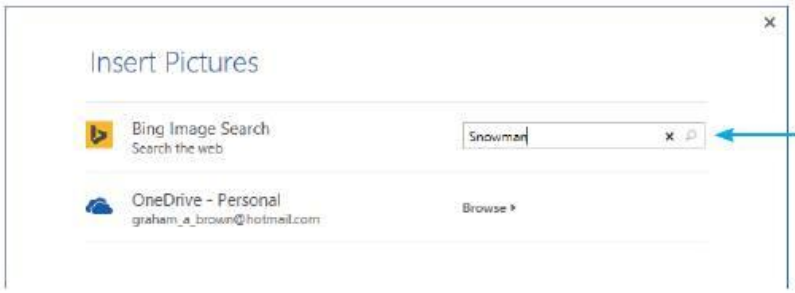
Read the contents of the document **snow.rtf** to see what it is about. Task 12a asks for a 'suitable image from clip art'; only when you have read the contents

and considered the audience will you know which images will be suitable and which will not.

12.1.2 Import an online image

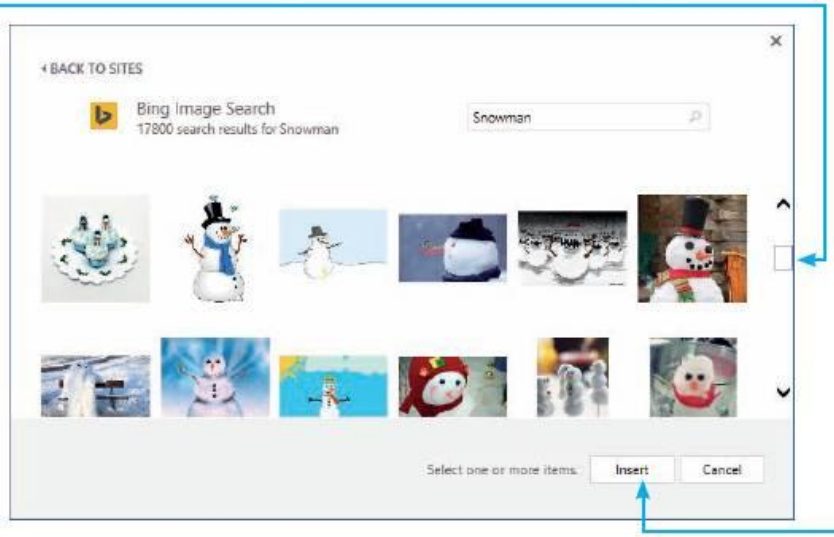


Many packages, like *Microsoft Word* and *Microsoft PowerPoint* used to include a number of free clip art images with the software but now images are imported from the internet. Move the cursor and click where you wish to place the image. Select the **INSERT** tab, then in the Illustrations section click on the **Online Pictures** icon.



Select where you wish to look for the image and in the search box enter the type of image you want. After reading **snow.rtf**, I think an image of a snowman might be the most appropriate for this task.

Press the <Enter> key. The search results are displayed.



Use the scroll bar to view the images. In this case there are more than 17 000 to choose from. When you have selected the first one appropriate for the task (lots of these images are appropriate for this age group), click on the image to highlight it, then click **Insert**.

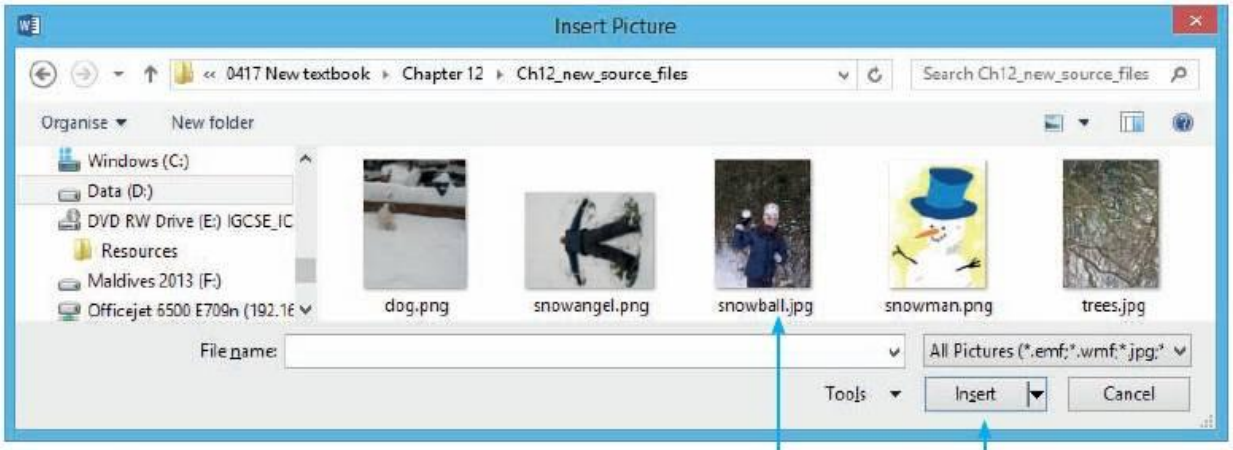
This places the image in your document.

Advice

Please note that you **must** ask for, and be given permission to use an image in any publication. Copyright law in many countries will not allow you to use an image belonging to another person without their written consent.

Many copyright holders are happy for students to use their images for educational purposes without charging them, but you must obtain their permission to do so.

12.1.3 Import an image provided for the task



Select the **INSERT** tab, followed by **Picture**. This opens the **Insert Picture** window. Browse through the folders and files until you locate the file **snowball.jpg**.

Click the left mouse button on this file followed by **Insert**.

This will insert the image into the document. Save the document as task12a.

You will notice that the images have just been placed at the end of the document. These will now need manipulating so that they become a part of the document, rather than just appended to the end.

12.2 Edit an image

It is important that an image included in any document, presentation or publication should, as mentioned earlier in the chapter, be appropriate to the subject matter. If a document was about the snow, you may expect to see an image like this.

Read the question and text carefully to try to understand which image would be the best and why. Does this image need editing? Is the image the correct shape to fit the position you wish to place it? If the image needed to be in landscape orientation you would need to crop the image. Where do you crop it? If you crop the top off the image the watering can on the wall will be lost which gives the viewer an idea of the depth of the snow, but so do the bricks in the wall. Do you crop the bottom from the image and remove lots of the white snow? The choices are yours depending upon what message you want the image to give. Is it the depth of the snow? Is it the dog playing in the snow?

If this image needs to be in landscape orientation and no alternative image is available, then you must crop the image rather than compressing or distorting it. Images should retain the correct proportions between width and height; this is called the 'aspect ratio'.

12.2.1 Resize an image

Task 12b

Open the file task12a.

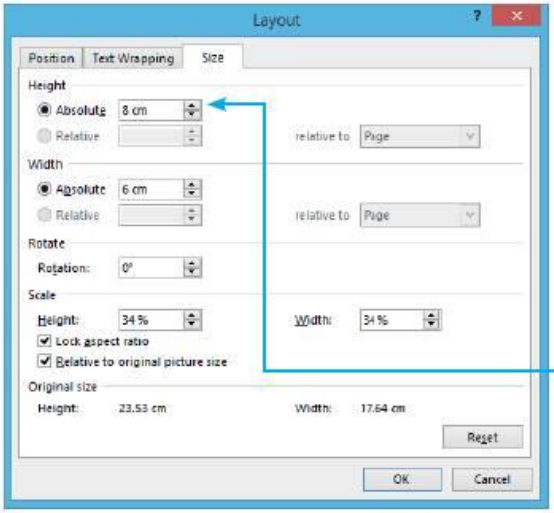
Resize the image **snowball.jpg** to 8 cm high and maintain its aspect ratio. Place this at the top right of the first paragraph.

Resize the image of the snowman to 2.8 cm high and 2 cm wide. Place this image at the top left of the second paragraph. Ensure that the text wraps around both of these images.

Find the image **snowball.jpg** in your document. To obtain a drop-down menu, right click with the mouse on this image. From this menu select the Size and Position... option.

Advice

If the Size and Position... option does not appear, select Format Picture... followed by the Size tab.

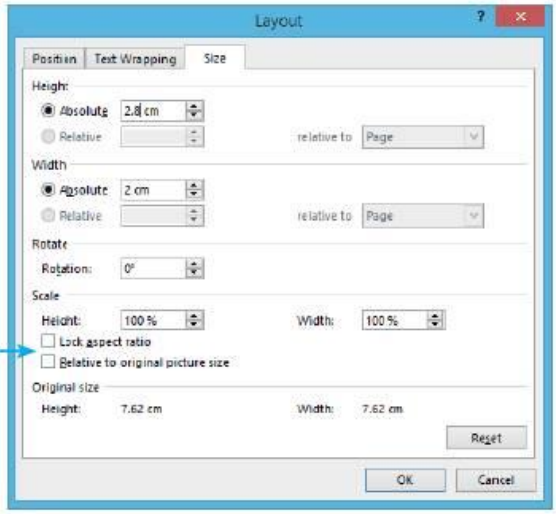


This opens the Layout window which should be in the Size tab. If not, select it.

The task instructs you to resize the image, maintaining its aspect ratio. This means to keep the height and width in the same proportions as the original image, usually to ensure that you do not distort it. To do this, ensure that the two tick boxes related to the aspect ratio are both selected.

Change the Height: of the image to 8 cm and click on OK.

Use a similar method to resize the image of a snowman to 2.8 cm high by 2 cm wide. Select the snowman image and open the Size window for that image. In this case different lengths and widths have been specified, but you have not been instructed to crop the image. This means that you will probably distort the image from its original proportions. To do this, ensure that both of the aspect ratio tick boxes have their ticks removed.



Use the Height: box to change this setting to 2.8 cm and the Width: box to 2 cm.

This will change the proportions (aspect ratio) of the image from this,  to this. 

Notice how the second image is slightly thinner but the same height. This task is continued in the next section.

Advice

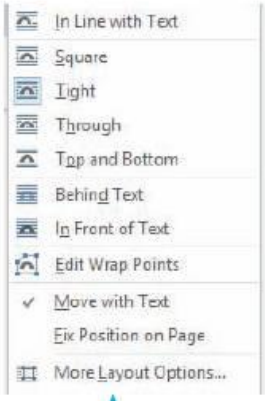
If evidence of an image size or the aspect ratio is required, you can use screen shot evidence of this window.

12.2.2 Wrap text around an image

Task 12b asks you to place the resized **snowball.jpg** image at the top right of the first paragraph. You are expected to align the image to the margins and to the top of the paragraph and there is a further instruction to wrap the text around the image. It is often wise to set the text wrapping first, then place the image. Click the left mouse button on the image to select it (which opens Picture Tools), then the FORMAT tab followed by the drop-down arrow next to the Wrap Text icon.

You get a drop-down menu with layout options. Useful ones include:

- **In Line with Text:** This places the image as an in-line graphic and is treated as a text character within a line of text. It will move with the text surrounding it if new text is inserted or deleted.
- **Square:** This places the image on the page and the text wraps (flows) around it. Use **More Layout Options...** to specify the type of wrapping that you require.
- **Tight:** This places the image on the page and the text wraps (flows) around it, like **Square**, but you cannot control the distance of the text from the image for the top and bottom settings, although you can to the left and right, using **More Layout Options...**.
- **Through:** This places the image on the page and the text wraps around the image with preset values.
- **Top and Bottom:** This places the image with the text above and below the image, but not wrapped to the side.
- **Behind Text:** This places the image behind the text. It can be used to set a background image in a document.
- **In Front of Text:** This places an image over the top of the text.
- **More Layout Optons:** This can be used to give more options to the selected layout types above. For example: if a **Square** layout is selected you can specify where you wish to flow the text around the image and the distance of the text from the image on each side. This option also allows you to control the positioning of the image on the page.



For this task, set the **Text Wrapping** of the image to **Tight** using the drop-down menu.

Advice

This menu can also be found by right clicking the mouse on an image and selecting **Wrap Text**.

Advice

Packages like *Microsoft PowerPoint* will not give text wrap options. Sometimes you have to layer objects on the slide or on the page in a document. To do this click the right mouse button on the image and use the options like **Bring to Front** and **Send to Back**. This is also useful for placing overlapping images in a presentation or document.

12.2.3 Place an image with precision

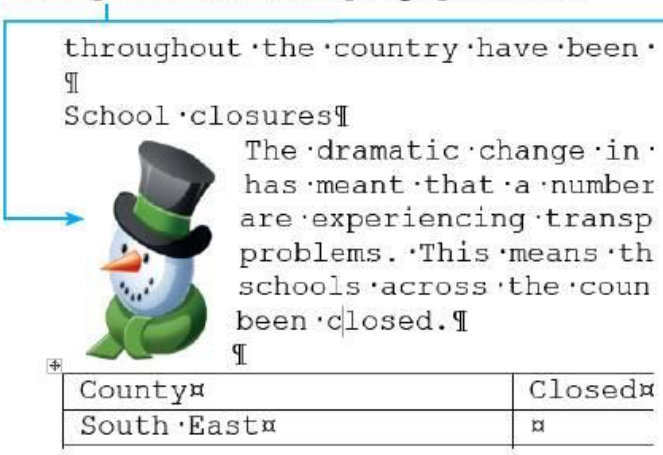
You will be expected to place images precisely. To move and place this snowball image, click and hold the left mouse button on the image and drag it to the top right corner of the first paragraph. There are two methods of placing the image: the first is to drag it until the green guidelines appear at the top and right side of the image like this:

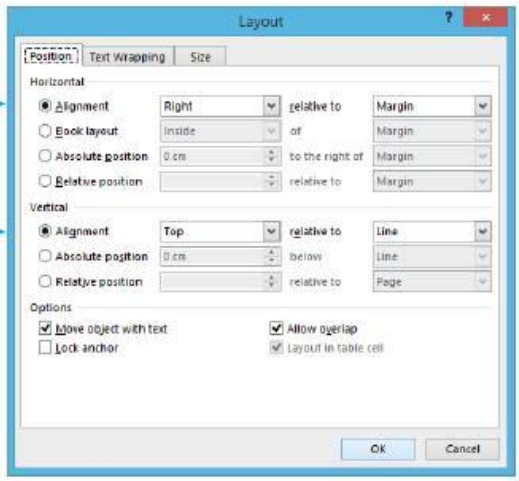
The second method is to roughly place the image. Right click on the image again. Select the **Size and Position...** option to open the **Layout** window. Select the **Position** tab.

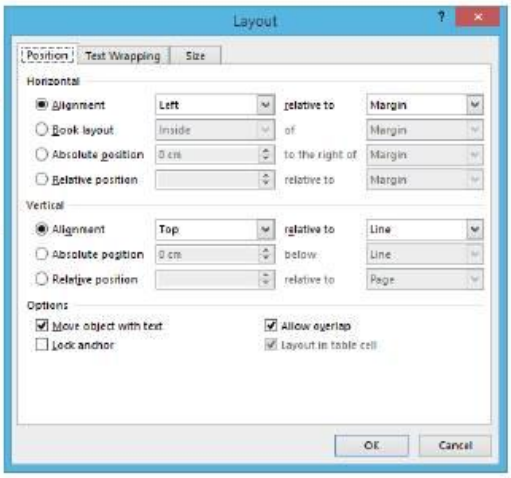
Set the Horizontal alignment to Right aligned to the Margin. Set the Vertical alignment to Top aligned to the top of the line of text.

Click the OK button to place the image. Check that this has worked correctly. If not, this is usually due to the image being placed with too little precision when it was dragged and dropped. Try dragging and dropping the image again and repeat the process.

Repeat this process, placing the resized image of the snowman at the top left of the second paragraph like this.



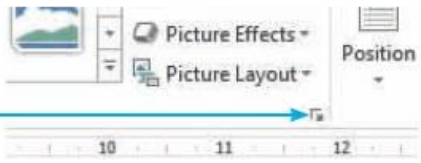




12.2.4 Place a border around an image

Although you have placed the image as specified, without a screen shot of the layout window it will not be possible to tell that you have placed the image correctly as it has a white background. A good tip is to place a thin border around the image so that its alignment can be seen.

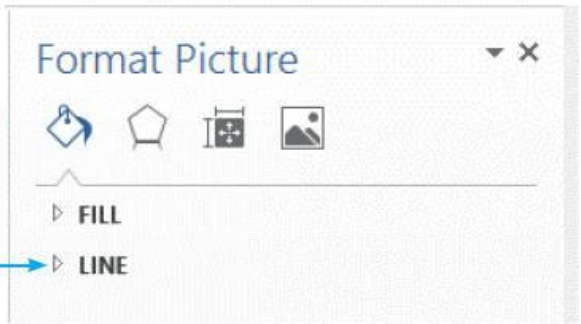
To set a border on the image, click on the image, select the FORMAT tab then, in the Picture Styles section, click the left mouse button on the small arrow at the bottom right.

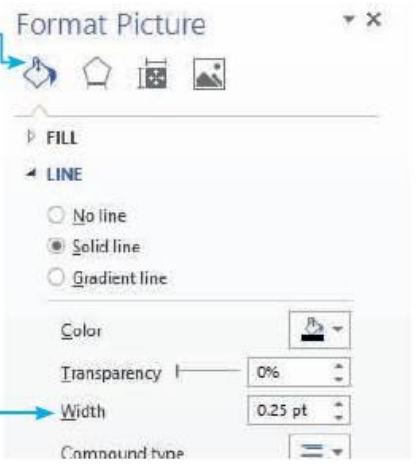


This opens the Format Picture pane to the right of the document. Click the left mouse button on the Paint bucket icon to select the Fill and Line section of this menu.

Click the left mouse button on the triangle for the Line section to extend the menu.

Left click on the radio button for Solid line, which again extends the options in the pane. Choose a (thin) line Width of 0.25pt.





The border now shows the precision placing of the image.

throughout ·the ·country ·have ·been ·c
¶
School ·closures¶

The ·dramatic ·change ·in ·
has ·meant ·that ·a ·number
are ·experiencing ·transp
problems. ·This ·means ·th
schools ·across ·the ·coun
been ·closed.¶
¶

County¤	Closed¤
South ·East¤	¤

Save your document as task12b.

Task 12c

Open the file task12b.

The image **trees.jpg** has been taken on a digital camera. Place this image to the right of the table, aligned to the right margin. Resize this image if needed.

Place the image **trees.jpg** at the end of the document, as shown earlier in the chapter. Click on the drag handle and drag the vertical borders in the table to narrow the column widths so that all text shows without wrapping, but no extra white space is shown.

The table should change from this. to this.

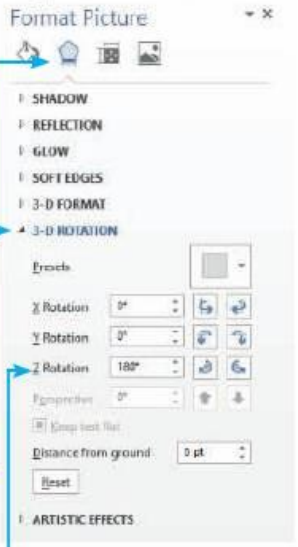
Using the ruler at the top, you can tell that the image will need to fit into a space from about 7 cm into the page to 16 cm in. This means the image width should be about 9 cm wide (16 – 7 = 9). Use the methods learnt earlier in this chapter, to resize the image to 9 cm wide whilst maintaining its aspect ratio. Set the text wrap so as to allow the image to sit to the right of the table. Drag the image into the correct position to the right of the table.

12.2.5 Rotate an image

Because the image has been taken using a digital camera and saved, the original image is upside down. The image could be saved and adjusted in an external graphics package, or can be adjusted in the Format Picture pane within *Microsoft Word*. Click the left mouse button on the Pentagon icon to select the Effects section of this menu.

Click on the triangle to open the 3-D Rotation options.

To turn the image upside down, we must rotate the image through 180 degrees. Select the Z Rotation section and use the small arrows until the image has been fully rotated.



Save your document as task12c.

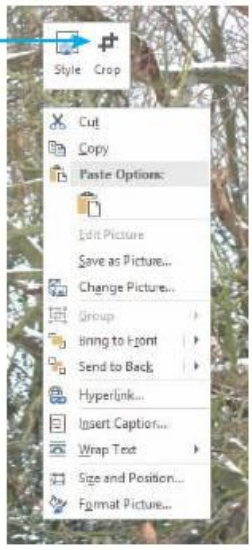
Task 12d

Open the file task12c.

Crop the image **trees.jpg** to remove the bottom 25% of it.

12.2.6 Crop an image

To crop an image is to cut off part of the image. This changes its aspect ratio but does not distort the image. Right mouse click on the image **trees.jpg** to get two menus and left click on Crop.



The drag handles for the image will change to crop handles. Drag the centre crop handle at the top of the image down so that about 25% (1/4) of the image is selected (so that it becomes grey) like this.

Look carefully at this image and you will see that with the crop tool selected, the image is upside down. This is because this image has already been rotated through 180 degrees in Section 12.2.5 but cropping takes place on the original image. You will notice that you have dragged from the top of the image rather than the bottom of the image. Click the left mouse button on the text and the image will be cropped and appear the right way up, with the snow on the top of the branches, like this.

This image will need moving so that it aligns with the top of the table and right margin.

Save your document as task12d.

Task 12e

Open the file task12d.

Reflect the image **snowman.jpg** so that the snowman faces the other two images.

12.2.7 Reflect an image

To reflect an image, left mouse click on the image and select the Format Picture pane, then click on the Pentagon icon to select the Effects section of this menu. **Do not** select Reflection, but click on the triangle to open the 3-D Rotation options. With the 3-D Rotation features, a reflection (flip) from left to right is an X rotation of 180 degrees and a (flip) reflection from top to bottom is a Y rotation of 180 degrees. Sometimes it is easier to perform these functions in a graphics package before placing the image.

For this task, set the X rotation of 180 degrees, like this.

Save your document as task12e. The finished document should look like this.

Winter weather forces schools to close
By <Your Name>

On Monday February 2nd 2009 the South East of England was hit by snow. I know this is not unusual in many parts of the world, but it was interesting to watch the whole region grind to a virtual standstill. At the time of writing this article the major London airports of Heathrow, Gatwick and London City were all closed. Stansted airport had been closed but has just had one runway re-opened. Travel chaos has ensued, the M25 is closed in many places and many schools throughout the country have been closed.

School closures

The dramatic change in the weather has meant that a number of areas are experiencing transport problems. This means that many schools across the country have been closed.

County	Closed
South East	
Essex	250+
Hertfordshire	100+
Middlesex	80+
Sussex	50+
North	
Greater Manchester	100
Lancashire	70
Cumbria	34
Durham	70
Northumberland	33
Yorkshire	1

This table shows the number of schools reported closed. It is interesting to note that although the snow is no heavier in the South East of England, one of the eastern Counties has reported more than 250 of its schools are closed.

This gave the children lots time to play in the snow, snowballing, making snowmen and snow angels. The snow gave an added dimension, producing some very picturesque scenes, many captured on camera.

Task 12f

Open the file **trees.jpg**. Save the image as a .png file.

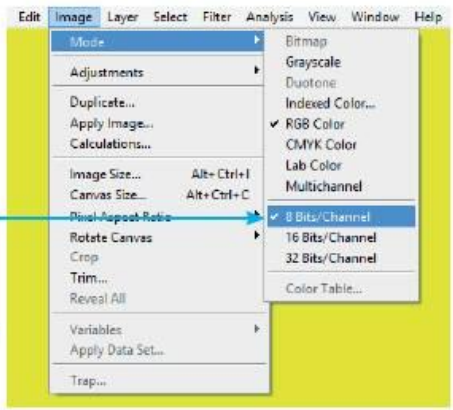
Adjust the colour depth of this image to 16 bits per channel and save the new image as **trees2.png**.

12.2.8 Adjust the colour depth of an image

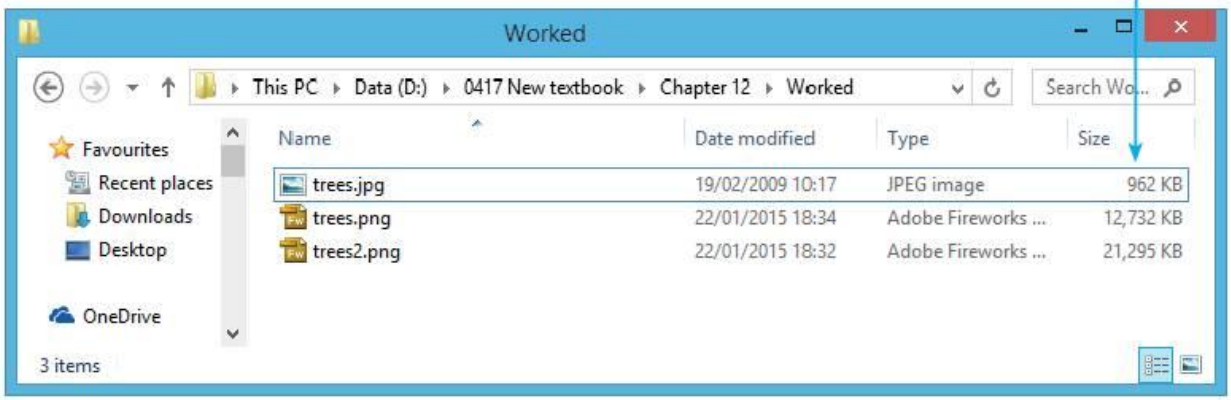
These functions will be performed in *Adobe Photoshop*. Open the package and open the file **trees.jpg**. Save the image using the FILE tab, then Save As. Keep the filename as **trees** and change the Format to **PNG**.

All colour JPEG images have a colour depth of 24 bits which is 8 bits per colour channel (greyscale JPEG images have less). If you need to do lots of editing to an image it is better to change the colour depth before starting, so as to reduce the image degradation (sometimes seen as blurring) when making the changes. Changing the colour depth of an image also changes the file size. A file with a 48 bit colour depth (16 bits per channel) needs twice the storage space of a file with a 24 bit (8 bits per channel) colour depth.

Select the Image tab, followed by Mode, then change the colour depth from 8 Bits/Channel to 16 Bits/Channel.



Save the image again but change the filename to **trees2** and keep the **Format** as **PNG** as JPEG does not support 48 bit images. The difference in the file sizes can be seen here.

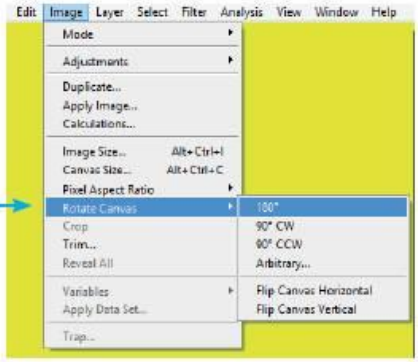


Task 12g

Rotate the file **trees2.png** through 180 degrees and save the new image as **trees3.png**.

Open the file **trees.png** in *Adobe Photoshop*. Select the **Image** tab, followed by **Rotate Canvas**. From the sub-menu select **180°**.

Save the new image as **trees3.png**.



Task 12h

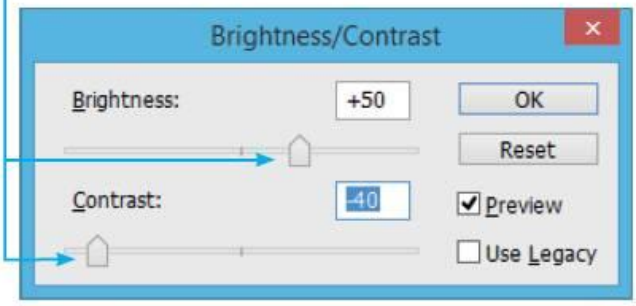
Increase the brightness of the image **trees3.png** and decrease the contrast, so the image can be used as a background. Save the new image as **trees4.png**.

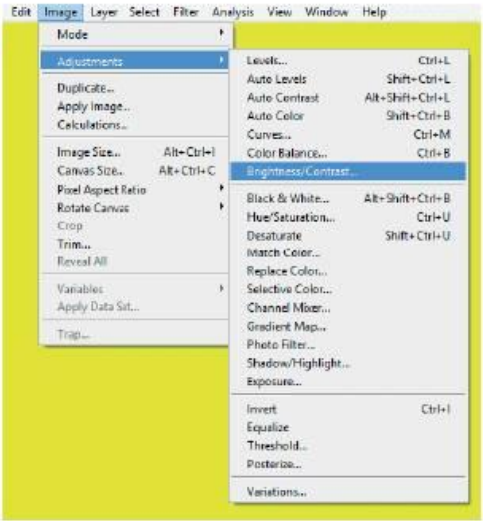
12.2.9 Adjust the brightness and contrast of an image

Open the file **trees3.png** in *Adobe Photoshop*. Select the **Image** tab, followed by **Adjustments**. From the sub-menu select **Brightness/Contrast...** which opens the **Brightness/Contrast** window.

Use the two sliders to edit both the **Brightness** and the **Contrast** until the image looks appropriate for the task.

Save the new image as **trees4.png**.





Advice

The brightness and contrast of an image can also be edited with the packages in *Microsoft Office* in a similar way using the right-hand icon from the **Format Picture** pane, then selecting **PICTURE CORRECTIONS** and the sliders for **Brightness** and **Contrast**.

Activity 12a

Open the image **snowangel.png** in a suitable package. Reduce the colour depth to 8 bits per channel. Rotate the image 90 degrees clockwise. Save the image as **snowangel1.png**. Save the image again as **snowangel1.jpg**. Show evidence of the finished image, the filenames and file sizes.

Activity 12b

Open the presentation **winter.pptx** in a suitable package. Crop the bottom 30 % from the image **dog.png**, reduce its contrast and increase its brightness. Place it to fill the slide so that it becomes a background image.

Find an appropriate image of a snowman. Resize it to 2 cm high. Place it 1cm from the top of the slide and 1 cm from the left of the slide with no border.

Activity 12c

Open the file you saved in Activity 12b. Reflect (flip horizontally) the image of the snowman. Place a 1pt red border around this image.

13 Layout

In this chapter you will learn how to:

- use software tools to prepare a basic document to match the purpose and target audience
- create a new document
- open an existing document
- place objects into the document
- enter and edit data including text and numbers
- create a table
- format a table and its contents
- wrap text around a table
- explain why headers and footers are needed
- create headers and footers
- use a header and footer
- align the contents of the header and footer consistently within a document
- place automated objects in headers and footers.

For this chapter you will need these source files from the CD:

- text1.rtf
- table1.csv
- text2.rtf
- table2.csv
- activity13c.rtf.

13.1 Basic documents

This chapter will help you develop your document layout skills. The word 'document' does not just relate to a word-processed document, but can be a piece of written or printed material, or an electronic file that provides information or evidence or that serves as an official record. These can even include images such as photographs. Such documents will therefore include word-processed documents from *Microsoft Word*, reports from a database using *Microsoft Access*, spreadsheets, graphs and charts using *Microsoft Excel*, a presentation using *Microsoft PowerPoint* or a web page. Even though each of these packages requires different practical skills, they have many common elements which work in similar ways.

New documents need to be created with regard to the target audience, which will often be a major factor in setting the styles that will be used within the document (more details can be found in Chapter 14). One other very important element will be the accuracy of your data entry. Always check your documents for typing errors. More help will be given on proofing in Chapter 15.

Plan it

Plan your document before starting it by making sure that you know:

- What is the purpose of the document?
- Who is the target audience?
- How will I make it suitable for this audience?
- What is the appropriate medium?
- What is the appropriate package?

13.1.1 Create a new document

The method used to create a new document in most of these applications will depend on whether the package is already open in the computer.

Create a new document if the package is already open

To create a new document in most of these applications (databases, graphs, charts and web pages are different), open the application package and click on the FILE tab followed by New. It is worth saving your new document as soon as you have started it, and saving your work often using the methods shown in Chapter 11.

Create a new document if the package is not open

This method does not apply to web pages. Open the application package. It may open a new document when the package is opened. In this case go to Section 13.2. If it does not automatically open a new document, then the Start screen for the package will open. If you are using a home computer, down the left side is a list of recently used files that could be selected. It is unlikely that this will appear in many school systems due to the security settings placed by your network administrator. In the bottom left corner of the window will be an option to Open other.... The rest of this depends upon the package, if it is *Microsoft Word* you will see  , if it is *Microsoft Access* you will see  , if it is *Microsoft Excel* you will see  , etc. Double click on this text and double click to select New from the left menu. Open a new blank document/workbook/database, etc by selecting the top left icon in the window. It is worth saving your new document as soon as you have started it, and saving your work frequently using the methods shown in Chapter 11.

13.1.2 Open an existing document

The method used to open an existing document in most of these applications will depend upon whether the package is already open in the computer.

Open a document if the software is already running

If the software is already running, in most applications (except databases, graphs, charts and web pages), click on the FILE tab followed by Open. It is worth saving your new document as soon as you have opened it, with a different version number using the methods shown in Chapter 11. This will make sure that the original file that you have opened is kept without changes.

Open a document if the software is not running

This method does not apply to web pages. Open the software package and the Start screen for the software will open. If you are using a home computer, down the left side is a list of recently used files that could be selected. It is unlikely that this will appear in many school systems due to the security settings placed by your network administrator. In the bottom left corner of the window will be an option to Open other.... The rest of this depends upon the package, if it is *Microsoft Word* you will see  , if it is *Microsoft Access* you will see  , if it is *Microsoft Excel* you will see  , etc. Double click on this text and locate your file within your storage area from the Computer icon. It is worth saving your new document as soon as you have opened it, with a different version number using the methods shown in Chapter 11. This will make sure that the original file that you have opened is kept without changes.

13.2 Place objects into a document

Task 13a

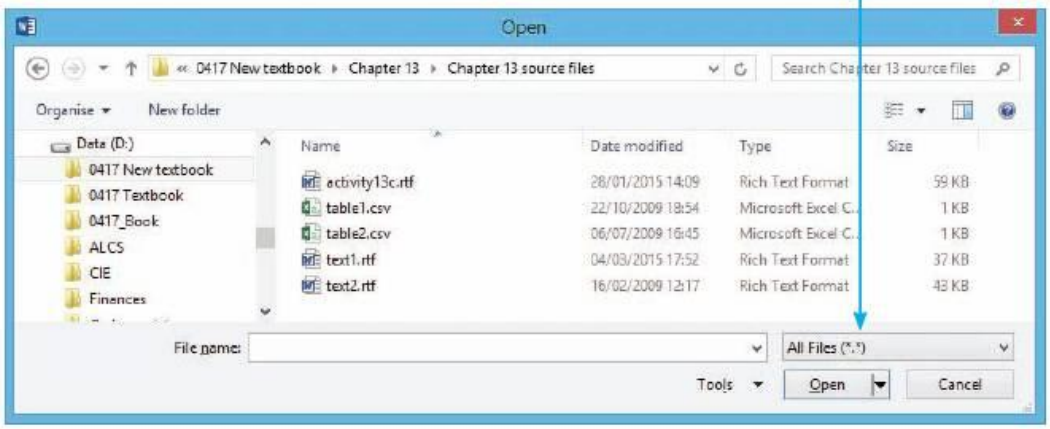
Create a new document. Open the file **text1.rtf** and insert the file **table1.csv** as a table within the document. Change the document heading to 'Winter weather forces schools to close'. Save the document as task13a.

13.2.1 Place text

Before starting this task, examine the files **text1.rtf** and **table1.csv**. As Task 13a makes no mention of the purpose of the task or its audience we cannot answer the first three questions from the 'Plan it' section above. After examining the two files:

- the most appropriate medium would appear to be printed on paper (or if used electronically as a downloadable document)
- the most appropriate package would appear to be a word processor (although this may be converted into portable document format if used as a downloadable document).

Open the document **text1.rtf** in *Microsoft Word*. As you do this, when you get to the Open window, you may need to change the file type to All Files.



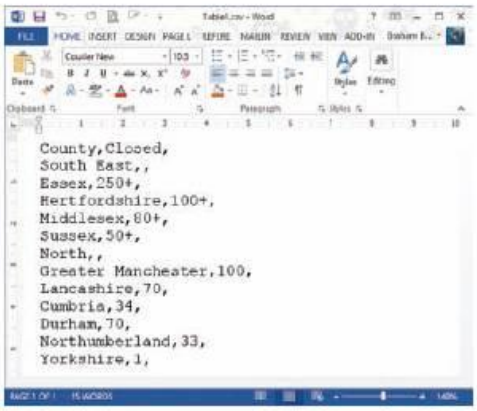
If you do not you may not be able to see all the files that are needed for this task in the Open window. Left mouse click on **text1.rtf** and select Open.

Use the FILE tab and Save As to save this document with the filename task13a as a *Word* document, rather than in rich text format.

13.2.2 Place a table from a .csv file

Open *Microsoft Word*. Open the file **table1.csv** as a new *Word* document. An alternative to copying and pasting the table into the document would be to place the .csv file in the document as an **embedded object**. This is really useful if you wanted to update the table within another package like a spreadsheet, but is not as useful when you have little time to keep updating objects embedded into a document.

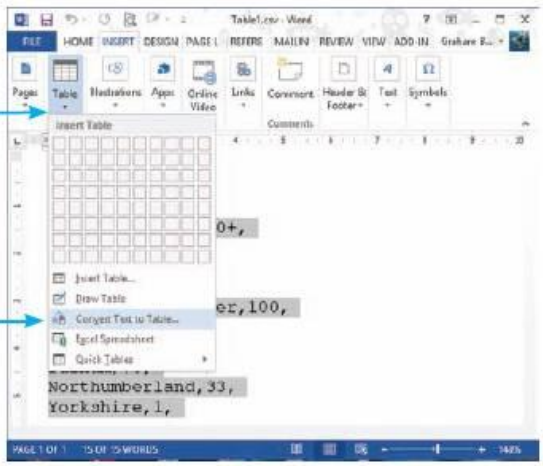
The file **table1.csv** looks like this when it has been opened in *Word*.



Advice

If you have to combine more than one file (sometimes with different file types), open each file as a new document, then copy and paste from one document to another. This method can reduce any problems that could occur with embedded objects.

Now you need to edit it, to turn the comma separated values into a table and copy it into the file that you recently saved. Highlight all the text (hold the <CTRL> key and tap the <A> key) and then select the INSERT tab followed by the Table icon.

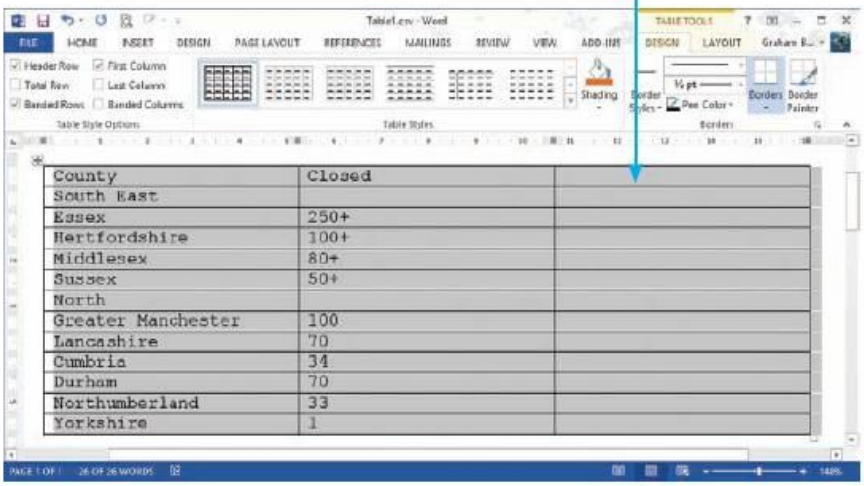


Click the left mouse button on Convert Text to Table....

Because the text is highlighted it will be placed within the cells of a table.

This opens the Convert Text to Table window. Click on OK to create the table. If *Word* has not offered you the correct values for rows and columns because the .csv file contains both commas and carriage returns, then the table may need editing by either removing blank rows and/or columns. In this example, it has created an extra column to the right.

To remove this column, first click the left mouse button in a cell in the right-hand column. This removes the highlighting from the table. In the same cell, right mouse click to obtain a drop-down menu. From this menu select the Delete Cells... option.



County	Closed	
South East		
Essex	250+	
Hertfordshire	100+	
Middlesex	80+	
Sussex	50+	
North		
Greater Manchester	100	
Lancashire	70	
Cumbria	34	
Durham	70	
Northumberland	33	
Yorkshire	1	

Choose the radio button for Delete entire column followed by OK.

Copy this table and paste it in place of the text <*Place table here*> in the document that you saved as task13a. This task is continued in Section 13.2.4.

13.2.3 Place an image, graph, chart or database extract

Please refer to Chapter 12 for the placing and editing of images. Graphs and charts can be copied and pasted from *Excel* and edited as if they are an image within a document. If a database extract is to be included in another form of document, export this (as shown in Chapter 18) before copying and pasting this into the document.

Place a screen shot in a document

To take a screen shot of the current screen use the <Print Screen> or <Prt Scr> key on your keyboard. This captures an image of the screen contents (the same as Copy) and places it in the clipboard. Paste this image into a document. To take a screen shot of a single window use <Alt> and <Prt Scr>. To take a screen shot of part of a window use the Snip tool (as shown in Chapter 11). Please note that if you want to show a drop-down menu that you are using in the screen shot, you must capture the whole screen and crop unused areas from the image. See the section on cropping images in Chapter 12.

Advice

For screen shots in an evidence document, make sure that it is easy to read the contents of the screen shot but **do not** crop off the information that may be needed, for example: your name, Centre number and candidate number, the filename or the evidence that you are using a web browser rather than an editing package.

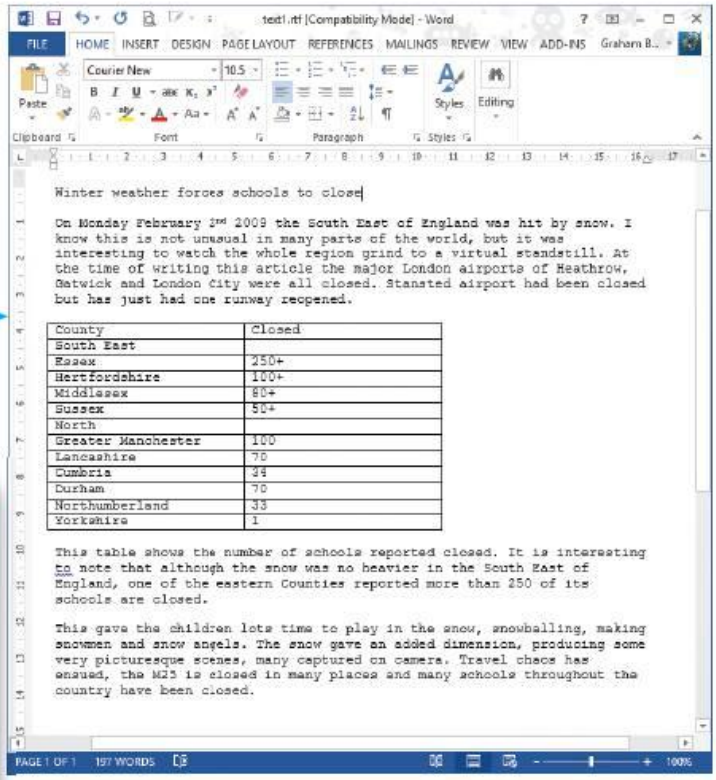
13.2.4 Enter and edit data

Data can include text and numbers. For the purposes of a document, both can be entered and edited in the same way through the keyboard.

Enter text or numbers in a document

Open the file task13a. To change the document heading, highlight the existing heading and overtype this with the new heading from the task. Although this seems one of the easiest tasks, it is one where a significant number of students fail to check their data entry. You will need to be 100 per cent accurate with all data entry, including the use of capital and lower case letters. The document should now look like this.

Save the changes to this document.



Edit text or numbers in a document

Task 13b

Open the file task13a.

Move the last sentence in the document so that it becomes the last sentence in the first paragraph.

Add a new subtitle 'School closures' just above the table, and add this new paragraph between the subtitle and the table:

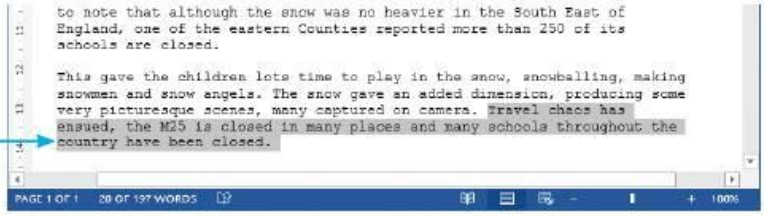
> 'The dramatic change in the weather has meant that a number of areas are experiencing transport problems. This means that many schools across the country have been closed.'

In the third paragraph change the word 'was' to 'is', and add the word 'has' between 'counties' and 'reported'.

Save the document as task13b.

There are a number of techniques that could be used to move the last sentence to the end of the first paragraph. These include cut and paste, copy and paste then delete the original and drag and drop. It is recommended that you learn and practise all of these methods.

All three methods require you to highlight the correct section of text. A useful tip (especially if you are right-handed) is to highlight from the end of the text back to the beginning rather than the other way around. Highlight the text like this.



Editing methods

You can now choose your method from the following.

Cut and paste

Right mouse click within the highlighted area to get the drop-down menu, then select **Cut**. This removes the sentence and places it in the windows clipboard. Move the **cursor** to the end of the first paragraph and right mouse click to obtain the drop-down menu again. This time select **Paste**.

Copy, paste and delete

Right mouse click within the highlighted area to get the drop-down menu, then select **Copy**. This copies the sentence to the clipboard but does not remove it.

Move the cursor to the end of the first paragraph and right mouse click to obtain the drop-down menu and select Paste. Move back to the original sentence, highlight it and press the <Delete> key on the keyboard. Although this method takes longer than method 1, it does not remove the original sentence until the end of the process, so if you accidentally lose the sentence from the clipboard the original is still present.

Advice

Use <Ctrl><X> to cut, <Ctrl><C> to copy and <Ctrl><V> to paste.

Drag and drop

Click the left mouse button in the highlighted area and hold this down, moving the cursor to the end of the first paragraph. Release the left mouse button at that point and you will drop all of the highlighted text there.

Advice

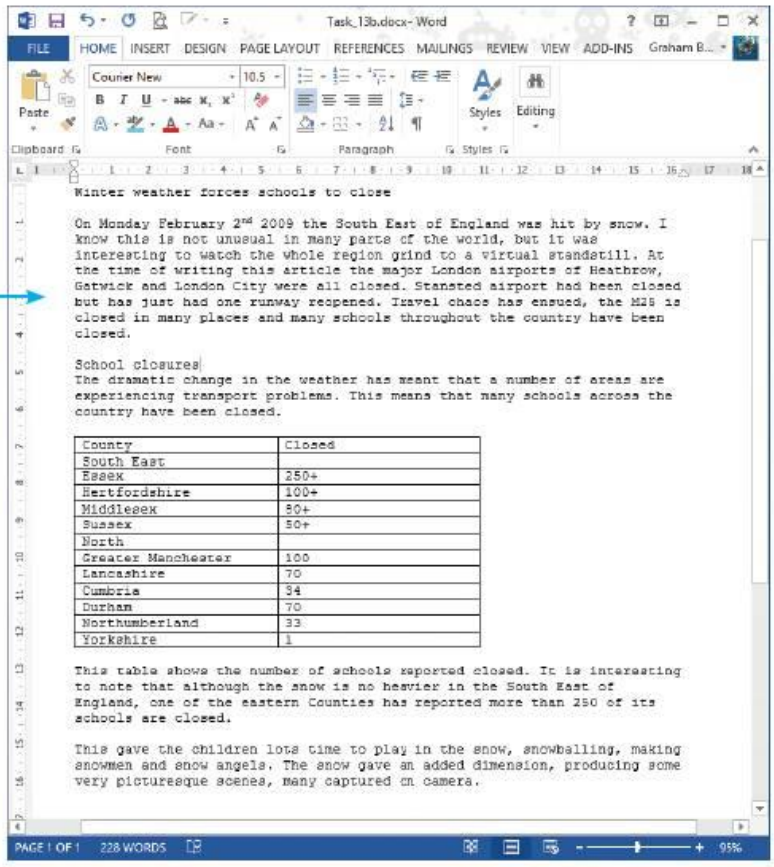
Drag and drop is easy when both positions are on the screen at the same time, but harder when you need to scroll through the document before dropping.

Whichever method you have used, make sure that the character spacing between the sentences and the line spacing between paragraphs matches the rest of the document. Check carefully for any inconsistencies.

To add the subtitle, move the cursor to the end of the first paragraph and press the <Enter> key twice. (This will keep the same paragraph spacing as the rest of the document.) Now type the text 'School closures' followed by the <Enter> key. Type the new paragraph given in Task 13b. Go back and check for data entry errors and the consistency of spacing. Correct any errors.

To change the word 'was' to 'is', locate the word and highlight it. Type in the word 'is' and it will replace the original. To insert the word 'has', place the cursor between the words 'counties' and 'reported'. Make sure that there is a single space on each side of the cursor before you type the word 'has'.

Save your document as task13b. The finished document should look like this.



Activity 13a

Open the file **text2.rtf** from the CD and insert the file **table2.csv** as a table within the document after the paragraph that ends 'This table shows the number of schools closed in some of the local authorities:'.

Change the document heading to 'Snow brings disruption to Britain'.

Move the last paragraph in the document so that it becomes the first paragraph.

Add the following text as a new paragraph immediately before the paragraph that starts 'Flights were suspended ...':

> 'Heavy snowfalls were reported to the north of London. London was also affected but not to the same extent as the disruption that had been caused the week before.'

In the last paragraph change the word 'weird' to 'unusual' and add the word 'national' between 'many' and 'newspapers'.

Save and print this document.

13.2.5 Create a table

Tables of data may need inserting into your word-processed documents or presentations. You have already inserted a table from a .csv file in Task 13a.

Task 13c

Open the file task13b.

Add to the end of the document the following text as a new paragraph:

> 'Temperatures recorded at one weather station in Ross-on-Wye during the week read:'

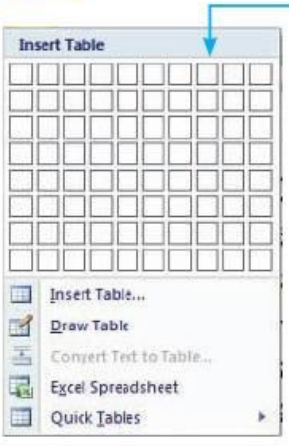
Below this add this table:

	Maximum	Minimum
2nd Feb	3	–1
3rd Feb	5	–3
4th Feb	5	–3
5th Feb	2	–1
6th Feb	2	–1
7th Feb	5	–3
8th Feb	4	–2

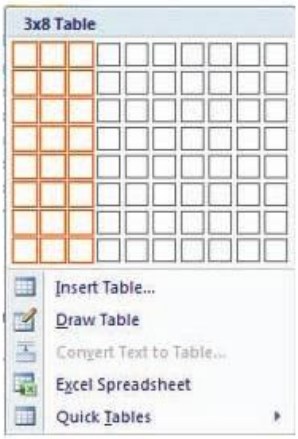
Save the document as task13c.

Open the file task13b and add the text given above as a new paragraph to the end of the document.

To create a new table you must first work out how many rows and columns the table contains. By counting them, you can work out that this table contains three columns and eight rows. Move the cursor to the correct place in the document, then select the INSERT tab, the Tables section and click on the Table icon.



This will open the Insert Table drop-down menu. Move the cursor over the grid until it highlights the three columns and eight rows that you need, like this.



Click the left mouse button in the last highlighted cell of the grid and this will insert a three by eight table into your document. Add the text from the task into this table. You can move the cursor into the next cell by pressing the <Tab> key. If you need more rows than the eight available, move the cursor into the last cell of the table and press the <Tab> key to create a new row. If you need lots of new rows, hold down the <Tab> key. Save the document as task13c.

Activity 13b

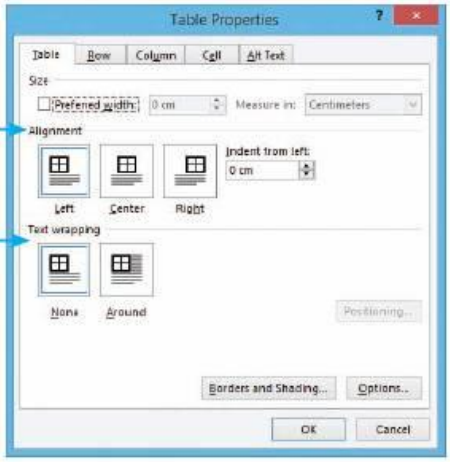
Create a new document with the title 'Skills to practise using tables'. Create this table, below the title.

Function	How	Feature		
Insert	Insert tab	Table		
	Right click	Rows		
	Right click	Columns		
Delete		Rows		
Format		Cells	Alignment	Left, right, centre, fully justified
				Top, centre, bottom
			Colour, shading	
		Rows	Breaks across page	
		Gridlines	Show	
			Hide	
Text wrapping		Cells		

Save this document.

13.2.6 Format a table

Tables can be formatted so that they can be aligned left, right or centrally between the margins. Text can be wrapped around the table or not as required. These features are found in the table properties: click the right mouse button in any cell of the table, then select **Table Properties...** and the **Table** tab within the **Table Properties** window. The table alignment can be selected in the **Alignment** section and text wrapping around the table can be switched on or off in the **Text wrapping** section.



Task 13d

Open the file that you saved in Task 13c.

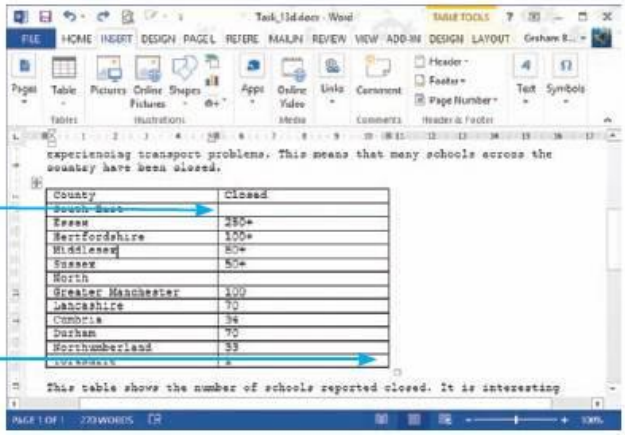
Narrow the columns in the top table so that there is a minimum of white space but no text wraps within a cell.

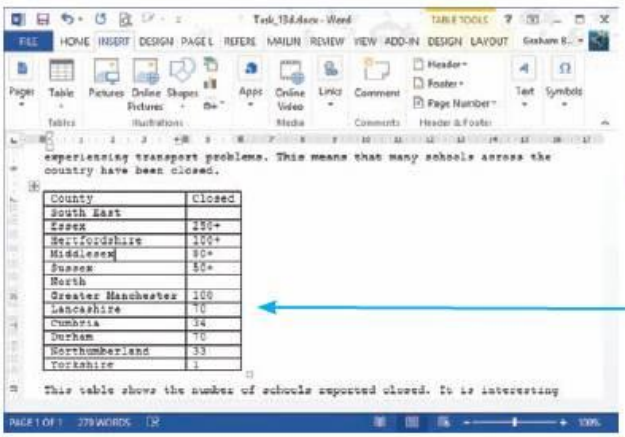
Set the text wrapping options for this table so that the body text of the document flows around the table.

Save the document as task13d.

Open the file that you saved in Task 13c. Move the cursor into the top table and grab the vertical gridline.

Drag this to the left while holding down the left mouse button so that it almost reaches the right edge of the longest data item. Repeat this with the right-hand gridline.

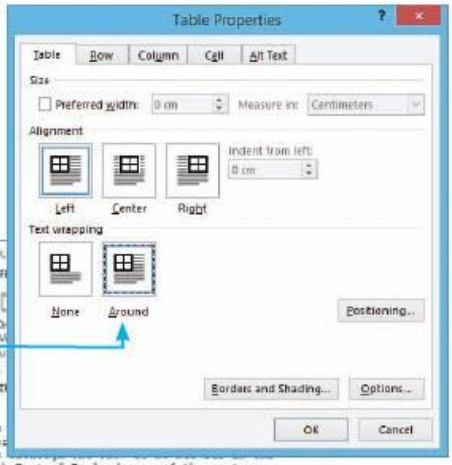


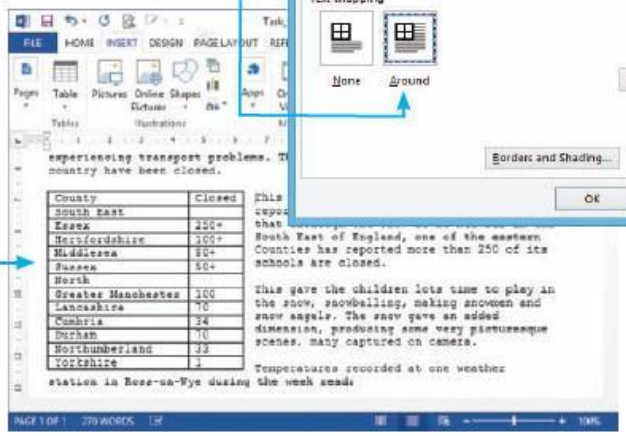


The table will look like this.

Click the right mouse button in any cell of the table, then select **Table Properties...** and the **Table** tab within the **Table Properties** window. Move the cursor into the **Text wrapping** section and select **Around** to wrap the body text around the table. Click on OK to complete this. The table should look like this.

Save the document as task13d.





Task 13e

Open the file that you saved in Task 13d.

Right align all of the cells containing numbers in the second column of the top table. Centre align all of the cells in the top two rows and the row containing 'North'.

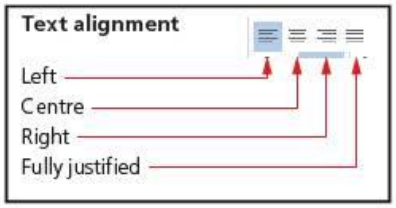
Make the top row of the table twice as high. Vertically align all data to the middle of each cell.

Merge the cells in rows 2 and 7 into single cells.

Set the background colour of all cells in the top two rows and row 7 to yellow.

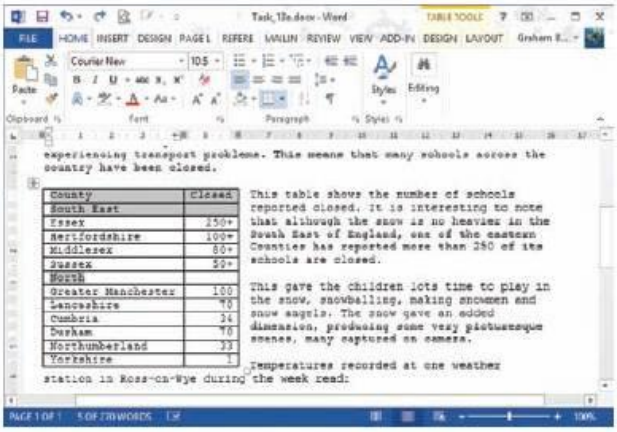
Save the document as task13e.

Align cell contents within a table



Move the cursor into the top table. To highlight all the cells containing numbers, left mouse click in the top cell containing numbers and drag the mouse down. Select the **HOME** tab. In the **Paragraph** section find the four icons for text alignment. Click on the third icon to right align the contents of these cells.

Highlight all cells in the top two rows of the table as described above, hold down the <CTRL> key and drag over the contents of the cell containing 'North' so that all five cells are highlighted like this.



Select the **HOME** tab. In the **Paragraph** section find and click on the second icon for text alignment.

Vertically align cell contents within a table

To make the top row of the table twice as high, grab the gridline below the top row and drag down so that it changes from this to this.

County	Closed
South East	
Essex	250+

County	Closed
South East	

You can see that the cell contents are aligned to the top of the cells in this row (and the rest of the table). You must vertically align all data to the middle of each cell. Highlight all the cells in the table and click the right mouse button in one of these cells. Select **Table Properties...** and the **Cell** tab. Click in **Center** then OK so that it changes from this to this.

County	Closed
South East	

County	Closed
South East	

Merge cells within a table

Highlight both cells in row 2 of the table and click the right mouse button in one of these cells. Select **Merge Cells** from the drop-down menu. Repeat this for row 7. The table now looks like this.

County	Closed
South East	
Essex	250+
Hertfordshire	100+
Middlesex	80+
Sussex	50+
North	
Greater Manchester	100
Lancashire	70
Cumbria	34
Durham	70
Northumberland	33
Yorkshire	1

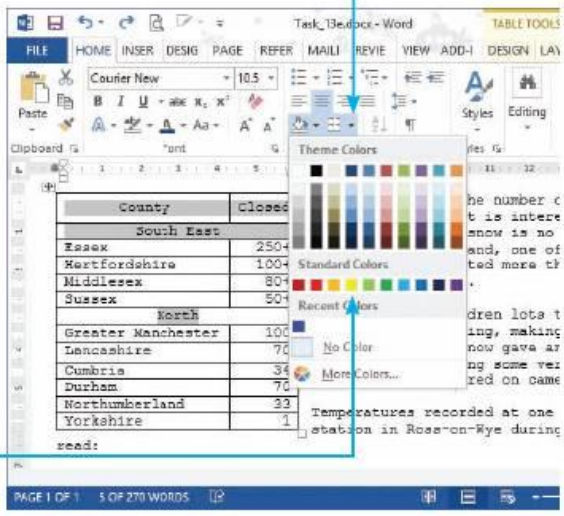
Set the background colour to cells within a table

Highlight all cells in rows 1, 2 and 7 together. Select the **HOME** tab. In the **Paragraph** section click on the small triangle to the right of the **Shading** icon to get a drop-down menu/palette.

The palette gives you a range of greyscale shadings, the theme colours that are available, plus some of the standard colours. If the colour that you require is not present use the **More Colors...** option.

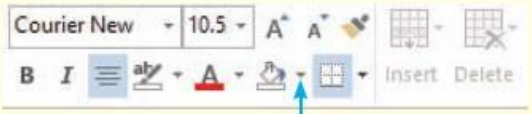
For this question we need yellow so click on the yellow block in the palette.

Save the document as task13e.



Advice

The **Shading** icon can also be found by clicking the right mouse button when the text has been highlighted in a small menu like this.



Task 13f

Open the file that you saved in Task 13e.

Remove all gridlines from the lower table except those cells containing the maximum and minimum temperatures during this week.

Save the document as task13f.

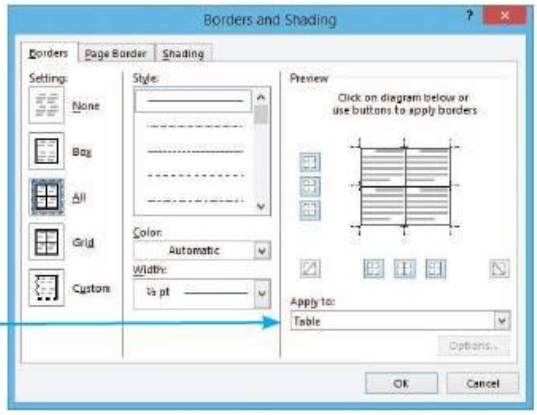
Add and remove gridlines from a table

To work on the second table, click the right mouse button in the table. Select Table Properties... and the Table tab. Select the option for Borders and Shading....

This opens the Borders and Shading window with the focus of the borders applied to this table.

To remove all borders (the four lines around the outside) and gridlines (the lines within a table) click on None, followed by OK twice. The borders and gridlines within the table will usually show as faint dashed lines that are visible on the screen but not when printed. Highlight the cells containing the maximum and minimum temperatures for the week, like this.

	Maximum	Minimum
2nd Feb	3	-1
3rd Feb	5	-3
4th Feb	5	-3
5th Feb	2	-1
6th Feb	2	-1
7th Feb	5	-3
8th Feb	4	-2

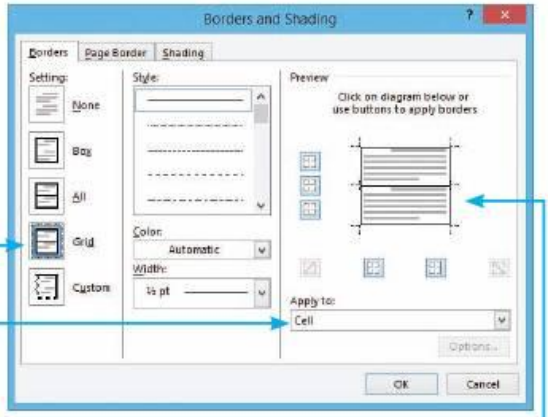


Click the right mouse button on one of these cells, select Table Properties..., the Table tab, then Borders and Shading....

As the Borders and Shading window opens, click on Grid to set the gridlines back.

Note that the focus of the borders applied to only these cells after selecting <OK> twice. Save the document as task13f.

The completed table will now look like this.



	Maximum	Minimum
2nd Feb	3	-1
3rd Feb	5	-3
4th Feb	5	-3
5th Feb	2	-1
6th Feb	2	-1
7th Feb	5	-3
8th Feb	4	-2

Activity 13c

Open the file **activity13c.rtf** in a suitable software package.

Merge all cells in the top row into a single cell. Centre align the text both horizontally and vertically. Shade this cell with a mid-grey background colour.

Merge cells 1 and 2, and merge cells 3 and 4 in row 2 of the table. Centre align all text in row 2 horizontally. Shade all three cells in this row with a light grey background colour.

Merge cell 1 in both rows 5 and 6. Merge cell 2 in both rows 4 and 5. Format each cell in rows 3 to 5 as it specifies in the table.

Replace the text <Your name> with your name.

Save the document.

Advice

A quick method of editing the borders is to click on this diagram.

Change the line widths, colours and turn lines on and off. Create a new table and play with the different options to see what they do.

13.3 Headers and footers

13.3.1 What is a header and footer?

A **header** is the area of a document between the top of the page and the top margin. A **footer** is the area of a document between the bottom of the page and the bottom margin. You can insert text or graphics into headers and footers. This might include the author's name, the document's filename, page numbering, or even a company logo. Headers and footers can be found in many printed documents, including those that have been word processed or desktop published, and in presentations, reports from spreadsheets and databases and in **web pages**.

13.3.2 Why are headers and footers needed?

Headers and footers are needed to make sure that each page (or pair of facing pages) has elements like the page number, book/document/chapter, logo, titles, filename etc. placed consistently within them. If these are placed in the header or footer, they only have to be placed once but will repeat on every (or every other) page. This saves the author a great deal of time and effort, not having to duplicate their work on every page.

13.3.3 Create headers and footers

In all the packages within *Microsoft Office* the headers and footers have already been created and these can be opened, edited, resized etc. rather than created. Most of these application packages use the **INSERT** tab to access the header and footer. *Microsoft Access* uses the design view of a report and has not only page headers and footers but also report headers and footers (see Chapter 18 for further details). Headers and footers are not used in website authoring at this level. Each package has a different method of entry.

Open headers and footers in *Microsoft Word*

Open *Microsoft Word*, then from the **INSERT** tab, find the **Header & Footer** section and select either the **Header** or **Footer** icon.

Some standard themed settings are available for you to choose from if you wish, but I recommend the option to **Edit Header/Footer** is used.

Open headers and footers in *Microsoft Excel*

Open *Microsoft Excel*, then from the **INSERT** tab, find the **Text** section and select the **Header & Footer** icon.

Open headers and footers in *Microsoft PowerPoint*

Open *Microsoft PowerPoint*, then from the **INSERT** tab, find the **Text** section and select the **Header & Footer** icon.

To make the footer visible tick the check box next to footer. If slide numbers are required click on the check box next to slide numbers and then click on Apply to All (see Chapter 19 for more details).

13.3.4 Align headers and footers

Task 13g

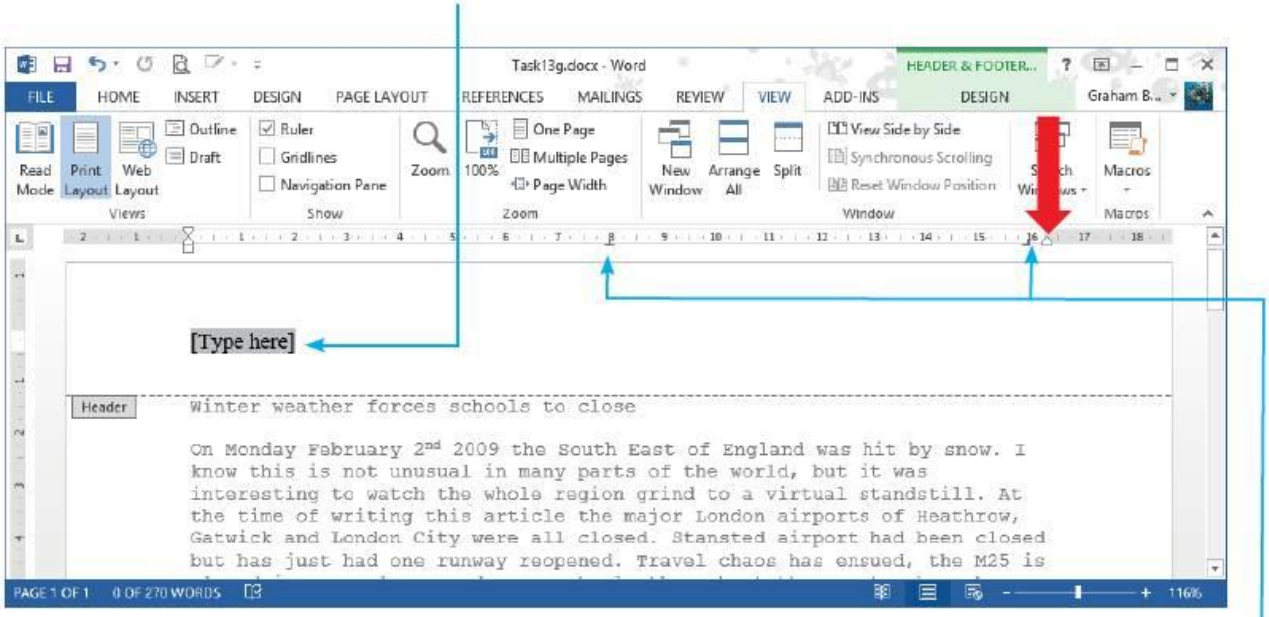
Open the file that you saved in Task 13f.

Add your name on the left in the header, the text 'Historical Study' in the centre of the header and the text 'England 2009' on the right in the header.

Save the document as task13g.

Use the ruler

Open the file task13f in *Microsoft Word*. Make sure that the ruler is visible at the top of the document. If it is not visible select the VIEW tab and in the Show section tick the checkbox next to Ruler. Open the header from the INSERT tab, with Header, then Blank header. Click the left mouse button on the text [Type here] in the header so that it looks like this.



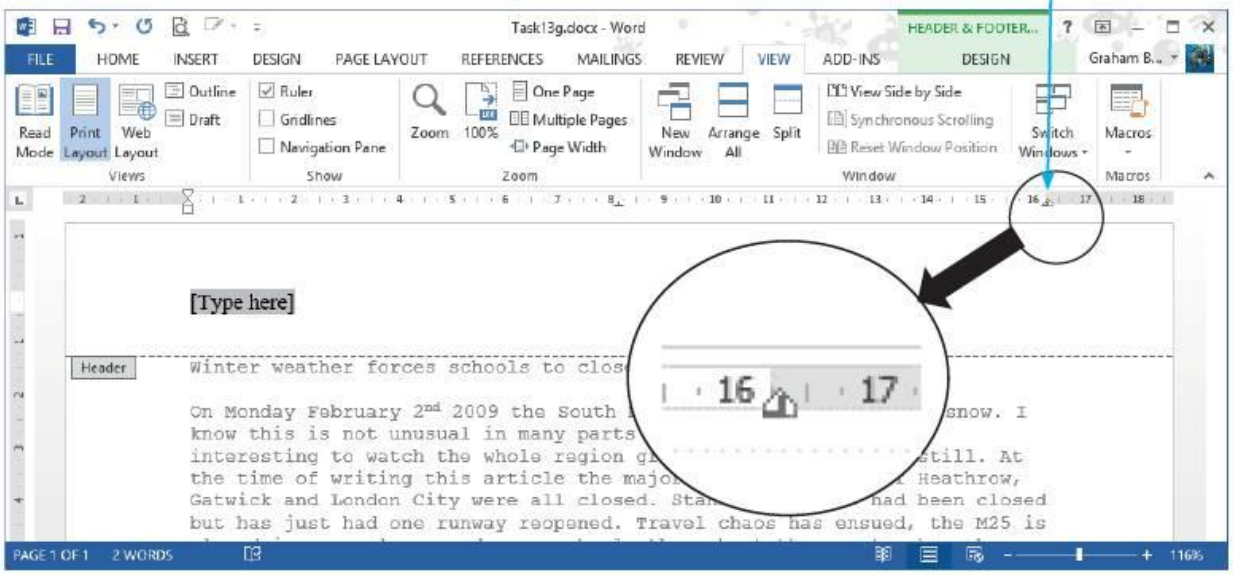
Check the alignment of the tab stops on the ruler before entering any text or object. In this case there are two tab stops placed on the ruler.

The left one of these is a centre aligned tab and show the centre of the page (although it is not precise in this example) and the right-hand tab stop shows the right-hand edge of the page, although we can clearly see that this does not match the full width (shown with the red arrow). These two **must** be placed together for the header to align to the edge of the body text. Grab the right-hand tab stop and drag this so that it sits over the right margin stop. Be careful not to drag the tab stop off the ruler or it will be removed. If this is difficult, hold down the <Alt> key whilst dragging it to stop it snapping to *Word*'s hidden gridlines.

Advice

<Ctrl> <Z> undoes the previous action and is a good tip if a tab stop has been accidentally removed. This will undo your last action.

The right tab stop should look like this.



The right margin and tab stop have been placed at 16.3 centimetres from the left edge. The centre tab stop needs to be placed at 8.15 centimetres (half of this width). Use the left mouse button to drag the centre tab stop to this position.

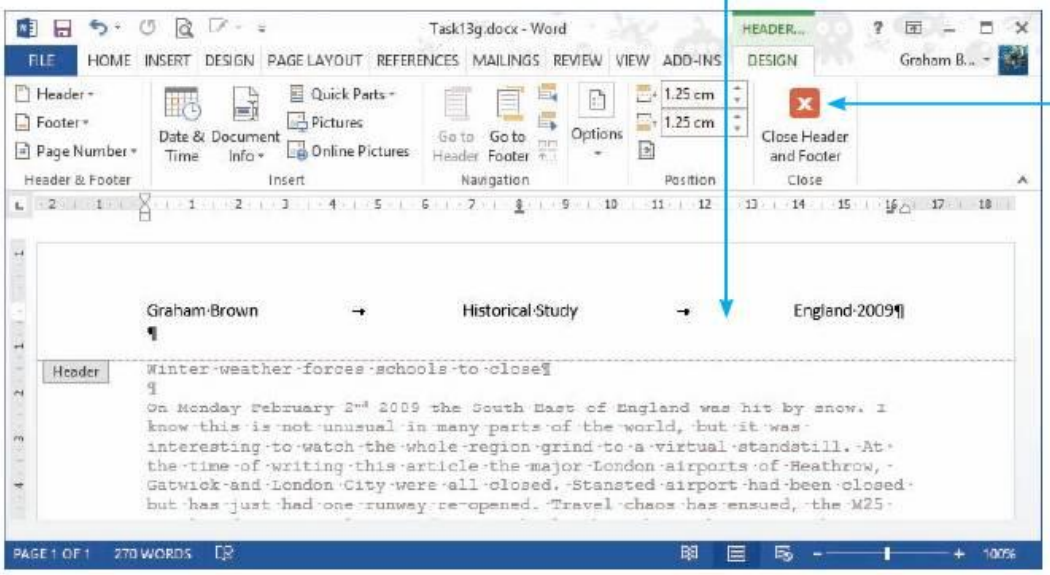
Advice

You can always use the scale at the bottom right corner of the window to zoom in, if positioning the tab stop is difficult.

Click again on the text [Type here] and enter your name. Press the <Tab> key and enter the text 'Historical Study'. As you type this text you will see that it always stays exactly in the centre of the page. Press the <Tab> key again and enter the text 'England 2009'. As you enter it you should notice it always stays right aligned to the tab stops. The finished header looks like this.

Advice

Practise getting absolutely precise measurements for your tab stops.



Double click the cursor in the body text to view the page showing the header and footer or double click on Close Header and Footer to return to Draft

View which will not show you the changes you have just made.
Save your document as task13g.

More on tab stops

There are four types of tab stop that you may need to use. These are:

Type of tab stop	Looks like	What does it do
Left tab	All text and numbers	Aligns tabbed text, so that the left edge of the text is in a fixed position.
Centre tab	All text and numbers	Aligns tabbed text, so that the centre point of the text is in a fixed position.
Right tab	All text and numbers	Aligns tabbed text, so that the right edge of the text is in a fixed position.
Decimal tab	400000.53 4.3 2134	Aligns tabbed text, so that numeric data aligns with the decimal point in a fixed position.

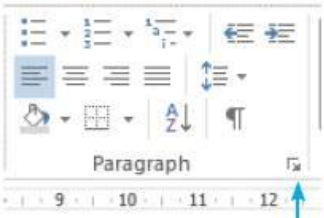
Example:

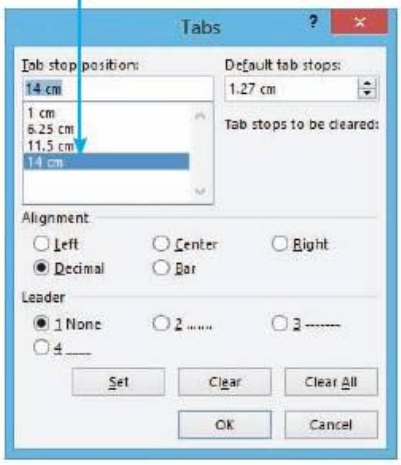
Left	Centre	Right	Decimal
Left tabbed	Centre tabbed	Right tabbed	$0.13
Left again	more centre tabbed	right	$1234.45
Left	Lots of centre aligned text	small right	$23.45

Tab stop positions can be added, edited or cleared from the Tabs window. To open this select the **HOME** tab, In the **Paragraph** section, double click to select the **Paragraph** group's dialog launcher in the bottom right corner.

Then from the paragraph window select the Tabs button.

This can be used to create new tabs, these are the tab stops for the example above.





Task 13h

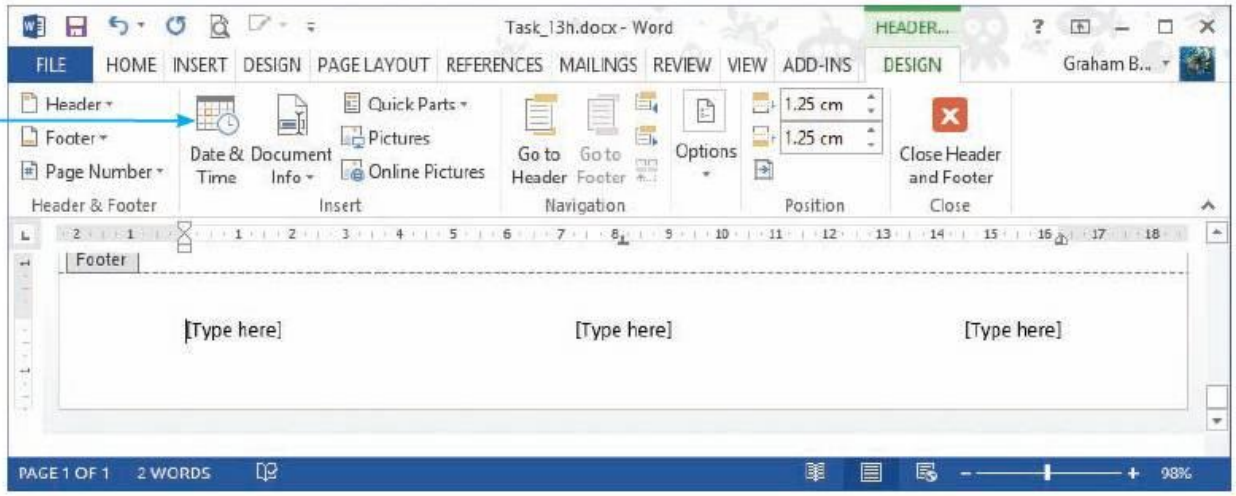
Open the file that you saved in Task 13g.

Place in the footer the text 'Saved on' followed by the date, then the text 'at' and the time on the left, with the page number page in the centre, and the automated filename and file path on the right.

Save the document as task13h.

13.3.5 Place automated objects in headers and footers

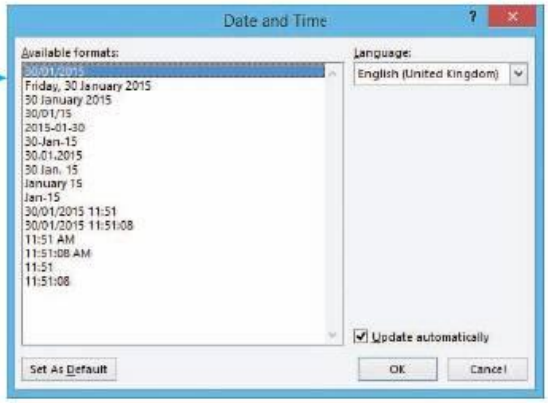
Open the file task13g in *Microsoft Word*. Make sure that the ruler is visible at the top of the document. Open the footer from the INSERT tab, with Footer, then the Blank (Three Columns) footer. Change the position of the right-aligned tab stop so that it precisely matches the page margin. Change the centre tab so that it is placed precisely half-way between the margins, like this (see Section 13.3.4).



Automated date and time

Move the cursor over the left [Type here] and click the left mouse button to highlight it. Enter the text Saved on followed by a space, then click on the icon for Date & Time.

This will open the Date and Time window. Choose an appropriate date format, as the question does not tell you which one to use. This is a portrait page so a shorter version would be better. I have chosen the top option from the menu followed by OK.

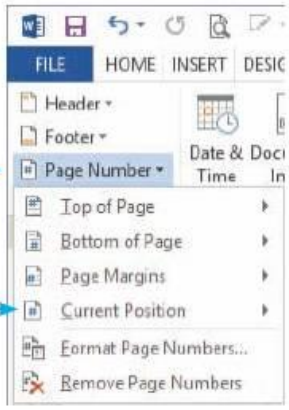


Type another space, the word 'at' followed by another space. Click on the icon for Date and Time and choose an appropriate time format followed by OK.

Automated page numbers

Move the cursor over the centre [Type here] and click the left mouse button to highlight it. Select the icon for Page Number to get the drop-down menu.

As we have moved to the correct position on the page already, click the left mouse button on Current Position. This opens another sub-menu from which you can choose the type of page numbering you require. Again, this is a portrait page so a shorter version would be better. I have chosen the top option Plain Number.

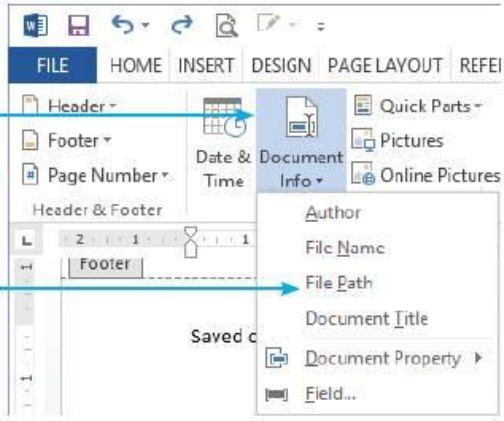


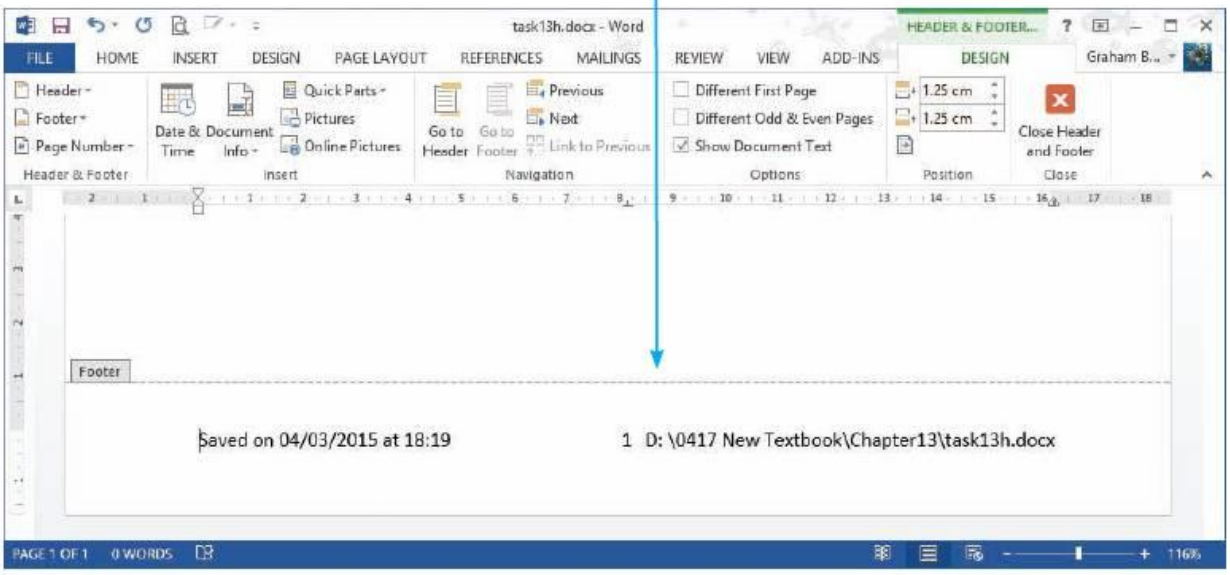
Automated filename and file path

Move the cursor over the text [Type here] and click the left mouse button to highlight it. Select the icon for Document Info to get the drop-down menu.

To add the file name and file path to the footer click the left mouse button on File Path.

Sometimes if you have used long file and folder names, or there is a long file path, the header or footer may look crowded. Do not change the tabs as these will have been set to match the question, even if sometimes it looks unusual like this.





Save your document as task13h.

Activity 13d

Open the document that you saved in Activity 13c. Save it with the filename activity13d.

Place in the header: the text 'Created by' and your name, and an automated filename on the right. Place in the footer: the text 'Page number' followed by an automated page number in the centre, and the text 'Last updated:' followed by the date and time on the right.

Save the document.

14 Styles

In this chapter you will learn how to:

- explain what a corporate house style is
- make sure that all work produced matches specified house styles and has consistency of presentation
- produce documents which conform to a corporate house style
- take into account the audience when creating or selecting a style
- create and edit styles for page layout including: text alignment, spacing between lines, spacing between paragraphs, spacing before and after headings
- create and edit styles including: font type (serif, sans-serif), font face, point size, font colour, text enhancement, bulleted lists, numbered lists
- create and apply paragraph style(s) with a new style name
- produce evidence of the styles you have created.

For this chapter you will need these source files from the CD:

- activity14a.rtf
- activity14b.rtf
- advice.rtf
- lists.rtf.

14.1 Corporate house styles

14.1.1 What is a corporate house style?

Most companies and organisations have a corporate house style. This is sometimes called 'corporate branding'. This can be seen on a company's products, printed stationery (like letterheads and business cards), advertising, websites and often on company vehicles. House style can range from company logos to recognised colour schemes, fonts, point sizes etc. You will probably recognise many international companies' advertising by the colour scheme or other stylistic features that they use, long before you can read the company name on the material. In ICT terms, you should always adopt a specific style for the work that you produce. Anything produced for a company will usually have a logo, colour scheme, font style, paragraph style, page layout (particularly if using headed notepaper), page formatting and defined styles for bullets and numbering.

When you produce work, it is important that you apply these styles to every element that you produce, whether it relates to a document, presentation or any other form of communication, especially when it is for customers or clients. The most important part of applying styles, is to make sure that you have consistency of presentation.

14.1.2 What is the purpose of a house style?

A house style is used to make sure that all documents and other materials from an organisation have consistency. It is used to save time in planning, setting up, creating and formatting documents and other materials. It is also designed to support brand recognition and reduces the risk of mistakes in documents, like typing errors in an address or telephone number, or missing an important element like a logo.

14.1.3 Match the specified house style

You must always make sure that all work produced matches the house styles given to you which may look like these examples.

Example 1 House style for a website

Create and apply the following styles to all web pages:

Style	Definition
h1	Font – Arial Bold, if this is not available Arial, if neither of these fonts are available, the browser's default sans-serif font. 24 point font. Black. Italic.
p	Font – Times, if this is not available Times New Roman, if neither of these fonts are available, the browser's default serif font. 11 point font. Black.
table	Gridlines visible and 2 points thick. Light grey background colour. Foreground colour #100080.

Example 2 House style for a presentation

The master slide must have:

- a yellow background
- a 4 point thick dark blue horizontal line 4 cm from the top of the slide
- the logo logo.jpg placed in the bottom left corner of the screen
- the text **Corporate House Styles** in a navy blue, underlined, 36 point serif font, above the line, with no text wrap, aligned to the right of the slide
- automatic slide numbers in the bottom right corner
- 1st level bullets formatted in a 24 point blue (#0000FF) italic sans-serif font with a hollow disc bullet style.

Example 3 House style for a word-processed document

Create, store and use the following paragraph styles:

	Font style	Font size	Alignment	Enhancement	Line spacing	Spacing before	Spacing after
Heading	sans-serif	24 point	right	bold, italic	Single	0	6 point
Subhead	sans-serif	16 point	centre	underlined	Single	0	6 point
Body text	serif	11 point	left		Single	0	11 point
Bulleted list	serif	10 point	left with 2 cm indent		Single	0	0 point
Header	serif	10 point	to page margins	bold			
Footer	serif	10 point	to page margins	bold			

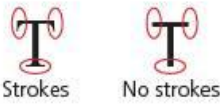
Different techniques are required to apply these styles, each technique being package specific. However, the results would be that each document, web page or presentation slide would have the same formatting, colour scheme and layout. In the case of the website, the styles would be applied in a cascading stylesheet (see Chapter 21), for the presentation the master slide would be created and a theme applied (see Chapter 19) and for a document styles are defined and applied to the text and layout of a the page.

14.1.4 Font styles and sizes

Serif and sans-serif

Text can be changed to have different font faces, colours and sizes and can have a number of enhancements added. These are useful for making text stand out. Font faces are grouped into two main categories: **serif** fonts and **sans-serif** fonts. These are not the name of the font face, but are the generic categories that describe the properties of the font.

A serif font looks like this: **This is a serif font** and a sans-serif font looks like this: **This is a sans-serif font.**



The word 'serif' describes the short strokes at the end of individual letters. Sans-serif fonts do not have these short strokes. If you are asked to set text in a sans-serif font, you must find any font in your word processor that does not have these serif strokes.

Serif fonts are often used in newspapers and books as they are usually easier to read than sans-serif fonts. It would be appropriate to use sans-serif fonts for emphasis or for titles or subtitles. It is not sensible to use more than two different font faces on any page. You can use other enhancements to make text stand out such as bold, italics, underline and highlighting. Other elements like coloured text and backgrounds can also be used to emphasise text.

Font size

Font sizes are measured in points. There are 72 points to an inch (which is just over 2.5 cm). If you are asked to produce text of an appropriate size, for most adults 10 point is appropriate as **body text**, but older readers may prefer 12 point. Anything above 14 point is generally unsuitable as body text for adults, but may be ideal for children. In stories for children learning to read (ages four to six) it may be appropriate to use a 20 or 24 point font size to make it easier to make out the letter shapes. Larger font sizes would also be appropriate as body text for the partially sighted. Much depends upon the target audience.

Font face

The font face is the design of the typeface. Different fonts like Arial, Arial Narrow and **Arial Black** all have the same design for each letter but have different widths. Some fonts can be the same size but appear to be different heights. For example, all of these fonts are 11 points high:

ALGERIAN, *Brush Script Std*, *Edwardian Script ITC* and Arial.

The height of the font is measured using the measurement from the top of the letter with the tallest **ascender** (often the letter 'h'), to the bottom of the one with the longest **descender** (i.e. the bit that descends below the line, often the letter '*f*').

14.2 Create styles in a document

For this chapter we will focus on the application of styles within a word-processed document. The document contains layout and font styles. In *Microsoft Word*, the layout styles are stored in a document template which is usually hidden from you. As you create a new document, a set of default styles are applied to it. They include the page orientation, margin settings, settings for the header and footer as well as different font styles which *Microsoft* have called 'Themes'.

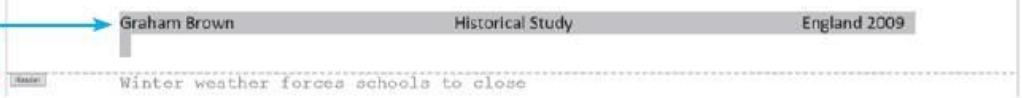
Open the file task13h in *Microsoft Word*. Save this as task14a. We will start in the header. Open the header of the document and highlight all the text in the header, like this.

Task 14a

	Font style	Font size	Alignment	Enhancement	Spacing
Header	serif	10 point	to page margins	bold	
Footer	serif	10 point	to page margins	bold	

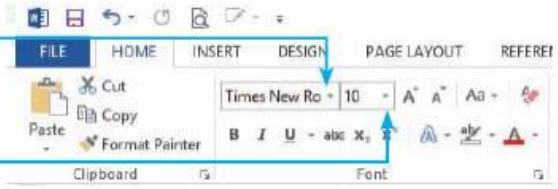
Open the document you saved as task13h. Create, store and use the following styles in this document.

Save the document as task14a.

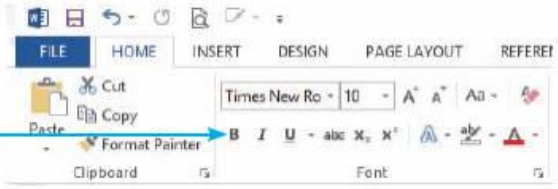


Select the HOME tab. In the Font section find the drop-down menu for the font face.

Set the font face to Times New Roman which is a serif font. Set the Font Size to 10 point using the drop-down menu next to the font size.



The text in the header does align to the page margins (you took great care getting that right in Chapter 13) so the last part of this style is to embolden (add the bold enhancement) to this text. With all the header text highlighted select the HOME tab and in the font section click on the icon for bold.



The header will now look like this.

Graham Brown **Historical Study** **England 2009**

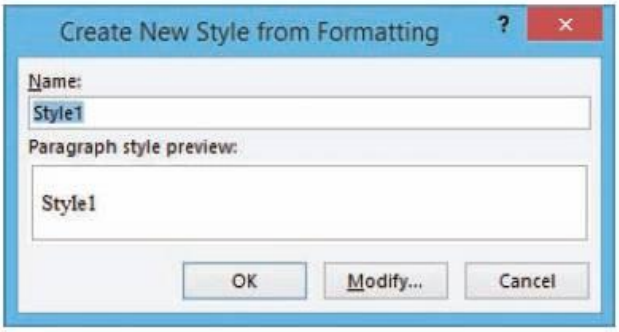
Advice

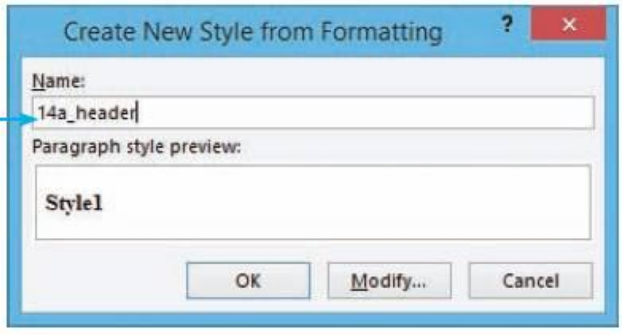
Another way of making text bold in *Microsoft Word* is by pressing <Ctrl> and <B> together.

As you are in the header the title bar should show HEADER & FOOTER TOOLS and the tab should change to the DESIGN tab.

With the header highlighted, click the lower drop-down menu button for the Styles section.

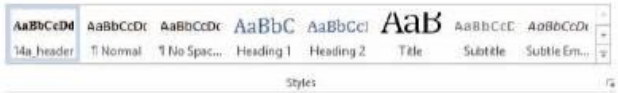
The list of defined styles will expand and give an option to Create a Style. Click on this option to open the Create New Style from Formatting window, like this.





Enter a Name: for this style, for example: 14a_header (to help us remember that is the style set for the header in Task 14a). To view or edit the details of the style you can use Modify..., but as the style looks correct, click on OK.

This new style has been defined and now appears in the list of available styles.



Move to the footer of the document. Before setting the styles, check the footer contents. The automated file name and path have not have changed.

Saved on 04/03/2015 at 18:49 1 D:\0417 New textbook\Chapter 13\task13h.docx

Your file path will not be the same as the one shown here. To update this, click the right mouse button on the filename/path to get the drop-down menu. Click on Update field. The filename will have changed to look similar to this.

Saved on 04/03/2015 at 18:48 1 D:\0417 New textbook\Chapter 14\task14a.docx

Highlight all of the footer, select the HOME tab then click the left mouse button on the style you called 14a_header.

Saved on 04/03/2015 at 18:48 1 D:\0417 New textbook\Chapter 14\task14a.docx

The footer should change from this to this.

Saved on 04/03/2015 at 18:55 1 D:\0417 New textbook\Chapter 14\task14a.docx

Save the document.

Task 14b

Open the document you saved as task14a. Add the text 'Winter wonderland or woe?' as a new main heading at the start of the document. Create, store and use the following styles in this document.

	Font face	Font size	Alignment	Enhancement	Line spacing	Spacing before	Spacing after
Heading	sans-serif	24 point	right	bold, italic	Single	0	6 point
Subheading	sans-serif	16 point	centre	underlined	Single	0	6 point
Body text	serif	11 point	left		Single	0	11 point

Save the document as task14b.

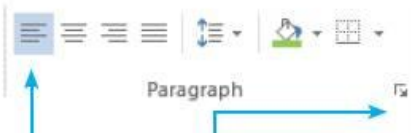
Advice

Use the ¶ Show/Hide icon from the home tab to show all hidden characters like returns and tabs.

Open the document that you saved in Task 14a. Move to the top of the document and add the text 'Winter wonderland or woe?' as a main heading before the subheading 'Winter weather forces schools to close'. Remove all blank lines from the document using the cursor and <Delete> key.

When defining the font styles, always start with the body text. Many people start by highlighting all the text using <Ctrl> and <A>, but for this task, just highlight the first paragraph. This will let you practise applying this style to the other paragraphs later.

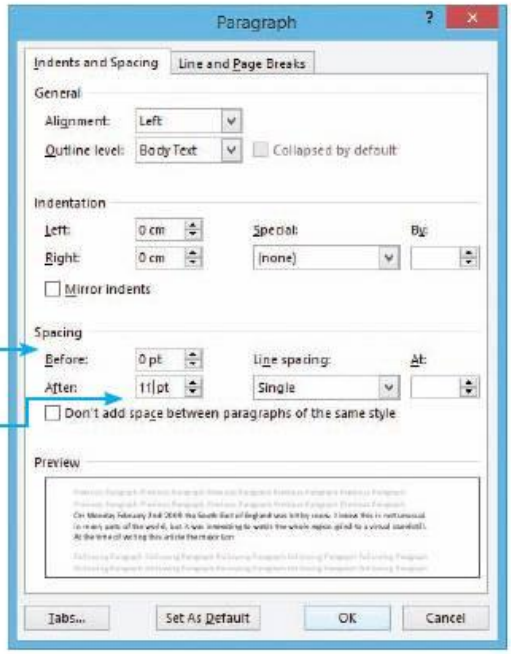
Select the HOME tab. In the Font section, set the font face to Times New Roman. Set the Font Size to 11 point using the drop-down menu. In the Paragraph section, select the text alignment to left using this icon.



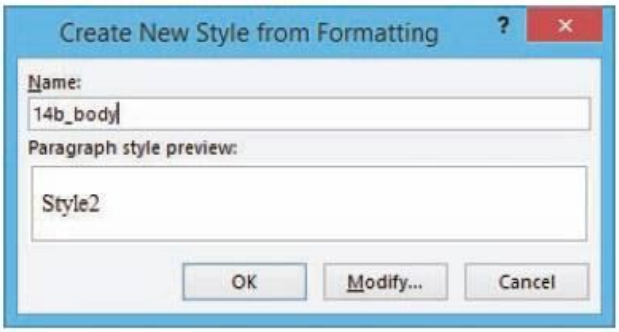
In the Paragraph section select the Paragraph Settings arrow to open up the Paragraph window. Move to the Spacing section.

Select Single for the Line spacing: and type the value (sometimes you can use the up and down arrows) in the After: box.

Click on OK to format this paragraph. From the HOME tab click the lower drop-down menu button for the Styles section.

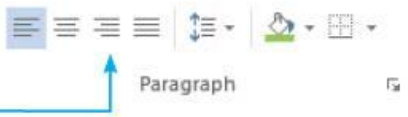


Click on **Create a Style** to open the **Create New Style from Formatting** window. Enter a **Name:** for this style, for example: **14b_body** (to help us remember that is the style set for the body text in Task 14b). To view or edit the details of the style you can use Modify..., but as the style looks correct, click on OK.

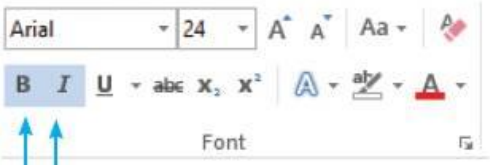


Click the cursor into each paragraph in turn, then then click the left mouse button on the style you called 14b_body.

Highlight the text for the main heading. In the **Font** section, set the font face to **Arial** which is a sans-serif font (i.e. it does not have serifs). Set the **Font Size** to **24** point. In the **Paragraph** section, select the text alignment to the right using this icon.



Open up the **Paragraph** window (as described on the previous page). In the **Spacing** section, leave the line spacing as single (as no spacing has been specified), but change the **After:** to **6** point. Click on OK to close this window. With the heading still highlighted, go to the **Font** section and click the left mouse button on the icon to embolden the text (i.e. to make it bold).



Click the left mouse button on the icon to italicise the text (i.e. to make it italic). From the **Styles** section, use **Create a Style** to open the **Create New Style from Formatting** window. Enter a **Name:** for this style, for example: **14b_heading**, then click on OK.

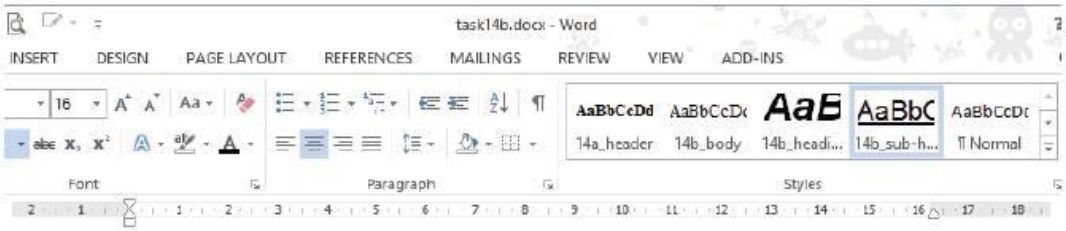
Use the same method to set the font style to the same sans-serif font (Arial) as the heading style. It is good practice to use as few fonts as possible within a document, two or three are acceptable. Set the size to 16 point and spacing as for the heading style. To centre align the text, move to the **Paragraph** section and use this icon.

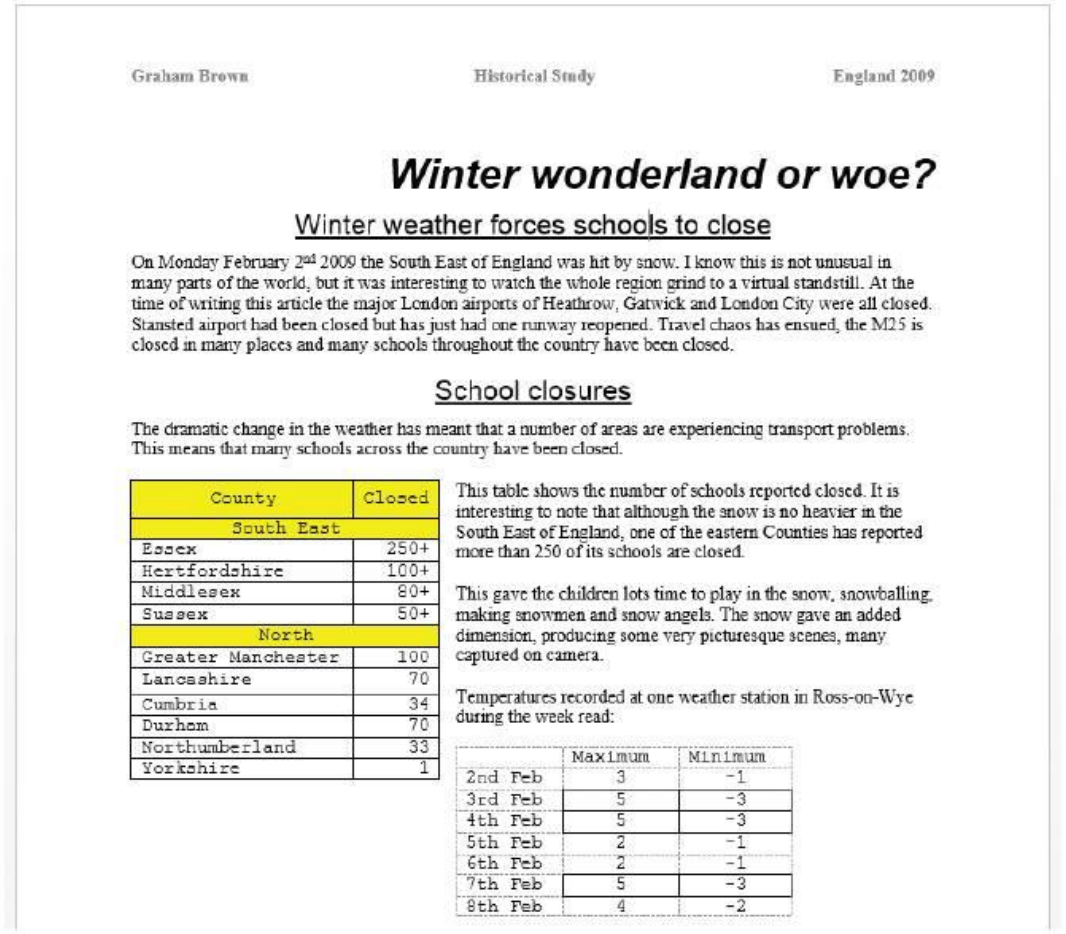
In the **Font** section select the underline icon.

Use **Create a Style** and call this style **14b_sub-head**. Click on each subheading in turn and click on this style. Save the document which should look similar to the one shown on the next page.

Advice

If you are asked to enhance text (e.g. ... make this text bold ...), do not use other enhancements as well (e.g. underline or italic).





Graham Brown Historical Study England 2009

Winter wonderland or woe?

Winter weather forces schools to close

On Monday February 2nd 2009 the South East of England was hit by snow. I know this is not unusual in many parts of the world, but it was interesting to watch the whole region grind to a virtual standstill. At the time of writing this article the major London airports of Heathrow, Gatwick and London City were all closed. Stansted airport had been closed but has just had one runway reopened. Travel chaos has ensued, the M25 is closed in many places and many schools throughout the country have been closed.

School closures

The dramatic change in the weather has meant that a number of areas are experiencing transport problems. This means that many schools across the country have been closed.

County	Closed
South East	
Essex	250+
Hertfordshire	100+
Middlesex	80+
Sussex	50+
North	
Greater Manchester	100
Lancashire	70
Cumbria	34
Durham	70
Northumberland	33
Yorkshire	1

This table shows the number of schools reported closed. It is interesting to note that although the snow is no heavier in the South East of England, one of the eastern Counties has reported more than 250 of its schools are closed.

This gave the children lots time to play in the snow, snowballing, making snowmen and snow angels. The snow gave an added dimension, producing some very picturesque scenes, many captured on camera.

Temperatures recorded at one weather station in Ross-on-Wye during the week read:

	Maximum	Minimum
2nd Feb	3	-1
3rd Feb	5	-3
4th Feb	5	-3
5th Feb	2	-1
6th Feb	2	-1
7th Feb	5	-3
8th Feb	4	-2

Activity 14a

Open the file **activity14a.rtf**. This document has four headings, a table, a bulleted list and body text. Add your name to the left in the header. Add an automated date and time on the right in the footer. Create, store and use the following styles in this document.

	Font style	Font size	Alignment	Enhancement	Line spacing	Spacing before	Spacing after
Heading	sans-serif	20 point	centre	bold, underlined	single	12 point	6 point
Body text	serif	12 point	fully justified		1.5	0	6 point
Header	sans-serif	12 point	to page margins	italic			
Footer	sans-serif	12 point	to page margins	italic			

Do not format the table or bulleted list. Save and print this document.

14.2.1 Editing styles in a document

Task 14c

Open the document you saved as task14b.

Change all the subheading styles to have a dark blue font with a yellow highlighted background.

Save the document as task14c.

Open the document that you saved in Task 14b. Highlight the top subheading. Select the **HOME** tab and in the **Font** section click the left mouse button on the small triangle to the right of the **Font Colour** icon.

This opens a colour palette, which looks like like this.

Select a dark blue font colour from the pallete, if the exact colour you are looking for is not present you can use the more colours option to see more. For this task the dark blue in the standard colours section looks ideal so select that one.

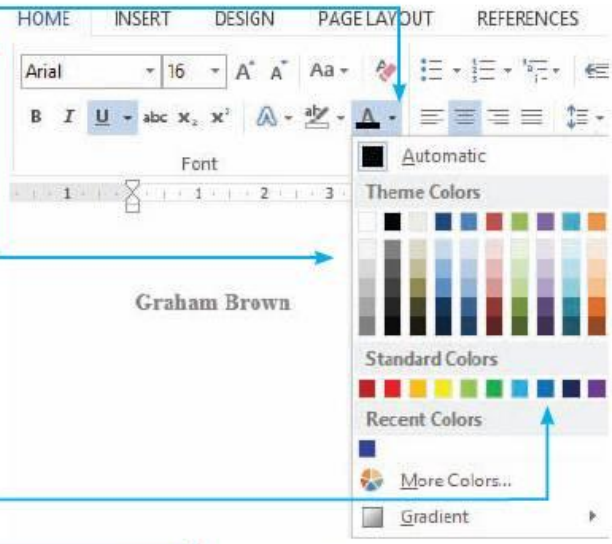
With the subheading still highlighted, left click the mouse button on the small triangle to the right of the **Text Highlight Colour** tool.

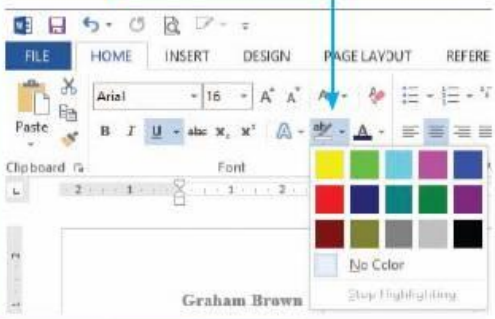
This opens the text highlighter palette. Select the yellow highlighter colour which will highlight the selected text. To change the style we created for the subheading, move the cursor to the **Styles** section and right mouse click on the style **14b_sub-head** to open a drop-down menu. Use the left mouse button to select the option for **Update 14b_sub-head to Match Selection**.

You will notice that the colour of the font has changed in the style, you have modified that part of the style but the highlighting has not appeared.

That is because not every feature of the word processor can be set into a document's saved styles. The new style has been applied to every subheading in the document, without the need for you to change the colour by hand.

As the highlighting does not save with the styles, which will need to be completed for each subheading, in this case just the one, but in a large document that could be time consuming. Highlight the subheading **School closures** in yellow. Save the document as task14c.





14.2.2 Use format painter

If you need to copy the formatting from one part of a document and apply it to another, for example if you have just set some text red and emboldened and want to copy that formatting onto another area of text you can use the **format painter**. Place the cursor within (or highlight) the text you wish to copy the formatting from and click the left mouse button. Select the HOME tab. In the Clipboard section, click on the Format Painter icon. Move the cursor to the text that you wish to format. If it is a single word then click the left mouse button anywhere within that word. If the area is more than one word, highlight the new text and the formatting from the original text will be applied to this text.

Format painter is very useful for copying styles in spreadsheets and presentations as well as in word processing.

Advice

Use the Format Painter with care, it copies paragraph formatting as well as font formatting. For example, if the area copied from is part of a bulleted list, when the format is applied, the new text also becomes a bulleted list in the same style.

14.2.3 Use lists

There are two types of list that you need to know about: bulleted lists and numbered (or sometimes lettered) lists. Bulleted lists contain a bullet point (character) at the start of each line to show that it is a new item in a list of other similar items.

Task 14d

Open the file **lists.rtf** and place your name on the right in the header in a 14 point serif font. Place the filename in the centre of the footer.

Change the 11 items listed into a bulleted list. Use a bullet of your choice. Make sure that this bulleted list is indented by at least 3 cm.

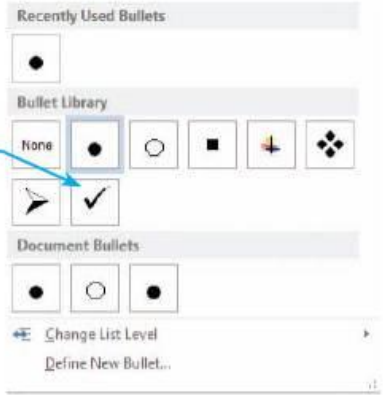
Set items 2 to 6 inclusive as a sub-list with a different bullet of your choice, indented by at least 4 cm.

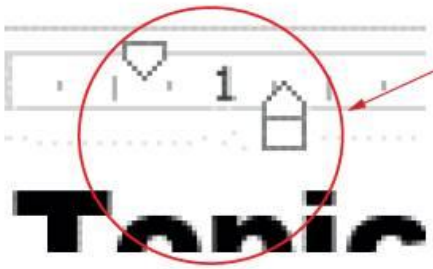
Save the file as task14d.

Open the file and create the header and footer as described earlier. To add bullet points to a list, highlight all of the text to be added, in this case all 11 items. Select the HOME tab, the Paragraph section and click on the Bullets icon.

This will place bullet points next to each of the list items. To choose the type of bullets used, select the drop-down handle instead of the icon.

Select the type of bullet point that you require from Bullet Library. In this case, you can choose any symbol like the ✓. The bulleted list will look like this.





Topics covered so far in Chapter 14

Whilst studying Chapter 14, I have learnt how to:

- ✓ create new styles for:
- ✓ headers
- ✓ footers
- ✓ body text
- ✓ headings
- ✓ subheadings
- ✓ edit styles after they have been defined
- ✓ set font styles and sizes
- ✓ emphasise text
- ✓ use format painter
- ✓ use lists

Notice how the bulleted list has been indented automatically in from the left margin, although not by at least 3 cm. To indent it further, you need to change the paragraph setting on the ruler.

Highlight all the bulleted list. On the ruler, click the left mouse button on the rectangle (not the triangle) and hold it down whilst dragging the handle to the right. Make sure that both handles are more than 3 cm to the right of the margin. The finished ruler should look like this.

Advice

If the ruler cannot be seen at the top of the page, use the VIEW tab, and tick the checkbox for Ruler.

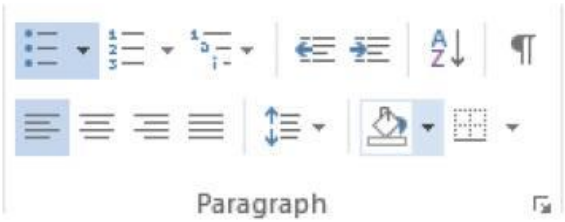
The bulleted list will now be indented like this.

Topics covered so far in Chapter 14

Whilst studying Chapter 14, I have learnt how to:

- ✓ create new styles for:
- ✓ headers
- ✓ footers
- ✓ body text
- ✓ headings
- ✓ subheadings
- ✓ edit styles after they have been defined
- ✓ set font styles and sizes
- ✓ emphasise text
- ✓ use format painter
- ✓ use lists

To create the sub-list, highlight only items 2 to 6 (headers to subheadings). Click the left mouse button on the Increase Indent icon.



You may need to click this a few times to move the indented sub-list far enough to the right.

Select the type of bullet point that you require from Bullet Library for this sub-list. Save the document.

Topics covered so far in Chapter 14

Whilst studying Chapter 14, I have learnt how to:

- ✓ create new styles for:
  - headers
  - footers
  - body text
  - headings
  - subheadings
- ✓ edit styles after they have been defined
- ✓ set font styles and sizes
- ✓ emphasise text
- ✓ use format painter
- ✓ use lists

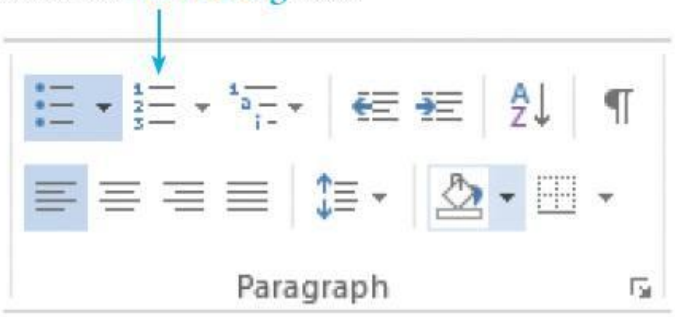
Task 14e

Open the file saved in Task 14d.

Change the first level bulleted list into a numbered list using arabic numerals, and the second level list into a lettered list starting with a).

Save the file as task14e.

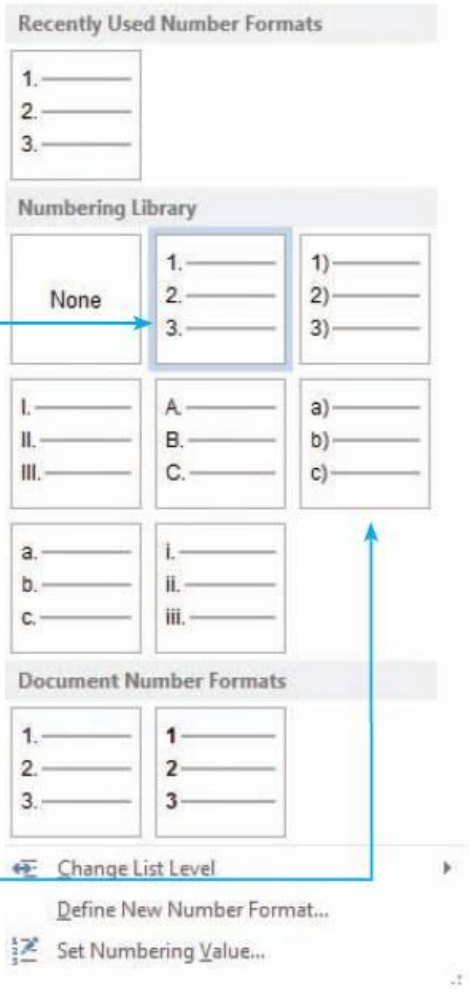
Open the file and highlight the entire bulleted list. Select the HOME tab, the Paragraph section and click on the Numbering icon.



This will place numbers next to each of the list items. To choose the type of numbering used, select the drop-down handle instead of the icon.

Select the type of numbering that you require from Numbering Library. In this case you can choose the arabic numerals as that was specified in the task. The extra indentation for the first level bullet points has been lost, so this will require you to reset the tab stop positions for these items.

Highlight the second level bullets and move the tab stop to the correct position. Again use the Numbering Library from the drop-down list to choose the correct formatting for these items. It should look like this.



Make sure that, if the bulleted list contains short items that would make up the end of a sentence, it has a colon before the list, each list item starts with a lower case character and only the last item in the list has a full stop. Add the full stops to the appropriate places before you save the file.

Word will often try to place capitals on each list item, but this is not correct as each one is not a new sentence. You must adjust these to get a list looking like this.

Topics covered so far in chapter 14

Whilst studying chapter 14, I have learnt how to:

1. create new styles for:
   a) headers
   b) footers
   c) body text
   d) headings
   e) subheadings.
2. edit styles after they have been defined
3. set font styles and sizes
4. emphasise text
5. use format painter
6. use lists.

Activity 14b

Open the file **activity14b.rtf** and place your name on the left, today's date in the centre and the filename on the right in the header. Make the blue text into a bulleted list, using a bullet of your choice. Make sure that this bulleted list is indented by at least 2 cm. Make the green text into a numbered list, using numbers followed by a bracket. Make the red text into a bulleted sub-list, indented from the numbered list using different bullet points. Change the colour of all the text to black.

Save the file with a new name.

14.2.4 Define styles for lists

Task 14f

Open the document you saved as task14c.

Add the contents of the file **advice.rtf** before the paragraph that starts 'Temperatures …'.

Create, store and use the following styles in this document.

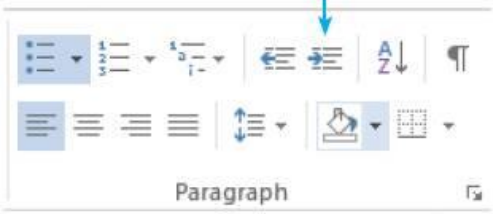
	Font face	Font size	Alignment	List type	Line spacing	Spacing before	Spacing after
List – level 1	serif	11 point	Left – indent 1 cm	Numbered list	Single	0	0
List – level 2	serif	11 point	Left – indent 2 cm	Bulleted list with arrow	Single	0	0

Save the document as task14f.

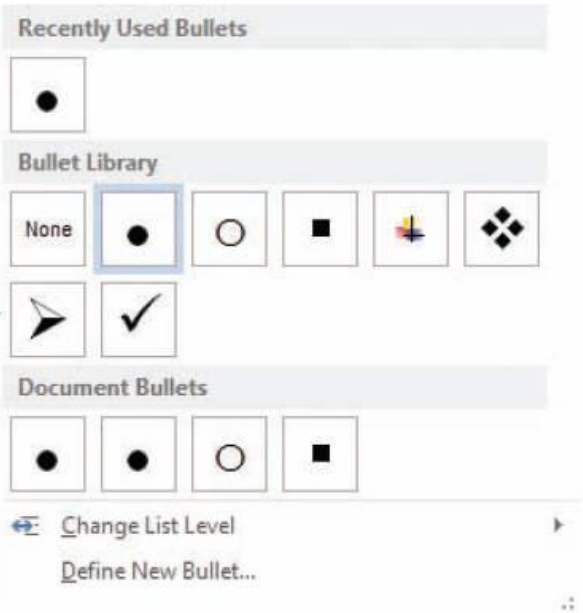
Open the file task14c and **advice.rtf** in your word processor. Copy and paste the contents of **advice.rtf** into the document before the paragraph that starts 'Temperatures …'. Click inside the paragraph that starts 'The United States government …' and set the style to 14b_body that you defined earlier.

Start by setting up the first level bullet style on the single line that starts 'Before winter approaches …'. When you set this text to an 11 point serif font, you must use the same font as the body text, so it is easier to use format painter from the body text, then to change the list type to a numbered list select the numbered list icon.

Change the indent to exactly 1 cm using the ruler. Change the line spacing to single line with no spacing before and after. From the Styles section, use Create a Style. In the Create New Style from Formatting window, enter a Name: for this style, for example: List-L1, then click on OK. To set up a style for the second level list, apply the new style List-L1 to the single line that starts 'Rock salt or more …'. Click the left mouse button on the Increase Indent icon.



Then click on the select the drop-down handle next to the Bullets icon. Select the type of bullet point that you require from Bullet Library. In this case choose an arrow to match the question.



From the Styles section, use Create a Style. In the Create New Style from Formatting window, enter a Name: for this style, for example: List-L2, then click on OK.

Highlight all the other level 2 bullets in the document and click on the List-L2 style.

Highlight the other two level 1 lists in the document and click on the List-L1 style.

Save the document as task14f. The completed list should look like this.

website. The United Kingdom government did not offer similar advice to its citizens. The advice from the United States is to prepare for a winter storm by doing the following:

1. Before winter approaches, add the following supplies to your emergency kit:
   - Rock salt or more environmentally safe products to melt ice on walkways.
   - Sand to improve traction.
   - Snow shovels and other snow removal equipment.
   - Sufficient heating fuel. You may become isolated in your home and regular fuel sources may be cut off. Store a good supply of dry, seasoned wood for your fireplace or wood-burning stove.
   - Adequate clothing and blankets to keep you warm.
2. Make a Family Communications Plan. Minimize travel. If travel is necessary, keep a disaster supplies kit in your vehicle.
3. Bring pets/companion animals inside during winter weather. Move other animals or livestock to sheltered areas with non-frozen drinking water.

Temperatures recorded at one weather station in Ross-on-Wye during the week read:

Activity 14c

Open the file you saved in Activity 14a. Save this file as activity14c. Edit and update the contents of the footer.

Create, store and use the following styles in this document.

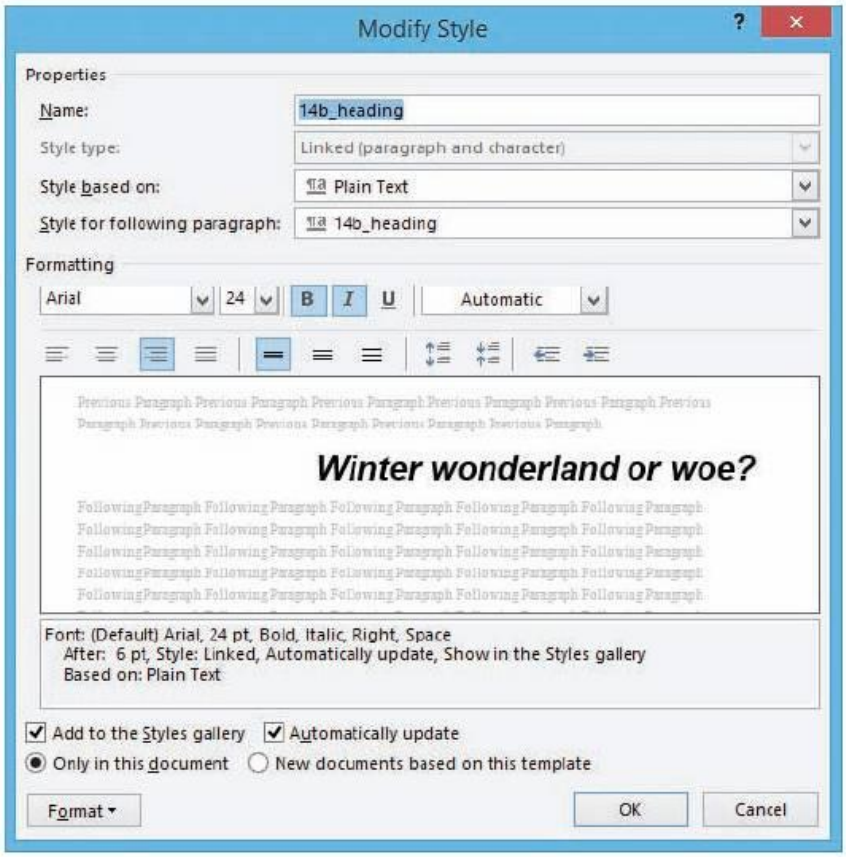
	Font face	Font size	Alignment	List type	Line spacing	Spacing before	Spacing after
List level 1	serif	12 point	Left – indent 1.5 cm	Bulleted list with arrow	Single	0	0
List level 2	serif	12 point	Left – indent 3 cm	Bulleted list with square bullet	Single	0	0

Save the file with a new name.

14.2.5 Evidence of your styles

If you are required to produce evidence of the styles you have created or amended, select the HOME tab. In the Styles section, click the right mouse button on the style that you have defined and want to evidence.

Select Modify from the drop-down list to open the Modify Style window. Hold down the <Alt> key and press <Prt Scr> to copy a screen shot of this window into the clipboard. This can then be pasted as evidence of your method.



Advice

Do not create a screen shot with the mouse hovering over a style in the Styles window. Whilst this shows much of the style definition it does not show the font face that you have selected.

15 Proofing

In this chapter you will learn how to:

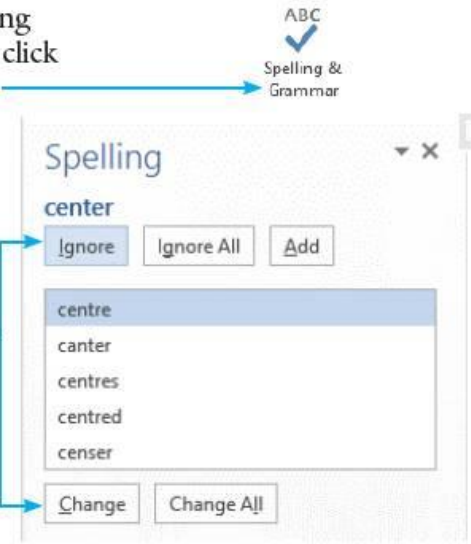
- use software tools to ensure that all work produced contains as few errors as possible
- explain why spell check software does not always give the correct response
- use spell check and grammar check to remove errors
- select the most appropriate type of validation check
- use validation to restrict data entry in databases and spreadsheets
- describe the importance of accurate data entry
- describe the potential consequences of data entry errors
- identify and correct errors in data entry
- define the term 'verification'
- verify data entered into a computer system
- describe visual verification
- describe double data entry
- explain the need for validation as well as verification
- explain why proofreading and other forms of proofing are needed.

For this chapter you will need these source files from the CD:

- activity15a.rtf
- gym.csv.

15.1 Software tools

You will need to spell check all word-processed documents before submitting them for assessment. Select the REVIEW tab and in the Proofing section click on the Spelling & Grammar icon. The spelling and grammar check starts automatically. Any words or phrases found in a document that are not in the dictionary will be flagged as an error. Do not worry about the differences in spelling that can occur with dictionaries from different regions, for example 'centre' and 'center'. Be careful not to change the spelling of names, especially of companies, people or places. Each time an error is flagged, read it carefully and decide whether to change or ignore the spelling, using the buttons in the pane.



15.1.1 Spell check

You need to make sure that your work is spelt correctly and contains no data entry errors or 'typos' (these are mistakes that you make when typing in the data). Errors may already exist in the documents you have to work on. Sometimes these are spelling errors which look like this: → speeling. Errors like this need correcting.

What is spell check?

Spell check is a test carried out by the word processor on the text. As you work, it checks each word and compares it to those held in its dictionary. If the words match then the word processor moves on and checks the next word. If the word does not match one in the dictionary, then it uses a red wavy underline to highlight the word to suggest it may be an error.

Does the spell check always work?

If the word processor shows the red wavy underline, it may not be a spelling error. The red underline tells you that *Word* has compared this word to its dictionary and not found a match. Sometimes, as in the case above, it is a spelling

error; at other times words like 'Tawara' are flagged as a spelling error because the dictionary does not have the name of this (made-up) place within it. When a person's name is entered into a word processor, some names will be shown as an error and other names will not.

Suggested spellings

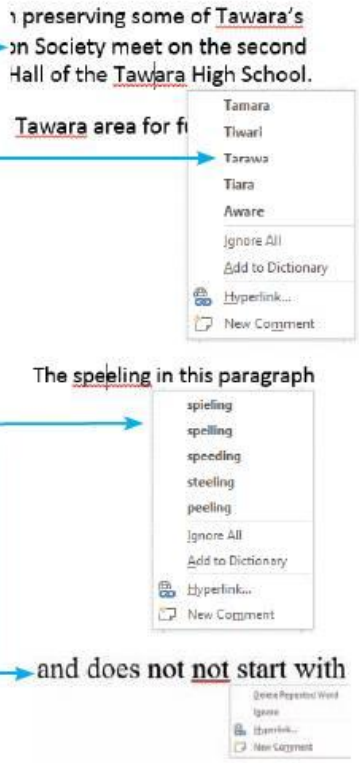
When *Word* shows you an error, right mouse click on it and a drop-down menu of suggested words will appear, like this.

For the word 'Tawara' no change needs to be made, but in the case of a genuine error like this, a list of suggested words is shown. Choose the word which is the most appropriate, in this case it would be 'spelling'.

Other errors

Sometimes other errors may be flagged as spelling errors, like this.

This example shows a repeated word 'not' which needs removing. Delete the extra word to correct this error.



15.1.2 Grammar check

What is a grammar check?

You may need to check for grammar errors in your answers to theory questions or evaluations. You will not need to correct grammar errors shown in text provided for you. A grammar error is shown with a blue wavy underline like this.

In this case it is not a proper sentence and does not start with a capital letter. Edit the text (by deleting the extra word) to correct this type of error.

Activity 15a

Open the file **activity15a.rtf**. Remove all errors, save and print the document.

15.1.3 Validation routines

What is validation?

Validation is checking that data entered is reasonable. It is often a process where data is checked to see if it satisfies certain criteria when input into a computer, for example, to see if data falls within accepted boundaries. For further details of validation, including the types of validation, see Section 7.2.

Appropriate type of validation

In practical examinations you may be required to apply appropriate validation rules in the data handling or data analysis sections. It is important that for each question you review all the different validation types, and decide which would be most appropriate, for example you would not use a type check on a book title as book/movie titles can contain any type of character (in fact you would be unlikely to find a validation check of any kind to check this type of data). A length check would not pick up transposed digits in an ISBN but could be used as well as a check digit for double checking. Another example is that a range check is unlikely to be appropriate on a bar code.

Task 15a

The data file **gym.csv** will be used both to create a database and in a spreadsheet. Select the most appropriate validation type for the month field in this data.

Examine the data in the file **gym.csv**. Using the list of validation types in Section 7.2 compare each type of check to see if it could be applied to the data in the month field. Use a table similar to the one below to help you.

Validation check	Appropriate?	Selected?
Range check	Yes, Select integer, >0 AND <13	Yes
Length check	Yes, Restrict to 2 characters, but would not stop 13, 14 etc.	
Character/type check	No, database would restrict to numbers if numeric data selected. Yes in spreadsheet, need to check numeric not text, but would not restrict to correct values.	
Format/picture check	No.	
Limit check	No, would only restrict one end of the range.	
Presence check	Yes, would be appropriate but would only check something had been entered.	
Consistency check	No, this is a single field with no other related field/s.	
Check digit	No.	

After working through each type of validation check, it is most appropriate to use a range check.

Task 15b

Create a database with the file **gym.csv**. Validate the month field.

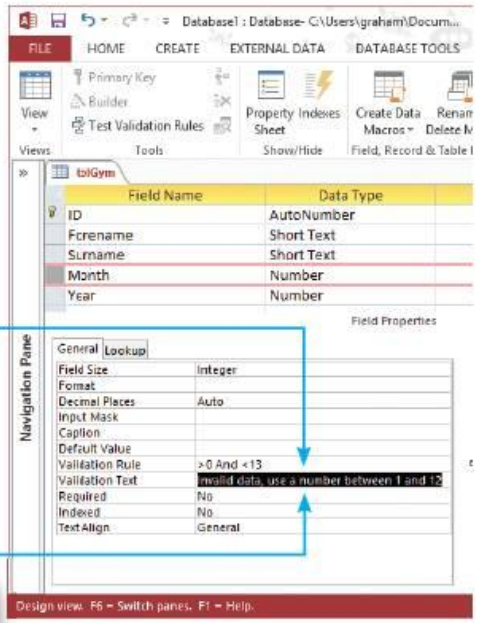
Validation in *Access*

Using the methods shown in Chapter 18, examine the file **gym.csv** and use it to create a new database. Open the table in **Design View** and select the **Month** field. In the **General** tab, move the cursor into the **Validation Rule** box.

We decided above that the most appropriate validation rule to apply to this field was a range check with >0 AND <13. The field has already been set to a numeric field with Integer sub-type. Type the validation rule into this box.

In the **Validation Text** box add suitable text that tells the user that they have made a data entry error and gives them information as to what is acceptable data for this field. It may look like this.

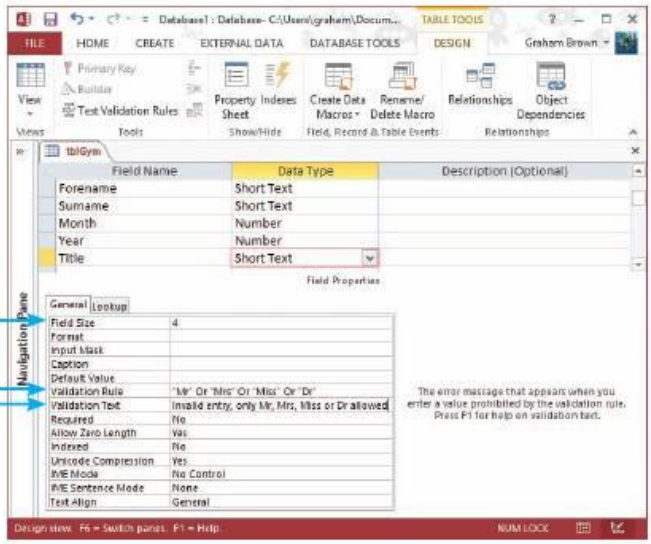
Save the database.



Task 15c

Add to the database saved in Task 15b, a new field called <Title>. Validate this field to make sure only Mr, Mrs, Miss, or Dr are allowed.

Open the database saved in Task 15b and using the methods shown in Chapter 18, add a new field called **Title** to the **Gym** table with the data type **Text**. Set the **Field Size** to 4 characters, as 'Miss' is the longest entry and this has four letters. Set the **Validation Rule** for this field to restrict the data entry to only 'Mr', 'Mrs', 'Miss' or 'Dr'. Add an appropriate message as **Validation Text**. The finished field should look similar to this.



Open the table and add a new record to the database. Try entering this date: 14/14/1992, and this title: 'Ms'. What happens and why?

Save the database.

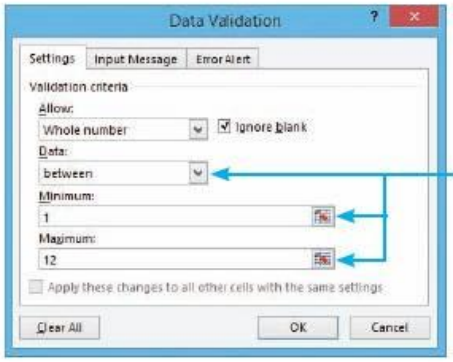
Task 15d

Create a spreadsheet with the file **gym.csv**. Validate the cells in rows 2–30 of the month column.

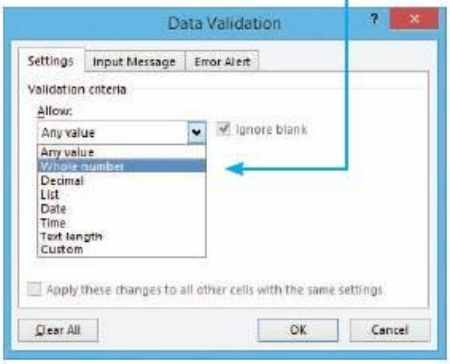
Validation in *Excel*

Using the methods shown in Chapter 20, examine the file **gym.csv** and use it to create a new spreadsheet. We decided above that the most appropriate validation rule to apply to this field was a range check with >0 AND <13. Highlight cells C2 to C26. Select the **DATA** tab, then in the **Data Tools** section, select the **Data Validation** icon.

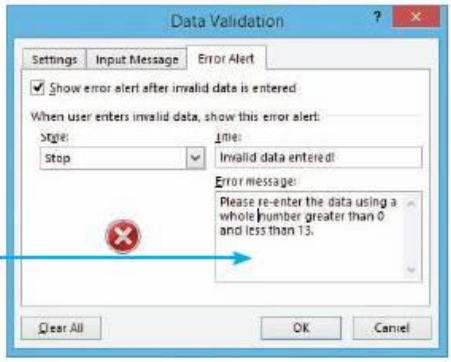
This opens the **Data Validation** window. Click to select the **Settings** tab (if it is not already selected), and move the cursor into the **Allow:** section. Select the drop-down list, then choose **Whole number** to make sure that only integers can be entered into these cells. When this value has been selected more options appear within this window.



From the drop-down list in the **Data:** box, select **between** (if it is not already selected). Using 'between' in *Excel*, means that you have to give the smallest and largest acceptable values. In the **Minimum:** box enter 1, (which is extreme data as it is the smallest acceptable value) and in the **Maximum:** box enter 12.



Select the **Error Alert** tab. Select an appropriate title for this error message and enter it in the **Title:** box. In the **Error message:** box enter a similar message to the one entered in Task 15b. It may look like this.

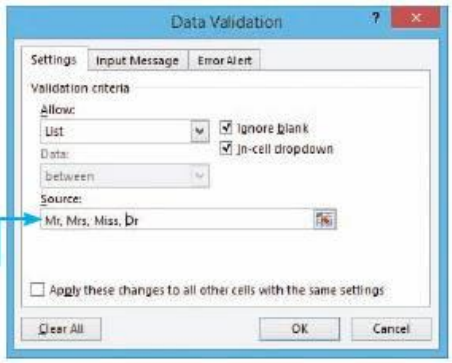


Click on OK. Test your validation routine with normal, abnormal and extreme data. Save the spreadsheet.

Task 15e

Add to the spreadsheet saved in Task 15d, a new column 1 with the label Title. Validate the cells in rows 2–30 of this column to make sure only Mr, Mrs, Miss, or Dr are allowed.

Open the spreadsheet saved in Task 15d and using the methods shown in Chapter 20, insert a new column before column 1. In cell A1 add the label Title. Highlight cells A2 to A26. Select the DATA tab, then in the Data Tools section, select the Data Validation icon to open the Data Validation window. Select the Settings tab (if it is not already selected), and move the cursor into the Allow: section. Select the drop-down list, then choose List. In the Source: box enter the text Mr, Mrs, Miss, Dr as the list of possible acceptable entries, like this.



Select the Error Alert tab. Select an appropriate title for this error message and enter it in the Title: box. In the Error message: box enter a similar message to the one entered in Task 15c. Click on OK. Test your validation routine with all four pieces of normal data and with abnormal data. Try things like 'dR', 'dr', 'mr' or 'mR' as part of your abnormal data. There will be no extreme data as this is not a range of possible answers with a highest and lowest value. Save the spreadsheet.

15.2 Proofing techniques

Proofing techniques are not the validation checks that you have studied in Section 15.1 but other ways of reducing the number of errors in your work. The term 'proofing' in printing means to make sure that the work is accurate. It should include checking not only spelling, punctuation and grammar, but also page layout, including:

- the correct application of styles
- the correct margin settings
- images placed as specified
- text wraps as specified
- images not distorted
- objects fitting within the boundaries of a page/column/slide
- objects not overlapping (unless specified in a question)
- no lists (bulleted or numbered) split over two columns/pages/slides
- no tables (bulleted or numbered) split over two columns/pages/slides
- no blank columns, pages or slides
- no widows or orphans.

Part of the proofreading and error correction will be to check for widows and orphans. A widow is the last line of a paragraph that appears alone at the top of a new page or column. An orphan is the first line of a paragraph (or heading) that appears alone at the bottom of a page or column. Even though you may have applied automatic widow and orphan control, it is always good practice to check that these have been removed. It is possible that you did not apply it to every paragraph. Make sure that other objects, like bulleted or numbered lists, tables, graphs and database or spreadsheet extracts are not split over two columns or pages. Again, inserting appropriate breaks should avoid these problems.

15.2.1 Accuracy of data entry

It is important that you read through all of the work and make sure that the text or data that you have typed is 100 per cent accurate. Check that your documents have consistency in all areas, not only fonts and styles, but also in line spacing and paragraph spacing. It is very easy to follow the instructions, for example to remove a page break, only to find that you have accidentally inserted an extra carriage return. If you have inserted section breaks or page breaks, make sure that there are no blank pages.

The importance of accurate data entry

It is critically important that data entered into computer systems is accurate. For example: if your school stores your doctor's telephone number on its system and this number contains an error, in an emergency they may not be able to contact the doctor. Another example is if a bank took $10 000 from a bank account, rather than $10, then this would have serious consequences financially. Errors in numeric data will cause problems if any calculations are performed. Imagine the costs of a data entry error if a rocket was being sent into outer space and one of its navigation systems was given some data with an error in it, or the consequences of a data entry error in the control of a nuclear reactor.

Common data entry errors

The most common data entry errors include: spelling errors, errors in the use of capital letters (like Capital letters Placed in tHe middle of A sentence, or not used where instructed) and transposed numbers (like 21 instead of 12). All of these errors can be removed by carefully checking every item of data entered when you have completed each step. Visually verify every character that you enter.

Other common errors are found in the spacing of characters in text entry, (like: sometimes words have too many spaces between them.There are even times when spaces are missed). There are sometimes factual errors, even if someone else has proofread and corrected your work, although you would hope this was not the case. It is possible that you may get source files in different forms that contain errors for you to correct.

At the end of every piece of work, check it carefully for data entry errors and consistency of your presentation.

15.2.2 Verification

What is verification?

Verification is a way of preventing errors when data is copied from one medium to another (e.g. from paper to disk/CD). Verification does not stop all errors, but helps to reduce the errors made when data is entered into the computer, by checking the accuracy of data entry. There are two common ways that verification checks are carried out. These are called 'visual verification' and 'double data entry'.

Advice

If the word 'verification' is used in a question, call this method 'visual checking'. If the word is not used in the question call it 'visual verification'.

Visual verification

Visual verification can also be called a visual check.

Visual verification is checking for data entry errors by comparing the original paper documents with the data entered into the computer. This does not make sure the data is correct. For example: if the original document contained an error (e.g. the telephone number 842211 was recorded as 841122) then this error would be copied onto the computer. This is not the same as proofreading.

Double data entry

Data is entered into a system twice (often by two different people). The two sets of data are then compared by the computer and any differences in the data is flagged as an error and can be corrected by the user. A simple example of this is when you are asked on a website to create a new password, you must enter the password twice. The computer checks the two passwords are the same before allowing you to continue. This does not check that the passwords are correct, for example if you make the same spelling error in both passwords the data will verify, but would still contain an error. In the case of these passwords the computer will check they are the same as the second password is entered. In the case of documents, two people would enter the data and the computer would verify they are the same after all the data has been entered.

Why are validation and verification needed?

Validation and verification, when used together, will help to reduce the number of errors in data entry. Even together they do not stop all data errors occurring. For example, if a school has a telephone number of 842211, but this is recorded in the original documents as 841122. This error would not be found or corrected through visual verification or double data entry. If the most appropriate validation is applied (to either a database or spreadsheet) for example: to make sure that all telephone numbers are six digits long and start with a 5, 8 or 9. Again 841122 would pass the validation tests but if someone then tried to telephone the school it would not work.

A company supplying electricity sends bills to its customers that are between $100 and $500. You need both validation and verification because:

- data might be sensible but has not been transcribed/transferred accurately, for example an electricity bill for $329 may have been copied as $320 – it is still sensible but has not been copied accurately
- data might have been transcribed/transferred accurately but may not be sensible, for example an electricity bill of $3000.

Using validation in addition to verification would trap both errors, verification for the first example and validation for the second.

15.2.3 Proofreading

Although detailed knowledge of proofreading is not part of the Cambridge IGCSE syllabus, it is a term often used (incorrectly) by students. Proofreading is part of the proofing process. Proofreading is not a form of verification. It is the careful reading and re-reading of a document (before it is finally printed) to detect any errors in spelling, grammar, punctuation or layout, whether or not they were in the original document. This process is more than just verification; verification simply checks the transcription of data from one medium to another. If the original data contains errors then the verified data will contain the same errors. Proofreading should help to remove many of these errors by checking that the data is correct, not just accurately transcribed.

16 Graphs and charts

In this chapter you will learn how to:

- select the most appropriate graph or chart for a given task
- create a graph or chart
- label a graph or chart
- extract segments from a pie chart
- change chart colours to print in black and white
- add a secondary axis
- set axis scales.

For this chapter you will need these source files from the CD:

- employees.csv
- project.csv
- rainfall.csv
- webhits.csv.

Important: please study Chapter 20 before starting this chapter.

16.1 Chart types

You may be asked to select an appropriate chart for a purpose. Which chart is the most appropriate is often very difficult to work out. The choice will be between a pie chart, a bar chart and a line graph.

16.1.1 Pie charts

If you are asked to compare percentage values, a pie chart is often the most appropriate type because pie charts **compare parts of a whole** or fractions of a whole. An example would be comparing the percentage of children who preferred ice cream, jelly or trifle.

16.1.2 Bar charts

Bar charts show the difference between different things. A bar chart is traditionally a graph with vertical bars, but it is called a column graph in *Excel*. This is a little confusing but to create a vertical bar chart you would need to use the 'column chart' and for a horizontal bar chart (with the bars going across the page) you would need to use the 'bar chart'. An example would be showing the number of items sold by five people in the same month.

Advice

Do not use stacked column charts or stacked bar charts.

16.1.3 Line graphs

Line graphs are used to plot **trends** between two variables. An example would be plotting the temperature of water as it was heated against time. You could then find any point in time on the graph and be able to read the corresponding temperature, even if the temperature had not been taken at that time.

16.2 Create a chart

To create a chart, you have to highlight the data that you wish to use. This is highlighted in the same way as other data in the spreadsheet. Sometimes you need to create a graph or chart using **contiguous** data (the data you use for this is in columns which are next to each other, e.g. columns B and C). Other times you need to create a graph or chart using **non-contiguous** data (the data you use for this is in columns which are not next to each other, e.g. columns B and F). To select non-contiguous data, hold down the <Ctrl> key while making your selections.

Task 16a

Open the file **employees.csv**. This shows the job types, the number of employees with that job type and the percentage of employees with that job type.

Create an appropriate graph or chart to show the number of employees with that job type.

Open the file and highlight only cells A1 to B8 (which is an example of contiguous data). The highlighted data should look like this.

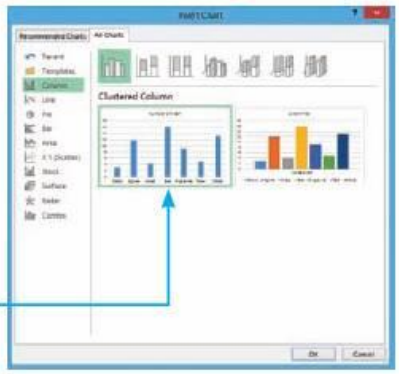
	A	B	C
1	JobTitle	Number of staff	Percentage
2	Director	3	0.048387097
3	Engineer	12	0.193548387
4	Analyst	4	0.064516129
5	Sales	16	0.258064516
6	Programmer	9	0.14516129
7	Tester	5	0.080645161
8	Clerical	13	0.209677419
9		62	

This highlighted area will be the cells used to produce the graph. Notice that the cells containing the column headings (A1 and B1) have been included in this selection as they will be used as the labels in the chart (they can be changed later if the question asks for different labels).

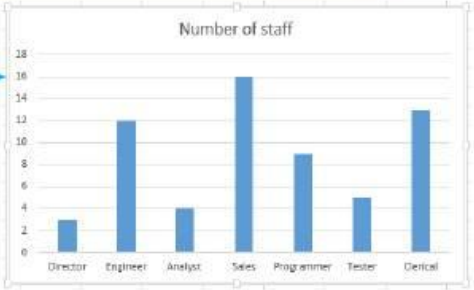
Decide what type of chart you will need for this task. Look at the data and decide if it compares parts of a whole, shows trends between two variables or shows the difference. In this task the data shows the different numbers of employees in each job type, so a bar chart is the most appropriate chart type, and in this case you can use a vertical bar chart.

Select the **INSERT** tab and find the **Charts** section.

Select a vertical bar chart (labelled **Column** in *Excel*); this can be selected using the small icon of a bar chart or, in this case, it could also be found using *Excel*'s 'Recommended Charts' (please note that this feature does not always select the most appropriate type chart for a given task). Click on the bar chart icon and the **Insert Chart** window appears, with the vertical bar chart (called a column chart in *Excel*) selected. If you select the wrong chart type you can always click on the chart types on the left of this window to change it. Selecting each chart type from the left, and each sub type from the icons along the top of this window, you can see the different graphs and charts to choose from. Select the chart shown and click OK.



The chart will look similar to this.



Save this as task16a.

Advice

Keep your charts simple – do not use 3-D charts or add features that are not a necessary part of a task.

A simple chart is often more effective.

Task 16b

Open the file **employees.csv**.

Create an appropriate graph or chart to show the percentage of employees with that job type.

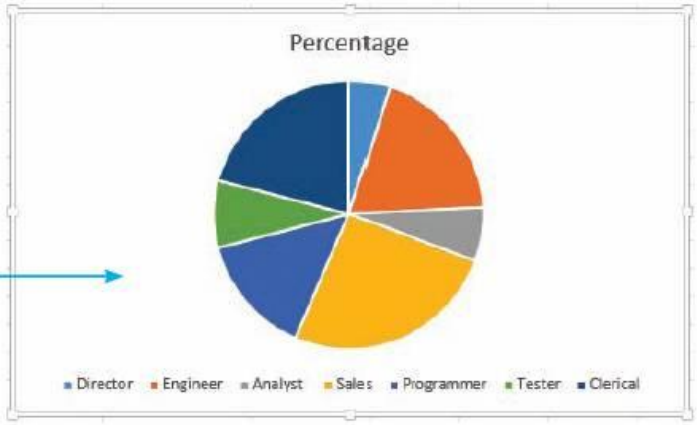
Open the file and, using the <Ctrl> key and the mouse, highlight cells A1 to A8 and C1 to C8 (which is an example of non-contiguous data). Do not highlight any other cells. The highlighted spreadsheet should look like this.

	A	B	C
1	JobTitle	Number of staff	Percentage
2	Director	3	0.048387097
3	Engineer	12	0.193548387
4	Analyst	4	0.064516129
5	Sales	16	0.258064516
6	Programmer	9	0.14516129
7	Tester	5	0.080645161
8	Clerical	13	0.209677419
9		62	

Decide what type of chart you will need for this task. Again, look at the data and decide if it compares parts of a whole, shows trends between two variables or shows the difference. In this task the data compares parts of the whole, so a pie chart is the most appropriate chart type. Select the INSERT tab and find the Charts section. Then select a Pie chart and the 2-D Pie.

The finished pie chart will look like this.

Save this chart as task16b for later use.



Task 16c

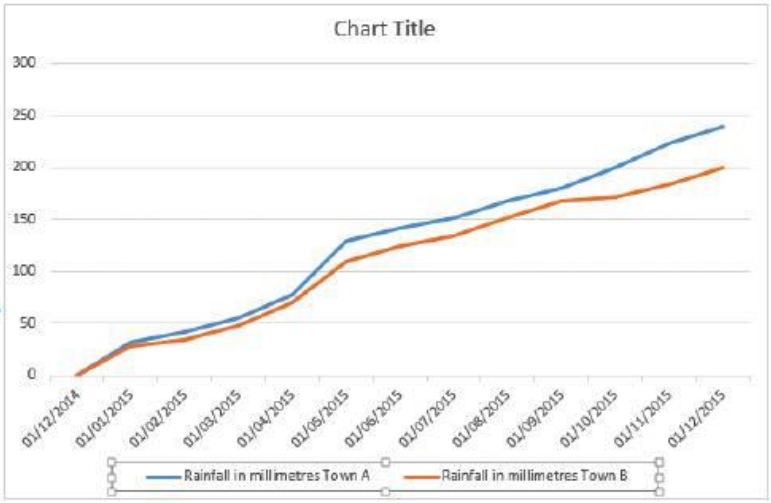
Open the file **rainfall.csv**.

Create an appropriate graph or chart to show a comparison of the monthly data for towns A and B.

Open the file and highlight cells A1 to C15. Decide what type of chart you will need for this task. Again, look at the data and decide if it compares parts of a whole, shows trends between two variables or shows the difference. This task mentions periods of time, which suggests a trend. In this task, it is seeing how the total amount of rainfall changes/varies over a period of 12 months. Because specific dates are used and the rainfall is cumulative, a line graph is the most appropriate chart type. As there are two towns shown in the data, you will make a comparative line graph using both data sets. Select the INSERT tab and, in the Charts section, select a Line graph and the 2-D Line (the top left icon).

The finished line graph will look like this.

Save this chart as task16c for later use.

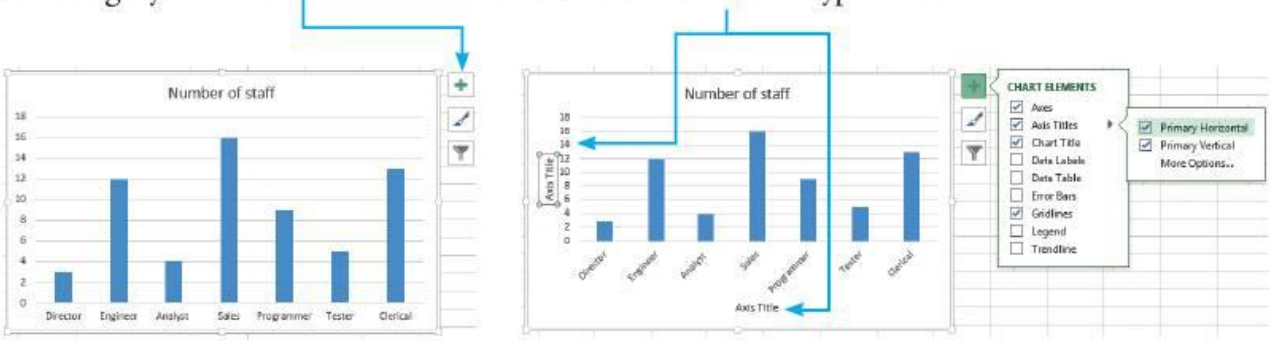


16.3 Label a chart

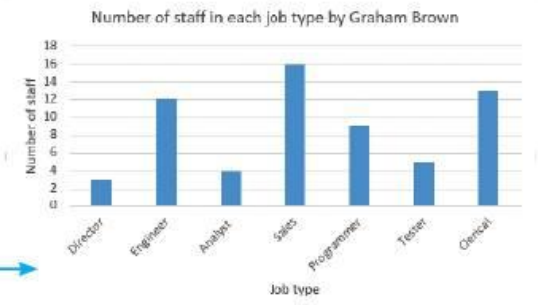
Task 16d

Open the chart saved in Task 16a and add appropriate chart labels.

Open the chart saved in Task 16a. Although *Excel* attempts to complete the chart – it has added a chart title and axis labels – it is still incomplete. All charts need fully labelling. Use the Chart Elements icon to add other elements, in this case value and category axis labels. Move the cursor into each label box and type each label.



If you are given the chart title, enter it very carefully and exactly as shown in the question paper; if not, change the text in the question into a chart title so that it gives as much information as possible to the reader. Include your name, Centre number and candidate number in the chart labelling. As there is only one set of values (data series) in this chart, a legend (or key) is not needed. Save this chart for later use. The finished chart may look like this.



Activity 16a

Open the file that you saved in Activity 20a. Use this data to produce a vertical bar chart comparing the number of days worked for each person, except Aminat and Sukrit. Add an appropriate title and labels to the chart. Do not include a legend.

Advice

The category axis in a vertical bar chart is the *x* axis and displays the names of the different categories; the value axis is the *y* axis and displays the number values.

Activity 16b

Open the file **webhits.csv**. This contains data about the number of members of an online book club and the average number of website hits each week over a nine-year period.

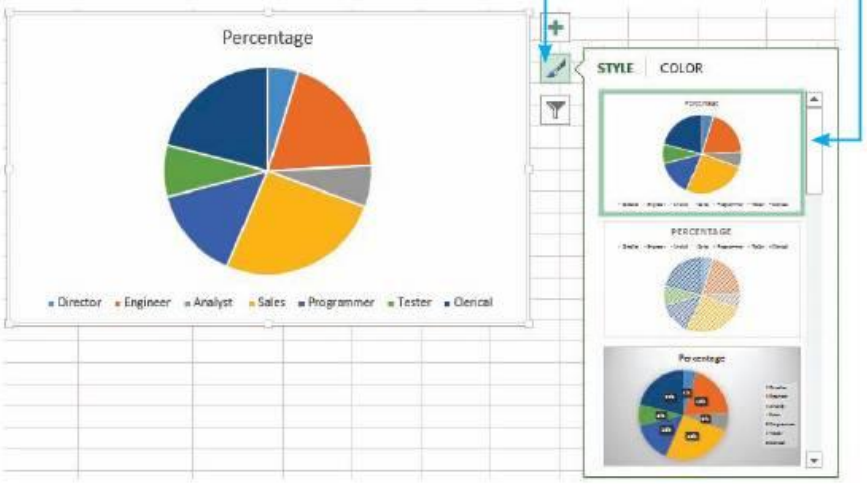
Create and label an appropriate graph or chart to show a comparison of these two sets of data.

Task 16e

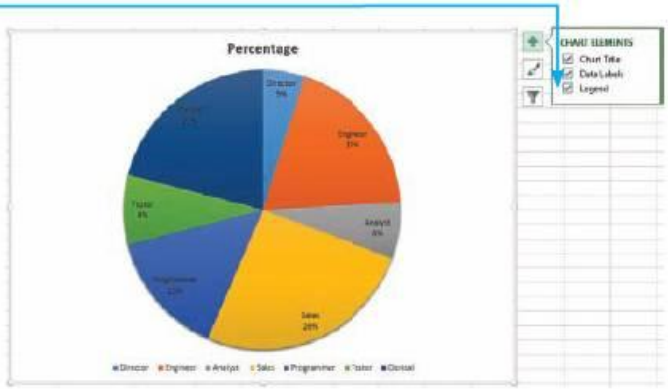
Open the chart saved in Task 16b.

Display all segment labels and percentage values on the chart. Do not display a legend. Extract the segment for engineers. Make this segment red.

Open the chart saved in Task 16b. Click on the chart with the left mouse button and use the **Style icon** to display a list of styles to choose from. You can scroll through the list and choose the style you want.

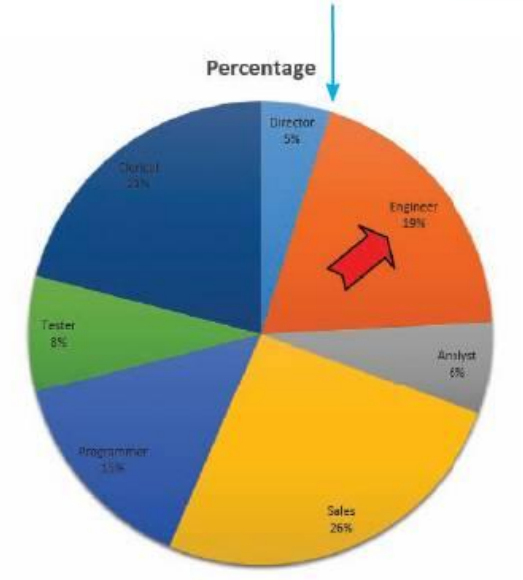


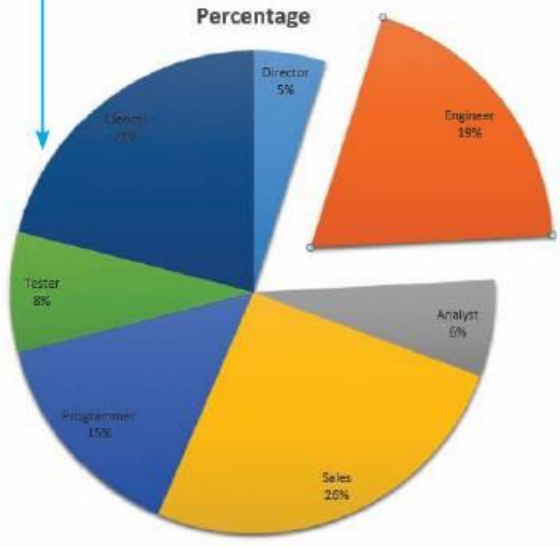
Careful selection here can save you a lot of work. Sometimes the best choice can also contain a legend but this is easy to remove. Select the **Chart Elements** icon and remove the tick from the legend box.



To extract the segment for Engineer, click the left mouse button on the segment (but not on the labels), hold the mouse button down and slowly drag the segment out in the direction shown by the red arrow.

The chart changes from this to this.



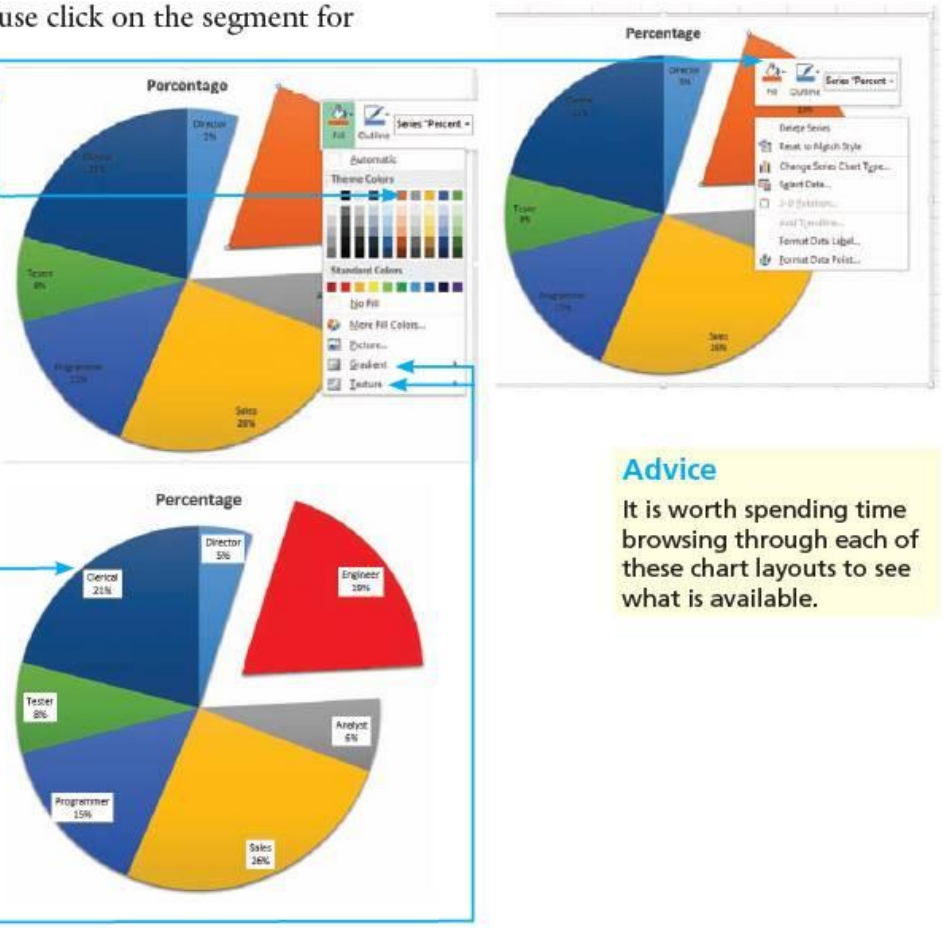


To make this segment red, right mouse click on the segment for engineers and select the **Fill** tool.

The drop-down palette of theme colours appears. For this task, select the red colour for the segment and the task is almost complete.

Use the same method so that the text is easy to read, like this.

The **Fill** tool is very useful in many types of chart, including bar charts, for changing the colours of different segments or bars. If a chart (or a document including a chart) has to be printed in black and white, it would be very difficult to tell which segment or bar is which. So that charts displayed or printed in black and white are easy to read, use the range of texture, pattern and gradient fills to make each bar or segment look different.



Advice

It is worth spending time browsing through each of these chart layouts to see what is available.

Activity 16c

Open the file that you saved in Activity 20m.

- Create a pie chart showing the name of each house (the colours) and the percentage of the class in that house.
- Add the title 'Percentage of students in each house'.
- Change the colour of each segment to match the name of the house.
- Extract the segment for the Yellow house.

Activity 16d

Open the **project.csv**.

Create a pie chart to compare the number of hours worked by the people with each type of job. Make sure that each type of job can be clearly identified when printed in black and white.

16.4 Use secondary axes

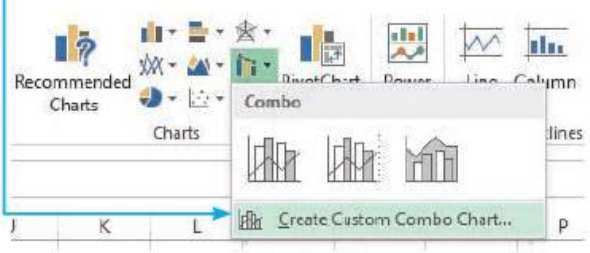
Task 16f

Open the file **rainfall.csv**.

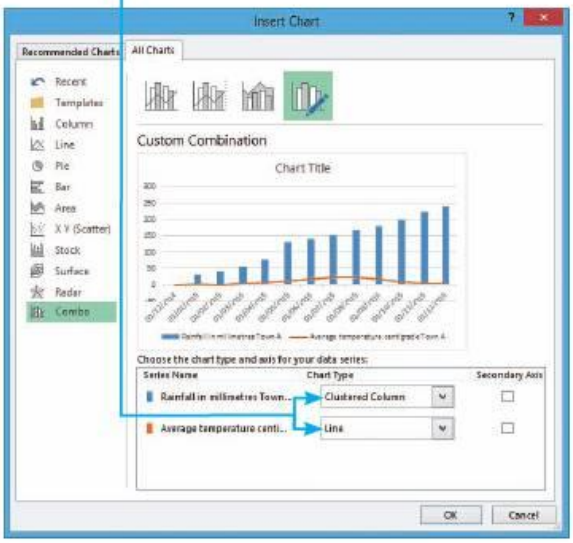
Create an appropriate graph or chart to show a comparison of the rainfall and average temperatures for each month in only town A. Add a second value axis to the chart for the temperature series and label and scale these axes appropriately.

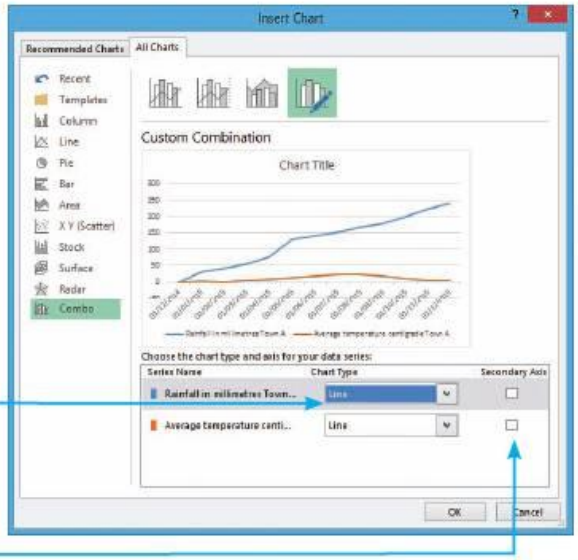
Open the file **rainfall.csv** and highlight the dates and data for town A; this is in cells A1 to B15 and D1 to D15. Select the **INSERT** tab then, in the **Charts** section, select the **Insert Combo Chart** icon.

Use the bottom option to **Create Custom Combo Chart**, which allows you to compare two values using bar charts and/or line graphs and opens the **Insert Chart** window set to Combination charts.



Both of the data series chosen show trends between two variables (rainfall will be plotted against the date, and average temperature will be plotted against the date) so using line graphs for both series would be the most appropriate chart types. To make this happen choose the **Chart Type** as **Line** for both series, like this.

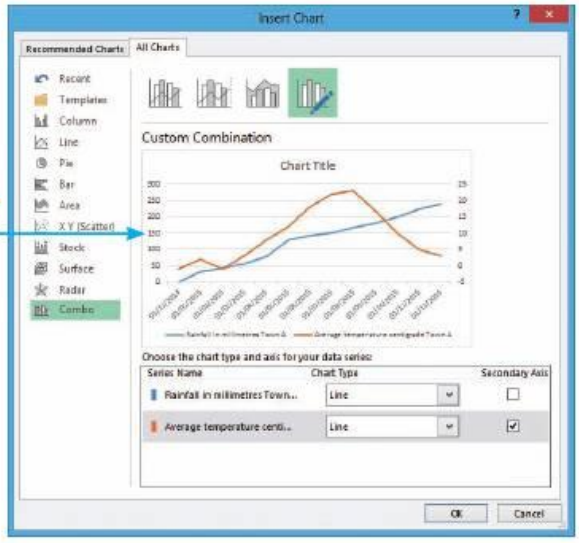




It is difficult to read the values for the temperature, so adding and scaling a second value axis will make it easier to read the graph.

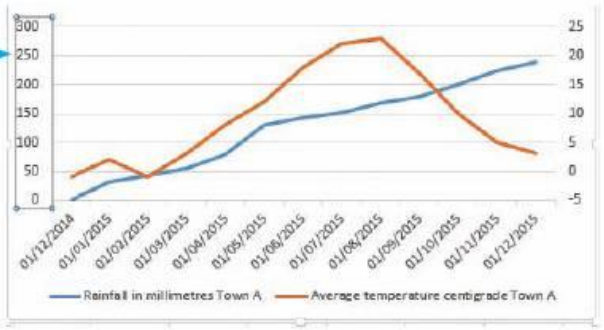
Click the left mouse button in the tick box for **Secondary Axis** for the temperature data series (the one shown in orange).

Your graph will now look similar to this. Click the OK button to create the chart.

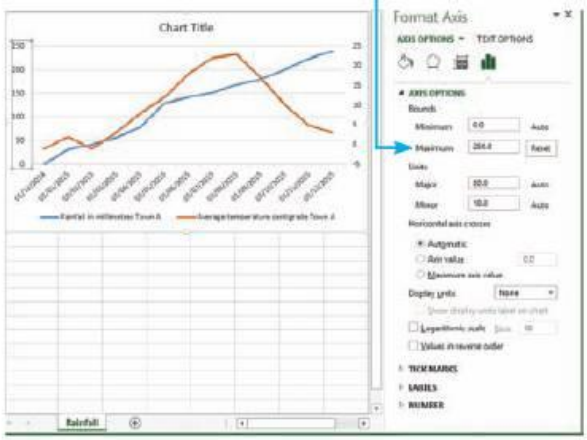


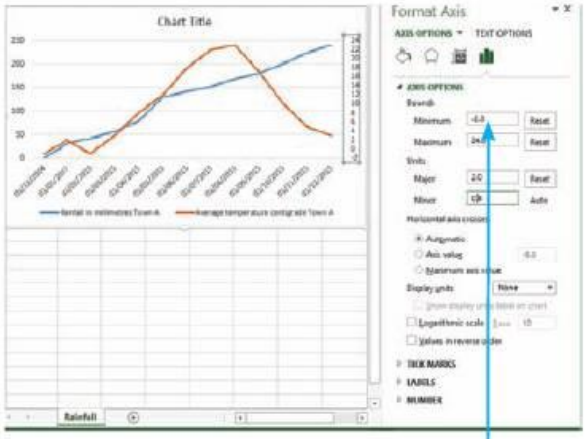
Excel has attempted to scale these axes but you are now going to adjust them further. You will change the primary axis so that it is set between 0 and 250 and the secondary axis so that it is set between –2 and 24. These values have been extracted from the original data: the total cumulative rainfall is 240 mm (so we will choose 250, so that the scale can go up in steps of 50); the temperature changes between –1 and 23 degrees (so we will use –2 and 24 so the scale can go up in steps of 2). For this axis it would be acceptable to use the values –5 to 25 suggested by *Excel*.

To change the primary axis values, double click on the axis labels like this.



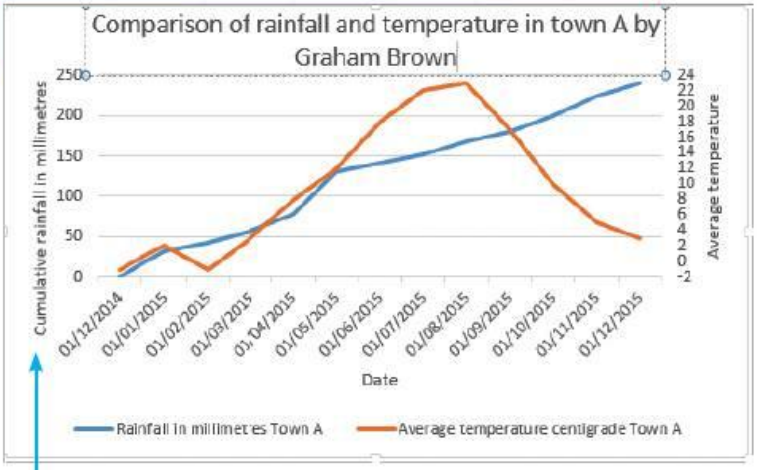
This opens the **Format Axis pane** at the right side of the window. In the **Axis Options** sections the **Axis Bounds** are set to 0 and 300. We want the bounds set to 0 and 250, so edit the **Maximum** boundary to 250. Press the <Enter> key or click the left mouse button to refresh the chart.





Follow a similar procedure for the secondary axis. Double click the left mouse button on the axis then change the axis settings with a **Minimum** value of –2, a **Maximum** value of 24 and, in the **Units** section, set the **Major Unit** to 2. The Minor Unit will change automatically.

It is important to label these axes appropriately. Label the primary axis (the left one) 'Cumulative rainfall in millimetres' and the secondary axis 'Average temperature'. Label the category axis 'Date'. Label the chart with a meaningful title, such as 'Comparison of rainfall and temperature in town A by <your name>'. These changes should leave the chart looking like this.



Save the file.

Activity 16e

Open the file that you saved in Activity 16b.

Add a second value axis to the chart for the number of members and set the maximum value for this axis to 3200 and keep the minimum value at 0.

17 Document production

In this chapter you will learn how to:

- set the page size and orientation
- set page and gutter margins
- define the terms 'widow' and 'orphan'
- use page, section and column breaks, to adjust pagination
- avoid widows and orphans
- set and remove page, section and column breaks
- use columns
- set text alignment
- set line spacing
- set tabulation settings, including indented paragraphs, hanging paragraphs
- edit tables
- explain what mail merged documents are and why they are created
- insert a special (automated) field into a mail merged document
- create a mail merged document
- run a mail merge with selected records and fields
- save and print a mail merge master document
- save and print selected merged documents.

For this chapter you will need these source files from the CD:

- activity17a.rtf
- activity17d.rtf
- mailmerge.rtf
- mmresidents.csv
- mmstudents.csv
- table2.rtf
- tabulation.rtf
- tcs.rtf.

17.1 Format text and organise page layout

17.1.1 Format pages

You may be presented with documents with different page layouts and given instructions to reformat them. Do not assume that a document is already set as specified. If it is in text (.txt) format, it will use the default settings of your word processor. If it is opened in rich text format (.rtf) or was saved as a *Word* document, it will keep the settings used to save the file.

Task 17a

Open the file saved in Task 14f.

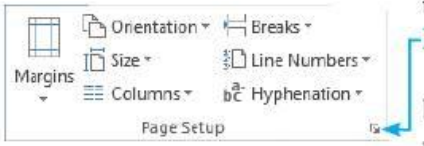
Change the page size to A5 and the orientation to landscape. Set the top and bottom margins to 3 cm and the left and right margins to 3.5 cm. The document is going to be bound along the top edge. Add a 2 cm gutter to the document.

Save the file with a new name and print the document.

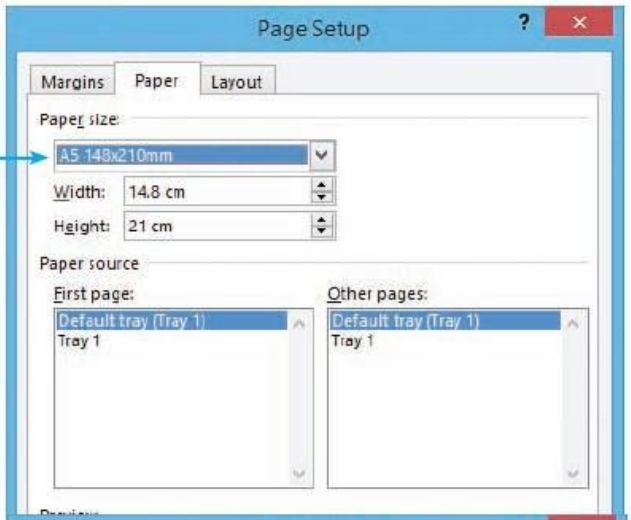
Open the file saved in Task 14f and save the document as task17a. Move into the footer and right mouse click on the date and time to get the drop-down menu. Select Update. Repeat this for the filename. Double click on the body text to leave the footer.

Set the page size

Select the **PAGE LAYOUT** tab and in the **Page Setup** section click the left mouse button on the icon at the bottom right corner of the box, to open the **Page Setup** window.



This window can be used to change the page size, orientation (to make the page tall or wide) and the page margins. To change the paper size, select the **Paper** tab. The **Paper size:** can be selected from the drop-down list. For this task, select A5 from this list.

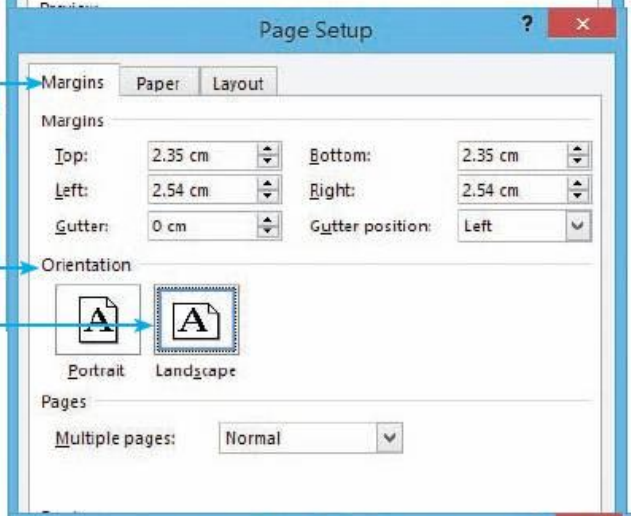


Set the page orientation

To change the page orientation, remain in the **Page Setup** window and select the **Margins** tab.

Find the **Orientation** section of the window.

Click the left mouse button on the landscape icon to change from portrait to landscape.



Set the page margins

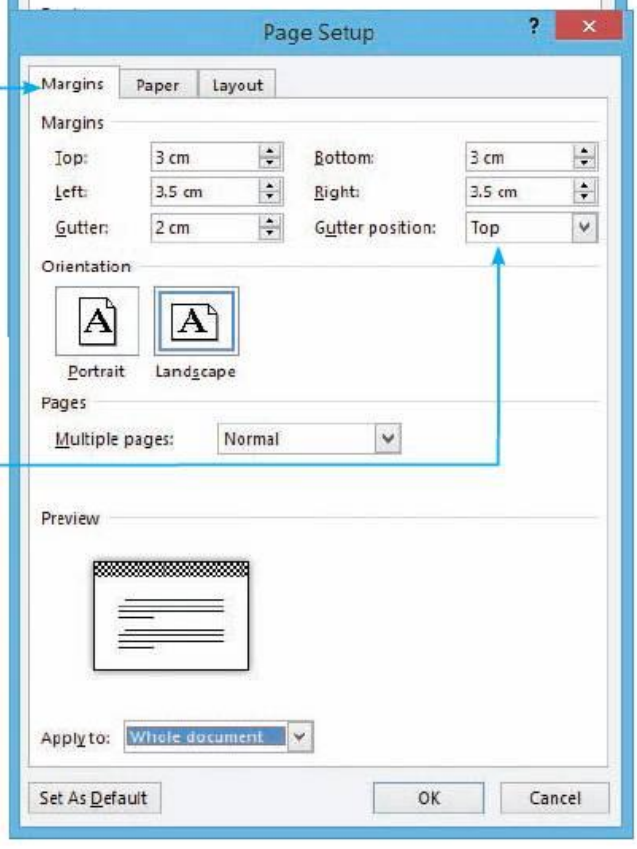
Remain in the **Page Setup** window and in the **Margins** tab. To set the top and bottom margins to 3 cm, select the **Margins** section.

Either highlight the text within the **Top:** and **Bottom:** boxes and type in the new values, or use the scroll handles to change the values in each of the boxes.

Change the left and right margins to 3.5 cm using a similar method in the **Left:** and **Right:** boxes. Click on OK.

Set the gutter

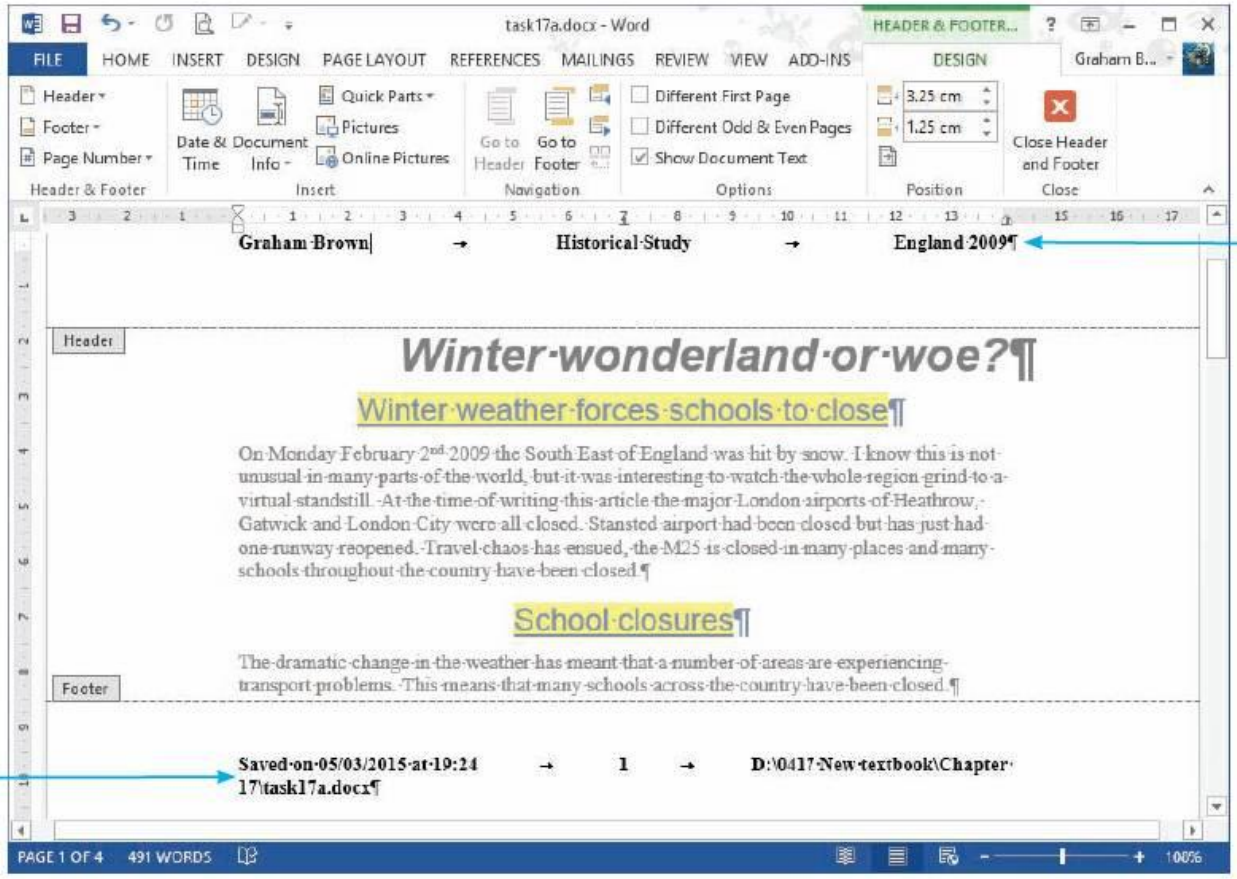
If the document is to be part of a bound book or booklet, a **gutter** will be needed. This is an area outside the margins that is used to bind the book together. The gutter is set in the same way, in the **Margins** section of the window. The gutter can be placed to the left or top of the page, depending upon the type of binding to be used. In this case change the **Gutter:** size to **2 cm** and the **Gutter Position:** to **Top**.

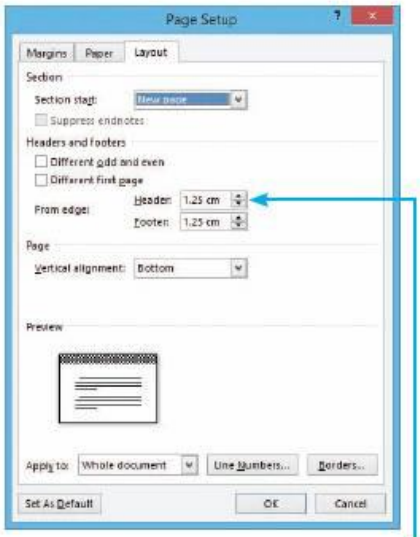


Edit headers and footers

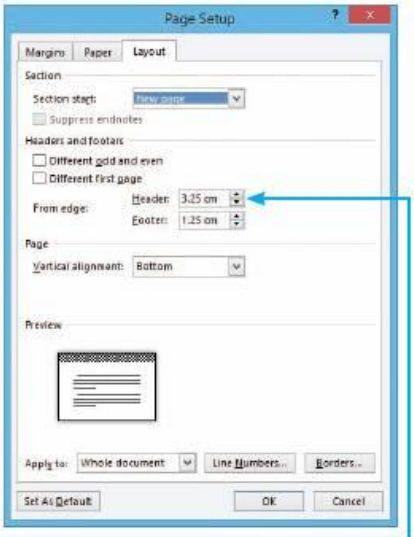
You worked with headers and footers in Section 13.3. Use the methods learnt there to change the tab stops in the header and footer so that all text aligns to the page margins.

After doing this you can see a problem with the header and one with the footer.





The header text is in the gutter (where the pages would be glued or bound). To change the vertical alignment of this header text, select the **PAGE LAYOUT** tab. In the **Page Setup** section click the left mouse button on the icon at the bottom right corner of the box, to open the **Page Setup** window. Select the **Layout** tab within this window. In the **From edge:** section, *Word* has set the distance from the **Header** text to the top of the page at 1.25 cm. This is the default value on my computer but the value shown on yours may differ. Take this value and add the 2 cm depth of the gutter to it, so on my computer it will become 1.25 + 2 = 3.25. Enter the new value, either by typing it or using the small arrows at the side. The window will change from this to this.



Click on OK. You will see the text move out of the gutter area.

The text on the right in the footer is too long to fit into the space provided by the word processor so it has wrapped onto the next line. This is because a file name and file path is required and now that the page is A5 (which is half the size of A4) it does not fit.

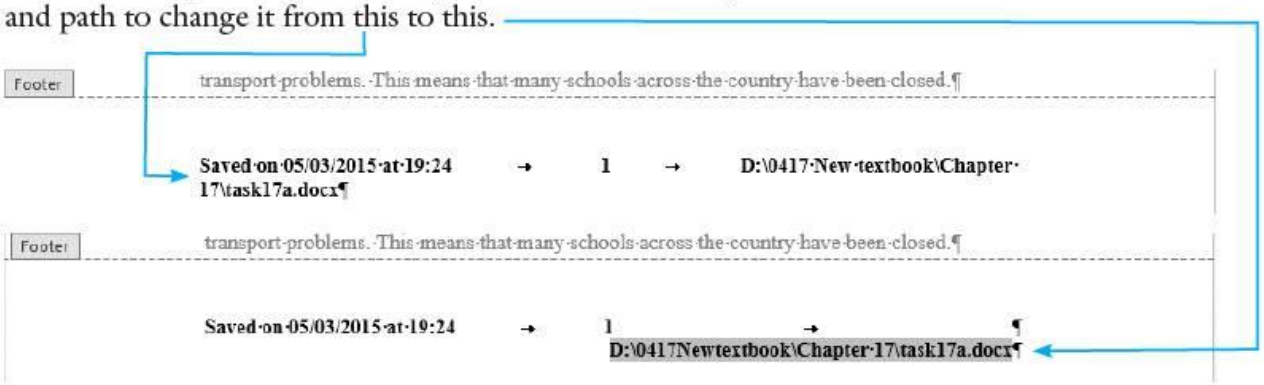
There are two ways to solve this problem.

Change the font style

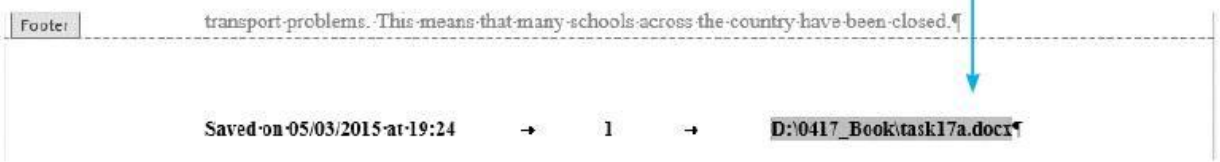
You can choose a narrower font face like Arial Narrow rather than Arial for sans-serif, or Bodini MT Poster Compressed rather than Times New Roman for serif. Make this change to all the serif or sans-serif style definitions so that it happens automatically. Although this may help, it may also make the text very difficult to read, especially in a serif font.

Change the file name or path

Word has already attempted to split this onto a second line. It will only split filenames and paths that contain spaces. Remove all the spaces from the filename and path to change it from this to this.



Changing the file name or path to make them shorter (but still meaningful) is the best solution. Use the methods you learnt in Chapter 11 to do this. Save the document. The finished footer may look like this.

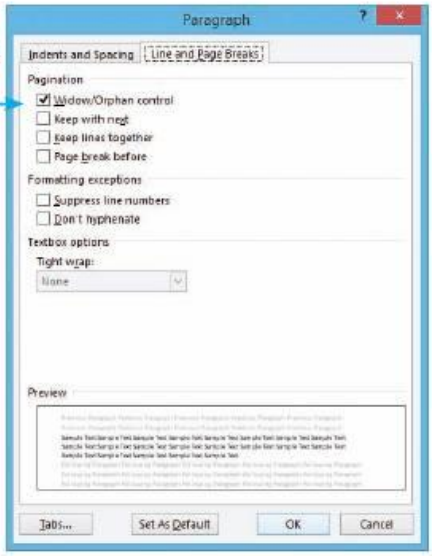


17.1.2 Widows and orphans

If you start a paragraph of text on one page or column but there is not enough room on the page to get the last line typed in, the single line of text which appears at the top of the next page or column is called a **widow**. Similarly, sometimes you start a paragraph at the bottom of a page or column but you can only type in one line before the rest of the text goes onto the next page. The first line of the paragraph at the bottom of the page or column is called an **orphan**. These should be avoided when producing a document. They can be manually avoided by inserting a **Page Break** or **Column Break**. For more information on breaks, refer to Section 17.1.3.

You can set up *Word* to avoid widows and orphans automatically. To do this, select the **PAGE LAYOUT** tab, then in the **Paragraph** section, click the left mouse button on the icon at the bottom right corner of the box, to open the

Paragraph window. Now select the Line and Page Breaks tab so that the window looks like this.



To get *Word* to avoid widows and orphans, select the Widow/Orphan control tick box and click on OK.

17.1.3 Use page, section and column breaks

Breaks can be used within a document to force text onto a new page or into the next column (if columns are being used), or to define areas with different layouts, for example where part of a document is formatted in landscape orientation and part is in portrait.

Page break

This forces the text onto the start of a new page, leaving white space at the end of the previous page. It is particularly useful for removing widows and orphans from your document, although *Word* can be set up to do this for you.

Column break

A column break is used to force the text into the top of the next available column, which may be on the same page or may be on the next page. This is also useful for removing widows and orphans.

Section break

A section break is used to split areas of a document with different layouts. There are two types of section break: one forces a page break as well as the change in layout and the other is a continuous break, which allows different layouts on the same page.

Task 17b

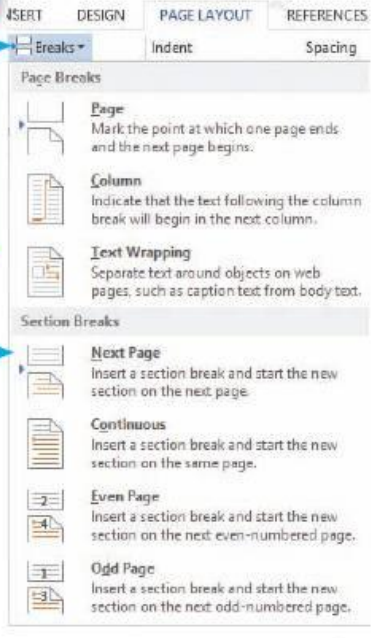
Open the file saved in Task 17a.

Keep only the two titles on the first page of the document. Set the orientation of the first page to portrait and the rest of the document to landscape. Set all of the body text except the table into two columns, with a 3 mm spacing and vertical line between the columns.

Save the file with a new name.

Open the file saved in Task 17a. Move the cursor to the place where the first break needs to be inserted. This will be just before the text 'On Monday ...'. Because this break will be the separator between two different types of layout (page 1 being portrait and page 2 onwards being landscape), a section break for a new page needs inserting rather than just a page break. To do this, select the PAGE LAYOUT tab and click on the Breaks icon.

This drop-down list will appear. In Section Breaks, click the left mouse button on Next Page.



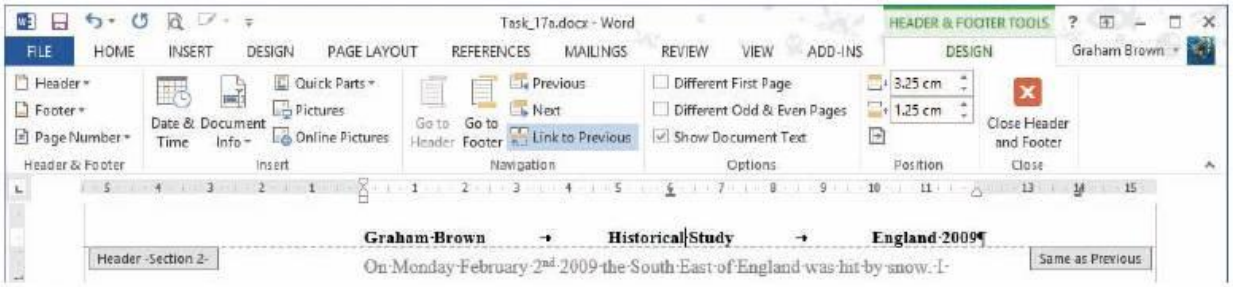
Advice

If you select the Home tab on the Toolbar and click on the Show/Hide ¶ icon, the section break will be visible like this:

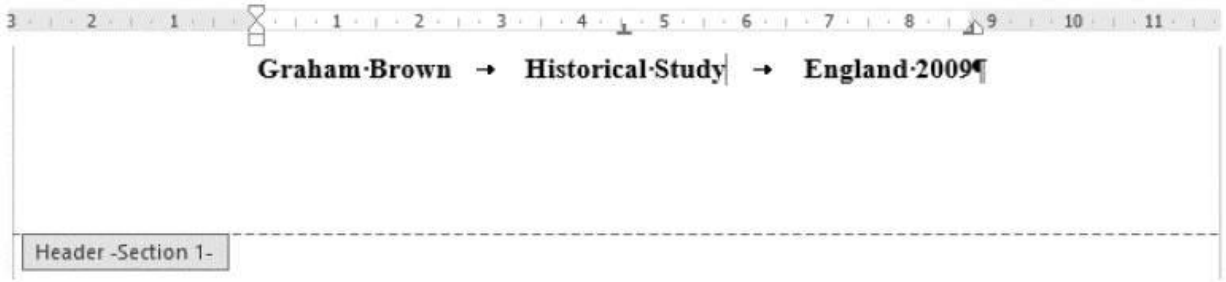
schools·to·close¶ Section Break (Next Page)

As the document is currently in landscape orientation, move the cursor to page 1, the section that needs to be changed to portrait orientation. Then select the PAGE LAYOUT tab again, followed by the Orientation icon and click on Portrait. You will notice that the word processor has only changed the orientation of this page (because you inserted the section break).

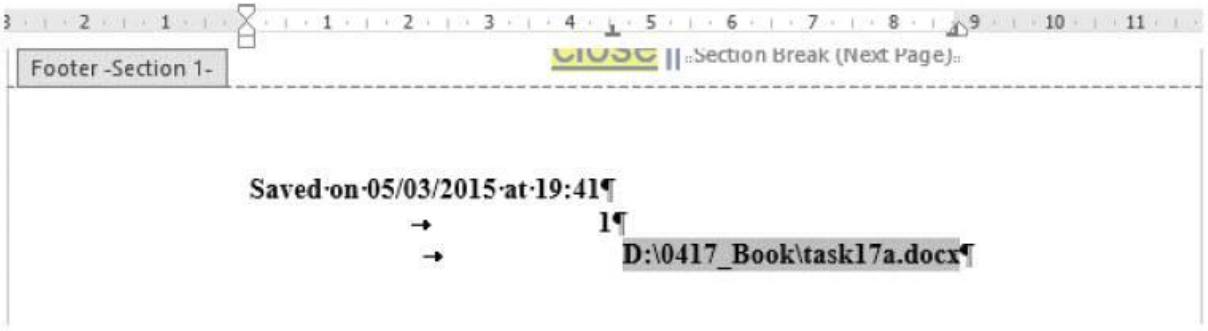
The header and footer settings have not been automatically amended for the new layout of this page, so we need to edit them. Double click the left mouse button into the header on page 2. Look in DESIGN tab of the HEADER & FOOTER TOOLS. You can see that this shows that the header in section 2 is linked to the header in section 1.



Click on the icon for Link to Previous so that the highlighting on this icon and the Same as Previous box are not seen. Now move the cursor into the header for page 1 and edit the tab stops for this section only, like this.



Repeat this for the footer. The text does not fit across the page so press the <Return> key after each item to move the next onto a new line like this.



This task is continued in the next section.

17.1.4 Use columns

Columns can be used to give a layout similar to that found in a newspaper. You may be required to format a document, or part of a document into a number of columns. If you are going to have different column settings for different parts of the document, you must decide where you are going to split the document into the different sections. However, this information is often given to you in the question.

For Task 17b you need to add three more section breaks to the document, so that the body text and the tables can have different layouts. These section breaks need to be at the start and end of the first table and at the start of the second table. Where the text and table do not need to be on different pages, you will set these as continuous section breaks. It may look like this.

Where the table is split over two pages, you will use a section break for next page.

Move the cursor to the place where you want each break inserted (i.e. before the first table), then in the PAGE LAYOUT tab click on the Breaks icon, followed by the Section Breaks option for Next Page. This is needed so that the table is not split over two pages. Move to the end of the first table and place a Continuous section break. Move to the start of the second table and place a Continuous section break.

Click the left mouse button to place the cursor within the text of the first paragraph. From the PAGE LAYOUT tab click on the Columns icon.

Do not select the option for two columns; although this would give you the correct columns it will give you default values for the column spacing and would not give you the vertical line. Instead select the More Columns option at the bottom of the drop-down list.

This opens the Columns window. Change the Presets from One column to Two.

Place a tick in the Line between box to place the vertical line.

Change the Spacing: from its default value to 0.3 cm (3 mm).

Make sure that the Apply to: box contains a reference to This section before clicking on OK. Move the cursor into the paragraphs after the table and repeat this process for the final section of the document.

School closures¶

The dramatic change in the weather has meant that a number of areas are experiencing transport problems. This means that many schools across the country have been closed..... Section Break (Next Page).....

Saved on 05/05/2015 at 22:39 → 2 → D:\0417_Book\Task_17a.docx¶

Graham Brown → Historical Study → England 2009¶

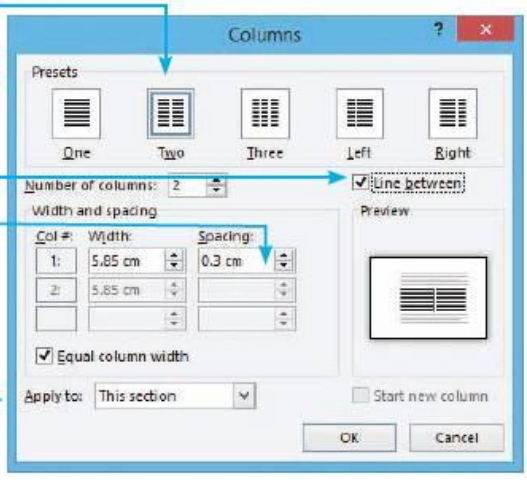
County	Closed
South East	
Essex	250+
Hertfordshire	100+
Middlesex	80+
Sussex	50+
North	
Greater Manchester	100
Lancashire	70
Cumbria	34
Durham	70
Northumberland	33
Yorkshire	1

(continuous).....

This table shows the number of schools reported closed. It is interesting to note that although the snow is no heavier in the South East of England, one of the eastern Counties has reported more than 250 of its schools are closed.¶

This gave the children lots time to play in the snow, snowballing, making snowmen and snow angels. The snow gave an added dimension, producing some very picturesque scenes, many captured on camera.¶

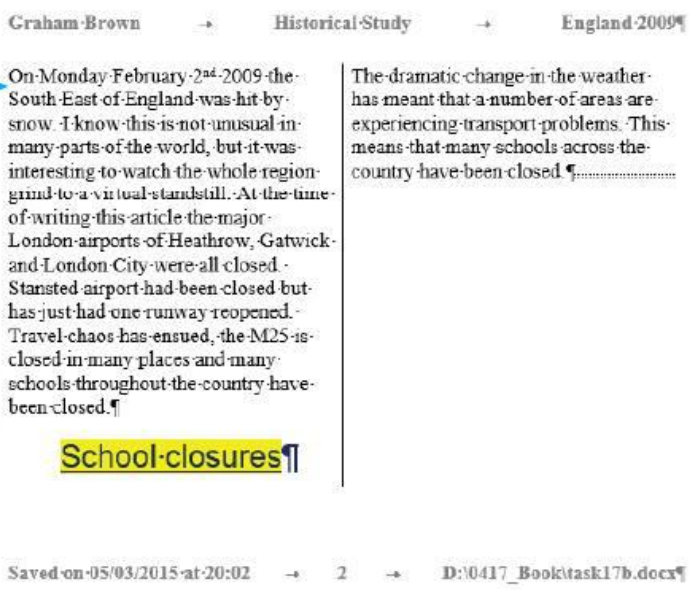
The United States government offered lots of advice about preparing for lots of snow. This advice and more details can be found in community centres or on



Advice

If you have just formatted the first section like this, moving the cursor into the final paragraph and pressing <Ctrl> and <Y> will repeat your last action. This is much quicker than repeating this process.

Sometimes when you have followed all the necessary steps, a page does not look as it should. In this case, page 2 has a heading which has become an orphan. To solve this problem, insert a column break just before the heading. Save the document.



Task 17c

Open the file saved in Task 17b.

Set the first level bullets to be indented by 3 mm and the second level bullets to be indented by 6 mm from the margin.

Save the file with a new name.

Open the document saved in Task 17b. Select the HOME tab and modify the styles List-L1 and List-L2 so that List-L1 has a 0.3 cm indent and List-L2 has a 0.6 cm indent.

Activity 17a

Open the file **activity17a.rtf**.

Change the page size to A4 and the orientation to portrait. Set all the margins to 4 cm and remove the gutter.

Place the date on the left, the filename in the centre and the time on the right in the header. Place your name on the left and an automated page number on the right in the footer. Ensure that the header and footer are 2 cm from the top and bottom of the page respectively.

Print the document.

Save the file with a new filename.

Activity 17b

Open the file you saved in Activity 17a.

Change the body text of only the first page so that it is set in two columns with a 1 cm spacing and a vertical line between the columns.

Save the file with a new filename.

Activity 17c

Open the file saved in Activity 17b.

Change the page margins to 2 cm and the alignment of the header and footer to fit the margins. Ensure that the header and footer are 1 cm from the top and bottom of each page.

Add a new title 'Arctic blast grips the United Kingdom' at the start of the document. Place the two titles on a single portrait page with a single column. All other text should be on landscape pages, in three columns with 1.5 cm column spacing.

Save the file with a new filename.

17.1.5 Set text alignment

Text can be aligned in four basic ways. It can be aligned:

- to the left margin with a ragged right margin which is called 'left aligned'
- to the centre of the page, which is called 'centre aligned'
- to the right margin, which is called 'right aligned'
- to both margins which is called 'fully justified'.

As you saw in Section 14.1, the text is aligned by selecting the text and then using the using the alignment icons. These icons are found in in the Paragraph section under the HOME tab.

Activity 17d

Open the file **activity17d.rtf** and place your name in the centre of the header.

Make only the title a 36 point sans serif font that is centre aligned and fits in a single, full width column.

Move the third paragraph so that it becomes the last paragraph. Fully justify the body text.

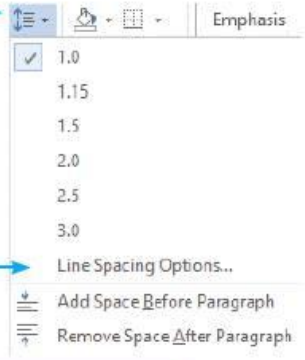
Centre align the second paragraph. Left align the third paragraph. Right align the fourth paragraph.

Make the first word 'grew' in the story 16 point, the second 'grew' 20 point and the third 'grew' 24 point.

Save the file with a new name.

17.1.6 Set line spacing

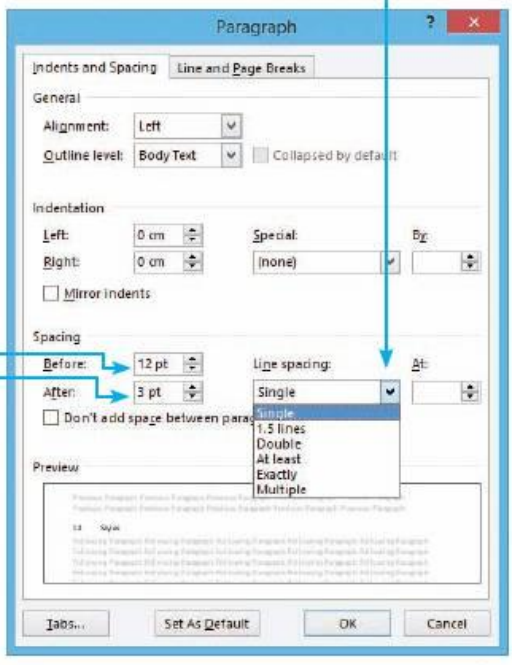
Line spacing is usually set as part of a defined style. More details of setting the line spacing as part of a style can be found in Section 14.1. Different line spacing can be used to present different page layouts. The most commonly used layouts are single line spacing, 1.5 line spacing and double line spacing. To change the line spacing in a paragraph, select the HOME tab, and look in the Paragraph section to find the Line spacing icon. Select this icon to open this drop-down menu.



Although you can change the line spacing of a paragraph from here, select Line Spacing Options... to open the Paragraph window, which gives you more options.

To change the line spacing, select the Line spacing: drop-down menu. This will allow you to define an exact number of lines, which is very useful for title pages, where lines may be spaced out, perhaps needing to be five or six lines apart.

Ensuring that line spacing on a page is consistent is just as important as setting the line spacing. It is often wise to select all text and adjust the line spacing together. If you move, copy, insert or delete text from your document, always check that the line spacing is correct after you have made any change. Each paragraph and heading can have the spacing before and after it set using the same Paragraph window. This is set in the Spacing section, where the space before and after any paragraph (a title is counted as a paragraph) can be edited.



Activity 17e

Open the file that you saved in Activity 17d.

Make the first paragraph single line spacing, the second paragraph 1.5 line spacing and the third paragraph double line spacing. Do not change the line spacing in the rest of the document.

Set the heading spacing to 12 spaces before and 24 spaces after the paragraph.

Save the file with a new name.

17.1.7 Set tabulation settings

Paragraphs can be formatted with different settings for the first line of a paragraph and the other lines in a paragraph. These settings are all changed on the ruler, which looks like this.

On the left side of the ruler are two settings for the left margin. The top pentagon adjusts the first line of the paragraph, the bottom pentagon aligns the rest of the paragraph, and the rectangle below moves the whole paragraph.

Task 17d

Open the file **tabulation.rtf** and place your name on the left in the header.

Set the first line of the first paragraph as indented text, indented by 2.5 cm. Indent the whole of the second paragraph by 2.5 cm. Set the fourth and fifth paragraphs as hanging paragraphs with a 2.5 cm tab. In the fifth paragraph make the text 'Good Use' a subheading.

Save the file with a new filename.

Open the file and place your name in the header.

Click the left mouse button in the first paragraph. Drag the top triangle to the right by 2.5 cm, like this.

To indent the whole of the second paragraph, click in that paragraph and then drag the small rectangle across to the right by 2.5 cm like this.

Highlight both the fourth and fifth paragraphs and drag the bottom triangle to the right by 2.5 cm like this.

To make the text 'Good Use' a subheading, remove the full stop and space at the end of it and replace it with the <Tab> key. The finished document looks like this.

This·paragraph·contains·indented·text.·This·means·that·the·left·margin·on·the·first·line·is·indented·from·the·rest·of·the·paragraph.·The·top·margin·setting·on·the·ruler·is·indented·to·the·right·of·the·lower·margin·setting.¶

The·whole·of·this·paragraph·has·been·indented·from·the·left·margin·and·is·called·an·indented·paragraph.·This·is·sometimes·used·to·show·sub-text·within·a·document,·or·for·showing·a·quotation·from·another·author.¶

This·paragraph·is·a·normal·paragraph·with·no·indents·and·no·hanging·first·line.·The·margin·settings·on·the·ruler·are·directly·above·each·other.¶

This·paragraph·is·called·a·hanging·paragraph.·This·means·that·the·first·line·of·the·paragraph·is·aligned·to·the·margin·and·all·other·lines·are·left·hanging.·The·bottom·margin·setting·on·the·ruler·is·indented·to·the·right·of·the·top·margin·setting.¶

Good·use →	One·really·good·use·of·a·hanging·paragraph·is·for·short·titles·like·this·one·to·be·followed·by·the·relevant·text.·By·setting·a·tab·stop·on·the·first·line,·the·short·title·can·be·used·as·a·heading.·This·layout·can·give·each·heading·a·powerful·effect·on·the·page,·without·any·other·text·enhancement·like·enlarging·or·emboldening·the·text.·¶

Activity 17f

Open the file that you saved in Activity 17c.

Add the text 'History item 1' as a new line to the start of the document. Format this text in the same style as the rest of the page. Change the title 'Weather update' to 'February 2009'.

Set all of the text on the first page to be spaced five lines apart and all other text in the document to be single line spacing with no spacing before each paragraph and 24 point spacing after each paragraph. Indent all the text on the second page by 5 mm.

Save the file with a new name.

17.1.8 Format bulleted or numbered lists

Although individual styles can be set for small portions of text, it is better to set these as defined styles and apply the styles to parts of the document, in this case lists. These elements have already been covered in Section 14.2.3.

17.2 Edit a table

It is recommended that you study Sections 13.2.5 and 13.2.6 before starting Section 17.2.

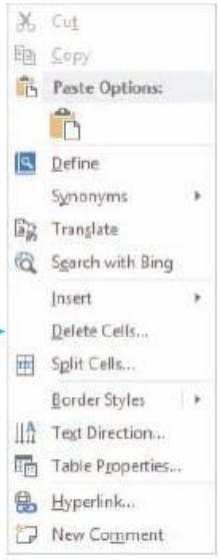
Task 17e

Open the file **table2.rtf** and place your name on the right in the header.
Delete the second column and the 'Martial arts' row.
Insert a new third column with this data.
Insert a new row between the 'Dance workshop' and 'Discover scuba' with this data.

Craft workshop	0	3	2	3

Merge cells 2 and 3 in the top row and cells 4 and 5 in the top row.
Save the file.

	Second choice
	1
	2
	21
	18
	2
	3
	10
	5



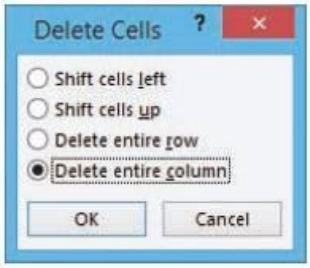
Open the file **table2.rtf** and place your name on the right in the header.

Delete a column

To delete the second column, move the cursor to any cell in this column, and click the right mouse button, to get the drop-down menu like this.

Select **Delete Cells...**, which will open the **Delete Cells** window. Select the radio button for **Delete entire column**.

Click on OK.



Delete a row

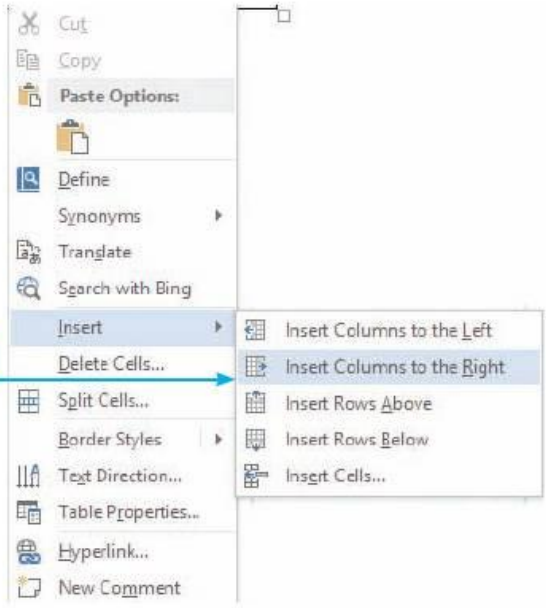
Repeat this method to delete the 'Martial arts' row. Right mouse click in any cell in this row and select **Delete Cells...**. This time select the radio button for **Delete entire row** before clicking on OK.

Insert a column

To insert a new third column, right click the mouse in any cell in the second column to obtain the drop-down menu. Select **Insert**, then **Insert Columns to the Right**. This will insert the column. Enter the text shown in the task into the cells.

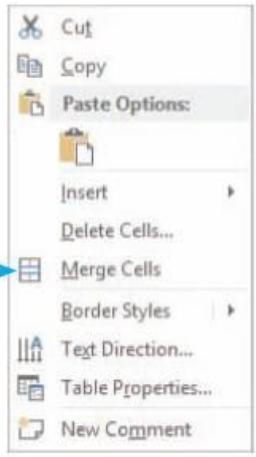
Insert a row

Use a similar method to insert the new row. Click the right mouse button in any cell in the 'Dance workshop' row. Select **Insert**, then **Insert Rows Below**. This will insert the new row. Enter the text shown in the task into the cells.



Merge cells

To merge cells 2 and 3 in the top row, highlight both these cells and then click the right mouse button on one of the highlighted cells to get the drop-down menu. Select **Merge Cells**.



Repeat this for the two cells placed to the right of the cells that you have just merged. Save the file. The completed table should look like this:

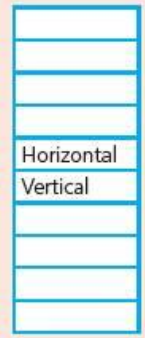
	X population		Y population	
Activity	**First choice**	**Second choice**	**First choice**	**Second choice**
Jewellery making	0	1	1	2
Paintballing	39	2	37	19
Boulogne trip	52	21	56	18
Rock workshop	3	18	2	3
Dance workshop	0	2	2	10
Craft workshop	0	3	2	3
Discover scuba	4	3	8	8
Beauty	4	10	1	9
Ceramic painting	0	5	1	2

Activity 17g

Open the file that you saved in Activity 13b.

Delete the top row and second column of the table.

Insert a new row above the row containing the word 'Format'. Insert the text 'Columns' in cell 2 of this new row. Insert a new fourth column with this data.



In column 1 merge the cell containing 'Insert' with the blank cells below it. Repeat this for the cell containing 'Delete' and the one containing 'Format'. In column 2 do the same for the cell containing' Cells' and the one containing 'Gridlines', and the same for the cell 'Alignment' in column 3.

Save the file with a new name.

Format a table

All of the required knowledge and skills for this section have already been covered in Section 13.2.6. These include:

- setting horizontal text alignment to left, centre, right and fully justified
- setting vertical cell alignment to top, centre or bottom
- formatting cells and their contents, such as: showing and hiding gridlines, wrapping text within a cell and shading or colouring cells.

Activity 17h

Open the file that you saved in Activity 17g.

Right align all the cells in the first column. Left align all other cells in the table.

Set the background colour of all cells in the first column to light grey. Ensure that there is no text wrapped within the cells of the table. Vertically align all data to the middle of each cell. Remove the gridlines from any unused cells.

Save the file with a new name.

17.3 Mail merge

17.3.1 What is a mail merged document?

A mail merged document is created to save the repeated typing of similar documents that are designed to be sent to different people. It uses a master document and a source file containing data. Data, like the names and addresses of people to send the letter to, is taken from the source file and placed into a copy of the original document. This is done automatically.

17.3.2 Why are mail merged documents used?

Mail merge is used to save retyping or editing lots of documents. It saves time (and therefore money) and helps to reduce the number of errors that may occur in editing or retyping the document. The most common use of mail merged documents is to produce personalised letters for a number of people. The contents of the letter have parts that are the same for all people and parts that are personal to the reader. When using the mail merge, the parts that are the same for all people only need to be typed once, even if hundreds of letters are to be created. The personal part of this letter is added using a placeholder, which will hold the individual information taken from the data source. The placeholders can hold information from a data source and/or instructions called merge codes (sometimes called field codes). The information from the data source is often a person's name and address, but may also include information about products that they have bought from a company.

You will be given a copy of a document that will become your master document. This contains the parts for all people. You will also be given a source file, which may be a database, spreadsheet or text file. You will need to merge the files into a number of personalised documents.

17.3.3 Create a mail merged document

Create a master document

A master document will usually be supplied to you as a source file. However, if a document to be used as a master document is only small you may be asked to create this document. The source document may be provided in a format suitable for use with any word processor. For example, it might be in a .rtf (rich text format) or a .txt (text format) file. This may need importing or opening in your word processor program and you will need to save it as a word-processor (.docx) file. You will need to import or create the document, carefully spell check and proofread the document and check that it has a consistent layout. You must then save two copies of this document as word-processed (.docx) files, making sure that you have a backup copy before you start to add the placeholders. You may need to go back to this backup copy if you experience any problems.

Task 17f

Use the file **mailmerge.rtf** as the master letter for a mail merge and the file **mmstudents.csv** as the data source file. In the master letter:

- insert relevant merge fields from the data source file to replace the text shown in chevrons, e.g. <field>
- replace the text <Date> with today's date in DD MMMM YYYY format
- replace the Headteacher's name with your name.

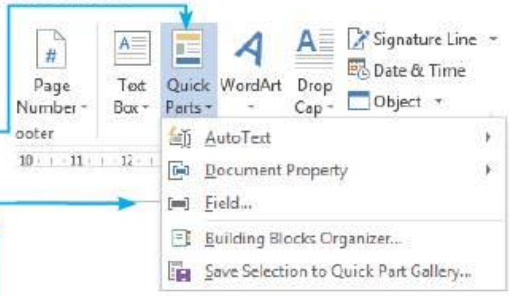
Save the file.

Open the file **mailmerge.rtf**. Save this as a *Microsoft Word* document because rich text format will not keep mail merge fields. Spell check and proofread the document. Correct any errors found (there are two).

You will notice that this document contains some text in chevrons <like this>. The text within the chevrons (and the chevrons) will each need to be replaced by a merge code.

Insert a special field into a mail merged document

Special fields that are automatically updated can be added to any word-processed document. In Section 13.3 we added date fields into the header and footer areas of documents. Move the cursor over the first of these and highlight the text <Date> which you will replace with the automated date. To do this select the INSERT tab, then in the Text section select the Quick Parts icon.



This will open a drop-down menu. Select the option for Field....

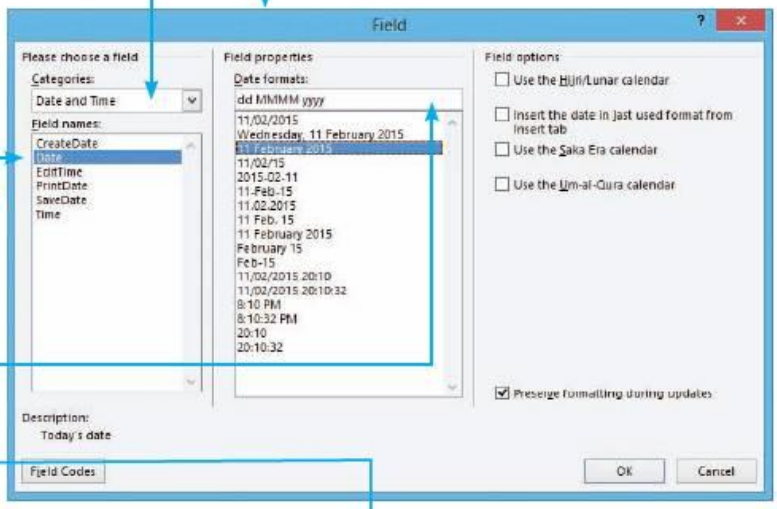
This will open the Field window which looks similar to this.

Using the drop-down menu from the Categories: section, select Date and Time.

Select the date from the Field names: drop-down list. This can be the date that the mail merge was created, the date it was saved, the current date or the date the document was printed. For this example, you can select the Date field name.

As you select it, the Date formats: list appears. The question asked for the format DD MMMM YYYY, scroll down through each of the formats until the date is displayed as required.

Click on OK to insert the placeholder for the date. This part of the letter should look similar to this.



Save the document again.

There are many different types of automated fields that can be placed into a document, for example the filename, number of words, number of chapters, name of author, file size, etc.

4309

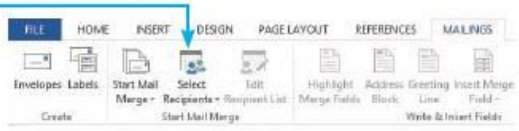
11 February 2015

<Title> <Forename> <Surname>

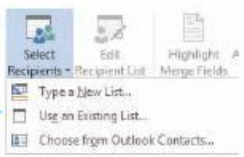
<Address 1>

Attach the source file to the master document

For all mail merge functions use the MAILINGS tab. As the letter has already been created, move the cursor into the Start Mail Merge section and select the icon to Select Recipients.

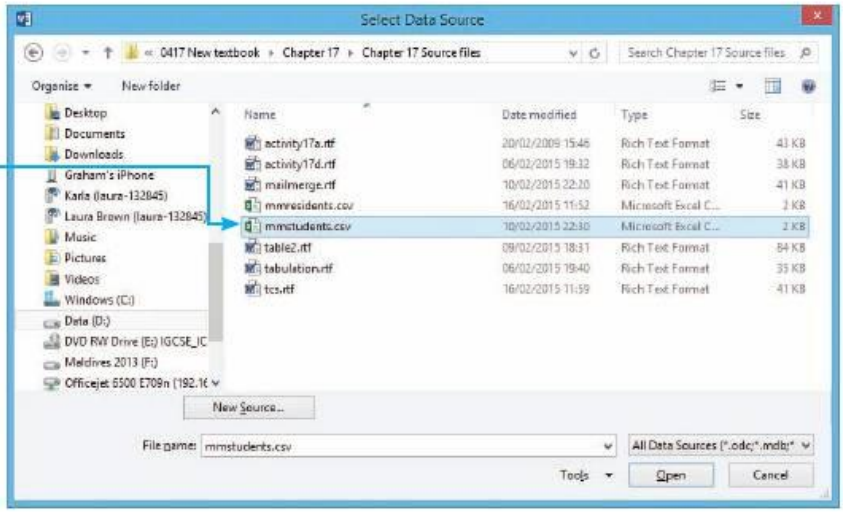


You can see that many of the other icons are 'greyed out' as the document has no source file attached to it, but these will become active icons later on. As you select the icon a drop-down list appears. Select Use an Existing List....



Use the left part of the **Select Data Source** window to move from the default 'My Data Sources' folder into the folder that holds the file **mmstudents.csv**.

Select this file and then click on Open. At this point you will see many of the previously greyed out icons appear ready for you to use. Save the document so that the path to the attached data source is also saved with the document.

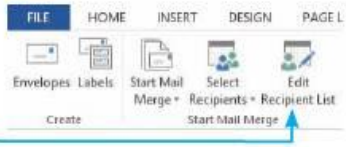


Advice

Once you have attached the data source do not save the document or data sources into different folders, or move them into different folders, or the links to the source document will not work.

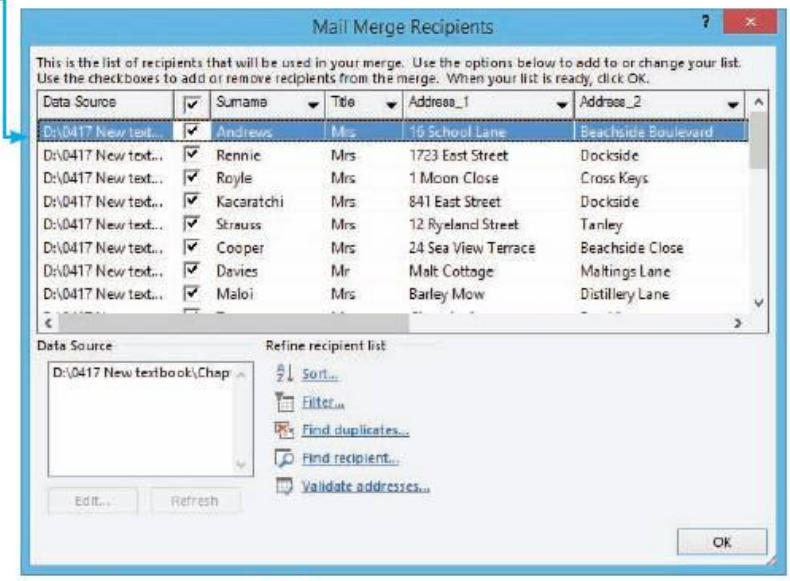
Check that the data source is attached

From the **MAILINGS** tab, in the **Start Mail Merge** section click the left mouse button on the **Edit Recipient List** icon.



This will open the **Mail Merge Recipients** window. Check that the data in here matches that source file.

If you need to select only certain people to send this mail merged letter to, you would untick the check box for those people who did not need a letter. This task does not tell us who to prepare the letters for, so make no changes at this point. Click on OK to return to the document.

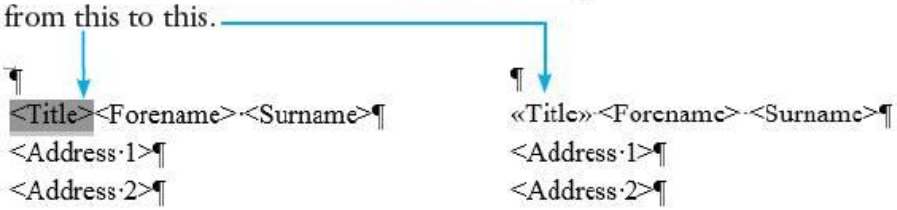


Insert merge fields into a mail merged document

Move the cursor over the first place where the merge field is to be placed and highlight the text <Title>. Do not highlight the spaces around this text. You are going to replace this text with the merge field for the person's title (e.g. Mr, Mrs, Miss, etc). Click the left mouse button on the **Insert Merge Field** icon to get a list of the available merge fields from the source data.

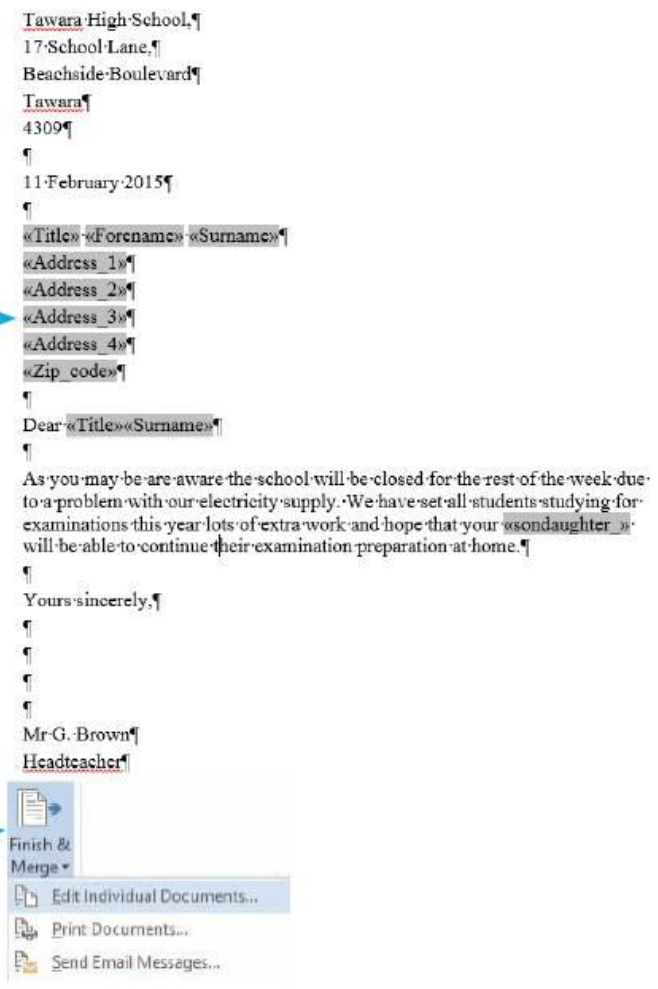
These are shown in the **Insert Merge Field** window. Click in the **Fields** section on **Title**.

Click the left mouse button on Insert. This part of the document will change from this to this.



You can see that *Microsoft Word* has placed double chevrons around the fieldname, to show that it is a field rather than text. Repeat this process for all of the other text with chevrons round in the document. To show which fields you have set as merge fields you can click on the **Highlight Merge Fields** icon so that they stand out. Replace the Headteacher's name with your name. The document should now look like this.

Save the file as task17f.



17.3.4 Run the mail merge

Task 17g

Run the mail merge saved in Task 17f so that individual letters are produced for all students.

Save the letters.

Run the mail merge with all records

Open the file saved in Task 17f. From the **MAILINGS** tab, select from the **Finish** section the **Finish & Merge** icon.

Select from the drop-down menu the option to **Edit Individual Documents...** so that you can check the contents of the individual letters before sending them to the printer. For this question where all records are required, make sure that the radio button for all the records is selected before clicking on OK.

A new *Word* document is created with all of the mail merged letters. This document has 25 pages, with one letter on each page. This matches the 25 records in the source data file. Save the merged letters as task17g.

Task 17h

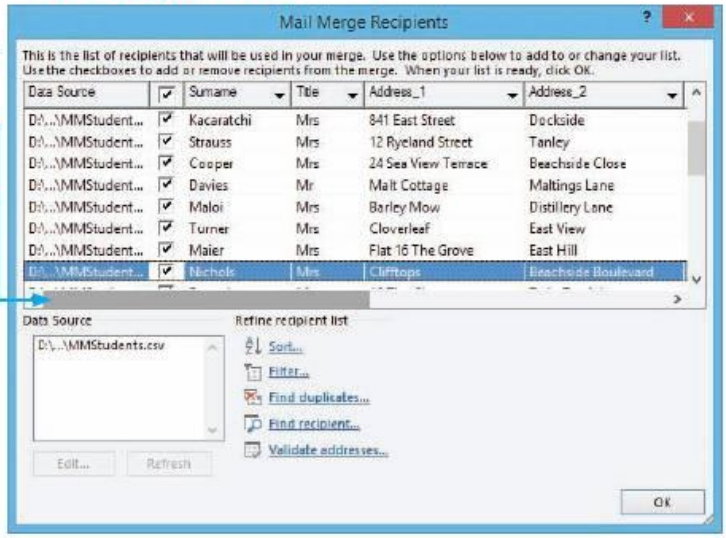
Run the mail merge saved in Task 17f so that individual letters are produced for only the students from Port Peppard.

Save the letters.

Run the mail merge with selected records

Open the file saved in Task 17f. To select the data for the letters, select from the MAILINGS tab, in the Start Mail Merge section, the Edit Recipient List icon.

This will open the Mail Merge Recipients window which will look like this.

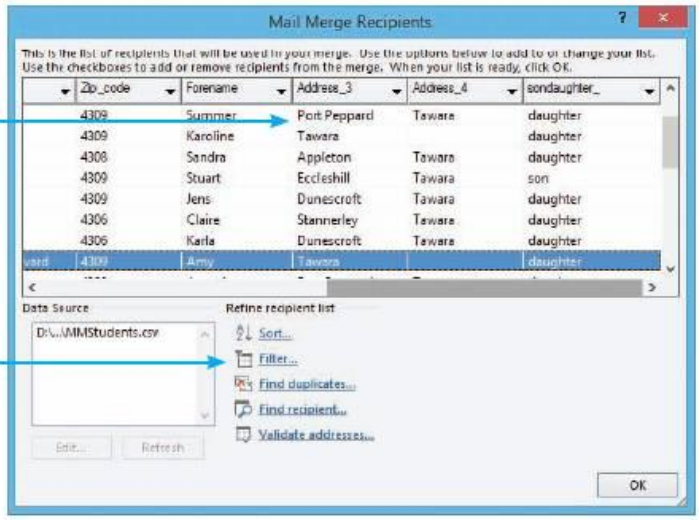


Use the horizontal scroll bar to examine the data.

Find the field containing Port Peppard. In this data source this is the Address 3 field.

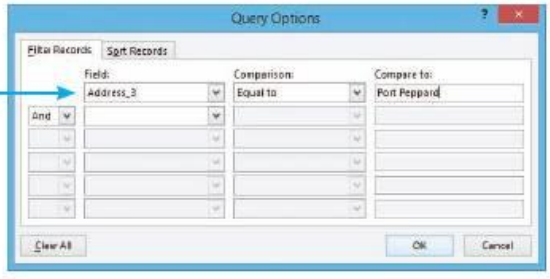
Remember or write down the name of this field.

You could go through each record and remove the tick against every record that does not have Address_3 as Port Peppard. This would not be a very efficient way of doing this and may take a lot of time. You may also make mistakes, for example, removing one accidentally. To select the correct records click the left mouse button on the text to Filter....



This opens the Query Options window. Make sure that the Filter Records tab has been selected. In the top row of the table, under the heading Field:, use the drop-down menu to select the Address_3 field. As you select this a drop-down menu appears in the next box below the text Comparison:. Select the option for Equal to if it is not already visible. In the box below the text Compare to: type the data to be compared with, in this case Port Peppard.

Take care that you do not make any typing errors. When you have completed this, click on OK.



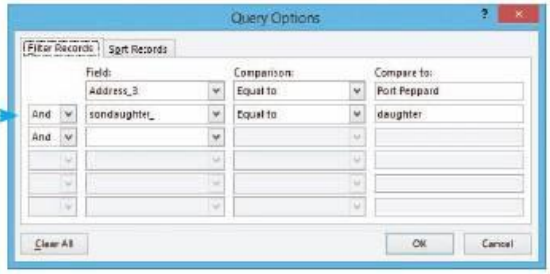
From the MAILINGS tab, select from the Finish section the Finish & Merge icon. Select from the drop-down menu the option to Edit Individual Documents.... Even though we have filtered the number of letters so that they are only sent to people living in Port Peppard, make sure that the radio button for all the records is selected before clicking on OK. The new merged document has six pages with the six letters addressed to only those living in Port Peppard. Save the merged letters as task17h.

Task 17i

Run the mail merge saved in Task 17f so that individual letters are produced for only the girls from Port Peppard.

Save the letters.

Other filters can be used in the Query Options window. Look at the data again and find out which field you would use to find the girls. You cannot use the title field as this is the title of the parent, not the gender of the student. Open the file saved in Task 17f and in the **Query Options** window set up the Filter to find only those students with the **Address_3** field **Equal to** (as the **Comparison:**) **Port Peppard** (as you did for Task 17h). Move the cursor down into the second row of the query. As the students live in Port Peppard **and** are girls, select **And** from the drop-down list on row 2.



In the **Field** box for this row, select the **son/daughter** field (note how this has changed to sondaughter_ because *Word* could not handle the use of the / in the original source data, this will not change the outcome of the merge). In the **Comparison:** box select **Equal to**, and type in the **Compare to:** box the word **daughter**. When you have completed this, click on OK.

Finish & Merge to get only three letters. Save the merged letters as task17i.

17.3.5 Print mail merge documents

Save your work regularly using the methods shown in Section 11.2. Mail merge documents will need to be printed so that they show the master document and the finished documents (often letters) after the merge has been run.

Task 17j

Print the master document created in Task 17f showing the merge and field codes.

Print the master document

You will always do this to show the merge codes within the document. Open the master document you saved in Task 17f. As you attempt to open the file a window similar to this will appear.

To allow the work that you did in Task 17f, (that is choosing the records from Port Peppard for the girls), to be included you must click the left mouse button on Yes. The document opens and looks like this.

Tawara High School,
17 School Lane,
Beachside Boulevard
Tawara
4309

16 February 2015

«Title» «Forename» «Surname»
«Address_1»
«Address_2»
«Address_3»
«Address_4»
«Zip_code»

Dear «Title» «Surname»

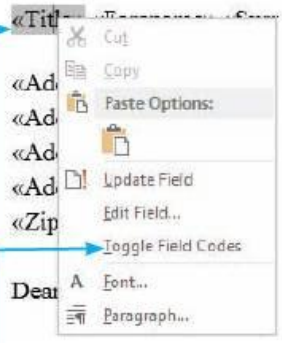
As you may be are aware the school will be closed for the rest of the week due to a problem with our electricity supply. We have set all students studying for examinations this year lots of extra work and hope that your «sondaughter_» will be able to continue their examination preparation at home.

Yours sincerely,

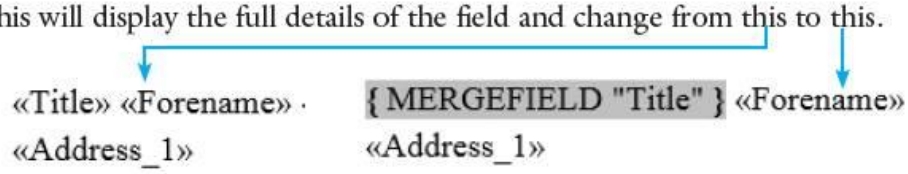
Mr G. Brown
Headteacher

The merge codes are visible inside the chevrons. This will show the name of the field and the fact that it is a merge field. You may notice that the field used for the Date is not shown.

You can see more detail for each field by clicking the right mouse button on a field and from the drop-down menu, selecting **Toggle Field Codes**.

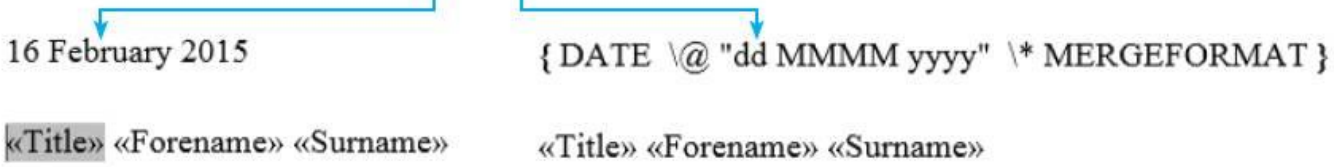


This will display the full details of the field and change from this to this.



If you wish to display the field codes in this format, take screen shot evidence and use that because the field codes in this format cannot be sent to the printer.

To show evidence of the date field and its formatting, right click the field (this one is not a merge field) and select Toggle Field Codes. This will display the full details of the field and change from this to this.



You can see that the format of the field is also displayed (the question asked for 'with today's date in DD MMMM YYYY format') showing the correct formatting. Again, this will not print, so screen shot evidence will need to be provided.

Task 17k

Print the merged letters saved in Task 17i for the girls from Port Peppard.

Print the merged documents

Open the merged letters saved in Task 17i. Check that each letter is addressed to the girls and that the address contains Port Peppard. Print these letters as a normal *Word* document using the FILE tab then Print.

Activity 17i

Use the file **tcs.rtf** as the master document for a mail merge and the file **mmresidents.csv** as the data source file.

In the master document:

- insert relevant merge fields from the data source file to replace the text shown in chevrons, e.g. <field>
- replace the text <Date> with today's date in DDDD, DD MMMM YYYY format
- replace the text <Your Name> with your name
- run the mail merge so that individual letters are produced for all residents.

Save the file.

Print only the first and last letter. Print the master document showing the merge and field codes.

Activity 17j

Print the merged letters saved in Activity 17i for the residents who live in Eccleshill.

Activity 17k

Print the merged letters saved in Activity 17i for the residents who live in Dunescroft or Stannerley.