

# 1

## General principles and procedures



### You should know:

- No prerequisites

### You will learn:

- How to use computer systems safely
- The basics of Windows
- How to use the mouse and the keyboard
- How to manage files and folders
- How to use floppy disks
- Key aspects of health and safety

## Computer systems

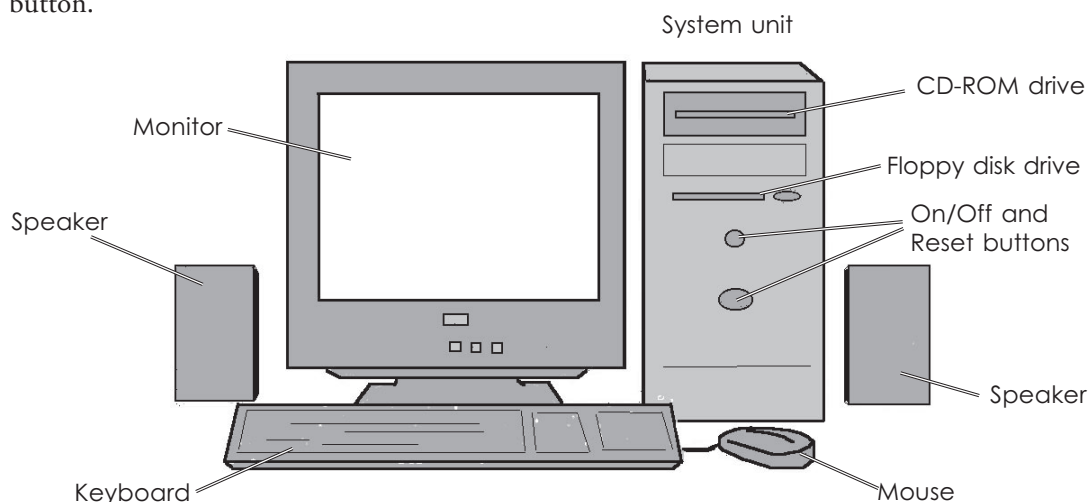
Computer systems come in all sizes, from mainframes that can fill a large room down to tiny hand-helds, but the most common type of computer is a PC (Personal Computer) running Microsoft Windows.

### The PC

PC systems typically have these components:

- *Monitor* or *VDU* (Visual Display Unit). On most desktop PCs this is similar to a TV, though flat LCD screens are becoming more common. Newer monitors usually have 17 inch screens, capable of resolutions up to 1600 × 1200. (The resolution is the number of *pixels* – dots of light – that make up the screen.)
- *System unit* – the box containing the ‘works’. This may act as a base for the monitor, or stand beside it, as in the illustration, or on the floor beneath.
- *Keyboard* – though mainly for entering text and numbers, the keys can also be used for controlling software, as you will see.
- *Mouse* – used for controlling the cursor on screen, allowing you to select items, start programs, draw pictures, and more.
- There will also normally be *speakers* and a *printer*, and possibly a scanner, attached.

On the front you should be able to see the front panels of a floppy disk drive and a CD-ROM drive, and two buttons – one is the on/off button, the other the reset button.



The main components of a desktop PC system

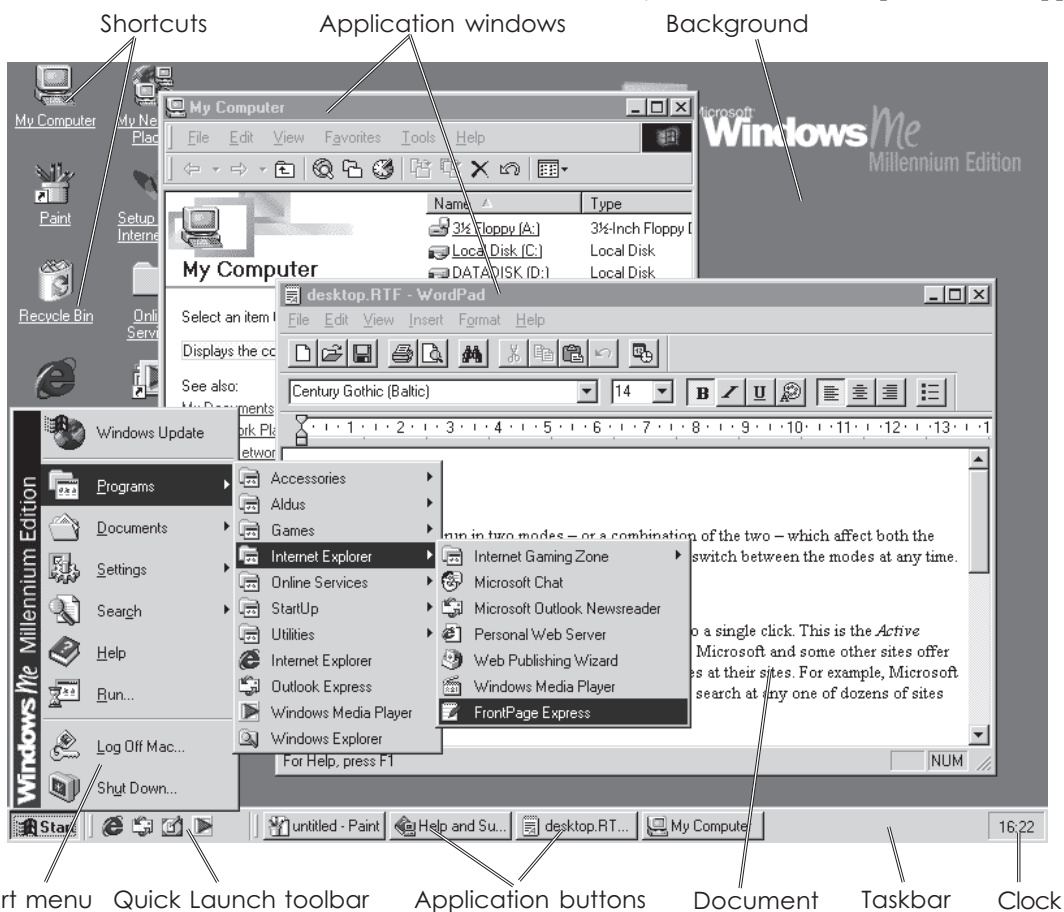
# Introducing Windows

Windows is an *operating system* – and more. An operating system handles the interaction between the processor and the screen, memory, mouse, disk drives, printer and other equipment. It is a bridge between the hardware of the computer and the *applications* – such as word processing or spreadsheet programs. Whatever hardware you are using, if it has a version of Windows, it can run any application written for that or for earlier versions of Windows. (This book assumes that you are using Windows 95, 98, Me, NT or 2000 – the differences between them are very small, and will be pointed out where it matters.)

## Starting up

Routines vary, depending upon the version of Windows and whether or not you are on a network, but will usually be like this.

- ❶ Turn on the PC.
- ❷ If the monitor has its own switch, turn it on.
- Various messages and images will appear to let you know that things are happening.
- ❸ If you are on a network, you will need to *log on* – to enter your user name and password.
- ❹ After a few more minutes' wait while the last files are loaded and the system configured for your use, the Desktop screen will appear.



The Desktop showing the main features. This is Windows Me, but 95, 98, NT and 2000 are very similar.

## The Desktop

Desktops vary hugely, but you should see some or all of these items.

### Shortcuts

These are icons – small images – with links to programs, folders or Web sites. Clicking on the icon will run the program, open the folder or take you online. There will be some shortcuts already on your Desktop, and you can easily add your own.

### Background

This may be a flat colour, a pattern, a picture or a Web page. It can be changed at any time without affecting anything else.

### Application windows

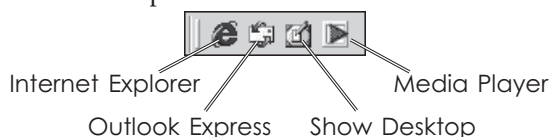
When you run an application, such as Word, it is displayed in a window. This can be set to fill the screen or to take a smaller area (see page 5).

### Taskbar

This is normally along the bottom of the screen, but can be moved elsewhere. It is the main control centre for the Desktop, carrying the tools to start and to switch between applications.

**Start** leads to the Start menu (see page 9).

The **Quick Launch toolbar** may be present. The default tools lead to Internet Explorer, Outlook Express and Media Player, and to the Show Desktop utility, which shrinks all open applications out of the way so that you have a clear view of the Desktop.



Links to other applications can be added if required.

When you run an application, a button is added to the Taskbar. Clicking on it will bring that application to the top of your Desktop.

The **Clock** can also be displayed on the Taskbar. You should find that it keeps good time – it even adjusts itself for Daylight Saving Time!

## Programs and Windows

### Starting applications

Applications can be started in several ways. Here are the three easiest:

- Click the application's desktop icon (if there is one).
- Click on its name in the Start menu (see page 9).
- Open a document that was created by or is normally handled by that application. The application will start automatically so that it can open the document.

### Switching between applications

When you have several applications running, the current one – the one that you are working on – will be on top. If its window is less than full-screen, then the windows of other applications may be partially visible underneath.

**To bring a window to the top, and make it the current one:**

- If you can see any part of the window, click on it.
- Otherwise, click on its button in the Taskbar.


## Window modes


A window is an independent part of the screen. It can be moved, resized, brought to the front or overlaid by other windows. Programs are run in windows, and documents are usually displayed in windows within their programs. You can have any number of programs running or documents open at any one time, though you can only be working actively in one window – the one on top.


A window can be in three modes:


- Maximized – filling the whole screen.
- Restore – adjustable in size and position.
- Minimized – a program window is reduced to a button on the Taskbar; a document window is reduced to its Title bar only.

## Changing the mode

The display mode can be changed using the buttons  in the top right of the frame.

To maximize a window, click .

To minimize a window, click .

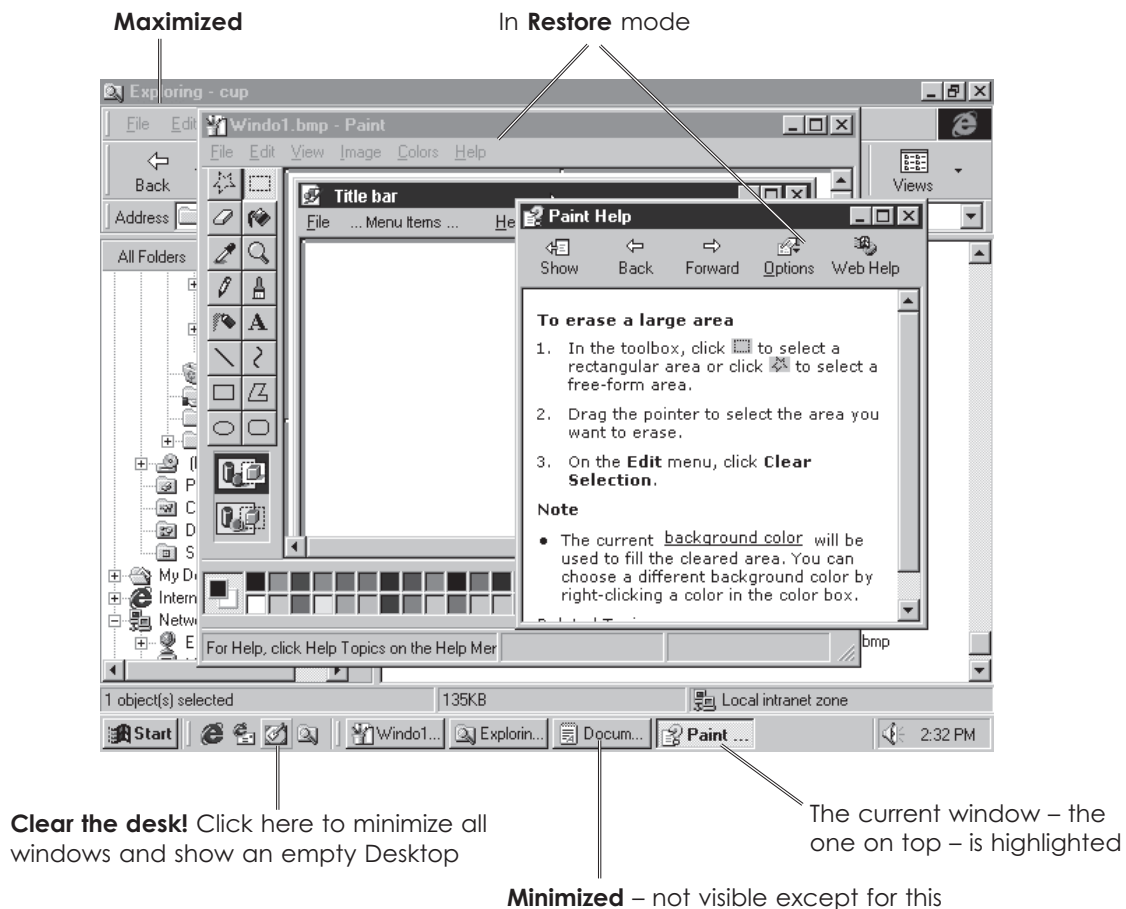
To restore a window to variable size, click .

When the window is maximized, the Restore button replaces the Maximize button:

➤ In a maximized window .

➤ In a restored window .

The  Close button is always present.



## The mouse

You can't do much in Windows until you have learned to use the mouse. It is used for locating the cursor, selecting from menus, highlighting, moving and changing the size of objects, and much more.

Most mice are built around a ball. Moving the mouse rolls the ball inside it. The ball turns the sensor rollers and these move the cursor. To control the mouse effectively you need a mouse mat or a pad of paper – mice don't move well on hard desktops.

They don't work well when they get dust and fluff inside. If you find that the cursor starts to move jerkily and becomes harder to control, take out the mouse ball and clean it and the rollers with a damp cloth. Dust inside the mouse can be removed with tweezers. You do not need to turn off the PC or disconnect the mouse before you do this.

A newer type of optical mouse works by bouncing a light off the surface of the mouse mat. A sensor notices differences in the image and changes mouse movement into cursor movement. An optical mouse will work on any surface and does not have problems with dust!

Note these points, for any type of mouse:

- If you are so close to the edge of the mat that you cannot move the cursor any further, pick up the mouse and put it back in the middle.
- You can set up the mouse so that when the mouse is moved faster, the cursor moves further. Watch out for this when working on other people's machines.

## Mouse actions

**Point** – move the cursor with your fingers *off* the buttons.

**Click** – click the left button. This action will select a file, menu item or other object.

**Right-click** – click the right button over an object on screen. This will open a menu of commands that apply to that object.

**Double-click** – click the left button twice in quick succession. This will run a program, or open a document from its icon. You can set the gap between clicks to suit yourself.

**Drag** – keep the left button down while moving the mouse. Used for resizing, drawing and similar jobs.

**Drag and drop** – drag an object and release the left button when it is in the right place. Used for moving objects.

### Tip!

If you need to practise using the mouse, play the games that come with Windows – you will find them in the **Accessories > Games** menu. Develop your point and click skills with Minesweeper, and your drag-and-drop skills with the card games.

## The keyboard

Most Windows tasks can be handled by the mouse alone, leaving the keyboard for data entry. However, if you prefer typing to using the mouse, you can do most jobs with the keys. The relevant ones are covered here.

### The function keys

These can be used in some applications to run certain operations – but they vary greatly, and so you have to learn the keystrokes. Two have the same effects in any application:

[F1] starts the Help system.

[F4] press this, while holding down [Alt], to close the application.

### The control sets

The **Arrow** keys can often be used instead of the mouse for moving the cursor. Above them are more movement keys, which will let you jump around in text. [Insert] and [Delete] are also here.

[Esc] is used to cancel operations and escape from trouble.



[Tab] moves across the page in word processing, or between objects in other displays – the current, selected object will be highlighted.

[Caps Lock] can be turned on if you want to type a lot of capitals. The **Caps Lock** light shows if it is on.

[Num Lock] should be turned on to use the number pad to type numbers, or off to use the keys for movement. The **Num Lock** light shows if it is on.

[Shift] is used to obtain capitals and the symbols on the top-row number keys.

[Control] is used with other keys to give key-stroke alternatives to mouse commands.

 is the same as clicking .

[Alt] is used, like [Ctrl], with other keys.

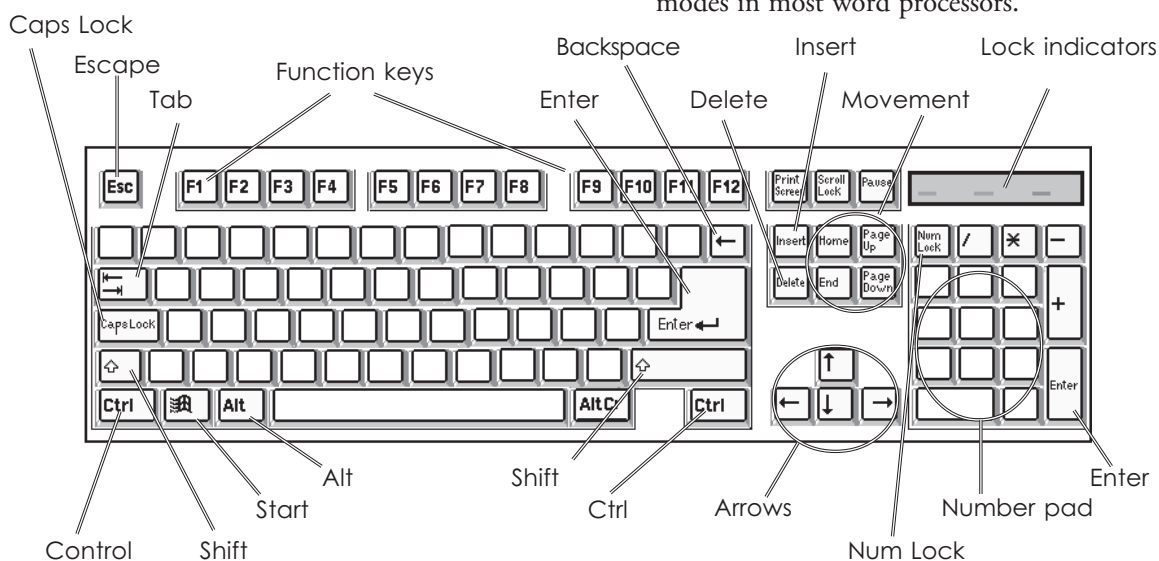
[Backspace] deletes the character to the left of the text cursor or any selected objects.

[Enter] is used at the end of a piece of text or to start an operation.

[Delete] deletes the character to the right of the text cursor or any selected objects.

[Insert] switches between Insert and Overtyping modes in most word processors.

### A typical PC keyboard





## Menus

Menus give you easy access to sets of commands and options.

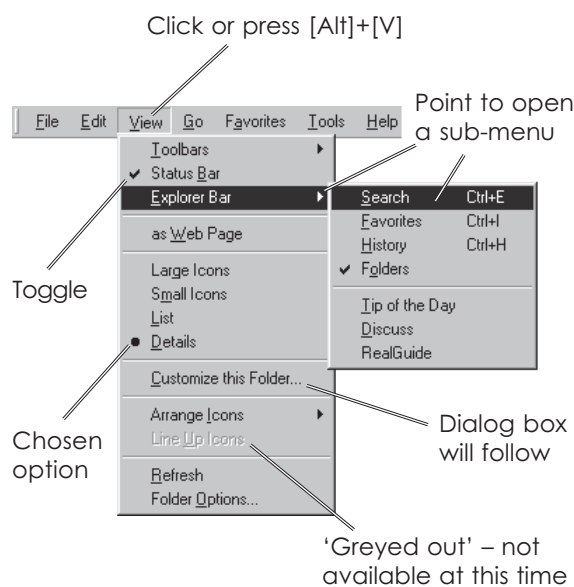
There are three types of menus:

- All programs have a *menu bar*, containing all of the program's commands and options. To open a menu, click on it, or press [Alt] and the underlined letter – usually the initial – e.g. press [Alt] and [F] for the File menu.
- For many objects on screen, e.g. icons, blocks of text or drawn figures, you can open a *shortcut* or *context menu*, containing a set of commands and options that may be used with that object. Right-click over an object to do this.
- Windows has its own special *Start menu* (see page 9).

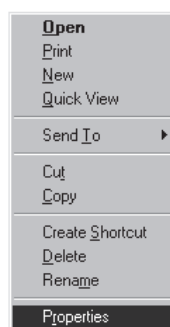
All menus are used in the same way:

- To select an item from a menu, click on it or type its underlined letter.
- Some items are *toggles*. Selecting them turns an option on or off. ✓ beside the name shows that the option is on.
- You sometimes get a set of options, of which only one can be selected at a time. ● beside the name indicates the chosen option.
- ▶ after an item shows that another menu leads from it. Click on or point to the item to open its menu.
- ... after an item shows that a dialog box will open to get more information from you.
- If an item is 'greyed out' – written in grey with a white shadow – it is not available at that time. You may need to set other options, or select different types of objects, before the command can be used.

A menu opened from the menu bar




The context menu for a file



Files can be opened, printed and deleted – amongst other things. The dividing lines are normally just decorative – they separate the commands into groups of related ones.

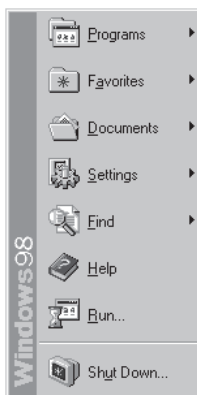


## The Start menu

Click  to open the Windows menu system.

From here you can run any application on your PC, open documents, get Help, find files, customise your system and close down at the end of a session.

There are eight main options on the first level menu:



**Programs** is the main route to your applications. All the programs on the PC should have an entry here, either directly on the Programs menu or in a submenu leading from it.

**Favorites** holds links to selected places on the Internet.

**Documents** holds a list of recently used document files. Selecting one from this list will run the relevant application and open the file for you to work on.

**Settings** is used to customise the Desktop and other aspects of the system and to set up printers.

**Find (Search in Windows Me)** will find files and folders on your computer, your network and the Internet, and help you to find people on the Internet.

**Help** is one way into the Windows Help system.

**Run** lets you run a named application. This is mainly used to run the setup program to install new software.

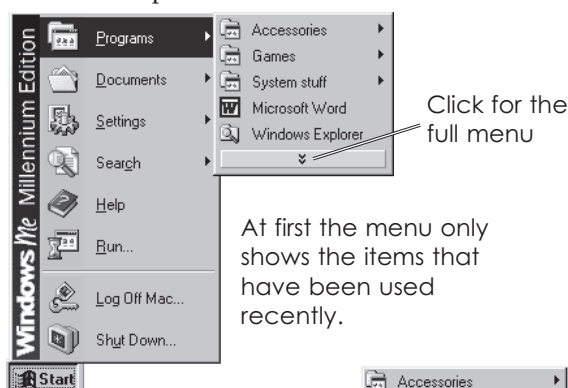
**Shut down** is the safe way to end a session on a stand-alone PC. If you simply switch off, you may lose work in documents that have not been saved recently.

If you are on a network, you will also have a **Log Off** option. Use this at the end of a session to close down your part of the network and leave the PC ready for someone else to use.

## Smart menus

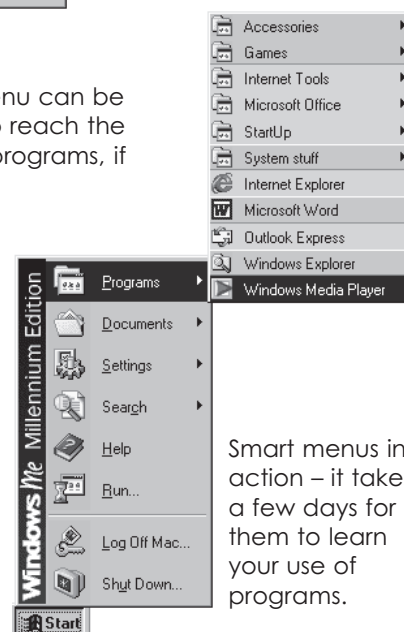
In Windows Me and in Office 2000, menus are 'smart'. When they first open, they display only the core items and those that you use regularly. The rest are hidden, but will be shown if you wait a few moments or if you click on the double-arrow bar at the bottom of the menu.

If you use a program, it will be added to the menu and become part of the displayed set in future. If you don't use a program for several days, it will be dropped from the menu. As smart menus are normally much shorter, it makes selection simpler and faster.



At first the menu only shows the items that have been used recently.

The full menu can be opened to reach the less-used programs, if needed.



Smart menus in action – it takes a few days for them to learn your use of programs.

## Toolbars

A toolbar is a set of buttons that give one-click access to commands and options. Most applications have at least one toolbar, and many applications have several – each with its own set of commands – Word, for example, has 16 toolbars. If an application has only one toolbar, this will usually be placed beneath the menu bar. Where there are several, you usually have more control over where they are placed. In Microsoft Office applications, such as Word, the toolbars can be fitted into the frame on any edge of the window, or left 'floating' – as free-standing panels that can be placed anywhere.

The position of toolbars can be adjusted at any time. To move a toolbar, drag on its handle, or its title bar, or any part which is not covered by a button.

In most applications, toolbars can be turned on or off through options on the View menu.

Using toolbar buttons is easy! In most cases, all you do is click on them. Sometimes, the button will have a little arrow to its right. Click the arrow to open up a palette of colours or other options and select from there, or click the button to use the default option.

