

# Beginners Guide in Windows 95/98

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## **1. What Is Windows 95?**

Windows 95 is the latest member of the Microsoft Windows family of products, and is the successor to Windows 3.x and Windows for Workgroups 3.x.

### **1.1 What are the key benefits and features of Windows 95?**

Windows 95 represents a major step forward in functionality on desktop and portable PC platforms by providing a system that is even easier, faster, and more powerful to use, and which maintains compatibility with the Windows and MS-DOS® operating system based applications and hardware peripherals in which customers have invested.

Ease of use is improved through the Plug and Play architecture and a more intuitive user interface. With Windows 95, the engine of Microsoft Windows is revamped to improve performance and provide smooth multitasking. Windows 95 is a complete, integrated 32-bit operating system that does not require MS-DOS, although it can run MS-DOS-based applications. It implements the Win32® API and provides pre-emptive multitasking and multiple threads of execution for 32-bit applications. Windows 95 includes reliable and open networking support and high performance, in addition to messaging and Dial-Up Networking access services.

As the successor to Windows 3.x and Windows for Workgroups 3.x, Windows 95 meets a number of key requirements. First, Windows 95 is compatible with applications and device drivers for both MS-DOS and Windows 3.x. In most cases, when a customer upgrades to Windows 95, performance will meet or exceed performance of Windows 3.1, as long as the customer has an 80386DX or higher system with at least 4 MB of RAM for the same set of tasks. For systems with more than 4 MB of memory, performance is improved over Windows 3.1. The transition to the new user interface is easy for current users of Windows, and companies that want to make the transition at their own pace will still be able to run Program Manager and File Manager during the transition period.

Windows 95 is not processor-independent nor does it support symmetric multiprocessing systems. Windows 95 is also not designed to meet C2-level security specifications. If these features are important to a customer, Windows NT™ is the right operating system to use.

### **1.2 How does Windows 95 compare to the other Windows operating systems?**

As compared to Windows 3.1 and Windows for Workgroups, Windows 95 is designed to make mainstream PCs easier and more powerful. It is the right choice for customers who want to run business and personal-productivity applications and for use on home computers. Windows NT is designed for the most demanding business uses, such as development or advanced engineering and financial applications. Windows NT is also the right choice for those who need scalability to multiprocessing and RISC systems.

### **1.3 What are the hardware requirements for Windows 95?**

Windows 95 will run on Intel (or compatible) 80386DX or higher processors with a minimum of 4 MB of memory (8 MB recommended). A VGA-compatible video adapter is also required. Windows 95 uses approximately 35-45 MB additional hard disk space as a typical upgrade from Windows 3.x, Windows for Workgroups 3.x, and MS-DOS (20 MB additional hard disk space

is required to access Microsoft Exchange and MSN™ (The Microsoft Network). Optional but recommended equipment includes a mouse, CD-ROM drive, modem, and audio card.

## **1.4 Why did Microsoft change the version numbering system for Windows?**

Until recently, version numbers have served us well. Version numbers helped inform customers that new versions were available and gave some sense for the significance of the improvements. However, our customer base has broadened to include less technical users, and our research indicates that even our most sophisticated customers find our current version-numbering scheme confusing. For example, Windows 3.1 provided far more new capabilities than a typical 0.1 release, and Windows for Workgroups 3.11 introduced dramatically more than the usual .01 release. We must make it easier for customers to understand which version of our software they are using, so they know when to consider upgrading to the next release.

## **2. Why Should I Upgrade To Windows 95?**

### **2.1 Why would individual customers want to upgrade to Windows 95?**

The sheer quantity of the improvements included in Windows 95 represents a great value for customers. Top on the list of requested improvements was an easier way to work with the PC. As a result, a new user interface was designed for Windows 95 that helps make computing even easier both for less experienced users and experienced users who want greater efficiency and flexibility.

Long filename support is one of many usability improvements in Windows 95. Improving ease of use goes beyond fixing problems with Windows — it encompasses the hardware, applications, and network too. Plug and Play makes hardware configuration automatic, and built-in networking makes starting a new network or connecting to an existing network server such as Novell® NetWare® and Windows NT Server just as easy.

Customers also want greater efficiency and power and to get their work done faster. They want to run more than one application or task at the same time. They want to use their computers to access files, electronic mail, and public-information networks from any location — at work, at home, or on the road. They also want better multimedia, whether for playing MS-DOS-based games or for teleconferencing using TV-quality video resolution. The following are highlights of capabilities in Windows 95 that address these requests:

- Preemptive multitasking. Windows 95 can perform multitasking smoothly and responsively for 32-bit applications.
- Scalable performance. The performance improvements that Windows 95 provides over Windows 3.1 increase as the amount of RAM increases, due to the high-performance 32-bit architecture of Windows 95. Support for 32-bit applications. Windows 95 supports the Win32 API, which means customers can enjoy a new generation of easier, faster, and more reliable applications.
- Increased reliability. Windows 95 increases protection for running existing MS-DOS and

Windows based applications and provides the highest level of protection for new 32-bit applications for Windows. As a result, an errant application is much less likely to disable other applications or the system.

- Faster printing. Windows 95 features a new 32-bit printing subsystem that reduces the time spent waiting for print jobs to finish and improves system response when jobs are printing in the background.
- Better multimedia support. Just as Windows 3.1 made sound a part of the system, Windows 95 now includes support for video playback. The video system and CD-ROM file system will provide high-quality output for multimedia applications.
- More memory for MS-DOS - based applications. The Windows 95 use of protected-mode drivers means customers have more than 600K free conventional memory in each MS-DOS window, even when they are connected to the network and using a CD-ROM drive and a mouse.
- Microsoft Exchange client. Windows 95 includes the Microsoft Exchange client, a universal client that retrieves messages into one universal inbox from many kinds of systems, including Microsoft Mail, faxes, Internet Mail, The Microsoft Network, CompuServe® Mail, and so on. Support for Mobile Computing. Users of portable PCs benefit from the built-in support provided by Windows 95 for their hardware, with automatic hardware reconfiguration (through Plug and Play), integrated disk compression, and battery power management. Dial-Up Networking and Briefcase help users stay organized and stay connected while on the road.
- Internet-Ready. Windows 95 includes the "plumbing" you need to connect to the Internet - support for TCP/IP and PPP dial-up connections are built in, and easy access to the Internet is available through The Microsoft Network. In addition, Microsoft Plus! includes the Internet Jumpstart Kit to give you the tools to browse the Web.

## **2.2 Basic Win95 usage vs MS-DOS (TM)**

### **2.2.1 protected mode**

An operating mode of Intel 80x86 processors. The opposite of real mode. The Intel 8088, Intel 8086, Intel 80188 and Intel 80186 had only real mode, processors beginning with the Intel 80286 feature a second mode called protected mode.

In real mode, addresses are generated by adding an address offset to the value of a segment register shifted left four bits. As the segment register and address offset are 16 bits long this results in a 20 bit address. This is the origin of the one megabyte ( $2^{20}$ ) limit in real mode.

There are 4 segment registers on processors before the Intel 80386. The 80386 introduced two more segment registers. Which segment register is used depends on the instruction, on the addressing mode and of an optional instruction prefix which selects the segment register explicitly.

In protected mode, the segment registers contain an index into a table of segment descriptors. Each segment descriptor contains the start address of the segment, to which the offset is added to generate the address. In addition, the segment descriptor contains memory protection information. This includes an offset limit and bits for write and read permission. This allows the processor to prevent memory accesses to certain data. The operating system can use this to protect different processes' memory from each other, hence the name "protected mode".

While the standard register set belongs to the CPU, the segment registers lie "at the boundary"

between the CPU and MMU. Each time a new value is loaded into a segment register while in protected mode, the corresponding descriptor is loaded into a descriptor cache in the (Segment-)MMU. On processors before the Pentium this takes longer than just loading the segment register in real mode. Addresses generated by the CPU (which are segment offsets) are passed to the MMU to be checked against the limit in the segment descriptor and are there added to the segment base address in the descriptor to form a linear address.

On a 80386 or later, the linear address is further processed by the paged MMU before the result (the physical address) appears on the chip's address pins. The 80286 doesn't have a paged MMU so the linear address is output directly as the physical address.

The paged MMU allows for arbitrary remapping of four kilobyte memory blocks (pages) through a translation table stored in memory. A few entries of this table are cached in the MMU's Translation Lookaside Buffer to avoid excessive memory accesses.

After processor reset, all processors start in real mode. Protected mode has to be enabled by software. On the 80286 there exists no documented way back to real mode apart from resetting the processor. Later processors allow switching back to real mode by software.

Software which has been written or compiled to run in protected mode must only use segment register values given to it by the operating system. Unfortunately, most application code for MS-DOS, written before the 286, will fail in protected mode because it assumes real mode addressing and writes arbitrary values to segment registers, e.g. in order to perform address calculations.

Such use of segment registers is only really necessary with data structures that are larger than 64 kilobytes and thus don't fit into a single segment. This is usually dealt with by the huge memory model in compilers. In this model, compilers generate address arithmetic involving segment registers. A solution which is portable to protected mode with almost the same efficiency would involve using a table of segments instead of calculating new segment register values ad hoc.

To ease the transition to protected mode, Intel 80386 and later processors provide "virtual 86 mode".

### **2.2.2 Plug and play**

Hardware or software that, after being installed ("plugged in"), can immediately be used ("played with"), as opposed to hardware or software which requires configuration.

### **2.2.3 Cluster**

An elementary unit of allocation of a disk made up of one or more physical blocks. A file is made up of a whole number of possibly non-contiguous clusters. The cluster size is a tradeoff between space efficiency (the bigger is the cluster, the bigger is on the average the wasted space at the end of each file) and the length of the FAT.

### **2.2.4 File allocation table**

One of the components of a file system. A table used to represent whether each cluster of a disk is free or allocated to a file. The terms is used in MS DOS, Windows and possibly other operating systems

## **2.3 Windows 95 benefits**

Microsoft kept DOS for compatibility and nothing else. Win95 includes MS-DOS 7.0, which under Win95, is a multitasking DOS. DOS programs run in protected sessions like Win95 programs do, and the system preemptively task switches between Win32 sessions, DOS sessions, and the single Win 3.1 session.

COMMAND.COM is now a multitasking command prompt. Win95 can unload it on command, unless a DOS program is running from it. Some Win32 character based programs can run from COMMAND.COM, if they don't depend on Windows NT features. Outside of Win95 though, COMMAND.COM, and the rest of DOS, is just DOS.

The biggest difference between old DOS and DOS 7.0, is it does not allow direct disk writes, to prevent filename corruption and virus infection. Effectively, if a program tries to write to the disk directly while outside of Win95, you will get an evil message telling you to restart your computer. Normally this is good, but some "good" programs (like Windows 3.1 running 32-bit disk access, which DOES work in DOS 7.0 by the way) need to access the disk directly. If you can trust such programs, type:

LOCK C: (or whatever drive letter)

before running the program. Notice, however, that LOCK C: only works outside of Win95 (like when you "Restart the computer in MS-DOS mode" for example), and within Win95, no direct writes are allowed under any circumstance.

Some DOS TSRs no longer supported under Explorer are PRINT and SUBST (though SUBST seems to work in 32-bit mode once you finish installing Win95). As a general rule, don't run any DOS TSRs that fiddle with the disk handler (such as Norton SMARTCAN or CASMGR) or require direct access to hardware (like PRINT).

4.00.950B users will notice their DOS apps will report their DOS version as MS-DOS 7.10. This version of DOS supports FAT32 file systems (The "32" refers to the number of bits the File Allocation Table supports, and as such it can support smaller cluster sizes on larger (> 1 GB) drives. FAT32 file systems will not work with DOS utilities designed for older versions of DOS, so don't waste your time.

### **3. Friendly Installation Wizard in Windows 98**

When installing Windows 98 from CD-ROM the procedure has been greatly simplified with the addition of a software 'Install Wizard Wizards are a relatively new feature to be found within many of Microsoft's applications and basically provide a highly intuitive set of menus and dialog boxes which are capable of guiding you to an end result. In this case, the end result is a successful installation of Windows 98.

In the past, configuring a machine to support additional features to a basic installation of Windows (such as sound cards and networking support) often meant running many individual installation programs some of which would assume prior knowledge of your machines configuration. The Install Wizard takes care of this problem by performing an extensive examination of the machine onto which you are about to install Windows 98.

Windows 98 will tailor its installation screens to suit your configuration. If hardware configuration changes need to be made, Windows 98 will tell you which component needs to be changed and what the new values should be set to, rather than just informing you that there is a problem.

### **4. Benefits of Windows 98**

**FAT:** Windows 98 includes support for the FAT32 filing system. This new filing system makes more efficient use of your hard disk, giving you up to 28% more disk space. It also enables you to use hard drives with capacities greater than 2 gigabytes.

**Fewer bugs?** Microsoft claim to have fixed thousands of bugs since the release of Window 95. In theory this should make Windows 98 a more stable operating system.

**Internet Intergration:** You do not need any additional software to access the Internet when using Windows 98. Internet Explorer has been incorporated into the operating system for fast web browsing. Email is handled by Outlook Express and FrontPage Express is included, enabling you to create your own web pages.

**Supports latest hardware:** 3 years have passed since the release of Windows 95 and many new pieces of hardware have hit the market. Windows 98 "knows" about much of the hardware currently in use, making upgrading your PC a much less painful experience.

**Automatic updates via the Internet:** Windows 98 includes Windows Update. If you have an Internet connection you can obtain all the latest add-ons for Windows directly from Microsoft's Windows Update web site.

**Programs start faster:** Windows 98 now keeps track of the files that each program uses. This allows the new Disk Defragmenter to better organize the files on your hard drive, providing improved performance.

To run Discover Windows 98

- Click on the Start button. Select the Programs folder, then select the Accessories folder, then select the System Tools folder.
- Select the Welcome to Windows command. The Welcome to Windows 98 window will be displayed. (You must have the Windows 98 CD inserted into your CD-ROM drive). Select Discover Windows 98 from the Contents list.

## 5. The Start Button

The Start button provides a launch point for all applications on the system. Exhaustive tests were performed with users who were: new to computer systems. When using Windows 3.x it was found that a new user took approximately nine minutes to find and open the Windows Write program (things such as double clicking cannot easily be picked up just by playing). Using Windows 98 it takes approximately three minutes to open the equivalent WordPad program (or much less in most cases) thanks to the Start button.

The main reason for the dramatic change is that the user no longer has to learn to deal with a complex hierarchy of overlapping and re-sizing groups, and does not need to know about the need to double click program icons before using the user interface.

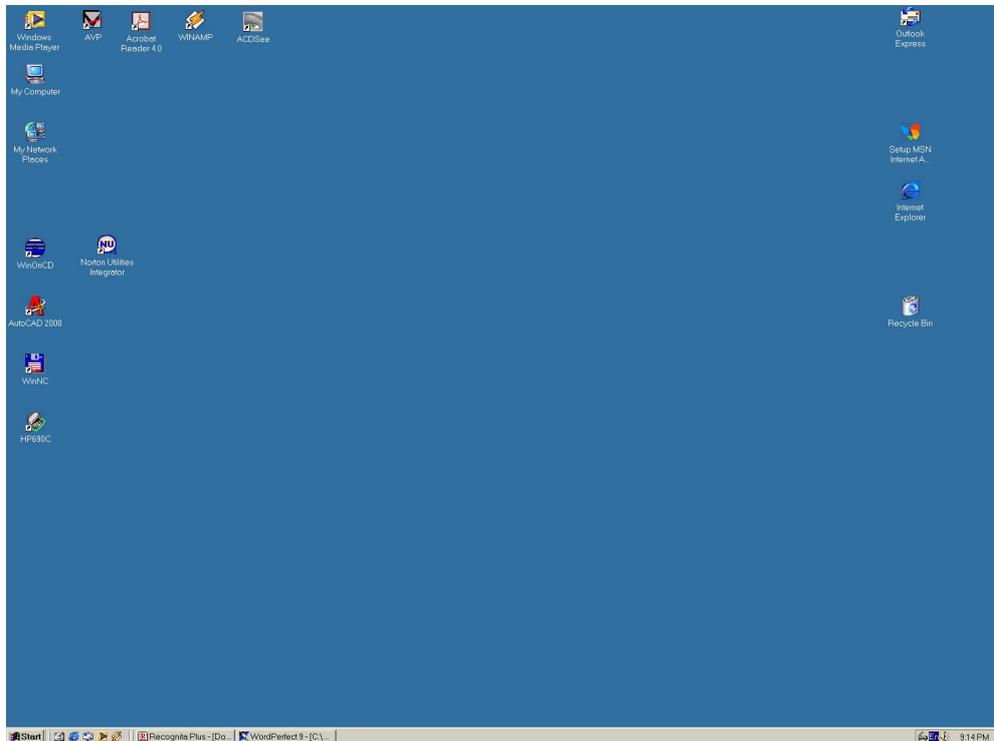


## 6. The Windows Desktop

At a glance the Windows 98 Desktop looks un-cluttered and almost inviting. The

emphasis is on encouraging the user to work with applications with the least amount of hassle and prior knowledge of a Windows environment.

The initial icons on the Desktop allow the user to view and interact with the system in a more logical way. Exhaustive tests were performed with end-users to design an interface that was as intuitive as possible.

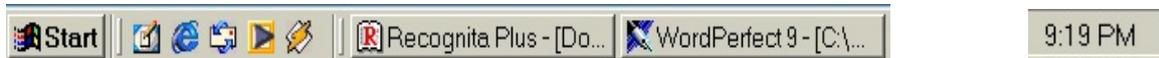


## 7. The Task Bar

- Access to all concurrently running applications
- System information and control

The Task Bar (normally positioned at the bottom of the screen) provides a constant view of which applications are running on the system and an easy way to switch between them. When using Windows 3.x to run multiple applications simultaneously, they could exist in one of two states -

either iconized with no fixed position, or within a window on the Desktop. This could be very confusing and it was often possible to actually lose an application behind a cluttered Desktop and forget that it was in fact running. The Task Bar eliminates this by providing a holding place for all applications. As you add to the: number of concurrently running applications the Task Bar automatically re-sizes its iconized view of the applications to ensure that they can always be seen.



The Task Bar also provides constant additional information such as the system time, lower consumption information on laptop, and volume control if you have a sound card fitted, all of which can be further tailored by the user.

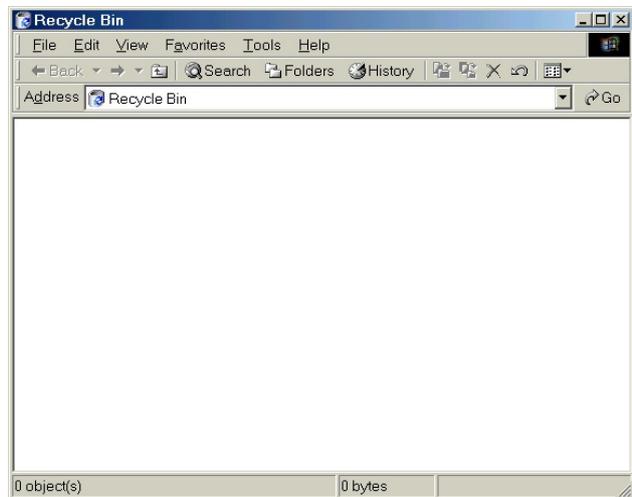
## 8.

The Start Button

- Easy retrieval of deleted data
- Files in the Recycle Bin are purged when disk space is low

Quick launch toolbar

When files or systems are deleted they are first moved to the Recycle Bin (identical to the Waste Basket found on Macintosh systems). As long as files are in the Recycle Bin they can easily be recovered if they have been accidentally deleted.

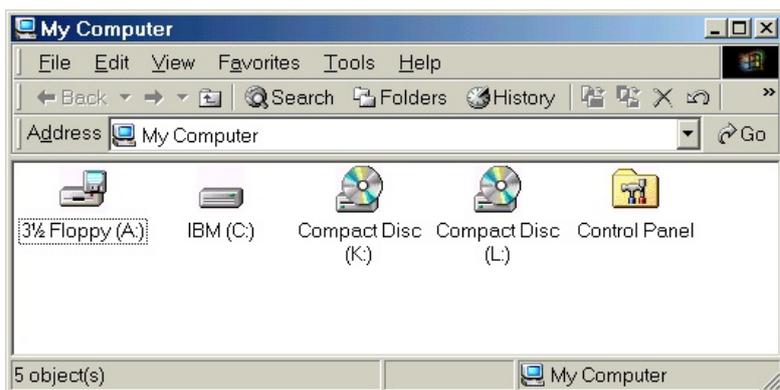


Windows 98 will preserve files until the system actually truly runs out of free disk space. When this happens Windows 98 will purge the contents of the Recycle Bin.

Warning! Files that are over-written due to an application using a duplicate filename will not be saved to the Recycle Bin.

## 9. My Computer

All of the main aspects concerning configuration and access to the system's local resources, such as the hard and floppy disk drives, are contained within the My Computer Desktop group. This allows the user to view local resources as objects. Double clicking on any drive will expand an additional window allowing the user to view the next level. During

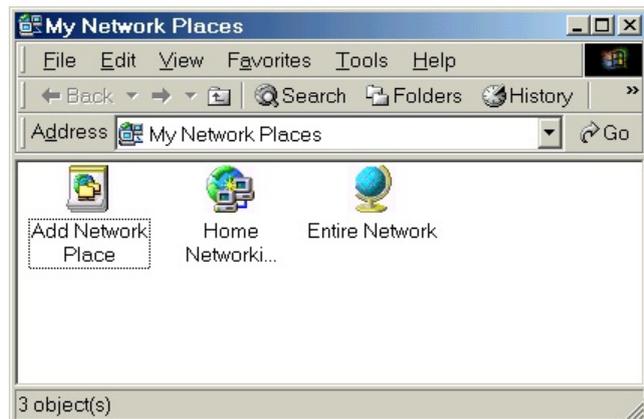


usability tests it was found that collapsing the hierarchical view presented by the Windows 3.x File Manager could often be confusing and that an object view was preferable.

## 10. Network Neighborhood

- Easy to use browsing tool
- Windows NT
- Novell NetWare

Background Network Neighborhood provides an easy mechanism for browsing any network systems and resources that you may be able to connect to in a way that is independent of the actual type of network vendor.



Traditionally, if a system needed to be simultaneously connected to different types of network, the way in which each could be connected and viewed would be vendor specific. Windows 98 is capable of displaying common view of your entire network even though it may actually comprise of resources from Windows NT, Novell NetWare, Banyan Vines, or perhaps all three!

## 11. Window Components and Selection Techniques

### 11.1 The Title Bar

- Provides added information
- May be used to maximize or restore window size

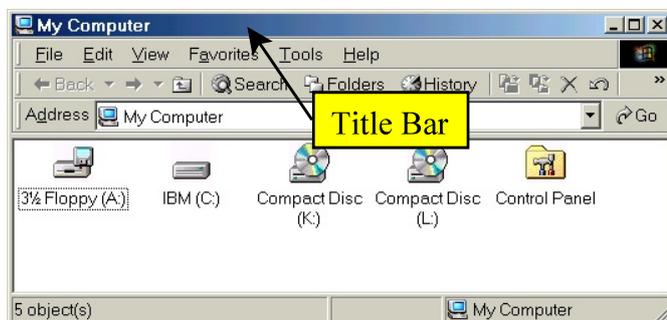
The Title Bar is displayed along the top of almost all program and folder windows and is used to display information such as the name of the application (or folder) and the document you are working on. Information that is displayed here may vary. For example, keep a close eye on the Title Bar when you first evoke a new application as some use the Title Bar to display information about what function is currently being processed.

To maximize or restore a window using the Title Bar: Double click on the Title Bar to toggle between a maximized object and one running within a window.

### 11.2 The Scroll Bars

- Allows for movement of text and graphics within a window.

When a program or folder needs to present graphics or text in a window two sets of scroll bars will appear along the bottom and right side of the window. By using the scroll bars it is possible to move to any position in a document and also work on a document many times bigger than your physical screen size.

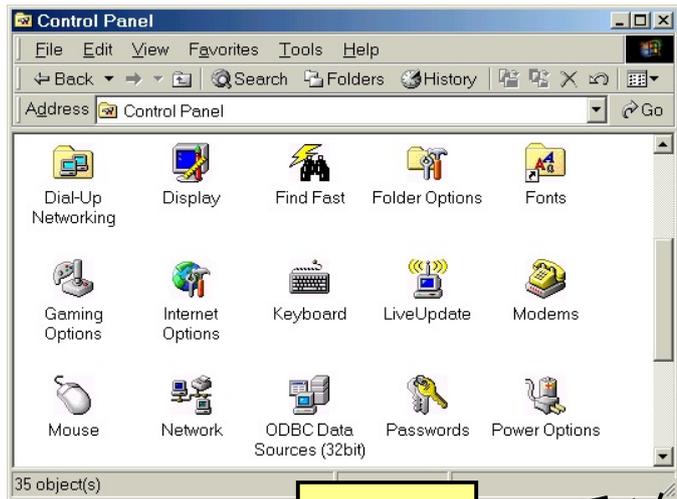


To move up and down within a window: To **scroll upwards** in a window, click on the upward pointing arrow  at the top of the vertical scroll bar;

To **move downwards** in a window, click on the downwards pointing arrow  at the bottom of the vertical scroll bar.

To move right to the left within a window: To **move to the right** hand side of a window, click on the right-hand arrow on the horizontal scroll bar.

To **move to the left-hand** side of a window, click on the left-hand arrow on the horizontal scroll bar.



Minimize

Maximize

Close

Scroll Bar

To scroll through a window at speed: click on the scroll box and **drag the scrollbar** up and down the vertical scroll bar.

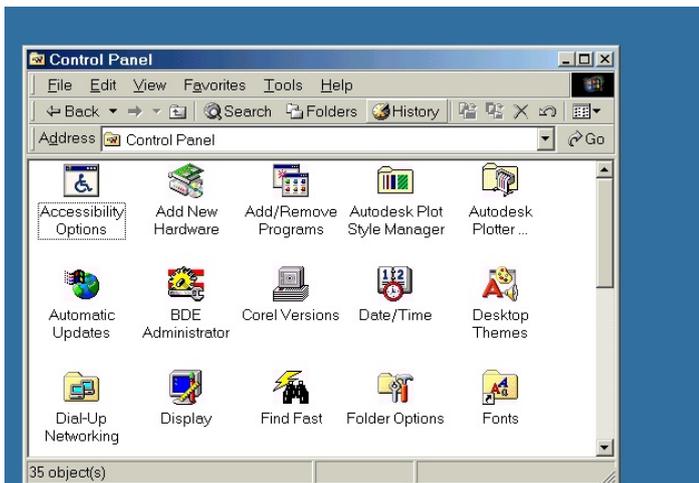
Note: When moving the scroll box the contents of the window will not be updated until the mouse button is released. For more precise scrolling it is better to use the individual arrows as described above.

### 11.3 Maximize, Minimize, Restore and Close Buttons

The Maximize, Minimize and Restore buttons are located in the top, right-hand corner of every window. When you click on the Maximize button the window expands to fill the screen, the Minimize button reduces the window to an icon on the Task Bar and the Restore button returns the window to its original state.

To minimize a window: click on the Minimize  icon.

To maximize a window: click on the Maximize



 icon.

To restore a maximized object to run in a window: click on the Restore  icon or double click on that windows Title Bar.

Note: To maximize, minimize and restore the window using the keyboard, press Alt + Spacebar for a parent window, or Alt + - for a child window. A menu will be displayed which allows you to select the option required using the arrow keys.

To minimize all program windows simultaneously:

- clic on an empty part of the Task Bar, using the right-hand mouse button to display a pop-up menu;
- select Minimize All Windows.

To open all minimized windows:

- Right click on an empty part of the Task Bar, using the mouse to display a pop-up menu.
- Select Undo Minimize All.

Restoring a window from the Task Bar by single clicking on it: In Windows 98 all windows that have been minimized, minimize down to the Task Bar. In the example shown, Recognita Plus and WordPerfect 9 had been minimized and are displayed in the Task Bar.

If you wish to restore the WordPerfect 9 window, simply click on the WordPerfect 9 button in the **Task Bar**.

What is the Close button used for?: The Close button is located in the top, right-hand corner of every program or folder Close button window. It allows you to close the current window in the carne way as double clicking on the small Control menu icon (found in the top, left-hand corner of each window) but only requires a single mouse click. If you have any un-saved work, Windows 98 will first ask if you want to save your changes before final termination of the application. BEWARE: If you are used to using Windows 3.1, you would normally see a Maximize button, where you now see the Close button. Be careful not to close programs, when you mean to maximize them!

To close a program using the Close button: move the mouse pointer to the Close  button and clickk once using the left-hand mouse button.

To close a window using the keyboard: press Alt + F4.

To close a window using a pop-up menu: right click on the button displayed within the Task Bar that represents the program you wish to close to display a pop-up menu and choose Close.

## 11.4 Borders

Borders can be used for:

- Obtaining an exact window size
- Horizontal control
- Vertical control
- Corner re-sizing
- Click and drag the vertical border to make the window narrower or wider
- Click and drag the horizontal border to make the window taller window or shorter
- Click and drag the corner of the window to re-size a window in two dimensions simultaneously

All objects are surrounded by a thin border when they are running within a window. When working with multiple windows on the Desktop you may need to re-size a particular window to an exact size by manipulating the borders. The window can be re-sized by clicking on the horizontal, vertical, or corner of the border.

To make a window taller or shorter:

- Move the mouse pointer to either of the horizontal borders;

- Depress the left-hand mouse button (and keep it depressed);
- Drag the mouse pointer up or down the screen;
- Release the mouse button when the window is the size and shape required.

To make a window narrower or wider:

- Move the mouse pointer to either of the vertical borders;
- Depress the left-hand mouse button (and keep it depressed);
- Drag the mouse pointer to the left or right across the screen;
- Release the mouse button when the window is the size and shape required.

To re-size a window in two dimensions simultaneously:

- Move the mouse pointer to any corner of the window;
- Depress the left-hand mouse button (and keep it pressed);
- Drag the mouse pointer diagonally across the screen;
- Release the mouse button when the window is the size and shape required.

To manipulate borders using the keyboard:

- Press Alt + Spacebar to activate the window control menu followed by the S key to select the Size option;
- A four headed arrow will appear and you can use the arrow keys to move the borders in or out. Press Enter when the window is the size required.

### 11.5 The Control Menu Icon

- All windows have a Control (or System) menu
- Click to display the Control (or System) drop down menu



The Control menu icon is located in the top, left-hand corner of each program or folder window and can be displayed by clicking once on the Control menu icon (a double mouse click will close the window!). Ordinarily the Control menu allows you to change the size and position of the window directly from the keyboard as we have already seen.

To open the Control menu: Click on the Control menu icon with the left-hand mouse button to display the Control drop down menu. Select from the following options:

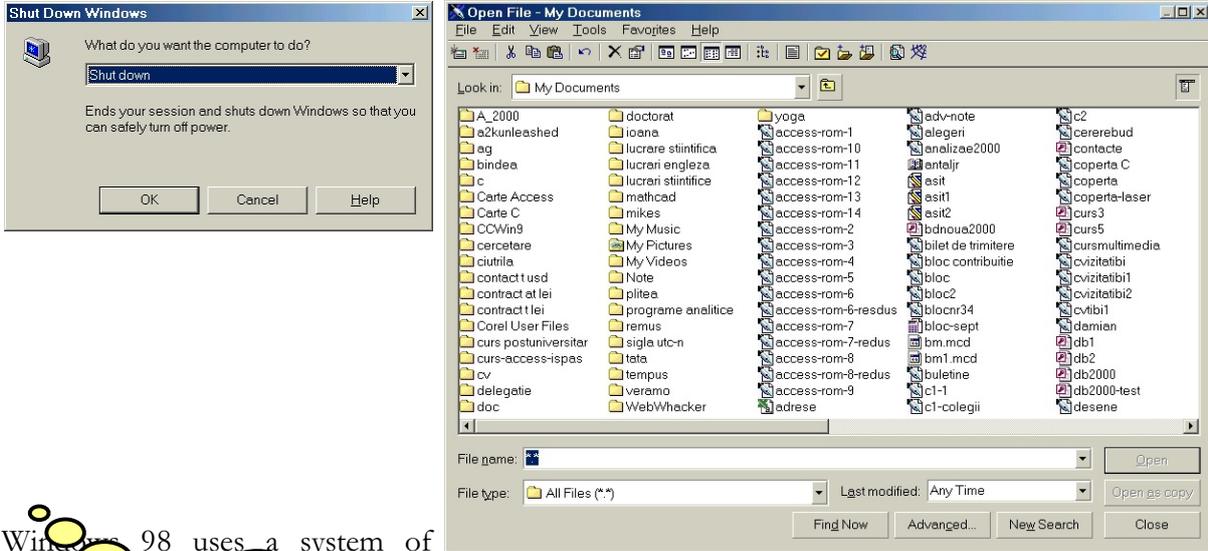
Item	Function
Restore	Restores the window to its original size
Move	Moves an object to a new location
Size	Re-size an object
Minimize	Minimizes the active window
Maximize	Maximize the active window
Close	Closes the active window

Always on Top

Optional command, not always available. Allows an object to always appear in the foreground, or on top of the active window. It is also useful for objects such as system information icons which you may want visible as you work

## 11.6 Dialog Boxes

- Dialog boxes assist in the selection of actions

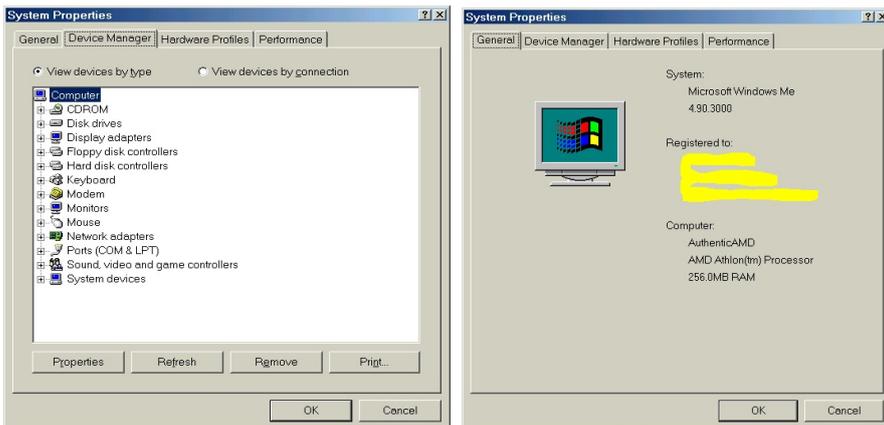


Windows 98 uses a system of dialog boxes for selecting options. To close a dialog box, press the Esc key.

To open a dialog box, you may prompt you for a YES or NO response when performing a task such as closing a file. However, when performing more complex sections such as character size, Windows 98 uses multiple dialog boxes to help you make your selection.

To open a dialog box: The following example shows you how to open the Shut Down Windows dialog box.

- Click on the Start button and choose Shut Down to display the Shut Down Windows dialog box as shown above;
- Select the option Shut down from the list box (by clicking the right down-arrow if necessary and selecting from the drop down list this option);
- Click to the OK button to accept the selected option or to the Cancel button to ignore the selected option and close the dialog box. Click on the Help button to reveal help on using the dialog box.



## 11.7 Tabs

- Some dialog boxes have multiple sections and categories
- Categories are separated by tabs
- Click on each tab to choose available options

Some dialog boxes have multiple sections and categories. Such

sections are separated by tabs (similar to the tabs on the cards in a card index box) and only the options on the currently highlighted tab can be viewed. When you select a different tab the original tab moves back and the new tab is brought into the foreground. Using tabs in this way permits a great many options to be viewed and selected without the need for a very large window.

To move between different tabs in a dialog box:

- Click on the tab required;
- The tab and the options available in it will be displayed. Any other tabs will move behind the selected tab;
- To move to another tab to view its options, simply click on the the tab.

## 11.8 Mouse Selection Techniques

**REMEMBER THE WINDOWS TECHNIQUE Select Then Manipulate !**

Selections using the mouse are simple and involve pointing and clicking. Different actions can be performed on text or icon selections depending on the number of clicks issued. The actions performed will also depend on the application you are using - it is worth experimenting.

To select text using the mouse:

To perform this	Do this
To place the cursor in a document	Click the left-hand mouse button once to place the Insertion point in the document at the location of the mouse pointer
To select the word in which the mouse pointer is located	Double click on the word with the left-hand mouse button
To select the paragraph in which the mouse pointer is located	Click the left-hand mouse button three times anywhere within the paragraph

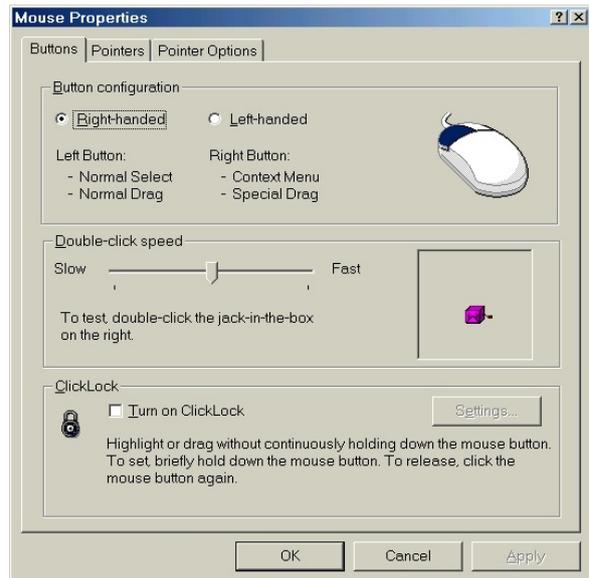
Note: The above conventions are common in the majority of Windows applications. However, there may be variations.

To change the mouse tracking speed:

The mouse tracking speed controls how quickly you need to click a mouse button in order to perform an action. For example, if the tracking speed is too speed fast, it may be more difficult to click the mouse button three times to select a paragraph. As a default the mouse tracking speed is set to fast. Although down to personal preference, you can set the mouse speed to a slower setting.

- Click on the Start button and choose Settings and then Control Panel;

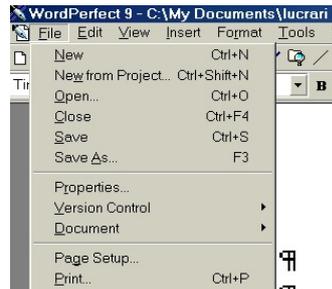
- Double click on the Mouse icon from the Control Panel dialog box to display the Mouse Properties dialog box;
- Make sure the Buttons tab is selected. In the Double-click speed section, adjust the mouse speed as required by clicking on the slide and dragging towards Slow or Fast. Then click on OK to close the dialog box and double click on the Control icon in the top, left-hand corner of the Control Panel dialog box to close it.



## 11.9 Keyboard Selection Techniques

- Accelerated application interaction

From within any application the speed at which you can configure options can be greatly increased by using keyboard shortcuts. Most major menu functions within an application have an accompanying shortcut key sequence. To see if a shortcut is associated with it, click on the menu drop down menu. If a shortcut is available it will appear to the right of the option.



you can select and keyboard shortcuts will have an option has a name to open the appear to the right

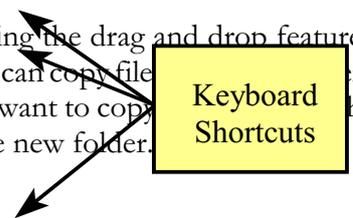
As you become more accomplished at using an application it is a good idea to learn a few shortcuts - you will soon find that you use the shortcut in preference to the mouse without even thinking about the change of action.

To use a keyboard shortcut: Press down the CTRL key plus the letter assigned to the option you wish to select, i.e. to display the Open dialog box press Ctrl + O.

## 11.10 Drag and Drop Techniques

- Allows logical moving and copying of objects

Windows 98 fully supports the ability to drag and drop objects. Using the drag and drop feature makes many system operations much more logical. For example, you can copy a file to another in Windows Explorer simply by picking up the object you want to copy with the mouse button, and releasing the mouse button to drop it into the new folder.



To move a file to a new directory using drag and drop:

- Click on the file you wish to move and hold the right-hand (or left-hand) mouse button, you are now in "drag" mode;
- Drag the file to the location where you wish to move the file and place the icon over the target;
- Release the mouse button and "drop" the contents into the new location.

NOTE: If you drag and drop a file on the same disk drive, Windows 98 will assume you wish to move the file rather than copy it. To invoke a file copy on the same hard disk hold down the Ctrl key whilst performing the drag and drop operation.

### 11.11 The Right-Hand Mouse Button

- Click the right-hand mouse button to display a pop-up menu pertaining to the object you click on

Windows 98 makes extensive use of the right mouse button to extend the functionality of previous versions of Windows. As the Windows 98 Desktop is now object-based, clicking any object (even the Desktop itself) will invoke a special object menu containing key configuration information and controls.



A key emphasis of the design of Windows 98 is to encourage users to interact in a more object-oriented way than ever before. Users only have to click on a document on which they are working and not worry about first invoking the needed application. Use of the right-hand mouse button further extends this process; once in an application the right-hand mouse button can take on additional functionality to make the application more powerful.

To use the right-hand mouse button:

- Click on any object with the right-hand mouse button;
- A pop-up menu will be displayed;
- The contents of the menu will depend upon the object on which you clicked. Even clicking on the Desktop itself will open a pop-up menu.

## 12. What is the Start Button?

- The initial launch point for Windows 98
- Requires only a single mouse click to be activated and display the Start menu

Clicking with the right-hand mouse button on the Desktop background displays this menu



A single click of the left-hand mouse button on the Start  button will invoke the Start menu. As mentioned previously, the idea behind the Start button is to allow the user to access their work or application with the least amount of fuss in a way that is 'discoverable' to the first time user (actions such as double clicking are not discoverable).

A single click of the right-hand mouse button will invoke a small, powerful, object control menu containing the options Open, Explore and Find. Their functionality is described as follows:

Item	Function
Open	The contents of the Start menu can be viewed. Folders and icons can be deleted, copied, and moved using drag and drop techniques.

Explore	Will invoke the powerful Windows 98 Explorer. The Explorer can display a hierarchical representation of the entire system and permit further Desktop manipulation and configuration.
Find	Will invoke the Windows 98 file searching utility from which you may search for any file either by its name or by its actual content.

## 12.1 The Start Menu

- Allows easy access to the components that make up Windows 98, and also to your application programs
- Easily configurable to suit the way YOU wish to work
- Items may be added or removed

TIP: Keyboard shortcut **Ctrl + Esc** to display the Start menu.

Start menu contains the various categories where your applications and work are stored. You can move further into the various sub-categories by positioning the mouse over the category you are interested in to automatically open the next sub-category (you do not even have to click the mouse !).

TIP: If you drag an object either from the Desktop or from the Windows Explorer and drop it directly onto the Start button a link to that object will automatically appear in the Start menu.

To display the Start menu using a mouse: Click on the Start Button located at the bottom left of your screen.

To display the Start menu using the keyboard shortcut key: **Press** Ctrl + Esc.

To display the Start menu using a Windows 98 aware keyboard:

- Windows 98 aware keyboards have two extra keys;
- Pressing the key with the symbol  on it will open the Start menu.

To close the Start menu using the mouse: Point the mouse at the Desktop (not at the Start menu) and click the left mouse button.

To close the Start menu using the shortcut key: **Press** the Esc key.

## 12.2 The Start Button - Programs



The Programs category is very similar to the Program Manager group found within Windows 3.x. From here you have access to all sub-groups that you create, or which may be created automatically by application installation routines.



TIP: You can easily add your own sub-categories to the Programs category by initially clicking the Start button with the right-hand mouse button and selecting the Open command. The view will now expand to display the contents of each of the categories as a window. The creation of additional folders and program icons can be performed easily whilst in this view.

Finally, when complete, close off the windowed view and click on the Start button with the left-hand mouse button - your newly created folders and icons will now appear within the Start menu itself.

### 12.3 The Start Button - Documents

- Recently edited documents are displayed here

The Documents section within the Start menu contains a list of the last 15 documents that were opened directly from your Desktop. Simply select the document you wish to continue working on and Windows 98 will automatically launch the associated application and open the file.

By allowing the user to select the actual document to be worked on rather than selecting an application, Windows 98 more directly mirrors the way in which people naturally work.

BEWARE: Document files that are opened within some older applications (typically by selecting the File/Open command within the application) will not be displayed here.

To clear the contents of the Documents menu:

- Click on the Start button and select Settings;
- Select Taskbar
- Click on the Start Menu Programs tab;
- Select Clear from within the Documents Menu section;
- Click on the OK button.

### 12.4 The Start Button - Settings

Access to configuration utilities:

- Control Panel
- Printers
- Taskbar

By selecting Settings from within the Start menu you can directly access the Control Panel and Printers folders. Being able to access the core system configuration utilities in this way is particularly useful when an application is already in the foreground and you want to make a quick change. In this scenario simply press Ctrl + Esc to invoke the Start menu over the top of your application and click

on Settings.

## 12.5 The Start Button - Find

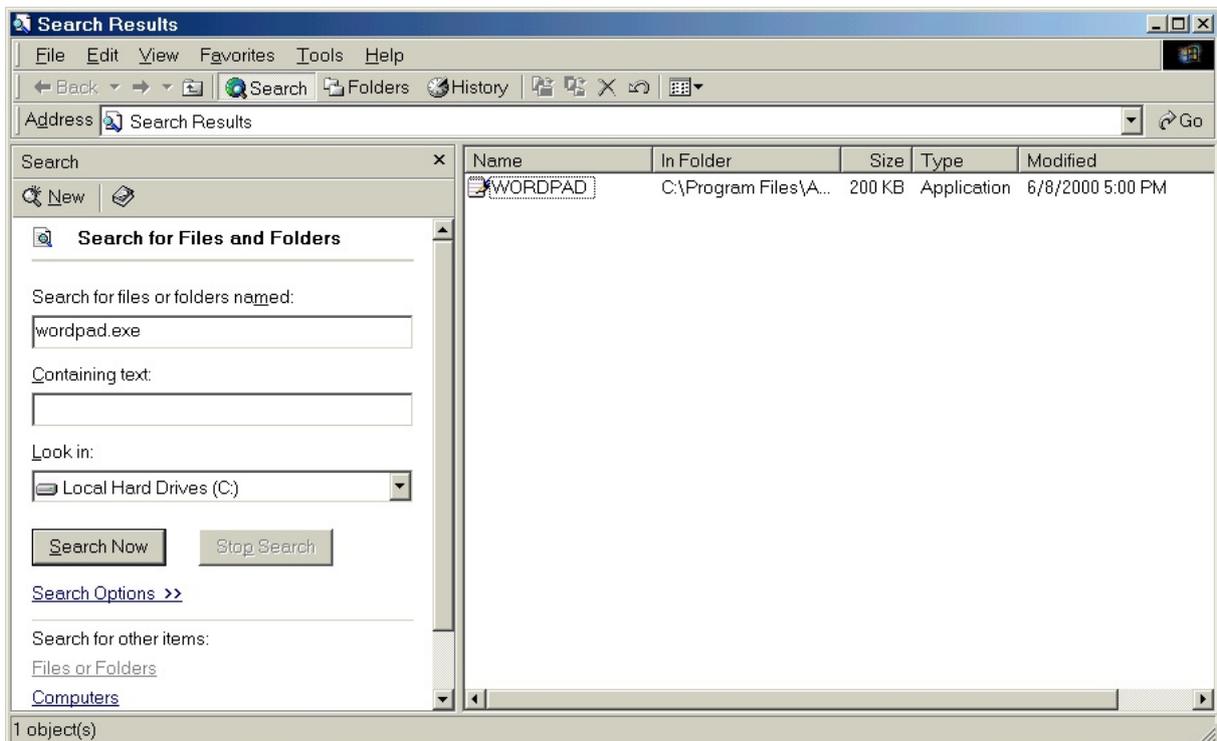
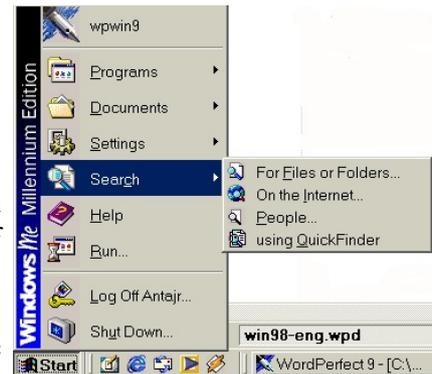
Searches all system resources to find:

- The Microsoft Network
- All Files
- People and Computer

The Find utility permits searching of all system resources. Within the Find category you can perform searches for distinct types of search which are described as follows:

**Find Files or Folders:** Here you may perform a highly powerful file name and actual file content search. By using the Find program it is possible to specify a text string that will occur within a file even if the file is a binary file. This kind of search has always been recognized as being particularly useful by users of the UNIX operating system and is more commonly referred to as a GREP search. You may also search for a particular type of file such as searching for all wave sound files (ending in an extension of .WAV).

To find the location of a file that you know the file name of: Click on the Start button and then click on the Find command. From the submenu displayed, select **Files or Folders**. This will display a dialog box as illustrated.



- In the **Search for files or folders named** section, enter the name of the file that you wish to locate. In this example we have entered **WORDPAD.EXE**;
- Ensure that the correct drive to be searched is selected, in this case **Drive C**. In Windows 98, to search the whole disk, make sure that the **Include subfolders** box is ticked;

- To start the search, click on the **Search Now (Find Now in Windows 98)** button. In this case the results will be displayed, as illustrated above;
- To open the file that has been found, double click on it.

Find Computer (Windows 98): If connected to a network or workgroup the Find computer option is very useful for locating a particular computer or shared resource on the network. Once located, you can double click the name of the computer or shared resource and perform any network action, such as Exploration or mapping a network drive. You may enter the name of the computer that you wish to locate directly into the Named text box and then click on the Find Now button.

Find On the Internet: This command will start Internet Explorer and display a page enabling you to search on the Internet.

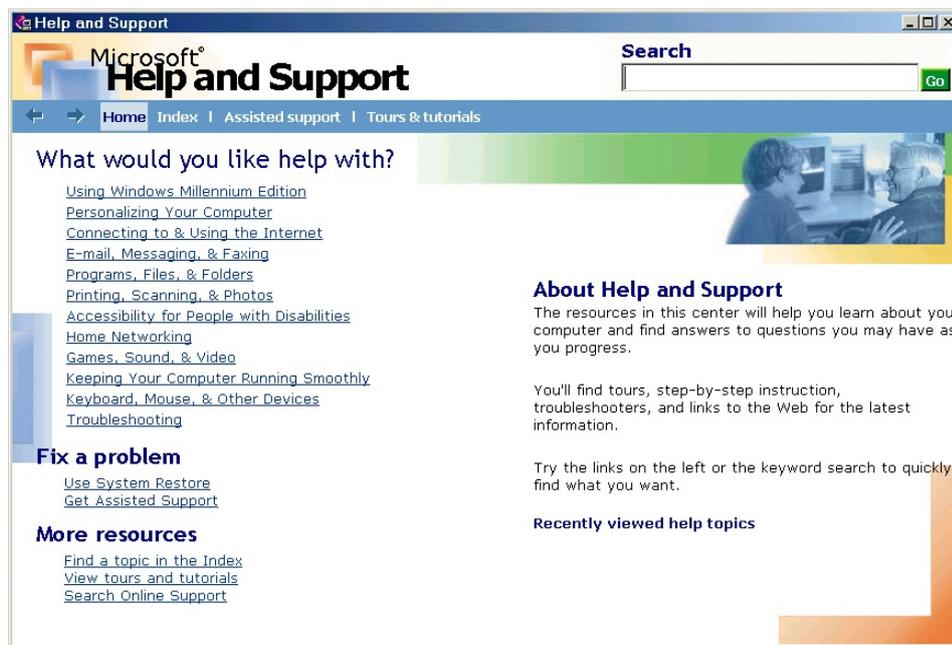
Find People: This command will display the Find People dialog box. You can use this command to search your personal address book or you can search for someone on the Internet by selecting one of the directory services from the Look in drop down list.

## 12.6 Windows Help

The Help within Windows 98 and Millennium is excellent! So use it!

To open the Windows Help windows:

- Click on the Start button and then select the Help command from the Start menu *or* press F1 key;
- The Windows Help window will be displayed as illustrated.



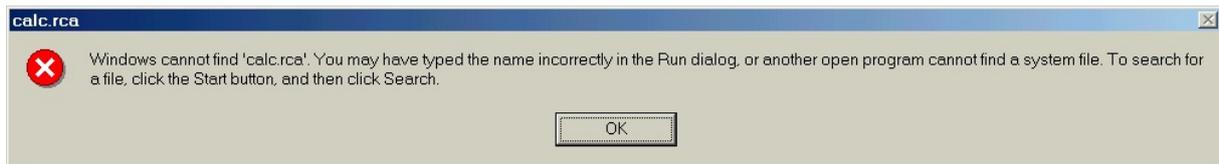
## 12.7 The Start Button - Run

Allows you to run programs by entering their file name





The Run option provides a text entry box for you to type the name and location of the file you wish to run. Clicking on Browse will allow you to search all local and network drives for files, this is particularly useful if you are unsure of the exact filename or path you can also run executable files. Running document files will run the 'associated' program and then display the document within the correct program. In some cases you may try running a document file and see the following message.



This indicates that Windows 98 does not understand the file extension, and no association has been set up between the file name extension and a particular program.

To use the keyboard to open the Run dialog box:

- Press the Ctrl + Esc keys;
- Release the keys and then press R.

To open folders using the Run command: The Run command is normally used to run programs, or to open documents within programs, however, you can use it to open folders. For instance to open the \WINDOWS folder and display its contents, you would enter C:\WINDOWS in the Run dialog box and then click on the OK button.

## 12.8 The Start Button - Shut down

Cleanly shuts down the system:

- Place the computer in stand by mode
- Shut down the computer
- Restart the computer
- Restart the computer in MS-DOS



The Shut Down option allows the user to close the Windows 98 operating system and ensure all running processes can halt cleanly and are given the chance to flush any data that may be in cache memory out to the disk. Several options are available when shutting the system down and they are summarized as follows:

This	Does this
Stand by	Places your computer in power saving stand by mode. To re-awaken your computer simply press a key or move the mouse. NOTE: Not all PCs support this feature.
Shut down	Flush all unwritten data to disk and close the system.
Restart	Flush all data from memory and totally restart the system.
Restart in MS-DOS mode	Flush all data from memory and restart the system running a Windows 98 DOS Shell.

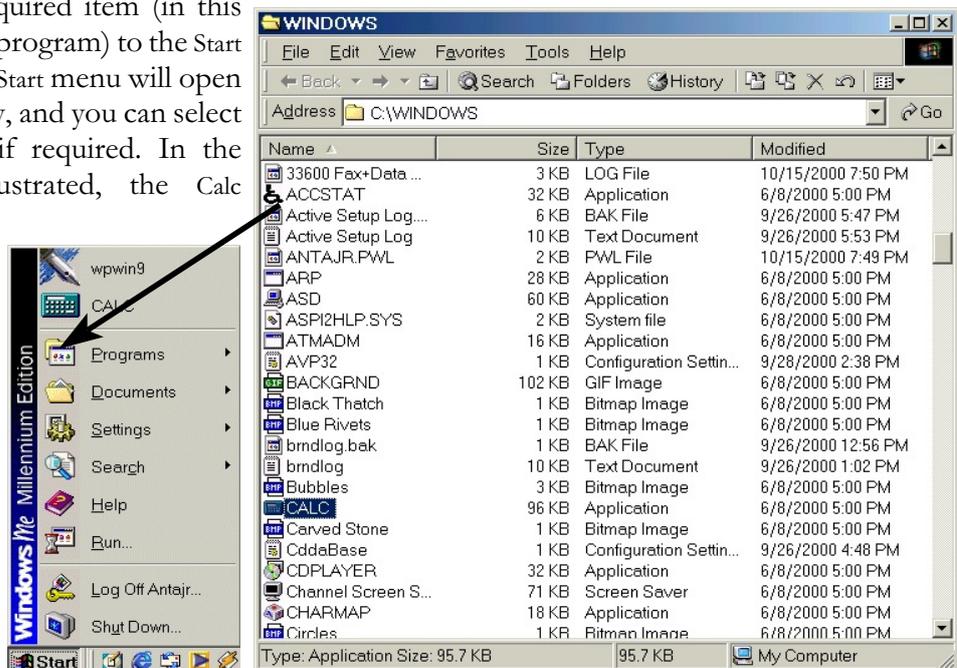
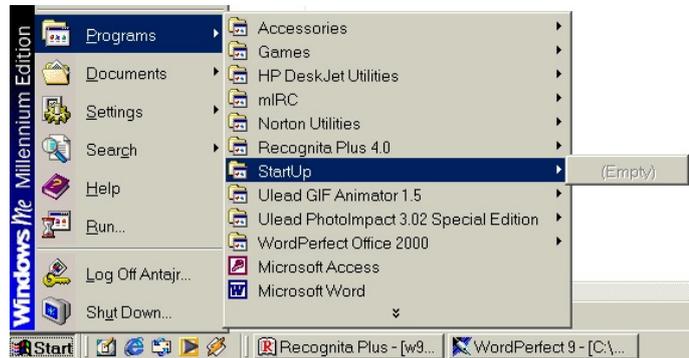
## 12.9 The Startup Folder

- Programs in the Startup folder will start automatically when Windows 98 is started

The Startup folder is special in one respect, any programs held within it will start automatically when you start Windows 98.

To view the contents of the Startup folder:

- Click on the Start button, and move the mouse pointer to Programs;
- From the sub-menu displayed select Startup.
- Drag the required item (in this case the Calc program) to the Start button. The Start menu will open automatically, and you can select sub-folders if required. In the example illustrated, the Calc program has been placed at the top of the main start menu.



### 12.9.1 Customizing the Start Menu

Make sure that you know how:

- To move an icon on the Start menu.
- To move an icon from the Start menu to the Desktop.
- To copy an icon from the Desktop or Windows Explorer to the Start menu.
- To delete an icon from the Start menu.

To move an icon on the Start menu:

- Click on the Start button;
- Highlight the icon you wish to move;
- Hold down the left mouse button and move the mouse pointer to the location at which you want the icon to be moved to. A horizontal bar will indicate where the icon will be inserted;
- Release the mouse button.

To move an icon from the Start menu to the Desktop:

- Click on the Start button;
- Highlight the icon you wish to move;
- Hold down the left mouse button and move the pointer onto the Desktop;
- Release the mouse button.

To copy an icon from the Desktop or Windows Explorer to the Start menu:

- Position the mouse pointer on the icon you wish to place on the Start menu;
- Hold down the left mouse button and move the pointer to the Start button. After short pause the Start menu will be displayed;
- Move the mouse pointer to the location on the Start menu that you want the icon to be displayed;
- Release the mouse button.

To delete an icon from the Start menu:

- Click on the Start button;
- Highlight the icon you wish to delete;
- Click the right mouse button to display a shortcut menu;
- Select the Delete command. The Confirm File Delete dialog box will be displayed.
- Click on the Yes button.

## **12.10 What is the Taskbar?**

- Displays running applications
- Click with the right-hand mouse button to:
  - customize Taskbar options
  - customize Start Menu programs

To use the right-hand mouse button on the Taskbar to allow configuration: Configuration of the Taskbar can either be accomplished by clicking on the Start button followed by Settings and selecting Taskbar, or simply by pressing the right-hand mouse button anywhere on the edge of the Taskbar itself and selecting Properties.

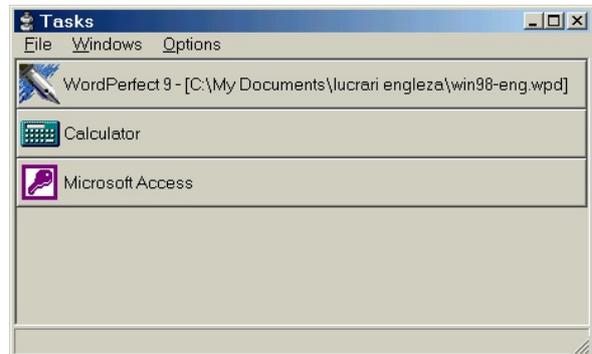
### **12.10.1 Controlling Applications From the Taskbar**

- Running applications are displayed within the Taskbar
- Right clicking on these applications, as displayed in the Taskbar, will display a popup menu which allows you to control that program

To use the Taskbar to switch between programs: To switch from one running program to another, simply click on the second program as displayed in the Taskbar.

Using the Taskbar to close a program: Right-click on the program button as displayed in the Taskbar, which displays a pop-up menu for that program. Click on the Close command from the pop-up menu.

Displaying the "Task List" within Windows 98: If you are an experienced Windows 3.1 user, you will be familiar with using the Windows 3.1 Task List, which was displayed by pressing Alt + Tab. This allowed you to switch between programs, close programs, as well as other vital operations such as tiling and cascading program windows, By default there is no Task List within Windows 98. The file name for the Task List program was TASKMAN.EXE and you will find that if you run this program within Windows 98, then a Task List is displayed, as illustrated.

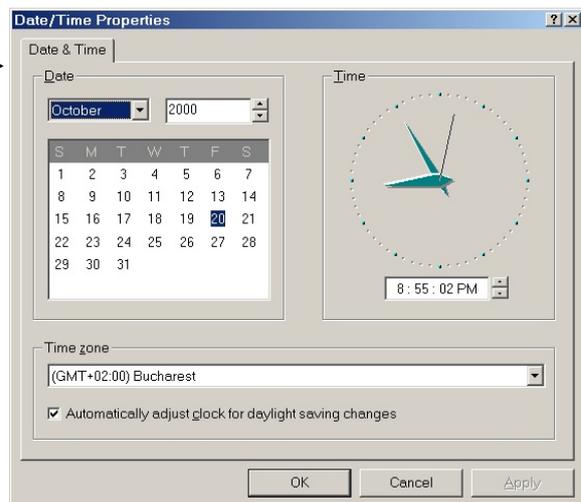
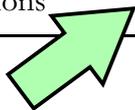


- To run the Windows 98 Task List, click on the Start button, then click on the Run command. Enter the command TASKMAN and click on the OK button.

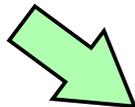
### 12.10.2 The clock

- Located in the Taskbar

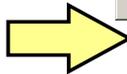
Double click to open Date/Time Properties dialog box, to allow modifications



8:58 PM



Move the mouse to the clock and after a few moments the date is



Friday, October 20, 2000

The Clock program is not located in the Start menu, along with the other Windows 98 accessories.

To view the Clock: Simply look at the right-hand end of the Windows 98 Taskbar.

To view the date: Move the mouse pointer to the Clock, as displayed in the Taskbar. After a few moments the date is displayed.

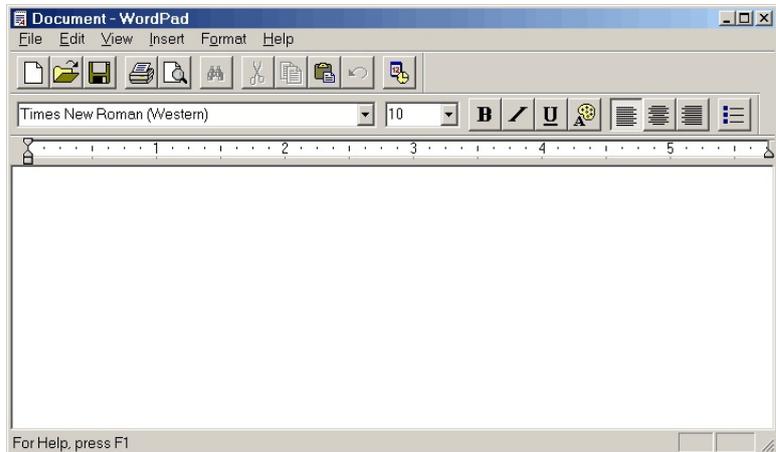
To change the date or time: Double click on the Clock which displays the Date/Time Properties dialog box, which allows you to modify the time or date.

## 13. The Windows 98 Accesories

### 13.1 What is WordPad?

The WordPad accessory is the Windows 98 equivalent to the Write program found in Windows 3.x. This new accessory offers new features for text and manipulation and formatting not found in the older program. Text manipulation features include:

1. The ability to change the color of a given font as well as the usual font attributes;
2. Full paragraph manipulation and indentation control;
3. The ability to define tabs;
4. An "insert today's date" feature;
5. Full print preview;
6. A case sensitive "find".



To start WordPad:

- Click on the Start button;
- Move the mouse pointer to Programs and select Accessories from the submenu;
- Click on WordPad, as illustrated below.

NOTE: WordPad will not recognize Word 6 styles, headers or footers!

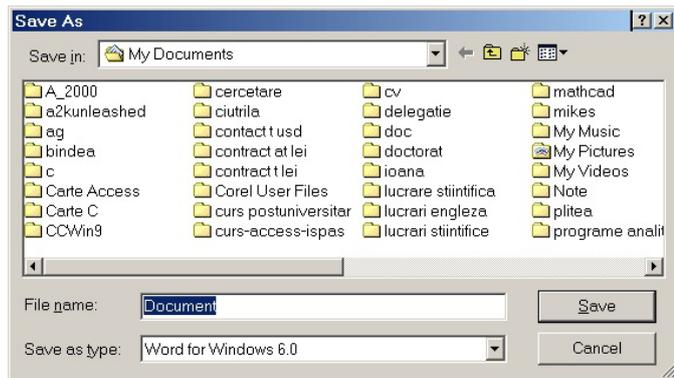


To enter text into WordPad: Simply start typing! WordPad opens up with a blank document by default.

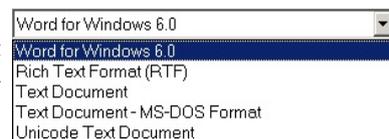
To save a WordPad file:

- From the File drop down menu, select Save, which displays the Save As dialog box OR click on the Save  icon.

In the Save In section, select the location you wish to save the file to (i.e. on your local hard disk(s), on a diskette, or on a network drive). Clicking on the down arrow next, to the Save In section will display a drop down list.

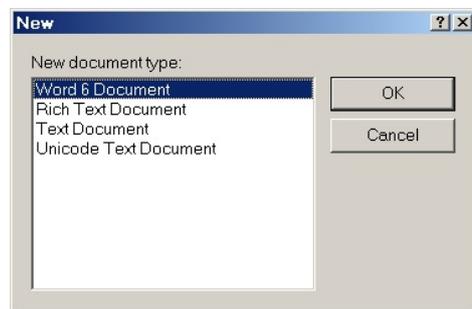


- Enter the file name as required.
- By default, the file is saved in Word 6 format. If you wish to save it in a different format, click on the drop down arrow next to the Save as type box to display the following drop down list.
- Click on the Save button to save the file.



To create a new document within WordPad:

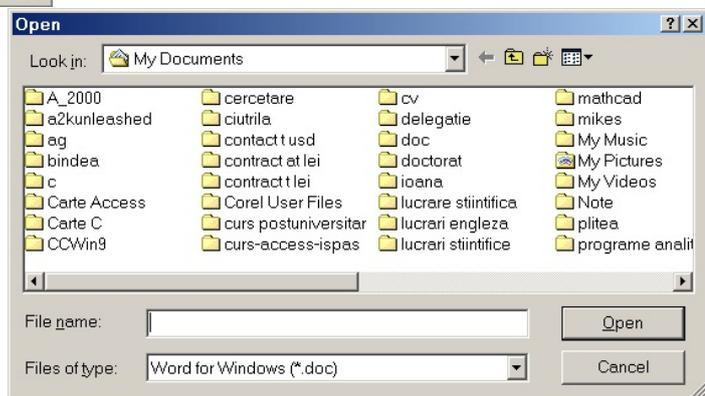
- Either from the File drop down menu select the New command OR click on the New  icon;
- The New dialog box will be displayed as illustrated below;
- Select the required format (or simply use the Word 6 default) and then click on the OK button.



**WARNING: Do NOT edit existing Word 6 files if the files contain styles, headers or footers.**

To open an existing WordPad file:

- Either from the File drop down menu select the Open command OR click on the Open  icon.
- The Open dialog box will be displayed as illustrated below.
- As when saving a file, select the correct location and enter a file name. Click on the Open button.

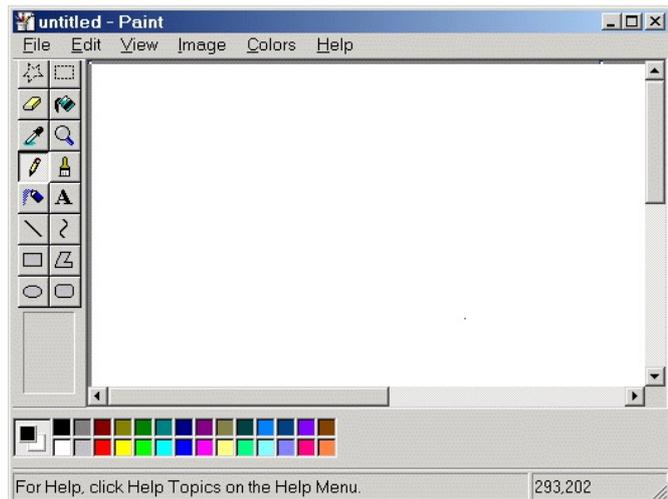


The default WordPad file extension - DOC:As a default, WordPad will browse for documents ending with a .DOC file WordPad file extension. It is possible to change the extension that WordPad will search for from the Open dialog box by selecting All Documents from the Files of type drop down list. Once you have located the file you wish to open, either double-click the filename using the mouse or highlight the filename and click Open.

## 13.2 What is Paint?

Paint is the Windows 98 version of the Paintbrush program found in Windows 3.x.

The Paint program offers the ability to generate: and manipulate graphics and pictures and store them in a .BMP format. The program offers a rich tool selection and all standard graphical functions, such as airbrush, freehand line draw, shapes and the ability to zoom. Paint no longer supports .PCX files.



Where the Paint application notably differs from the older version is in the ability to have four different levels of zooming, support for 24 bit (true color) encoded files, and a palette capable of accessing a 24 bit color spectrum.

**BEWARE:** If you use a 24 bit color format to store your pictures, you can end up with VERY large files on your disk!

To start the Paint program:

- Click on the Start button;
- Move the mouse pointer to Programs and then from the sub-menu select Accessories;
- Click on Paint.

### 13.3 Paint - Drawing Tools

Simple, but easy to use graphics tool.

The tools within Paint are depicted on the left-hand side of the screen in the toolbox. If the mouse is positioned over a tool (without clicking) the in-built Help facility will give a brief text description of the tool's function. The most commonly used tools are as follows:



Tool	Name	Function
	Free Form Select	The ability to draw an outline using the mouse in free form around any shape. Once selected, the highlighted outline support: both cut and paste and can also be re-sized.
	Select	As above, except uses a re-sizeable rectangle as the selection area.
	Eraser	The ability to erase portions of the picture you are working on. The size of the eraser is variable and has four different sizes

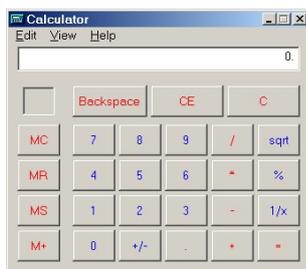
	Fill With Color	<p>Allows areas to be filled with colors, selected from the color palette.</p> 
	Pick Color	<p>With the Pick Color utility the mouse pointer will change to a pipette and you may position it over any part of the graphic on which you are currently working. The color pointed to by the pipette will automatically be selected from your color palette. This feature is very useful when more than 256 colors are in use.</p>
	Magnifier	<p>The ability to zoom the current on-screen graphic. 1X through to 8x zooming control is supported.</p>
	Pencil	<p>Allows you to draw shapes freeform, as if using a pencil.</p>
	Brush	<p>Allows you to apply color, as if using a paint brush.</p>
	Airbrush	<p>Allows you to apply color. using an air-brush effect.</p>
	Text	<p>Allows you to insert text.</p>
	Line	<p>Allows you to draw lines.</p>
	Curve	<p>Allows you to draw curves.</p>

	Rectangle	Allows you to draw rectangles.
	Polygon	Allows you to draw polygons.
	Ellipse	Allows you to draw ellipses.
	Rounded Rectangle	Allows you to draw rectangles with rounded edges.

### 13.4 The Calculator

Two modes:

- Standard and Scientific.
- Unlike the Windows 3.1 Calculator, this one works!



The Calculator program is very useful for adding up your expenses, or other vital activities! It has a Scientific mode which, amongst other features, allows you to convert from Decimal, to Hexadecimal and Binary. There was a famous error in the Microsoft Windows 3.1 Calculator.  $2.11 - 2.1 = 0$  I don't think so!

To start the calculator:

- Click on the Start button;
- Move the mouse pointer to Program and then from the sub-menu select Accessories;
- Click on Calculator.

To see what a key does in the Calculator: Right-click on a button within the Calculator and a What's This button is displayed. Click on this button and the function of the button is explained.

To switch to Scientific mode: Click on the View drop down menu, and click on the Scientific.