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## UNIT 2 WINDOWS INTERFACE

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➔ **NOTE**

*Interface* refers to the layout of the software on the screen i.e. where & how are the on screen objects located.

### Structure

- 2.1 Introduction
- 2.2 Text Interface
- 2.3 Graphical User Interface
- 2.4 Some Important Windows Concepts
- 2.5 The Windows Start Button
- 2.6 Windows Properties
- 2.7 Working with Multiple Windows
- 2.8 Control Panel
- 2.9 Let Us Sum Up
- 2.10 Check Your Progress Exercise
- 2.11 Answers to Check Your Progress Exercise

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### 2.1 INTRODUCTION

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In the previous unit you learnt about basic concepts of a computer. We will now discuss windows operating system (operating systems are system softwares necessary for starting and running a computer system) in a little more detail so that you become familiar with some terms of the operating system in order to be able to operate a system independently.

#### Objectives

After going through this unit, you will be able to:

- use Windows operating system in managing files and folders,
- list various features of Windows operating system, and
- explain how multiple Windows work.

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### 2.2 TEXT INTERFACE

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Text Interface basically refers to a screen where everything is text. During early 1980s and earlier computers were primarily text oriented, it was only in the late eighties and early nineties that graphics evolved. Till then, the user was required to remember all the commands and type them every time he wanted to do a task. Undoubtedly typing got very tiring and inconvenient after a while. Then the computer screen looked like the screen as illustrated in Figure 2.1.

➔ **NOTE**

*Operating Systems* are the most important system software, which interact with the application software and the computer hardware. Operating Systems handles details such as executing programs, storing data and programs and processing data.

```
PKZIP (B) FAST! Create/Update Utility Version 2.04g 02-01-92
Copyright 1989-1992 PKWARE Inc. All Rights Reserved. Shareware Version
PKZIP Reg. U.S. Pat. and In. Off. Patent No. 5,051,745

PKZIP /h[0] for basic help PKZIP /h[2][3][4] for other help screens.

Usage: PKZIP [options] zipfile [(list) [files...]]

Simple Usage: PKZIP zipfile file(s)...
Program -----|
New zipfile to create -----|
File(s) you wish to compress -----|

The above usage is only a very basic example of PKZIP's capability.

Press 1 for more options (including spanning & formatting), press 2 for
advanced options, 3 for trouble shooting options, any other key to quit help.
```

Figure 2.1: Primitive text interface

Improvements arrived with the addition of menus and the use of the arrow keys to move around the screen. This was much better than having to type in all the commands.

There were lists of commands in the popup menus. You would use the arrow keys to move up and down the list and then press the Enter key to execute the command.

## 2.3 GRAPHICAL USER INTERFACE

A graphical user interface (GUI - sometimes pronounced as GOO-ee) uses pictures to make it easier for the user. It is more user friendly. Windows is a Graphical User Interface, which in simple terms means that whatever you see on the screen, is made of geometrical shapes like squares and rectangles and is quite colorful. Figure 2.2 shows this improved text interface.



Figure 2.2: Improved text interface

The following terms should be of help before reading further:

### Mouse

Mouse is not a part of the actual interface but mouse is at the heart of the usage of GUI environment. Without learning how a mouse works, one can not be comfortable with the graphical user interface. A mouse generally has two buttons, (some have more for added functionality but mostly two buttons are used) - right click and left click as shown in Figure 2.3.



Figure 2.3: How a Mouse is used

### TIPS

In such environments various menus are usually available by using the Alt key in combination with a letter or number key.

### NOTE

*User Friendliness* refers to the extent of ease of use that software or its interface can provide to the user.

→ **NOTE**

**Selecting** any item on the GUI refers to clicking on that particular item once with the left mouse button once, it generally turns blue after that and is said to be selected.

1. *Click* – Mostly means pressing the left mouse button over a specific area once.
2. *Double click* – Almost always means pressing the left mouse button twice in quick succession.
3. *Drag* – Select the required On screen object, press the left mouse button and drag it to another area by holding the left mouse button. It moves the selected contents from the original place and drops them at the place the mouse button was released. You must remember that after all a mouse too is an input device just like keyboard. Therefore, it is perfectly alright to list it as one of the input devices.

**Window**

A window is the basic component of a GUI environment. Window is basically a rectangular area that acts as the container for other objects like menus, buttons, text etc., as illustrated in Figure 2.4.

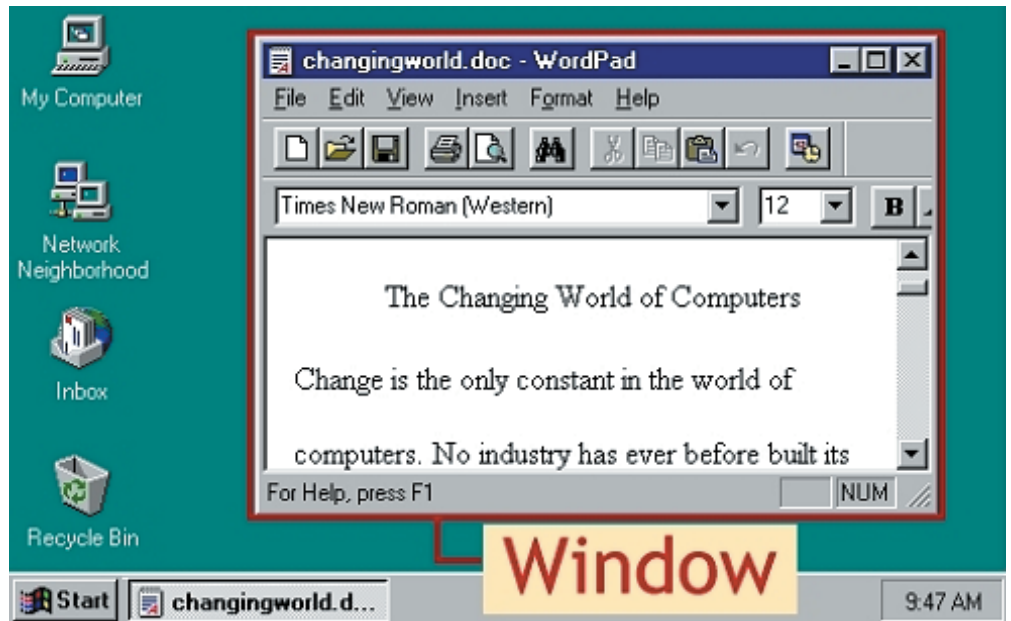


Figure 2.4: Window

**Buttons**

Look at Figure 2.5. It shows the buttons. A button is square or a rectangle, which is clicked. It looks a little elevated from the surrounding area. It may have text or an image on its face. When a button is clicked it actually means that user is asking the computer to perform a particular task.



Figure 2.5: Buttons

## Menus

A menu is list of items each of which performs a specific task when clicked upon. Figure 2.6 illustrates the menus. Menus contain a group of items which when clicked upon perform a particular task just like buttons.

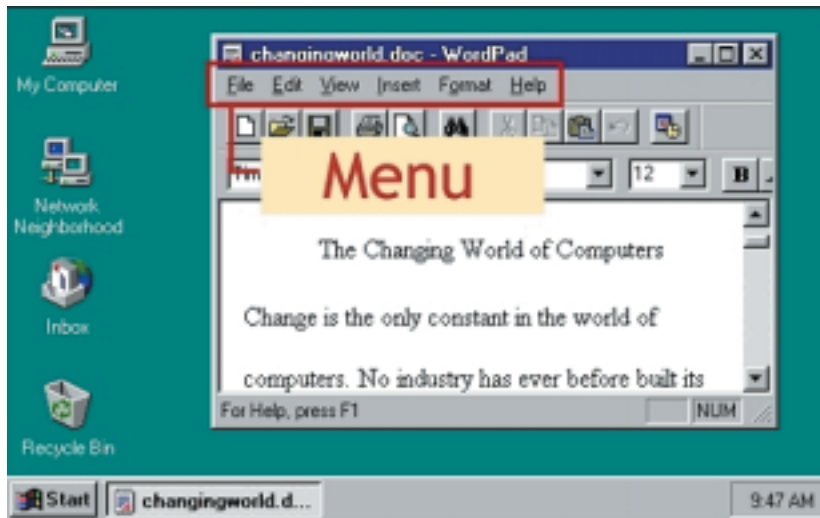


Figure 2.6: Menu

## Popup Menus

A popup menu is similar to a menu but it appears when the right mouse button is clicked. The popup menu is illustrated in Figure 2.7.



Figure 2.7: Popup Menus

## Icons

Icons are nothing but small images at times along with text that are there to make you aware of them and allow to do many tasks from one place, for example, people generally place icons and shortcuts to many applications that they have on their computers, so that they can start them whenever they want by just double clicking the icons. Don't panic if your computer doesn't look like the ones in the figures, different versions of Windows has slight differences in its appearances but the basic idea remains the same. The icons are illustrated in Figure 2.8.



Figure 2.8: Icons

## 2.4 SOME IMPORTANT WINDOWS CONCEPTS

Now that you understand some of the GUI concepts, you should learn things which are specific to the operating system that you wish to learn. There are some very important concepts, which are specific to Windows, which you should be very clear with before moving further.

### The Desktop

When you start Windows, the large area you see is called the *desktop*. Look at Figure 2.9, which shows main window interface. You can easily modify how the desktop looks, according to your choice.

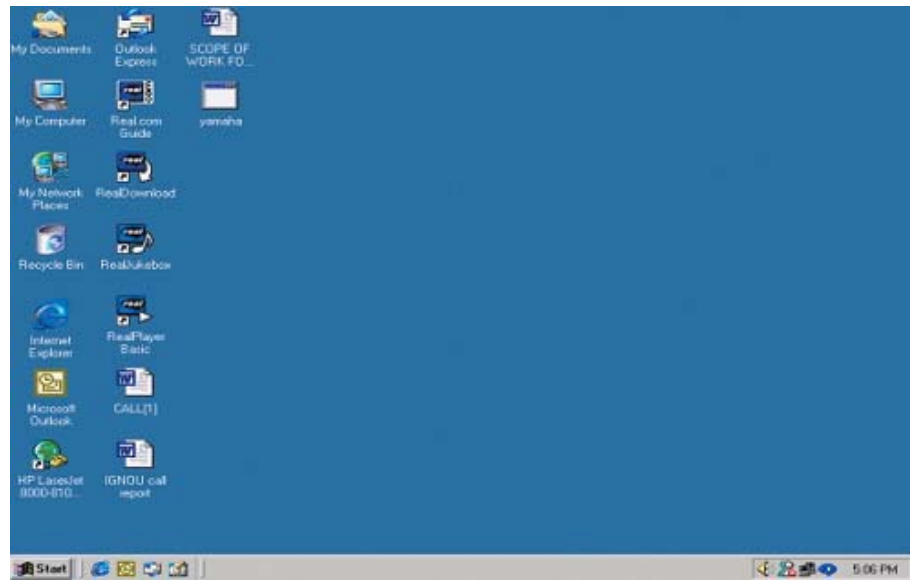


Figure 2.9: Desktop

### Changing the background color

For example, the desktop depicted in the Figure 2.9 has blue as its background colour, which can be changed by following these steps:

1. Click the right mouse button (anywhere on the desktop), a gray box (called a popup menu) appears.
2. Move the mouse over where 'Properties' word is written. It should turn blue.
3. Click the left mouse button.
4. A big box appears (called a dialog box). Click on 'Appearance' click on small button named colour, a small box of colours appears left click on the desired colour, then click OK (below).

The desired colour appears as the background. Similarly other settings can be explored.

### Using Recycle Bin

Files and folders can become useless after a while and so they can be deleted if the need be after selecting the file or folder. The recycle bin icon is illustrated in Figure 2.10.



Figure 2.10 : Recycle Bin

### → NOTE

A **File** has the same meaning in computers as it has everywhere except that a file has data meaningful to the user.

A **Folder** on the other hand, has files in it.

'Recycle Bin' is actually a place on your computer where all those files and folders go which are deleted, and could be put back if wanted, thus it gives you a chance to have those files and folders back if you want, even after you have deleted them.

But if they are deleted from the recycle bin itself, then they can never be had back. So you should be careful while deleting anything from the recycle bin, as you will never be able to have it back.

### My Document Icon

Figure 2.11 shows the My Documents icon.



Figure 2.11: My Documents

My Documents is a desktop folder that provides you with a convenient place to store documents, graphics, or other files you want to access quickly. On your desktop, it is represented by a folder with a sheet of paper in it.

### My Computer Icon

The My Computer icon is shown in Figure 2.12.



Figure 2.12: My Computer

You can use 'My Computer' to quickly and easily see everything on your computer. Double-click (press the left mouse button twice in quick succession) the 'My Computer' icon on the desktop to browse through your files and folders.

### My Network Places



Figure 2.13: My Network Places

At times, your computer might be connected to other computers on the network, then the 'My Network Places' icon allows you to browse through all the other computers on the network. Figure 2.13 illustrates the My Network Places icon. When properly set up, Windows allows you to use the network to your advantage and convenience, for example, if only one computer on the entire network has a printer attached to it (which is quite common), you can easily use the printer to print whatever you want. Also, if allowed, you can access the data in files and folders on other computers on the network. Thus networks are of great use and importance.

#### TIPS

Once selected a file or a folder could be deleted by either pressing the delete key on the keyboard or pressing the right mouse button & then clicking on delete.

A box appears asking for permission to send the file to recycle bin, press yes or no.

#### NOTE

Browsing refers to seeing & looking into the files & folders residing on your computer.

It is a general term, which loosely means the above but used in many places with similar meaning.

#### NOTE

As explained above, here browsing used a little differently means going through the computers and their files & folders (provided it is allowed).

## 2.5 THE WINDOWS START BUTTON

Look at Figure 2.14 which illustrates the Windows Start Button.



Figure 2.14: Windows Start Button

Start button is located at the bottom left-hand side of the screen when windows has finished loading and the desktop appears. It is one of the most frequently used areas; it is used to perform functions like starting application programs, finding a file, help, shutting down the computer etc. It can also be modified according to your needs and preferences although some basic components cannot be removed.

### Starting a Program

Programs here refer to the ‘Application Software’ we did along with system software in the last chapter. There are many popular application software like MS-Word, Winamp, Winzip etc. All these (provided they are installed on your computer) could be started using the following steps (follow Figure 2.14):

1. Click the start button.
2. Click on the Programs menu, whatever software are available on your computer would appear as a menu, as you can see in Figure 2.14.
3. Select the one you want to work with, by pressing the left mouse button on its name.

### The Documents Menu

The ‘Documents’ menu in the start menu actually provides short-cuts (quick ways to reach) documents or files that were recently opened. Figure 2.15 shows the documents menu.

To clear the contents of the Documents menu, follow the steps given below:

1. Click the Start button, and then point to Settings as shown in Figure 2.16.
2. Click Taskbar, and then click the Start Menu Programs tab.

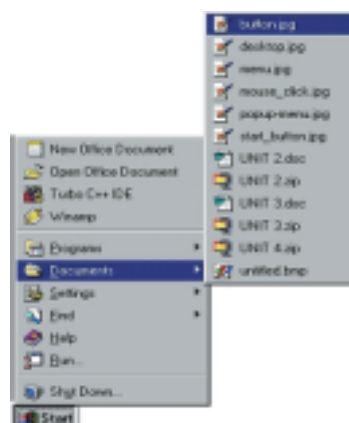


Figure 2.15: Documents Menu

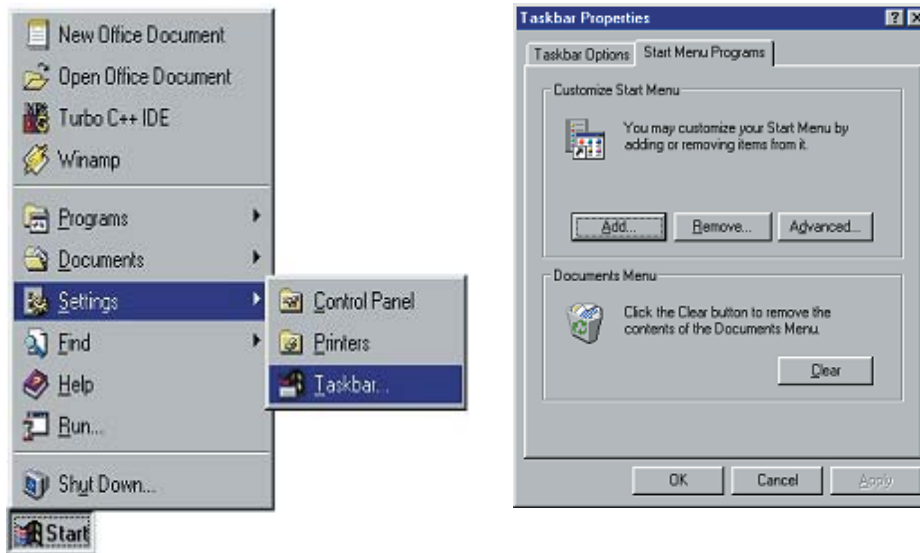


Figure 2.16: Taskbar Properties

3. In the Documents Menu area, click Clear.

### Using Windows 2000 Help

Windows provides extensive help on its usage and other related topics. It is a good habit to use the help provided by the Windows itself whenever in doubt. It can be accessed by the following steps:

1. Press the start button.
2. Click on the 'Help' menu. The Window which appears is illustrated in Figure 2.17.

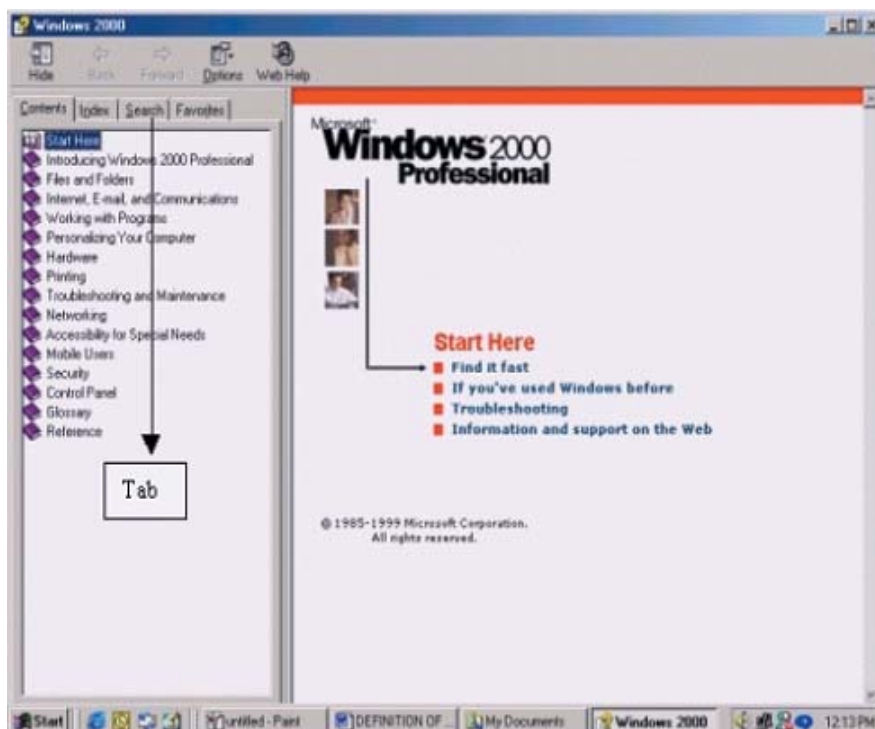


Figure 2.17: Windows Help

3. Click on a topic of your choice on the right hand side. If you don't find a topic of your choice, then click on the tab 'Search', as shown in Figure 2.17, and then type the topic of your choice, in the box as indicated in Figure 2.18, and press the enter key. The help on the topic appears on the right hand side.

**→ NOTE**

Sometimes due to lack of space windows overlap each other, each window can be accessed by clicking on a rectangular area which is actually the part of the window. Once that area is clicked the appropriate window is displayed. Such rectangular area as shown in the adjoining figure is called a Tab. For instance in the adjoining figure clicking on 'Search' tab will display the search tab while right now the 'Contents' tab is displayed.

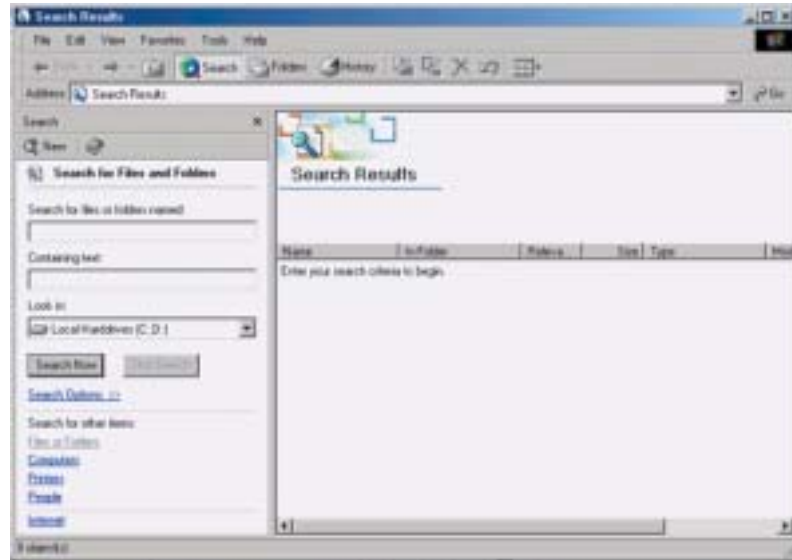


Figure 2.18 : Searching for Files and Folders

### Finding a File or Folder

These days with larger capacity auxiliary memory users have huge amounts of data on their PCs, because of which at times it is only human to forget where a file or folder is, in such situations you can use Windows itself to look for files and folders.

1. Click the Start button, and then point to Find.
2. Click Files or Folders.
3. In the Name box, type all or part of the file's name.
4. Click Find Now.

### Shutting Down the Computer

Windows 2000 and every other windows like Windows 95, Windows 98 etc. cannot be shut down by simply switching off the computer system directly, it damages the operating system. Therefore the proper way to shut down the operating system is through the start button. This way the operating system exits properly and is not damaged. The following steps could be followed:

1. Press the start button.
2. Click on 'shut down'.
3. The box, as illustrated in Figure 2.19, appears.



Figure 2.19: Windows Shut Down

### NOTE

A shortcut to shut down the computer is to use the 'ALT+F4' key i.e. pressing both the 'ALT' key and the 'F4' key simultaneously brings the same dialog box shown in the Figure 2.19.

4. Click OK.

## 2.6 WINDOWS PROPERTIES

In this section we will discuss the purpose of title bar, menu bar, tool bar etc. Figure 2.20 illustrates these window properties.

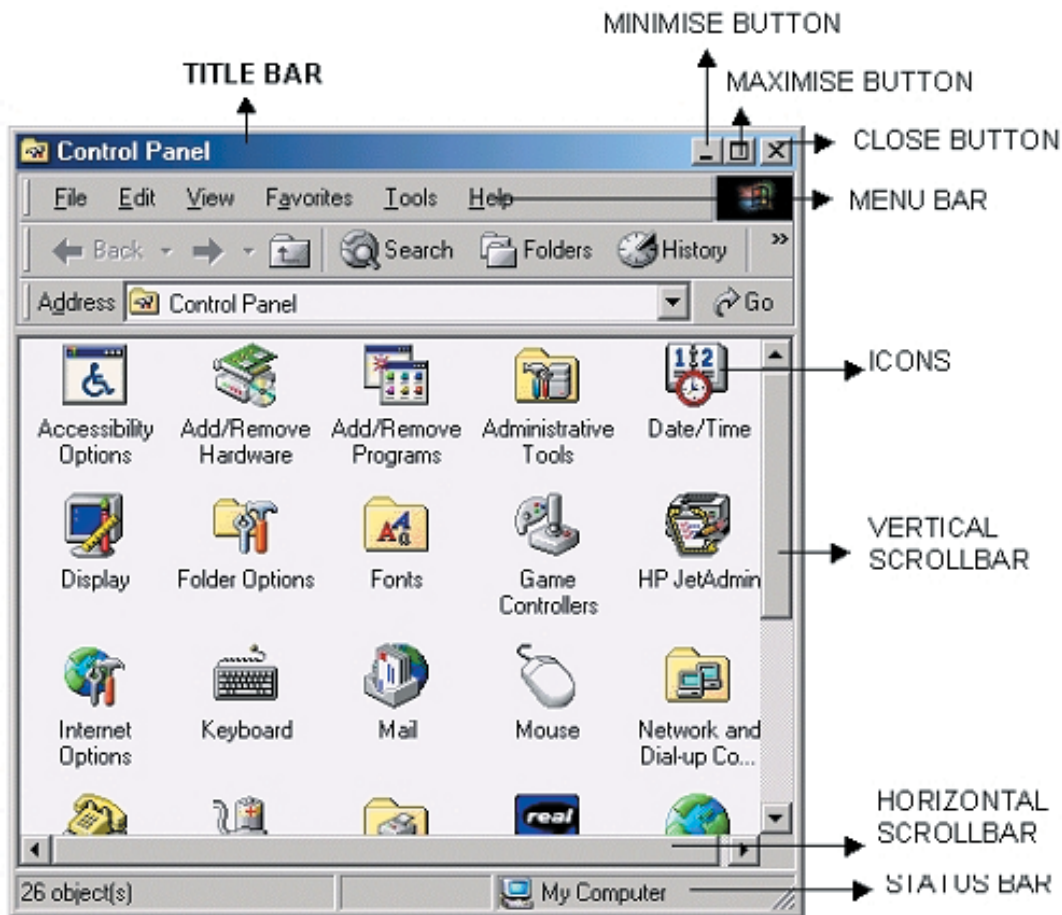





Figure 2.20: Windows Properties

### Title Bar

Title Bar is generally the dark blue colored strip at the top most of every window that displays the name of the program (e.g. notepad, word etc) running within the windows.

Title Bar also contains some (mostly three) buttons located on the right hand corner. They are minimize , maximize  and close  buttons respectively. Minimize button reduces a window to the smallest size, maximize button expands and close button closes the window.

### Menu Bar

Displays a list of menus each with individual pull down menus. Each pull down menu has a list of items to do specific jobs.

### Toolbar

Displays shortcuts in the form of buttons, which have icons on their faces for specific tasks.

### Status Bar

Displays messages, alerts and status messages regarding the Windows or other programs. For example the above figure shows MS Word's status bar indicating the progress of a particular operation that it is performing.

## 2.7 WORKING WITH MULTIPLE WINDOWS

Normally, when more experienced users work on Windows, several application softwares are opened simultaneously. For example, a user might be working on MS Word and along with it other applications like MS Paint, Winamp, Internet Explorer etc. might be running. For example, in the Figure 2.21, the user is working on MS Word, MS Paint, Internet Explorer etc. simultaneously while right now MS Word is activated.

### → NOTE

Activated refers to the window that is currently being worked on. While there may be many windows opened, active window is only one at a time.

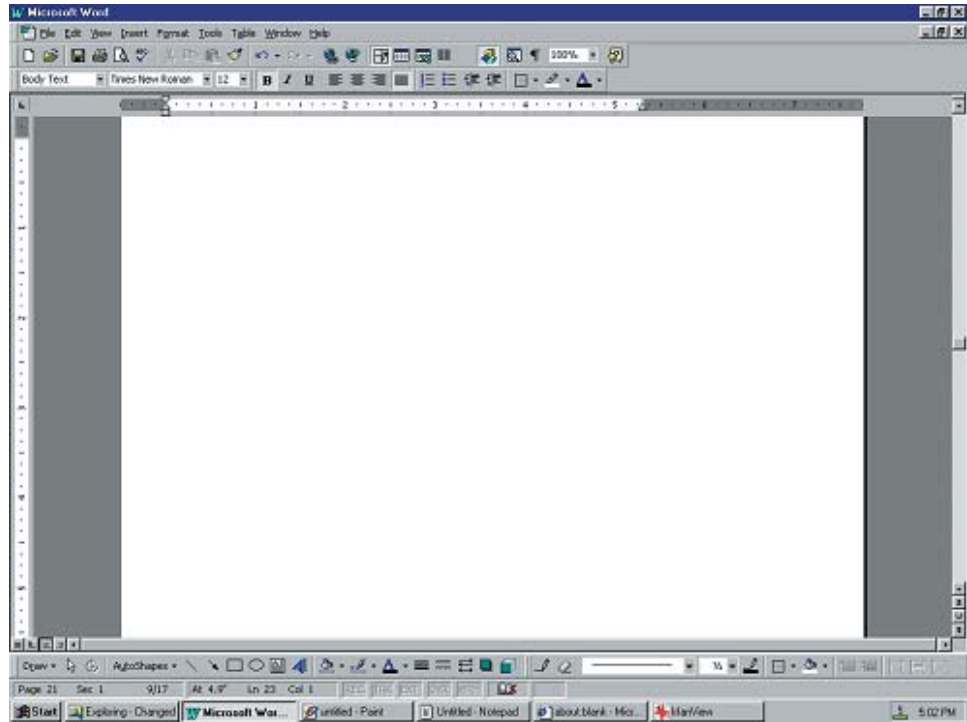


Figure 2.21: Multiple Windows

Following questions might come up:

- How does one browse from one window to another?
- How does one move windows to the desired area of the screen?
- How does one quickly minimize all windows?
- How does one view more than one window arranged in a systematic manner?
- What is the most convenient way (keyboard shortcuts) to do above-mentioned and other tasks? Etc.

The answers to above questions are presented below:

### Moving windows

In order to move a window (only a non-maximized window), you should follow the following steps:

1. Click on the title bar of the window (don't release the mouse button);
2. Drag the entire window to the desired on-screen location, then release the mouse button.

**Resizing windows**

Move the mouse pointer over the edge (pointed corner) of the window. The cursor becomes a double-pointed arrow as can be see in Figure 2.22. Drag the window border to resize the window.

**i NOTE**

A shortcut to move a non-maximized window is to press 'ALT+SPACE' key simultaneously, from the popup menu that appears select move, then move the window through arrow keys.

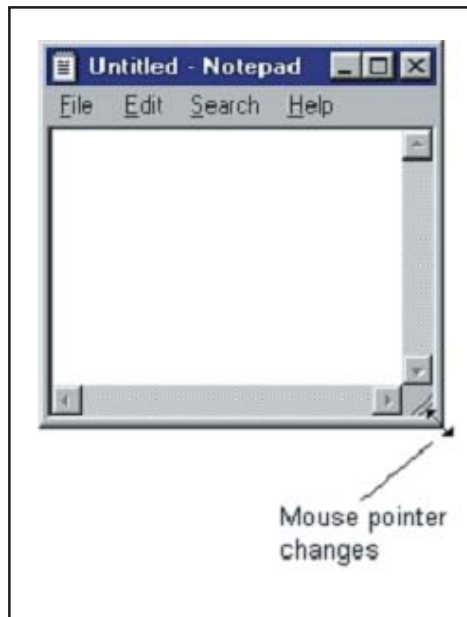


Figure 2.22: Resizing Windows

**Automatically Arranging Windows Using Taskbar**

Multiple windows could be arranged automatically vertically or horizontally, known as tiling or could be cascaded.

**Cascading:**

1. Right click on the taskbar.

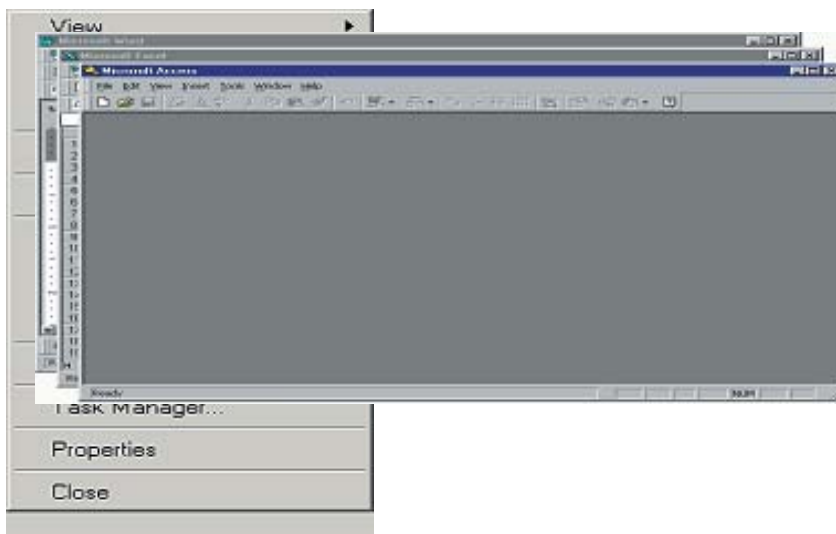


Figure 2.23: Cascading Windows

2. From the popup menu that appears select 'Cascade Windows' as shown in Figure 2.23.

**Tiling Horizontally:**

1. Right click on the taskbar.

- From the popup menu that appears, select 'Tile Windows Horizontally'. Look at Figure 2.24.

**→ NOTE**

- ✓ Make sure all the windows you want to display are open. Closed or minimized windows will not be displayed.
- ✓ To restore your windows to their original state (as they were), right-click a blank area on the taskbar, and then click Undo Cascade or Undo Title. To Open a minimized window, click its button on the taskbar.-

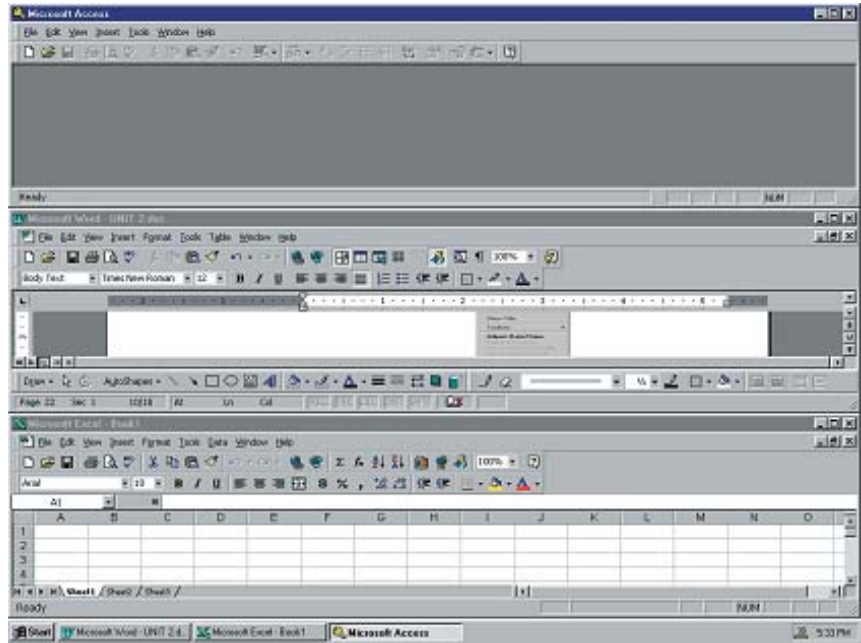


Figure 2.24 : Tiling Windows Horizontally

**Tiling Vertically:**

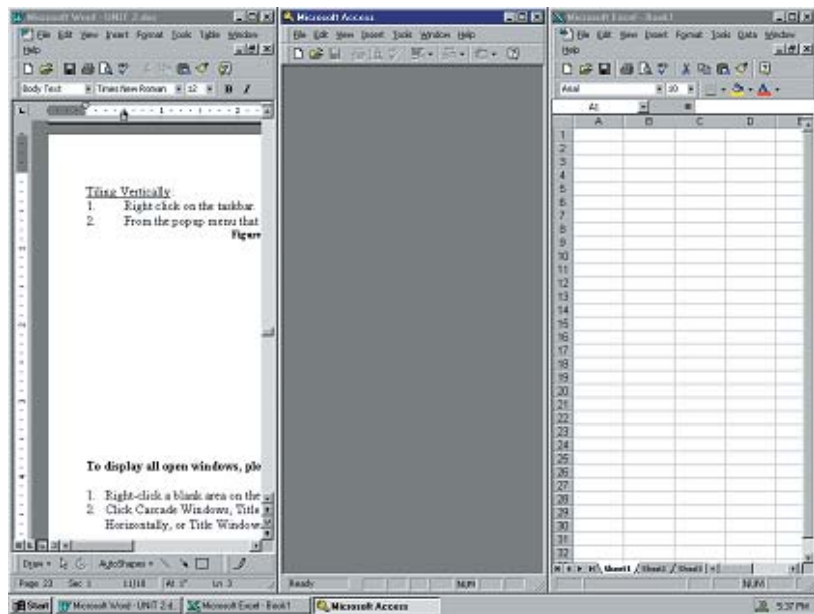


Figure 2.25: Tiling Windows Vertically

**→ NOTE**

*Alt+Tab* refers to pressing alt key & without releasing it pressing the tab key. A small box appears, by pressing the tab key you can select between the running programs.

On whichever program the tab key is released that window is activated.

**Right click on the taskbar:**

- From the popup menu that appears, select 'Tile Windows Vertically, Figure 2.25 shows vertical windows.

**Minimizing all open windows:**

- Right-click a blank area on the taskbar.
- Click Minimize All Windows.

**Switching between running programs:**

Press the alt + tab button to switch between applications.

## 2.8 CONTROL PANEL

Control Panel is a very important place. As the name suggests, through the facilities available there, you can change almost anything and everything. Control Panel is a place where all the settings of both the hardware and the software could be changed. Figure 2.26 illustrates the control panel.



Figure 2.26: Control Panel

### Changing system date and time

For changing date and time, follow the following steps:

1. Press the start button.
2. Click on 'Settings' menu.
3. In the menu that appears click on 'Control Panel'.
4. Double click on the icon named 'Date/Time'.

The box as shown in Figure 2.27, appears. Click on the Date/Time tab.

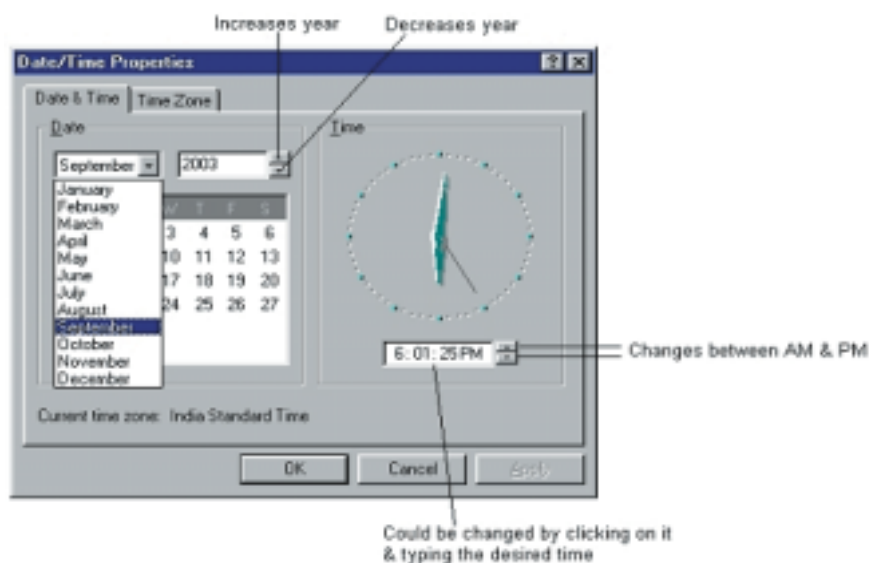


Figure 2.27: Changing date and time

You can easily change the month by clicking on the down arrow next to the currently displayed list box and then selecting the month of your choice.

Similarly, the year and time could be changed as shown in the Figure 2.27.

### Changing Display Properties

Windows 2000 offers a huge variety of options that allows you to change the way the desktop looks like. For example, the background image (also known as Wallpaper) could be changed, the background color could be changed (already explained above) etc.

### Changing The Background Image

1. Right click on the desktop, click 'Properties' in the appearing popup menu.
2. The dialog box as shown in Figure 2.28 appears. Click on the background tab.

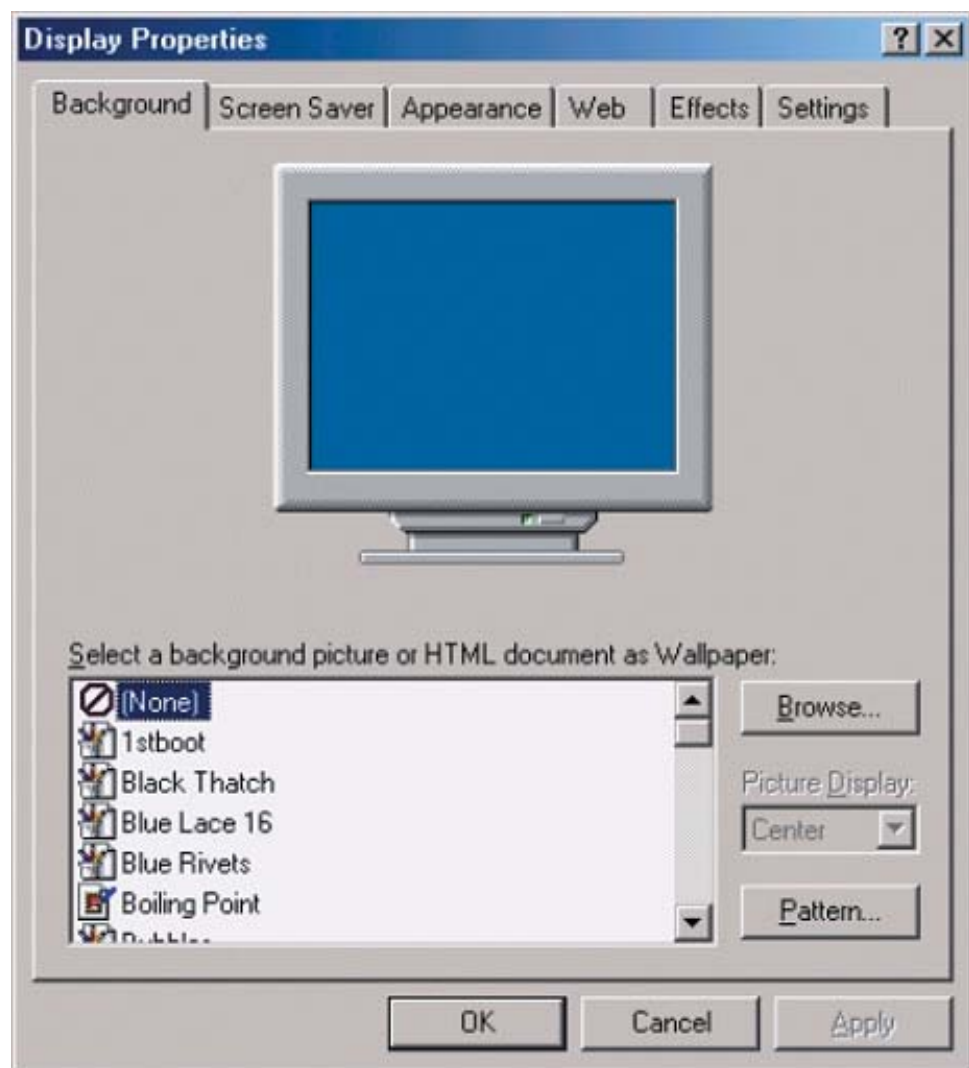


Figure 2.28: Changing Background

3. Select the desired image from the list and press OK.

### Changing the 'Screen Saver'

1. Right click on the desktop, click 'Properties' in the appearing popup menu.

2. In the dialog box that appears, click on the 'Screen Saver' tab as you can see in Figure 2.29.
3. Select the desired screen saver and press OK.

**→ NOTE**

*Screen Saver is a graphical image(s) or an animation, that is automatically displayed on the entire screen (nothing else is visible), if the computer is not interrupted in any way by the user for a particular time limit (which could be set).*

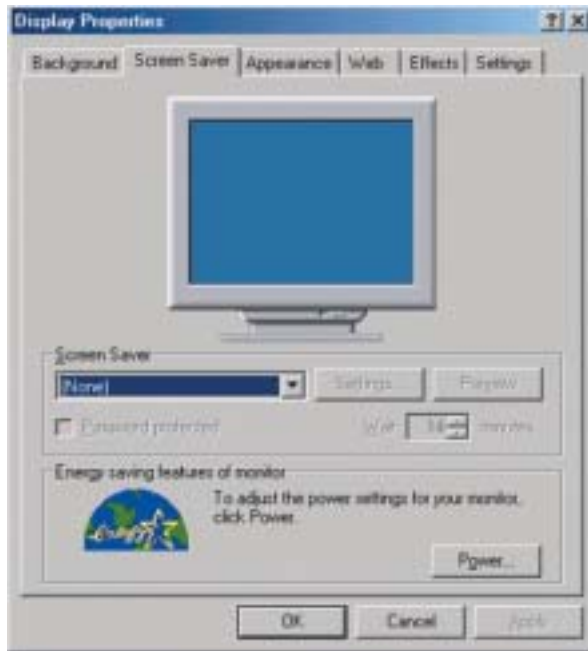


Figure 2.29 : Changing ScreenSaver

### Changing Windows Appearance Style

There are certain settings like the color combinations used by windows when it is started for the first time, for example, the color of the title bar when the window is activated is blue and when it is not activated is gray, this and other settings could be changed according to your choice. The steps are enumerated herewith:

1. Right click on the desktop, click 'Properties' in the appearing popup menu.
2. In the dialog box that appears, click on the 'Appearance' tab as shown in Figure 2.30.



Figure 2.30: Changing Appearance

3. Click on the small down arrow just below the word 'Scheme' and select the scheme of your choice and then press OK.

### Changing the Desktop Effects

Effect tab is meant to set the icons for system objects on your desktop and other effects. Following are the steps, which show how to vary the icons for system objects on the desktop.

1. In the effects tab, select the particular desktop icon you want to change. Look at Figure 2.31.
2. Click the change icon button. The change icon dialog box appears. The file name text box displays the particular file containing the icons. Select an icon and then choose OK.
3. If you want to use an icon from elsewhere, click on the Browse button and search for other files containing those icons.

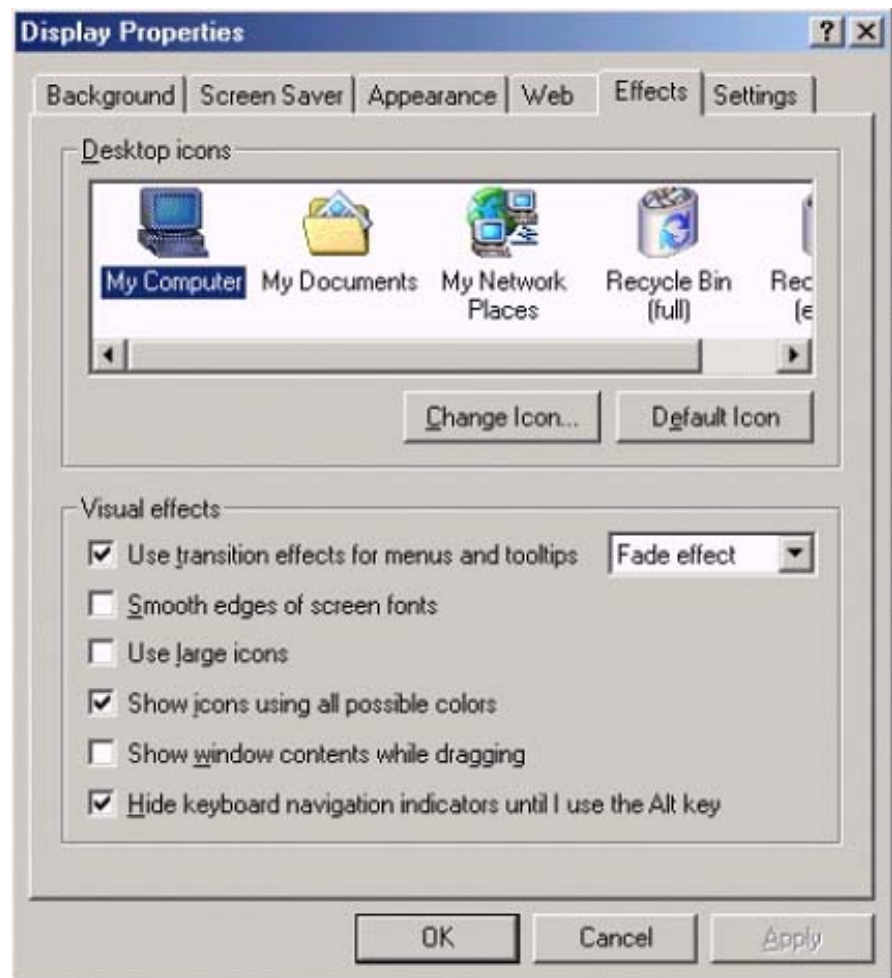


Figure 2.31: Changing Effects

#### → NOTE

*Cursor* refers to the continuously blinking bar appearing at the latest typed character in applications where text is typed e.g. Notepad, MS Word etc.

### Changing Mouse and Keyboard Properties

The mouse and keyboard could also be modified according to your choice. The mouse pointer (mouse arrow) could be chosen from a variety of different pointers. Similarly, keyboard settings would include speed of printing a character when it is pressed without releasing and the speed of blinking of the cursor.

#### Mouse Properties

The steps for changing the settings for mouse and keyboard are as follows:

1. Press the 'Start' button, point to settings, and then click on 'Control Panel'.
2. Double click on 'Mouse' to change its properties. The Mouse Properties window which appears is illustrated in Figure 2.32.
3. Press OK to exit.

**Button tab:** In the mouse icon window, select the buttons tab. In this tab, you can swap the mouse buttons and adjust the double click speed.

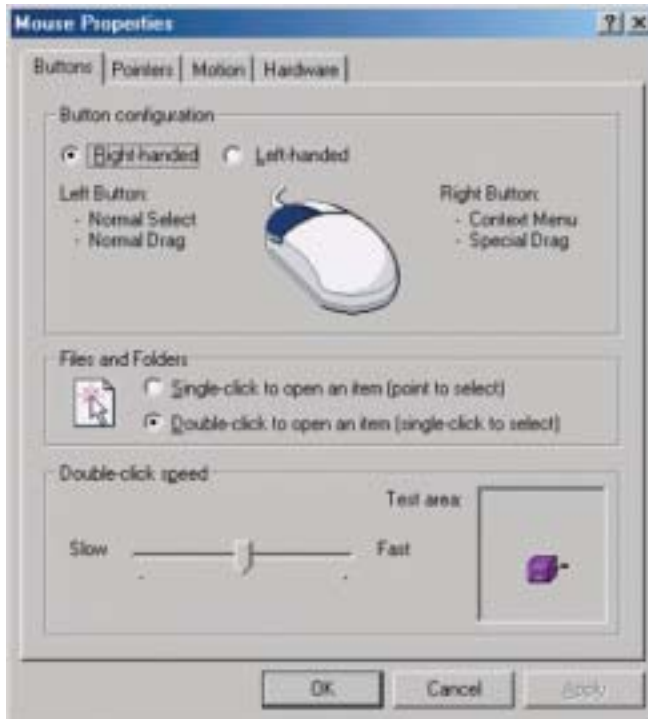


Figure 2.32: Changing Mouse Button

**Pointer tab:** Pointer tab is used to change the mouse pointers. Select the pointer shape as you see in Figure 2.33 and you want to change and then click on browse button. It will display you a list of pointer shapes. Select a particular shape and then click on open button to open the file. In the default dialog box, click on apply button followed by OK.

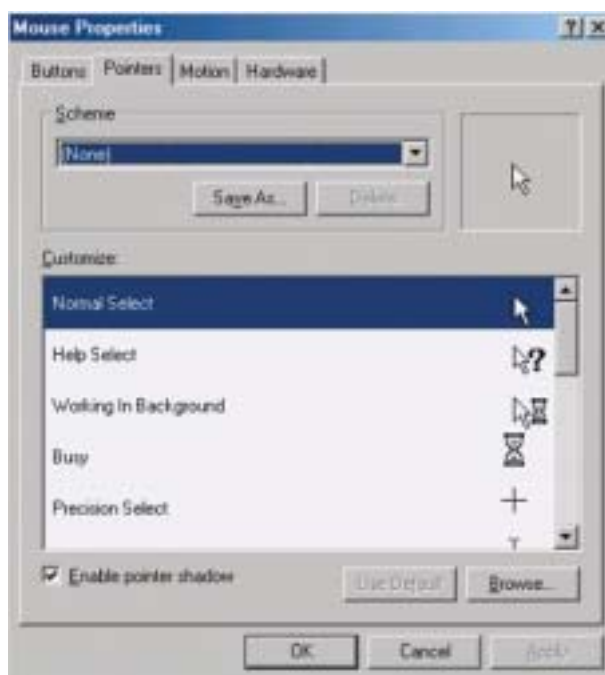


Figure 2.33: Changing Mouse Pointer

**Motion tab:** In the motion tab of the Mouse Properties dialog box, one can change the pointer speed and add a pointer trail to the pointer. Figure 2.34 illustrates the motion tab.



Figure 2.34: Changing Mouse Motion

### Keyboard Properties

Similarly the settings for keyboards could be changed by double clicking on 'Keyboard' in the 'Control Panel'. The Keyboard Properties window is shown in Figure 2.35.



Figure 2.35: Changing Mouse Speed

## Changing Regional Settings

Changes how numbers, currencies, date and time are displayed.

1. Go to 'Control Panel' and open the Regional Settings Properties dialog box as shown in Figure 2.36.
2. On the Regional Settings tab, click the name of the region whose date, time number, and currency format you want to use.

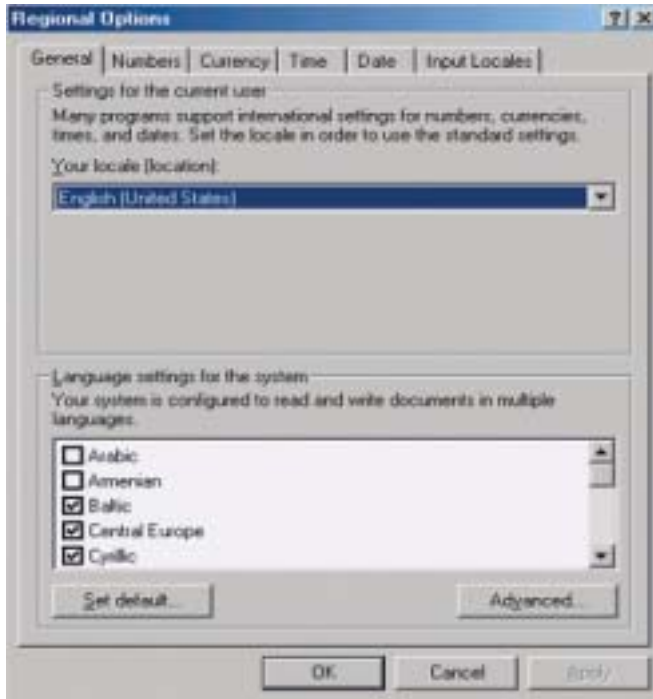


Figure 2.36: Changing Regional Settings

## Changing Printer Settings

The settings for the printers too could be easily changed through the control panel. Apart from adding or removing a printer from the computer or the network, other settings could be changed.

### Adding a new Printer

1. Go to 'Control Panel'; double click on 'Printers'. The printers window is shown in Figure 2.37.
2. Double click on 'Add Printer' to add a new printer.

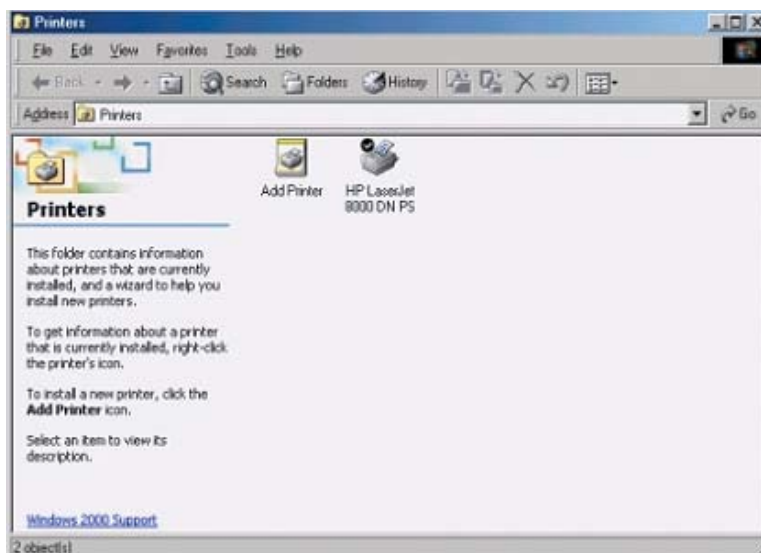


Figure 2.37: Adding Printer

### Changing other settings

1. Right-click the icon for the printer you are using.
2. Click 'Properties'. The settings you can change depend on the type of printer you have.
3. Click the different tabs to see all of the options you can set.

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## 2.9 LET US SUM UP

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In this unit we introduced various components of windows like Desktop, Start button, Start menu, Tool bar, Windows online help, My Documents, My computer, Recycle Bin and their functionalities. We also explained how to work with multiple windows. This unit also talks about control panel, which helps the user to customize his computer setting.

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## 2.10 CHECK YOUR PROGRESS EXERCISE

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1. How a printer is setup?  
.....  
.....  
.....
2. What is the use of a control panel?  
.....  
.....  
.....
3. What do you understand by the term recycle bin?  
.....  
.....  
.....

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## 2.11 ANSWERS TO CHECK YOUR PROGRESS EXERCISE

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1. A printer is set up by double clicking on Add printer option and following the instructions on the screen.
2. A control panel holds a group of tools that help to change the S/W and H/W settings.
3. Recycle bin is an area which usually holds deleted files until it reaches a user configurable percentage of a disk's capacity. At that point it discards them. It can be opened up to restore something which had been thrown away earlier.