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1.0 INTRODUCTION

In this unit, we are going to learn basics of computer. Computer is a machine that performs tasks or calculations according to a set of instructions, or programs. Compared to those early machines, today's computers are amazing. Not only are they thousands of times faster, they can fit on your desk, in your lap, or even in your pocket. Computers work through an interaction of hardware and software.

Hardware is physical component of a computer system. It is a tiny rectangular chip inside the computer called the central processing unit (CPU), or microprocessor. It is the "brain" of computer—the part that translate instructions and performs calculations. Hardware items such as monitor, keyboard, mouse, printer, and other items are often called hardware devices. Software refers to the instructions or programs that tell the hardware what to do.

The operating system (OS) is system software that manages computer and the devices connected to it. OS is responsible for management and coordination of activities and the sharing of the limited resources of computer. The OS acts as a host for other application software.

We will be discussing about two well known operating systems:

- (a) Windows operating system, and
- (b) Linux operating system.

1.1 OBJECTIVES

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

- understand about computer and it's components;
- features of Windows XP;
- know the installation procedure of Windows XP;
- features of Linux (Fedora);
- know the installation procedure of Fedora; and
- know the utilities and basic commands of Fedora.

1.2 FAMILIARIZATION WITH I/O PORT, KEYBOARD, MEMORY

Computer plays a key role in how individuals work and how they live. Even the smallest organizations have computers to help them operate more efficiently, and many individuals use computers at home for educational, entertainment, and business purposes. Thus you must be familiar with computers and its components.

In the following sub-sections, we will discuss the same and there is practice session also at the end of this section. Hope you will enjoy this practice session.

1.2.1 Computer and Motherboard

Computer : A computer is programmable machine that receives input, stores, manipulate data, and provides output in a useful format.

Computer takes input from input devices and then compute in CPU and stores in memory and sends output to output devices. The most common device for input is the keyboard. When you type, you are putting information into the computer, which is known as input. The most common device for output is the monitor. These input output devices are connected through I/O Ports.

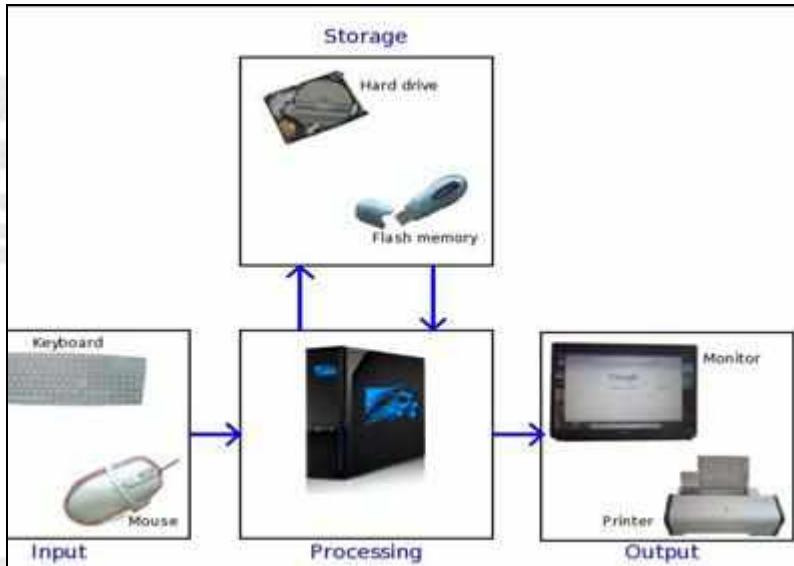


Figure 1.1 : Working of Computer

A computer system unit contains many parts. As shown in Figure 1.2(a) and Figure 1.2 (b).

Motherboard : The motherboard is the main circuit board of a computer. It is also known as the main board or system board. Typically, the motherboard contains the **CPU**, **BIOS**, **memory**, **mass storage** interfaces, **serial and parallel ports**, **expansion slots**, and all the **controllers** required to control standard **peripheral devices**, such as the **display screen**, **keyboard**, and **disk drive**. Collectively, all these chips that reside on the motherboard are known as the motherboard's **chipset**. The motherboard can be thought of as the "back bone" of the computer.

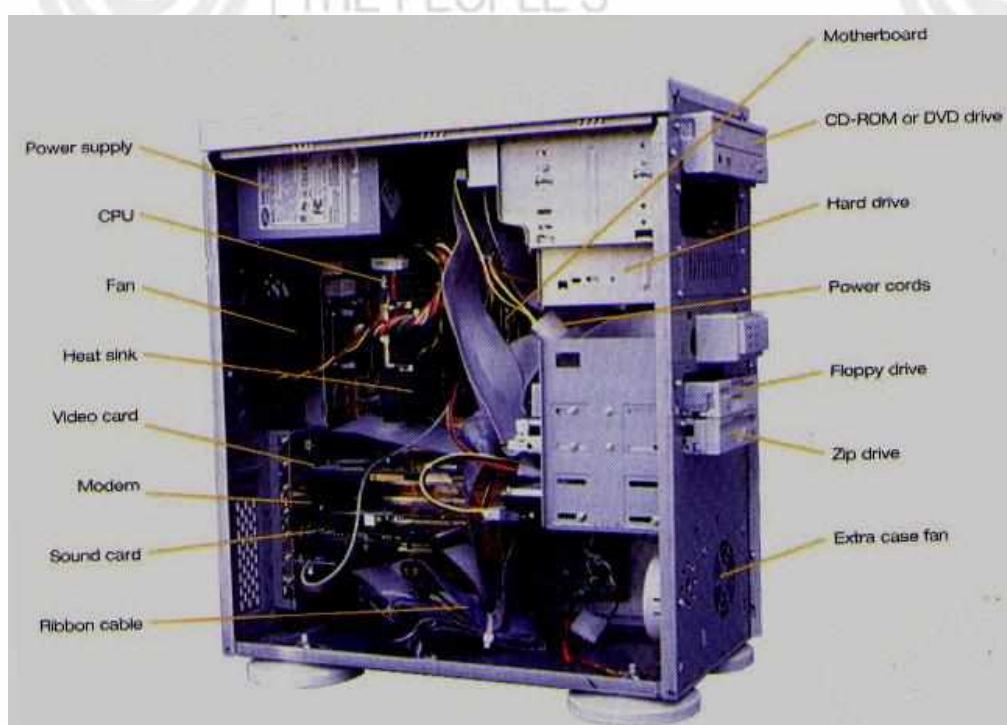


Figure 1.2(a) : Overview of Motherboard

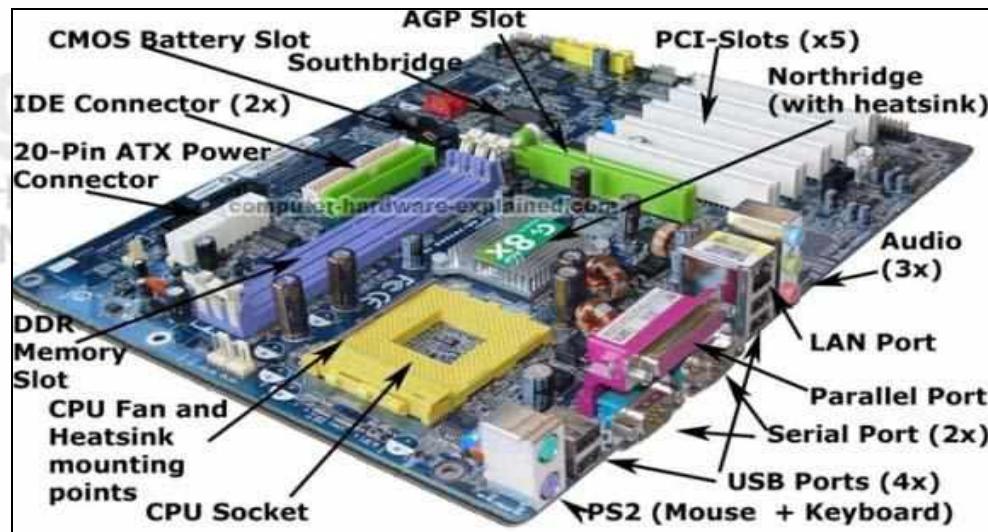


Figure 1.2 (b) : Detailed Overview of Motherboard

CPU : The CPU is the central electronic chip that contains the processing power of the computer. Today, all CPUs are microprocessors.

1. A microprocessor is a complete computer on a silicon chip.
2. A microprocessor does all of the functions of a computer.
 - stores data and instructions waiting to be used.
 - follows changeable instructions.
 - does input, processing, and output.

Memory : Memory is the part of the computer that temporarily stores applications, documents, and system operating information.

1.2.2 I/O Ports

In this sub-section, we will study about I/O ports.

Ports and Connectors : A port is a connector located on the motherboard or on a separate adapter. This we will discuss in following sub section.

As shown in figure 1.2 an internal view of some of the I/O ports. On the back of computers are several I/O (or Input/output) ports. Above, on the very top are two PS/2 ports, normally used for mouse and keyboard connections. Below that are the USB, (or Universal Serial Bus), ports. Below those are two serial ports beside a long parallel port that is often used to connect to a printer. On the bottom right is a game port for joysticks or other game controllers. On the bottom left is a microphone hook up, a speaker hook up, and an additional hook up for another sound input device like a musical keyboard.

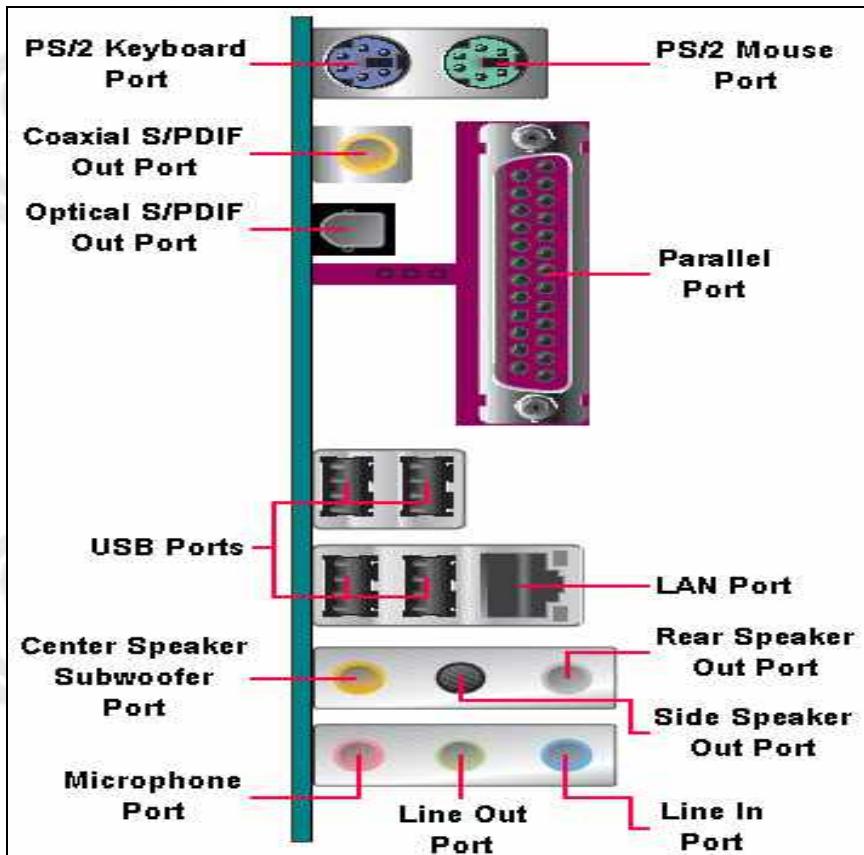


Figure 1.3. I/O Port

I/O ports are there to connect to I/O devices. There are various I/O devices which are discussed in the next subsection:

1.2.3 I/O Devices

Few I/O devices are given Table 1.1.

Table 1.1 : I/O Devices

Input Devices	Output Devices
Mouse	Monitor
Joystick	LCD
Scanner	Printer
Light Pen	Plotter

Here, we are discussing about Keyboard and mouse. Rest is kept for you to explore.

Keyboard Basics

Keyboard

- is used to type data into the computer.
- is most common input device.
- has special keys for giving the computer commands.
 - Commands tell the computer to do something, like save the file.
 - These special keys are called command or function keys.



Figure 1.4: Overview of Keyboard

Types of Keys

Typing Keys / Main Typing Keypad: It holds alphabetic character such as letter, special characters and numbers for typing.

Numeric Keypad: It can be used as numeric and directional keys, pressing the Num Lock key above the numeric keypad will tell whether the keys are on numeric or directional mode. If it is on, it is on numeric mode and can enter numbers. If it is off, it is on directional mode and only used for moving a cursor on screen UP, Down, Left or Right.

Function Keys: There are 12 functions keys starting from F1 through F12. These keys are used for special purposes.

Control Keys: It has two groups of keys, arranged from top to bottom.

The top keys holds Insert, Home, Page Up, Page Down, Delete, and End keys. Insert key switches between insert and overtype modes. Home key brings you back at the beginning of a page. Page Up and Page Down keys help you to move one page or screen up or down. Delete key erases a text or page. The End key takes you at the end of a page.

The bottom keys are independent directional keys, which let you to move the cursor Left, Right, Up and Down. Status lights, Escape key, Print Screen/SysRq, Scroll Lock, and Pause/Break are user for frequent functions.

Status Lights : These light indicate whether Num Lock, Caps Lock or scroll Lock light is on/off.

There are several short cut keys to make our work convenient when mouse is not working or if we do not want to do several manouevres with the mouse. It makes our work convenient while working with MS-Word.

Ctrl + A	Select all contents of the page.
Ctrl + B	Bold highlighted selection.
Ctrl + C	Copy selected text.
Ctrl + E	Aligns the line or selected text to the center of the screen.
Ctrl + F	Open find box.
Ctrl + I	Italic highlighted selection.
Ctrl + J	Aligns the selected text or line to justify the screen.
Ctrl + K	Insert link.
Ctrl + L	Aligns the line or selected text to the left of the screen.
Ctrl + M	Indent the paragraph.
Ctrl + P	Open the print window.
Ctrl + Spacebar	Reset highlighted text to the default font.
Ctrl + 1	Single-space lines.
Ctrl + 2	Double-space lines.
Ctrl + 5	1.5-line spacing.
Ctrl + Alt + 1	Changes text to heading 1.
Ctrl + Alt + 2	Changes text to heading 2.
Ctrl + Alt + 3	Changes text to heading 3.
Alt + Ctrl + F2	Open new document.
Ctrl + F1	Open the Task Pane.
Ctrl + F2	Display the print preview.
Ctrl + Shift >	Increases the highlighted text size by one.
Ctrl +]	Increase selected font +1pts.
Ctrl + Shift + <	Decrease selected font -1pts if 12pt or lower, if above 12 decreases font by +2pt.
Ctrl + [Decrease selected font -1pts.
Ctrl + / + c	Insert a cent sign (¢).

m



Ctrl + R	Aligns the line or selected text to the right of the screen.
Ctrl + T	Create a hanging indent.
Ctrl + U	Underline highlighted selection.
Ctrl + V	Paste.
Ctrl + X	Cut selected text.
Ctrl + Y	Redo the last action performed.
Ctrl + Z	Undo last action.
Ctrl + Shift + F	Change the font.
Ctrl + Shift + >	Increase selected font +1pts up to 12pt and then increases font +2pts.
Ctrl + ' + <char>	Insert a character with an accent (grave) mark, where <char> is the character you want. For example, if you wanted an accented è you would use Ctrl + ' + e as your shortcut key. To reverse the accent mark use the opposite accent mark, often on the tilde key.
Ctrl + Shift + *	View or hide non printing characters.
Ctrl + <left arrow>	Moves one word to the left.
Ctrl + <right arrow>	Moves one word to the right.
Ctrl + <up arrow>	Moves to the beginning of the line or paragraph.
Ctrl + <down arrow>	Moves to the end of the paragraph.
Ctrl + Del	Deletes word to right of cursor.
Ctrl + Backspace	Deletes word to left of cursor.
Ctrl + End	Moves the cursor to the end of the document.
Ctrl + Home	Moves the cursor to the beginning of the document.

How keyboard connects to a computer?

Computer Keyboard can connect with a computer through a cable or signal (wireless connection). Until recently, a keyboard used to connect with the standard PS/2 type or Serial.

Now, this trend has changed and the connection is replaced by USB (universal serial bus) and wireless connectors. Most modern PCs (motherboards) even don't have PS/2 connectors, only USB.

Since, there is no cable connection with main PC, wireless keyboard gets power from battery or a/c power connection. This is the side effect of wireless keyboards; you often have to change battery.

Mouse

The mouse is a small device used to point to a particular place on the screen and select in order to perform one or more actions. It can be used to select menu commands, size windows, start programs etc. The most conventional kind of mouse has two buttons on top: the left one being used most frequently.

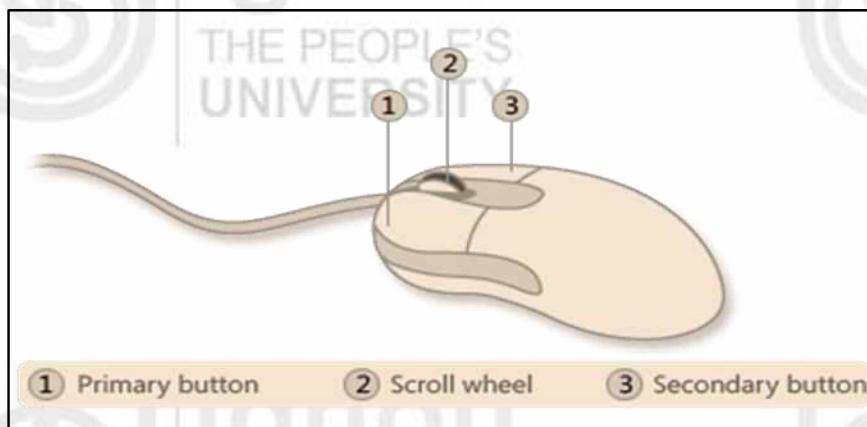


Figure 1.5 : Mouse and its buttons

Mouse buttons

Primary button / left button for left click

Secondary button / right button for right click

Scroll wheel for moving page up or down

Mouse Actions

Pointing : Point the object

Left Click: Used to select an item.

Double Click: Used to start a program or open a file.

Right Click: Usually used to display a set of commands.

Drag and Drop: It allows you to select and move an item from one location to another. To achieve this place the cursor over an item on the screen, click the left mouse button and while holding the button down move the cursor to where you want to place the item, and then release it.

How Mouse is connected to PC

Mouse is connected to pc similarly as keyboard. It can be connected with either PS/2 connectors or USB. The connections can be through a cable or wirelessly as well.

1.2.4 Memory

Now we discuss about one of the most important parts of computers i.e memory. Computers generally possess several distinct types of memory, each of which "holds" or stores information for subsequent use. The vast majority of computer memory can be placed into one of two categories: primary memory and secondary memory.

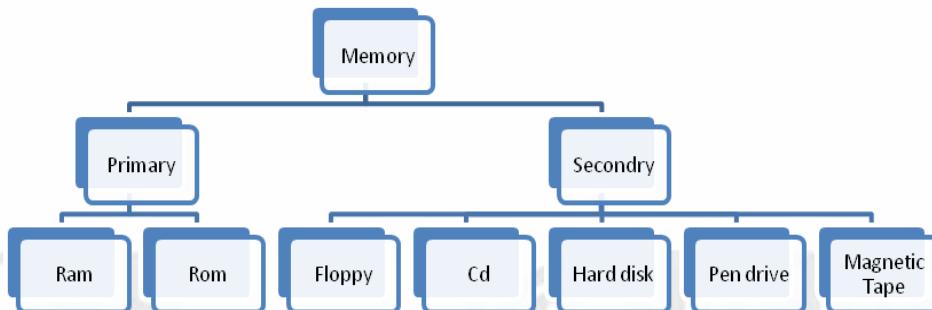


Figure 1.6 : Hierarchy of memory

Primary memory, often called main memory, constitutes that device, or group of devices, that holds instructions and data for rapid and direct access by the computer's central processing unit (CPU). Primary memory is synonymous with random-access memory (RAM).



Figure 1.7 : RAM

Modern RAM is made of semiconductor circuitry. RAM is a volatile form of information storage, meaning that when electrical power is terminated any data that it contains is lost. There are other semiconductor memory devices accessed by the CPU that are generally considered as being distinct from primary memory (i.e., different from RAM). These memory units include cache memory, read-only memory (ROM), and Programmable Read Only Memory (PROM) and EPROM (erasable programmable read-only memory).

Secondary memory, also called auxiliary memory or mass storage, consists of devices not directly accessible by the CPU. Hard drives, floppy disks, tapes, and optical disks are widely used for secondary storage. First, most secondary storage devices are capable of containing much more information than is feasible for primary memory (hence the use of the term "mass storage" as a synonym for secondary memory). A second, and essential, feature of secondary memory is that it is non-volatile. This means that data is stored with or without electrical power being supplied to the device, as opposed to RAM, which can retain its data only so long as electrical power is present.

Like primary memory, many secondary memory devices are capable of storing information, as well as retrieving it. Magnetic technology devices (such as hard drives, floppy disks, and tape) have this read-write capability, as do magneto-optical drives. However, some mass storage devices can only read data, as in the case of CD-ROM (Compact Disk-Read Only Memory) drives. CD-ROMs utilize

optical technology; however, newer optical technologies, such as CD-RW (compact disk-rewriteable), can both read and write information like magnetic storage devices.

Hard Disk

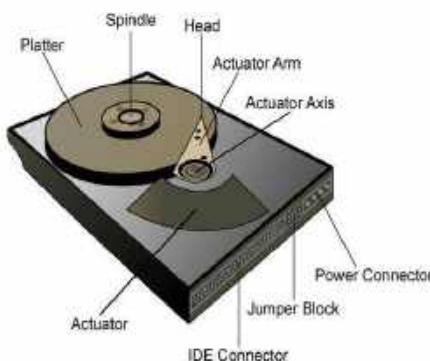


Figure 1.8(a) : Internal view



Figure 1.8(b) : External view

The hard disk is the main, and usually largest, data storage device in a computer. The operating system, software titles and most other files are stored in the hard disk.

Now let's have a Practice Session

Check Your Progress 1

1. Find shortcut keys for the following:
 - a) To Open Help.
 - b) To repeat the last action performed.
 - c) To save document
 - d) To Bold the selected text
 - e) Change the text in Microsoft Word from uppercase to lowercase or capital letter at the beginning of every word.
2. List use of following function keys:
F1, F2, F3, F4, F5, F7, F8, F12
3. Type the following passage in MS-WORD

over the past few years the growth of the computer industry has been quiet remarkable and today it is the fastest growing industry in our economy. Nowadays, many schools are equipped with computers for educating their students. Thereby making computers an integral part of education system. Teachers and professors use computers for teaching, giving presentations, assessing various data banks, maintaining database of students, communication in the form of e mails or chat, browsing the Internet and

Preparing students to have a competitive edge in the global job market. Computers have revolutionized the learning for students in a big way. They can watch various films on wild life, history, geography, science and encyclopedias with loud sound and excellent picture quality on CompactDisc's or DVD's.

- (a) In this paragraph, there are few spelling errors. Try spelling check for this. Try to find and replace 'loud' by "excellent".
- (b) Now save this paragraph with the name 'computer' on your desktop.

1.3 WINDOWS OPERATING SYSTEM

The main operating systems involved in networking now days are Windows and Linux. Both are having their own advantages and disadvantages. Linux works better on older, less powerful computer hardware because it requires less resource (memory or processing) as compared to Windows. Compared to Windows, Linux is virus-free and bugs free. Windows provides the user a mature, familiar and interactive interface that is easy to learn and understandable. But we think that a network administrator should have an expertise on both of these leading network operating systems. Even most of the network administrators are running both Linux and Windows on the server for the best networking.

This section provides you the:

- (1) Discussions, demonstrations, and lab exercises to sharpen your skills and knowledge necessary to admin and support Windows XP/Linux networking.
- (2) It contains an overview of Windows XP and Linux/Unix in the beginning to develop your understanding of these operating systems.
- (3) Further in this course you have an example to introduce you in the lab. Then you have different lab exercises on Linux/Unix and on Windows XP.

1.3.1 Overview of Windows

Background to Windows



Windows XP is an **operating system** that was produced by **Microsoft** for use on personal, including home and business desktops, **laptops**, and **media centers**. It was first released to computer manufacturers on August 24, 2001, and is the most popular version of **Windows**, based on installed user base. The name "XP" is short for "experience."

Windows XP was the successor to both **Windows 2000** and **Windows Me**, and was the first consumer-oriented operating system produced by Microsoft.

System Requirement for windows XP.

- Pentium 233-megahertz (MHz) processor or faster (300 MHz is recommended).
- At least 64 megabytes (MB) of RAM (128 MB is recommended).
- At least 1.5 gigabytes (GB) of available space on the hard disk.
- CD-ROM or DVD-ROM drive.
- Keyboard and a Microsoft Mouse or some other compatible pointing device.
- Video adapter and monitor with Super VGA (800 x 600) or higher resolution.
- Sound card.
- Speakers or headphones.

1.3.2 Windows Installing Procedure

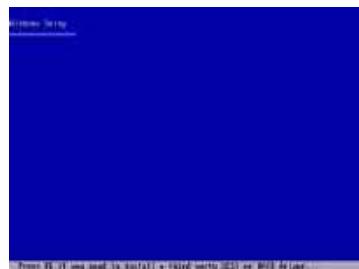
This procedure demonstrates how to install Windows XP Professional. The procedure to install Windows XP home edition is very similar to the professional edition. Since Windows XP Pro is more advanced operating system, it will be used to demonstrate the installation procedure.

The best way to install Windows XP is to do a clean install. It is not difficult to perform a clean installation. Before you perform the installation I recommend that you check **Windows XP Compatibility List** to ensure that your hardware is supported by XP. If your hardware is not on the compatibility list you can check your hardware manufacturer's website to download the drivers for Windows XP. Save all the necessary drivers onto floppy disks or CD before you start the installation.

Step 1 : Start your PC and place your Windows XP CD in your CD/DVD-ROM drive. Your PC should automatically detect the CD and you will get a message saying "Press any key to boot from CD". Soon as computer starts booting from the CD you will get the following screen:



Step 2 : At this stage it will ask you to press F6



Step 3 Press S to specify that you want to install additional device.



Step 4 : You will be asked to insert the floppy disk with drivers. Press enter after you have inserted the disk.



Step 5 : You will see a list of drivers for your HDD. Select the correct driver for your device and press enter.



Step 6 : You will then get a Windows XP Professional Setup screen. You have the option to do a new Windows install, Repair previous install or quit. Since we are doing a new install we just press Enter to continue.



Step 7 : You will be presented with the End User Licensing Agreement. Press F8 to accept and continue

Operating System



Step 8 : This step is very important. Here we will create the partition where Windows will be installed. If you have a brand new unformatted drive you will get a screen similar to below. In our case the drive size is 8190MB. We can choose to install Windows in this drive without creating a partition, hence use the entire size of the drive. If you wish to do this you can just press enter and Windows will automatically partition and format the drive as one large drive.

Step 9: Windows will show the total size of the hard drive and ask you how much you want to allocate for the partition you are about to create. I will choose 6000MB. You will then get the screen below. Notice it shows C: Partition 1 followed by the size 6000 MB. This indicates the partition has been created. We still have an unpartitioned space of 2189MB. Next highlight the unpartitioned space by pressing down the arrow key. Then press C to create another partition. You will see the total space available for the new partition. Just choose all the space left over, in our case 2180MB.



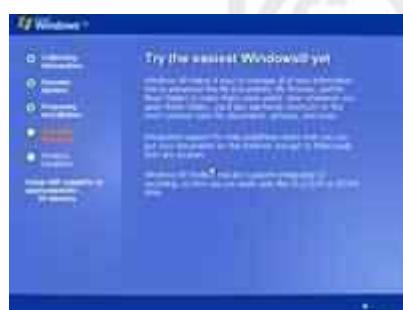
Step 10 : Choose format the partition using NTFS file system. This is the recommended file system. If the hard drive has been formatted before then you can choose quick NTFS format. We chose NTFS because it offers many security features, supports larger drive size, and bigger size files.



Windows will now start formatting drive C: and start copying setup files as shown on the two images below :



Step 11 : After the setup has completed copying the files the computer will restart. Leave the XP CD in the drive but this time DO NOT press any key when the message "Press any key to boot from CD" is displayed. In few seconds setup will continue. Windows XP Setup wizard will guide you through the setup process of gathering information about your computer.

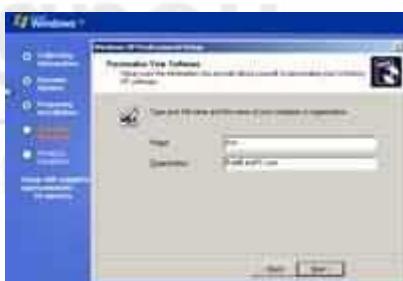


Step 12 : Choose your region and language.



Step 13 : Type in your name and organization.

Operating System



Step 14 : Enter your product key.



Step 15: Name the computer, and enter an Administrator password. Don't forget to write down your Administrator password.



Step 16: Enter the correct date, time and choose your time zone.



Step 17: For the network setting choose typical and press next.



Step 18 : Choose workgroup or domain name. If you are not a member of a domain then leave the default settings and press next. Windows will restart again and adjust the display.



Step 19: Finally, Windows will start and present you with a Welcome screen. Click next to continue.



Step 20 : Choose 'help protect my PC by turning on automatic updates now' and press next.



Step 21 : Will this computer connect to the internet directly, or through a network? If you are connected to a router or LAN then choose: '*Yes, this computer will connect through a local area network or home network*'. If you have dial up modem choose: '*No, this computer will connect directly to the internet*'. Then click Next.



Step 22 : Ready to activate Windows? Choose yes if you wish to active Windows over the internet now. Choose no if you want to activate Windows at a later stage.

Operating System



Step 23: Add users that will sign on to this computer and click next.



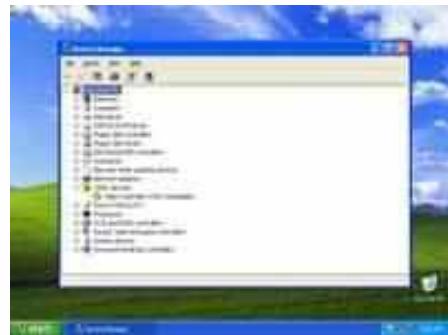
Step 24 : You will get a Thank you screen to confirm setup is complete. Click finish.



Step 25 : Log in, to your PC for the first time.



Step 26 : You now need to check the device manager to confirm that all the drivers has been loaded or if there are any conflicts. From the start menu select Start -> Settings -> Control Panel. Click on the System icon and then from the System Properties window select the Hardware tab, then click on Device Manager.



If there are any yellow exclamation mark "!" next to any of the listed device, it means that no drivers or incorrect drivers has been loaded for that device. In our case we have a Video Controller (VGA card) which has no drivers installed.

Your hardware should come with manufacturer supplied drivers. You need to install these drivers using the automatic setup program provided by the manufacturer or you need to manually install these drivers. If you do not have the drivers, check the manufacturer's website to download them.

To install a driver manually use the following procedure:

- From the device manager double click on the device containing the exclamation mark.
- This would open a device properties window.
- Click on the Driver tab.
- Click Update Driver button. The Wizard for updating device driver pops up as shown below:



You now get two options. The first option provides an automatic search for the required driver. The second option allows you to specify the location of the driver. If you don't know the location of the driver choose the automatic search which would find the required driver from the manufacturer supplied CD or Floppy disk. Windows would install the required driver and may ask you to restart the system for the changes to take affect. Use this procedure to install drivers for all the devices that contain an exclamation mark.

1.3.3 Working with XP

Operating System

i) Desktop



The typical Windows XP desktop includes following desktop icons

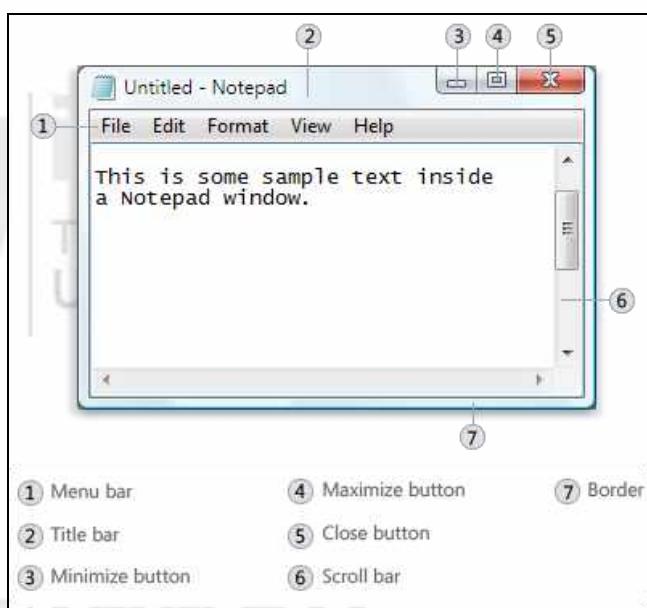


Icons are small pictures that represent files, folders, programs, and other items. Double-clicking a desktop icon starts or opens the item it represents. For e.g. Internet Explorer. It is used to quickly access Internet.

The Taskbar is usually located on the bottom of the screen. It houses the Start button, clock, and a task button for each active program currently running and each open folder.

ii) Parts of a window

Most windows have the same basic parts:



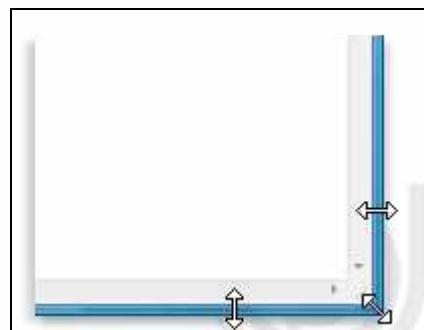
- Title bar. Displays the name of the document and program (or the folder name if you're working in a folder).
- Minimize, Maximize, and Close buttons. These buttons hide the window, enlarge it to fill the whole screen, and close it, respectively (more details on these shortly).
- Menu bar. Contains items that you can click to make choices in a program. See [Using menus, buttons, bars, and boxes](#).
- Scroll bar. Lets you scroll the contents of the window to see information that is currently out of view.
- Borders and corners. You can drag these with your mouse pointer to change the size of the window.

a) Moving a window

To move a window, point to its title bar with the mouse pointer  . Then drag the window to the location that you want. (*Dragging* means pointing to an item, holding down the mouse button, moving the item with the pointer, and then releasing the mouse button.)

Changing the size of a window

- To make a window fill the entire screen, click its Maximize button  or double-click the window's title bar.
- To return a maximized window to its former size, click its Restore button  (this appears in place of the Maximize button). Or, double-click the window's title bar.
- To resize a window (make it smaller or bigger), point to any of the window's borders or corners. When the mouse pointer changes to a two-headed arrow (see picture below), drag the border or corner to shrink or enlarge the window.



A window that is maximized cannot be resized. You must restore it to its previous size first.

b) Hiding a window

Hiding a window is called *minimizing* it. If you want to get a window out of the way temporarily without closing it, minimize it.

To minimize a window, click its Minimize button . The window disappears from the desktop and is visible only as a button on the taskbar, the long horizontal bar at the bottom of your screen.



To make a minimized window appear again on the desktop, click its taskbar button. The window appears exactly as it did before you minimized it.

Closing a window

Closing a window removes it from the desktop and taskbar. If you're done with a program or document and don't need to return to it right away, close it.

To close a window, click its Close button .

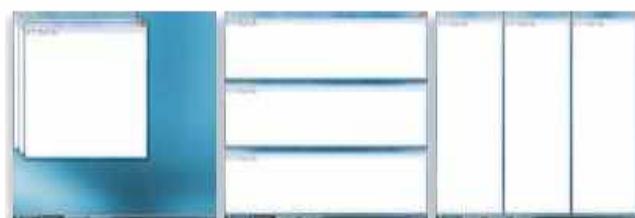
c) Switching between windows

- If you open more than one program or document, your desktop can quickly become cluttered with windows. Keeping track of which windows you have open isn't always easy, because some windows might partially or completely cover others.
- Using ALT+TAB. You can switch to the previous window by pressing ALT+TAB, or cycle through all open windows and the desktop by holding down ALT and repeatedly pressing TAB. Release ALT to show the selected window.



Arranging windows automatically

Now that you know how to move and resize windows, you can arrange them however you like on your desktop. You can also have Windows automatically arrange them in one of three ways: cascading, vertically stacked, or side by side.



To choose one of these options, right-click an empty area of the taskbar, then click Cascade Windows, Show Windows Stacked, or Show Windows Side by Side.

iii) Program Management

You can launch most of your applications via the Start button and Start Menu. Most of your applications can be launched by selecting Start, All Programs, then any program name, e.g. Microsoft Word. If an application is saved within a folder, you would launch it by selecting Start, Programs, folder name (e.g., Accessories), then program name (e.g., WordPad).

You can switch between running applications by clicking on them in the Taskbar or holding down the Alt key, then depressing and releasing the Tab key. If you inadvertently launch multiple copies of the same program, you will find that all the copies will be grouped onto one particular Tab button. The Tab will display the name of the program and the number of copies of the program that are open. To choose a specific copy, click the Tab button and all of the copies of the program names will pop up. Click the one you want to view and it will be displayed



Similarly you can open other search engine like Google chrome & Fire fox explore whole world .

iv) File Management

Step by step illustration for Creating and deleting Folder :

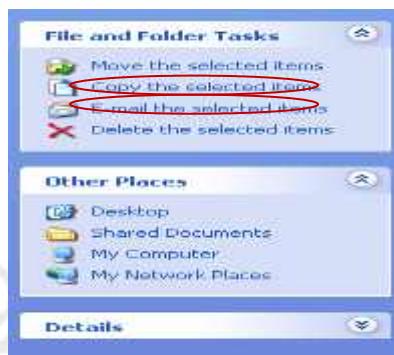
- Click on the Start button.
- Place the pointer on *My documents*.
- Select New from the menu File.
- Select Folder.
- Once the folder option has been selected you will see that on the right window a new folder will appear that has the name *New Folder* and that it is selected. Rename it *My folder*.or *any other name you want*.
- Then select the folder, right click and then select option delete by clicking.
- When it asks you if you want to send the folder to the Recycle Bin click Yes.

- Select the folder to be copied.
- Once the folder has been selected, click on Copy.
- Select the folder where you want to copy then open that folder , right click and select paste option.

In the case of not having the folder created to which we want to copy to, click Make new folder, rename new folder with name you want and Click OK.

Copy or Move Multiple Files or Folders

1. Double-click on the folder *My documents* and create folder 1 and folder 2 .
2. Select the folder ‘folder 1’
3. Press CTRL , Select another folder ‘folder 2’
4. Select from right panel under ‘file and folder task ‘heading ‘Copy the selected items’ or ‘Move the selected items’



- 5) The following window will be open



- 6) Then double-click the folder you want to move the selected items
- 7) if you want to copy in new folder then select ‘ make new folder ‘ and new folder is created then select copy

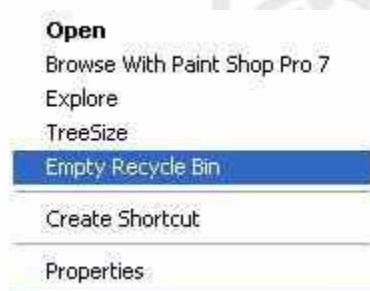
This can also be done to move or copy Files.

Some Windows XP Tips

Check the Taskbar for the programs that are currently running on your computer. You should close (click on the X at the upper right) all duplicate instances of the same program to free up memory.

If your application should "hang" (keyboard or mouse does not respond), hold down the CONTROL and ALT keys, then depress and release the DELETE key. You will get a menu of the tasks currently loaded in memory. Highlight the application that hung (usually the one that is marked "not responding"), and click on End Task. You can usually unload the application gracefully without having to reboot your computer.

Files deleted from your local hard drive will be saved in the Recycle Bin until you empty the Recycle Bin. To empty the Recycle Bin, right click on Recycle Bin, and select Empty Recycle Bin. If you need to recover deleted files from the Recycle Bin, right click on Recycle Bin, and select Explore. You should move the file from the Recycle Bin to another folder on the hard drive (for example, click and drag the file in Recycle Bin, Explore to the desktop).



It's best to empty the Recycle Bin from time to time as deleted files saved in the Recycle Bin actually take up more hard disk space than if they were in a regular folder. But remember, once the Recycle Bin is emptied, you can NOT recover the deleted files. Also, files deleted from diskettes are not saved in the Recycle Bin.

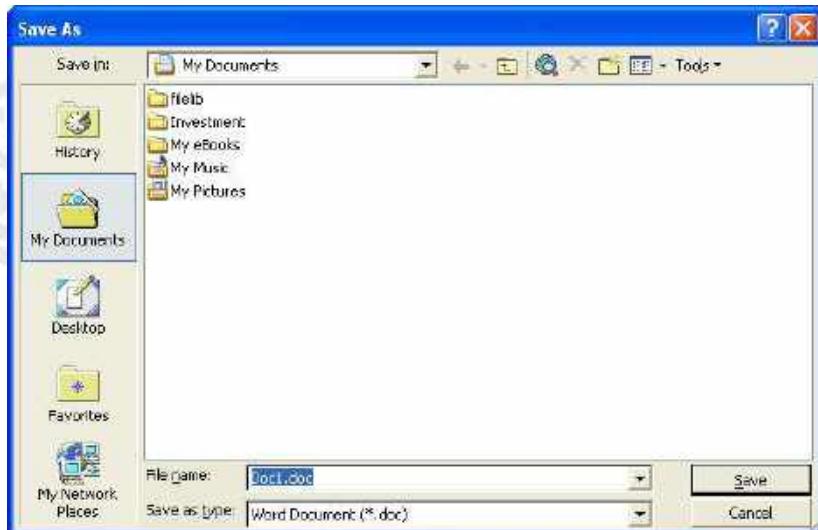
Finding a "Missing" Document

If the document was created recently on your computer, launch the application you used to create it, and select File. Windows remembers the last nine documents you opened by default.

If you remember the file name or part of the file name but not its location, click on the START button, Search, and Files or Folders. On the menu on the left side, select All Files and Folders. In the Look In box, select (C:). In the All or Part of Name: box, enter the file name, and click Search. Windows will list all instances of the file if it finds any matches. If you know part of the file name, you can enter it in A Word or Phrase In the File: box.

Saving Documents

In Microsoft Word, the default location to save your document is the My Documents folder. To save your document in a different folder, click on the yellow folder with the up-arrow to browse one level up, on the left side click on the yellow folder with the * to get to your Favorites folders, or click the yellow folder with a yellow * on it (on the toolbar) to create a new folder. The Save In: box shows the current folder.



Note: if you use Corel WordPerfect, your default folder for saving documents is My Files. You may use either folder but it's best to create a folder for each project and save your documents in their corresponding project folder.

Check Your Progress 2

1. Find out whether your PC has compatibility to install windows XP.
2. Practice and install Windows XP in your PC.

Check Your Progress 3

1. Organize your Desktop icons by name then change the Desktop theme also
2. Your desktop is showing date “Wednesday, may 22, 2011” and time “11:48 AM” now change it to present date and time.
3. Create shortcuts for MS-Word.
4. i) Create new folder rename it as “Lab1”.
 - ii) Create new ms-word document. Type a paragraph on “computer operating system “and save it as “session 3”
 - iii) Ask your friend to search document “session 3”
5. How can you remove an item from the Start menu or from a Program menu?
6. Search Calculator, notepad, paint.
7. Where the pen drive is connected?
8. How will you install extra ram in your computer.

1.4 LINUX OPERATING SYSTEM

1.4.1 Overview of UNIX/ LINUX Operating System

Even after thirty years of its creation UNIX is still regarded as one of the most versatile, flexible and powerful operating systems in the computer world. It was created at Bell Labs in 1970 written in the C programming language, which was developed at the same time. It supports large numbers of simultaneous users, runs

with few alterations on many hardware platforms (provides some platform independence) and of course it was and is a simple, elegant, and easy to use (at least compared to its predecessors) Linux is a relatively new UNIX flavor derived from the work of Linus Torvalds, who was interested to develop a UNIX for academic use. Linux is one of the many versions of the UNIX operating system. Working on Linux means working on one of the flavors of UNIX. The main advantage that Linux is absolutely free, you need not spend even the cost CD it can be entirely free downloadable from the Internet. (No registration fees, no costs per user, free updates, and freely available Operating System and Networking Lab source code). It is portable (means can be configured on any processor like Intel, Solaris, etc), dual-bootable, fast, reliable, secure and versatile. These properties make it popular among the System Administrators. While working on it you may realize many more important features and advantages of Linux. Most of the exercises are command line based but similar exercises you can try on your GUI based Linux.

Fedora 10, also known as Cambridge, was released on November 25th, 2008, and it brings faster boot experience with Plymouth, better printing, better webcam support, improved wireless network connection sharing, better software maintenance and update. We will learn how to install the DVD edition of the Fedora 10 operating system on your PC. Why the DVD edition? Because we believe it offers most of the applications you'll need. However, this guide will make things very simple for you, but if you get stuck somewhere in the middle of the installation and you need help, do not hesitate to use our commenting system at the end of the article.

1.4.2 How to install Linux Operating System

- You will need the Fedora 10 DVD image that corresponds to your hardware architecture (i386 or amd64), and which can be downloaded from here. When the download is over, burn the ISO image with your favorite CD/DVD burning application (Brasero on Linux or Nero, CDBurnerXP, Roxio on Windows) on a blank DVD at 4x speed.
- It is always recommended having an empty hard drive for a Linux installation (that means no other operating system on it, no Windows), and you must have a minimum of 10 GB free space for the Fedora installation.

Great, now let's begin. Insert or leave the DVD in your CD/DVD-ROM device, and reboot the computer in order to boot from the DVD. Hit the F8 or F12 key (depending on your BIOS) to select the CD/DVD-ROM as the boot device.

You'll be presented with a very nice Fedora artwork GRUB splash and some options...



At this stage, we simply suggest you press Enter, and wait for the system to load...

```
sysctl net.netfilter.nf_conntrack_acct=1 to enable it.
ip_tables: (C) 2000-2006 Netfilter Core Team
TCP cubic registered
Initializing XFRM netlink socket
NET: Registered protocol family 17
Using IPI No-Shortcut mode
registered taskstats version 1
Magic number: 1:471:834
Freeing unused kernel memory: 412k freed
Write protecting the kernel text: 2732k
Write protecting the kernel read-only data: 1172k

Greetings.
anaconda installer init version 11.4.1.62 starting
mounting /proc filesystem... done
creating /dev filesystem... done
starting udev... done
mounting /dev/pts (unix98 pty) filesystem... done
mounting /sys filesystem... done
trying to remount root filesystem read write... done
mounting /tmp as ramfs... done
running install...
running /sbin/loader
detecting hardware...
```

Select the "Skip" option when you're asked if you want to check the media before installation, and press "Enter"...



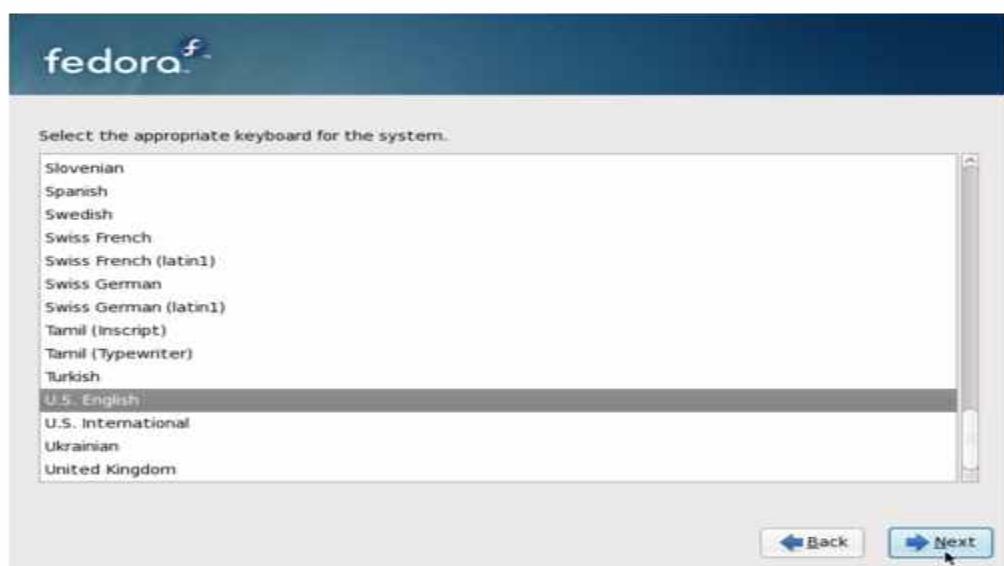
Anaconda (the Fedora installer) will load and you'll see the welcome screen. Click "Next"...



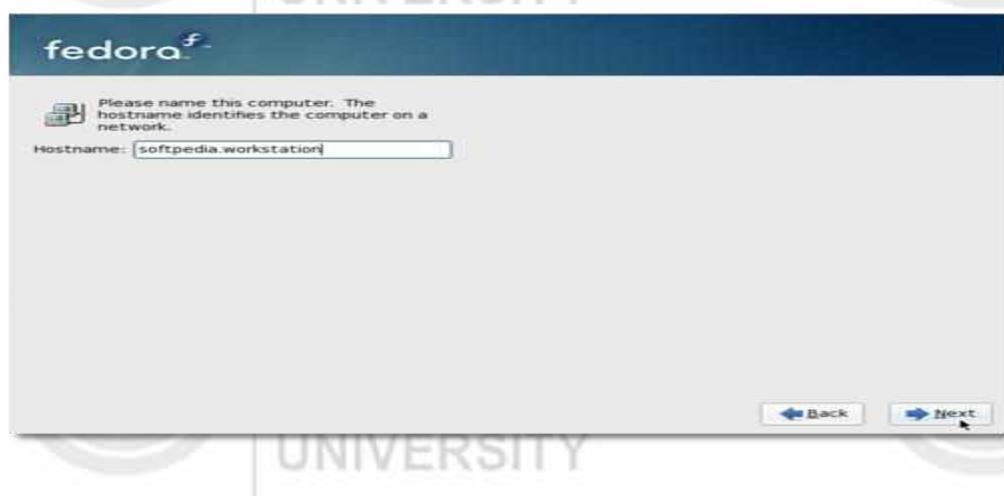
Choose your language...



Choose your keyboard layout...



Type a name for the computer. It can be anything you want...



Select your location (country/city)...



Enter the root (System Administrator) password. The longer, the better (WRITE IT SOMEWHERE)...

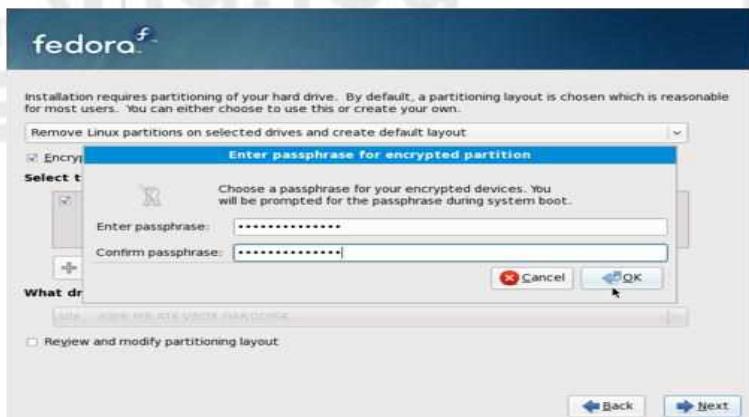


Here, comes the partitioning part! If you have an empty hard drive, all you have to do is click "Next," but make sure the "Remove all partitions on selected drives and create default layout" option is selected. If you don't have an empty hard drive and you still want to install Fedora 10 on your machine, then make sure you select the "Use free space on the selected drives and create default layout" option (10 GB minimum of free space is required). Click "Next"...

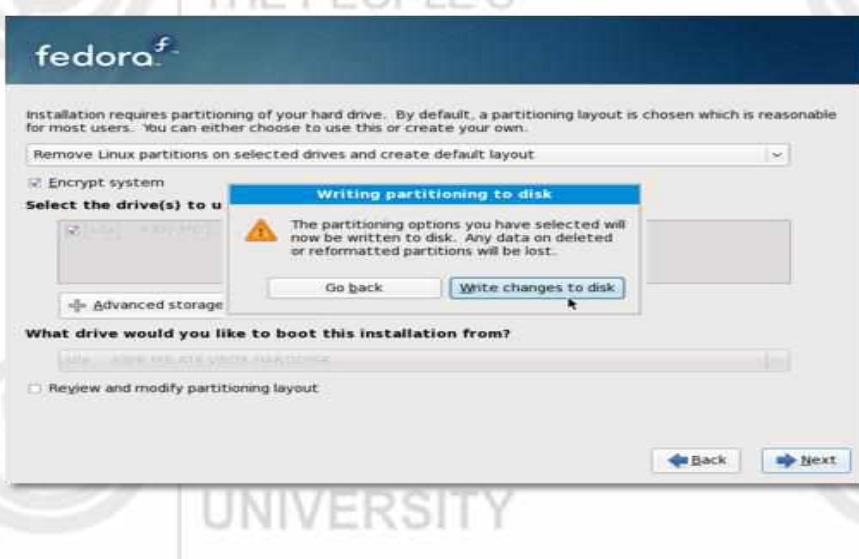


We also recommend to select the "Encrypt system" option. Enter a password (the longer, the better) for the encrypted partition...

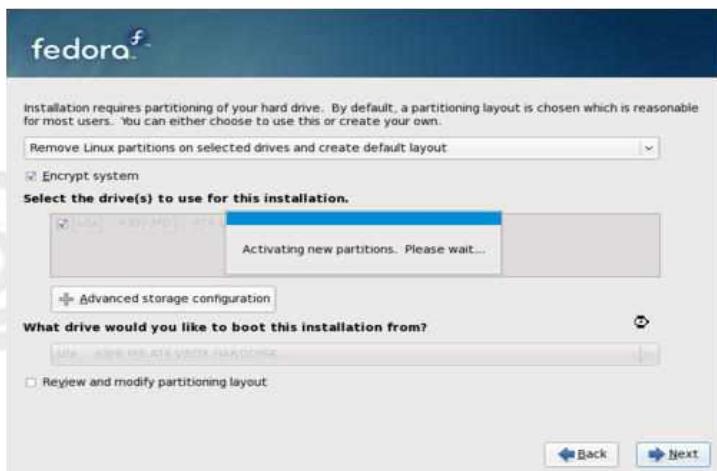
Operating System



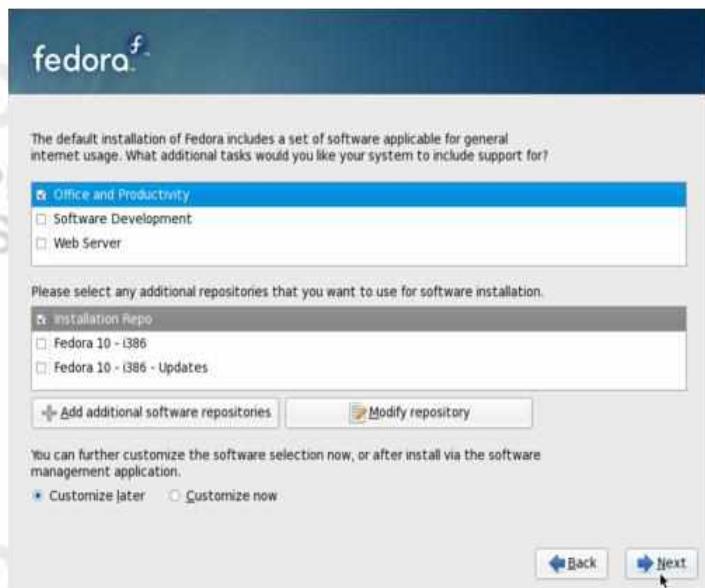
Click the "Write changes to disk" button when asked...



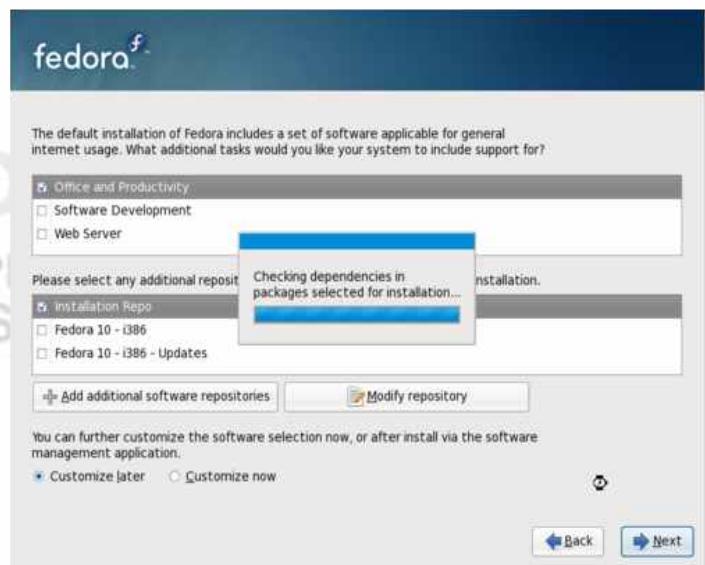
The hard drive will be formatted and the partitions will be created...



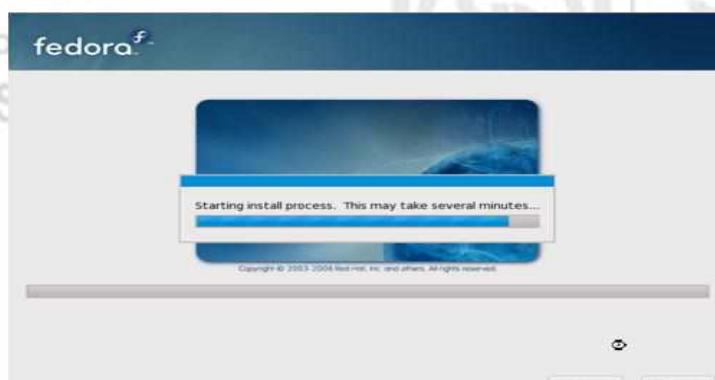
Now, you can select the desired packages...



Hit the "Next" button and everything will be done automatically from now on, just sit back and watch how the packages are copied to your hard drive. The installation process will take about 8-10 minutes (depending on your computer specs and the selected packages).



It starts installing, wait for sometime

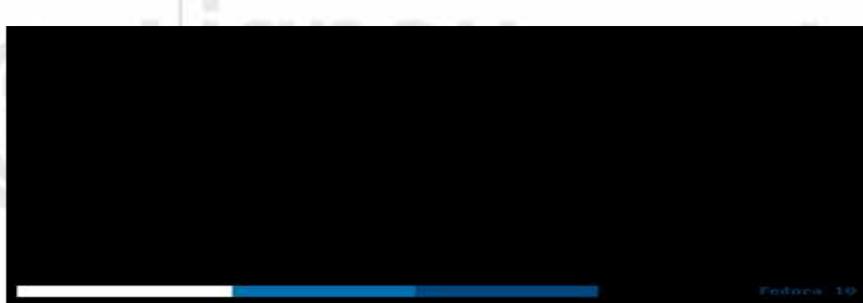




When the installation is over, you will get a "Congratulations, the installation is complete" screen. Click the "Reboot" button and your computer will automatically restart...



Remove the DVD from your optical drive. Your brand new Fedora 10 operating system will boot for the first time...



If you've chosen to encrypt your partition, then you'll be prompted for the password ...



The system will continue to boot and in a few seconds you will see the First Boot Configuration Wizard. Click "Forward" on the Welcome screen...



Click "Forward" on the License screen...

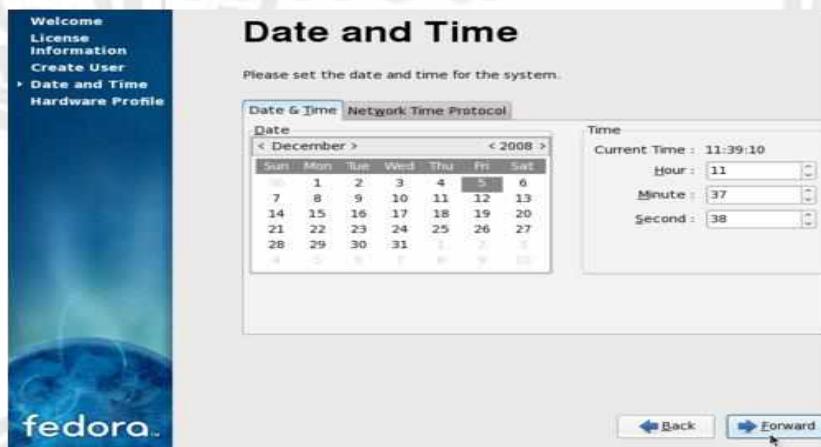


Create a regular user for the system...

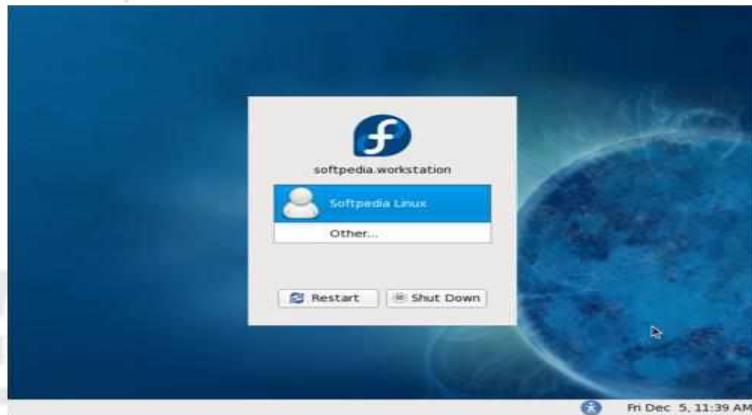
Operating System



Set the date and time...



Click "Finish" and you will see the login screen. Enter the password for the regular user you've just created...



That's it!

1.4.3 Linux utilities and Basic Commands

The following is a list of commonly used commands which are organized under different categories for understanding and ease of use. Keys proceeded by a ^ character are CONTROL key combinations.

Terminal Control Characters

<code>^h</code>	backspace erase previously typed character
<code>^u</code>	erase entire line of input so far typed
<code>^d</code>	end-of-input for programs reading from terminal
<code>^s</code>	stop printing on terminal
<code>^q</code>	continues printing on terminal
<code>^z</code>	currently running job; restart with bg or fg
<code>DEL, ^c</code>	kill currently running program and allow clean-up before exiting
<code>^\\</code>	emergency kill of currently running program with no chance of cleanup

Login and Authentication

<code>Login</code>	access computer; start interactive session
<code>Logout</code>	disconnect terminal session
<code>Passwd</code>	change local login password; you MUST set a non-trivial password
	Information
• <code>date</code>	show date and time
• <code>history</code>	list of previously executed commands
• <code>pine</code>	send or receive mail messages
• <code>msgs</code>	display system messages
• <code>man</code>	show on-line documentation by program name
• <code>info</code>	on-line documentation for GNU programs
• <code>w, who</code>	who is on the system and what are they doing
• <code>who am i</code>	who is logged onto this terminal
• <code>top</code>	show system status and top CPU-using processes
• <code>uptime</code>	show one line summary of system status
• <code>finger</code>	find out info about a user@system

File Management

• <code>cat</code>	combine files
• <code>cp</code>	copy files
• <code>ls</code>	list files in a directory and their attributes
• <code>mv</code>	change file name or directory location
• <code>rm</code>	remove files
• <code>ln</code>	create another link (name) to a file
• <code>chmod</code>	set file permissions
• <code>des</code>	encrypt a data file with a private key
• <code>find</code>	find files that match specified criteria

Display Contents of Files

• <code>cat</code>	copy file to display device
• <code>vi</code>	screen editor for modifying text files
• <code>more</code>	show text file on display terminal with paging control
• <code>head</code>	show first few lines of a file(s)

- tail show last few lines of a file; or reverse line order
- grep display lines that match a pattern
- lpr send file to line printer
- pr format file with page headers, multiple columns etc.
- diff compare two files and show differences
- cmp compare two binary files and report if different
- od display binary file as equivalent octal/hex codes
- file examine file(s) and tell you whether text, data, etc.
- wc count characters, words, and lines in a file

Directories

- cd change to new directory
- mkdir create new directory
- rmdir remove empty directory (remove files first)
- mv change name of directory
- pwd show current directory

Devices

- df summarize free space on disk device
- du show disk space used by files or directories

Special Character Handling for C-shell

*	match any characters in a file name
~user	shorthand for home directory of "user"
\$name	substitute value of variable "name"
\	turn off special meaning of character that follows
'	In pairs, quote string with special chars, except !
"	In pairs, quote string with special chars, except !, \$
`	In pairs, substitute output from enclosed command

Controlling Program Execution for C-shell

&	run job in background
DEL, ^c	kill job in foreground
^z	suspend job in foreground
fg	restart suspended job in foreground
bg	run suspended job in background
;	delimit commands on same line
()	group commands on same line
!	re-run earlier command from history list
ps	print process status
kill	kill background job or previous process
nice	run program at lower priority
at	run program at a later time

crontab	run program at specified intervals
limit	see or set resource limits for programs
alias	create alias name for program (in .login)
sh, csh	execute command file

Description of Commonly Used UNIX Commands

The description for the most commonly used UNIX commands is given below in an alphabetic order.

a) cat

cat allows you to read multiple files and then print them out. You can combine files by using the > operator and append files by using >>.

Syntax: cat [argument] [specific file]

Example:

cat abc.txt

If you want to append three files (abc.txt, def.txt, xyz.txt), give the command as,

cat abc.txt def.txt xyz.txt > all

b) cd, chdir

cd (or chdir) stands for “change directory”. This command is the key command to move around your file structure.

Syntax: cd [name of directory you want to move to]

When changing directories, start with / and then type the complete file path, like

cd /vvs/abc/def

in this eg. You are moving from vvs directory to abc directory then move to def directory .

You can also move relative to the current directory by typing

cd vvs/abc/def

To move relative to the parent directory of your current directory, use

Cd ../vvs/abc/def

c) chmod

chmod (which stands for “change mode”) changes who can access a particular file. A “mode” is created by combining the various options from who, opcode, and permission.

Syntax: chmod [option] mode file

If you look at a list of files using the long list command ls -l, you'll see the permissions, owner, file size, modification time, and filename. The first column of the list shows who can read, write, and execute the files or directories, in other words, the permissions. It basically shows who has permission to do what to a given file or directory. r stands for “read” and means that you're allowed to read the file or directory. w stands for “write” and gives permission to edit or change the file as well as create, move, rename, or remove a directory. x stands for “execute” which gives permission

to run a file or search a directory. Every file or directory has four sets of rwx permissions. The first set represents the user (u), the second set represents the group (g), the third set represents other (o), and the fourth set represents all (a). The column will look like this: rwxrwxrwx

Each set of rwx represents user, group, and other respectively. Only the owner of a file or a privileged user may change the permissions on a file. There are two ways to change permissions on a file or directory, either numerically or by using lettered commands. Both ways use the command chmod. To add permissions to a file, you use +, to remove permissions you use-.

For example, take a file:

```
-rw-r--r-- 1 yash mony 476 Apr 14 17:13 vvs.txt
```

To allow a group (mony, in this case) “write” access, you would type:

```
chmod g+w vvs.txt
```

If you wanted to remove “read” ability from “other” you would type:

```
chmod o-r vvs.txt
```

It is also possible to specify permissions using a three-digit sequence. This is a more efficient way to change permissions (or at least it requires less typing), so use this method if it doesn’t confuse you. Each type of permission is given an octal value. Read is given the value of 4, write is given the value of 2, and execute is given the value of 1. These values are added together for each user category. The permissions are changed by using a three-digit sequence with the first digit representing owner permission, the second digit representing group permission, and the third digit representing other permission. For example, if you wanted to make vvs.txt readable, writable, and executable for the user, readable and writable for the group, and readable for other, you would type: chmod 764 vvs.txt

The first digit means readable and writable for the user (4+2+1), the second digit means readable and writable for the group (4+2+0), and the third digit means readable for other (4+0+0). If you want to change the permissions on a directory tree use the -R option. chmod -R will recursively change the permissions of directories and their contents.

d) cp

The cp command copies files or directories from one place to another. You can copy a set of files to another file, or copy one or more files under the same name in a directory. If the destination of the file you want to copy is an existing file, then the existing file is overwritten. If the destination is an existing directory, then the file is copied into that directory.

Syntax: cp [options] file1 file2 If you want to copy the file favourites.html into the directory called laksh, you give

the command as:

```
cp favourites.html /vvs/laksh/
```

A handy option to use with cp is -r. This recursively copies a particular directory and all of its contents to the specified directory, so you won't have to copy one file at a time.

e) date

The date command can be used to display the date or to set a date. In unix the term date includes the time as well.

Syntax: date [option] [+format]

```
date [options] [string]
```

The first structure shows how date can be used to display the current date. A certain format can be specified in which the date should be displayed. Check the Unix manual for specific formats and options. The second structure allows you to set the date by supplying a numeric string. Only privileged users will be able to use this second command structure.

f) diff

diff displays the lines that differ between two given files.

Syntax: diff [options] [directory options] file1 file2

diff can be an extremely valuable tool for both checking errors and building new pages. If you run a diff between two files, you'll be shown what differences the files have line by line. The lines referring to file1 are marked with the < symbol. The lines referring to file2 are marked by the > symbol. If the file is a directory, diff will list .the file in the directory that has the same name as file2. If both of the files are directories, diff will list all the lines differing between all files that have the same name. If you have a file that is not working properly, it can be a great help to check it against a similar file that is working. It will often quickly alert you to a line of code that's missing. A handy option to use if you want to generally compare two files without noting the complex differences between them is the -h option (h stands for half-hearted). Using -i as an option will ignore differences in uppercase and lowercase characters between files, and -b will ignore repeating blanks and line breaks.

The exit command allows you to terminate a process that is currently occurring. For example, if you wanted to leave a remote host that you were logged onto (see rlogin also), you should type exit. This would return you to your home host.

h) find

find searches through directory trees beginning with each pathname and finds the files that match the specified condition(s). You must specify at least one pathname and one condition.

Syntax: `find pathname(s) condition(s)`

There are several handy conditions you can use to find exactly what you want. The `-name` condition will find files whose names match a specified pattern. The structure for the name condition is: `find pathname -name pattern`

The condition `-print` will print the matching files to the pathname specified. `-print` can also be used in conjunction with other conditions to print the output. If you wanted to find all the files named favorites.html in the directory Ram, then

you'd do this:

```
find /Ram -name favorites.html -print
```

This looks through the directory Ram and finds all the files in that directory that contain favorites.html, then prints them to the screen. Your output would look like this:

```
/Ram/sixteen_candles/favorites.html
```

```
/Ram/favorites.html
```

```
/Ram/breakfast_club/favorites.html
```

All meta-characters (!, *, ., etc.) used with `-name` should be escaped (place a \ before the character) or quoted. Meta-characters come in handy when you are searching for a pattern and only know part of the pattern or need to find several similar patterns.

For example, if you are searching for a file that contains the word “favorite”, then use the meta-character * to represent matching zero or more of the preceding characters.

This will show you all files which contain favorite.

```
find /Ram -name '*favorite*' -print
```

Lab Course

This looks through the directory Ram and finds all the files in that directory that contain the word “favorite”. The output would look like this:

```
/Ram/sixteen_candles/favorites.html
```

```
/Ram/favorites.html
```

```
/Ram/leastFavorites.html
```

```
/Ram/breakfast_club/favorites.html
```

```
/Ram/favorite_line.html
```

The -user condition finds files belonging to a particular user ID or name.

i) grep

The grep command searches a file or files for lines that match a provided regular expression (“grep” comes from a command meaning to globally search for a regular expression and then print the found matches).

Syntax: grep [options] regular expression [files]

To exit this command, type 0 if lines have matched, 1 if no lines match, and 2 for errors. This is very useful if you need to match things in several files. If you wanted to find out which files in our vvs directory contained the word “bca” you could use grep to search the directory and match those files with that word. All that you have to do is give the command as shown:

```
grep 'bca' /vvs/*
```

The * used in this example is called a meta-character, and it represents matching zero or more of the preceding characters. In this example, it is used to mean “all files and directories in this directory”. So, grep will search all the files and directories in vvs and tell you which files contain “bca”.

j) head

Displays the first ten lines of a file, unless otherwise stated. Syntax: head [-n] [files]

For example, the following command will display the first 15 lines of favourites.html.

```
head -15 favourites.html
```

k) kill

kill ends the execution of one or more process ID's. In order to do this you must own the process or be designated a privileged user. To find the process ID of a certain job give the command ps.

Syntax: kill [options] PIDs

There are different levels of intensity to the kill command, and these can be represented either numerically or symbolically. kill -1 or HUP makes a request to the server to terminate the process, while kill -9 or kill KILL forces a process to terminate absolutely. Most politely, UNIX users will attempt to kill a process using -1 first before forcing a process to die.

l) ls

ls will list all the files in the current directory. If one or more files are given, ls will display the files contained within “name” or list all the files with the same name as “name”. The files can be displayed in a variety of formats using various options.

Syntax: ls [options] [names]

ls is a command you'll end up using all the time. It simply stands for list. If you are in a directory and you want to know what files and directories are inside that directory, type ls. Sometimes the list of files is very long and it flies past your screen so quickly . You miss the file you want. To overcome this problem give the command as shown below:

ls | more

The character | (called pipe) is typed by using shift and the \ key. | more will show as many files as will fit on your screen, and then display a highlighted “more” at the bottom. If you want to see the next screen, hit enter (for moving one line at a time) or the spacebar (to move a screen at a time). | more can be used anytime you wish to view the output of a command in this way. A useful option to use with ls command is -l. This will list the files and directories in a long format. This means it will display the permissions (see chmod), owners, group, size, date and time the file was last modified, and the filename.

drwxrwxr-x vvs staff 512 Apr 5 09:34 sridhar.txt

-rwx-rw-r-- vvs staff 4233 Apr 1 10:20 resume.txt

-rwx-r--r-- vvs staff 4122 Apr 1 12:01 favourites.html

There are several other options that can be used to modify the ls command, and many of these options can be combined. -a will list all files in a directory, including those files normally hidden. -F will flag filenames by putting / on directories, @ on symbolic links, and * on executable files.

m) man

The man command can be used to view information in the online Unix manual.

Syntax: man [options] [[section] subjects]

man searches for information about a file, command, or directory and then displays it on your screen. Each command is a subject in the manual. If no subject is specified, you must give either a keyword or a file. You can also search for commands that serve a similar purpose. For example, if you want more information about the chmod command, you should type:

```
man chmod
```

A screen will then appear with information about chmod. Type q to quit.

n) mkdir

mkdir creates a new directory.

Syntax: mkdir [options] directory name

For example, to create a directory called parkhyath in the present working directory, give the command as,

```
mkdir prakhyath
```

o) more

more displays the contents of files on your screen.

Syntax: more [options] [files]

To have the next line displayed, hit the return key, otherwise press the spacebar to bring up the next screen. Press h for assistance with other commands, n to move to the next file, or q to quit.

p) less

less is similar to more in that it displays the contents of files on your screen. Unlike more, less allows backward and forward movement within the file. It does not read the whole file before displaying its contents, so with large files less displays faster than more. Press h for assistance with other commands or q to quit.

Syntax: less [options] [files]

q) mv

mv moves files and directories. It can also be used to rename files or directories.

Syntax: mv [options] source target

If you wanted to rename vvs.txt to vsv.txt, you should give the command as:

```
mv vvs.txt vsv.txt
```

Operating System

After executing this command, vvs.txt would no longer exist, but a file with name

vsv.txt would now exist with the same contents.

r) passwd

The passwd command creates or changes a user's password. Only the owner of the password or a privileged user can make these changes.

Syntax: passwd [options] files

s) pwd

pwd prints the pathname of the current directory. If you wanted to know the path of the current directory you were in you give the command as pwd. You will get the complete path.

t) rm

rm removes or deletes a link to a file from a directory. If a file has more than one link then removing a link does not delete the file. But when the last link to a file is removed, the file gets deleted.

A link is a name of a file. In unix a file can have many names.

Syntax: rm [options] files

In order to remove a file, you must have write permission to the directory where the file is located. While removing a which doesn't have write permission on, a prompt will come up asking you whether or not you wish to override the write protection.

The -r option is very handy and very dangerous. -r can be used to remove a directory and all its contents. If you use the -i option, you can possibly catch some disastrous mistakes because it'll ask you to confirm whether you really want to remove a file before going ahead and doing it.

u) rmdir

rmdir allows you to remove or delete directories but not their contents. A directory must be empty in order to remove it using this command.

Syntax: rmdir [options] directories

If you wish to remove a directory and all its contents, you should use rm -r.

Check Your Progress 4

1. Practice to install Fedora 10 in your pc.
2. First try to execute the following commands on your operating system and write down the results and use of each command.
 - man (find manual help)
 - cd
 - ls, ls -a (try to find out other options of ls using man)
 - cd ..
 - pwd
 - cd ..
 - ls -al
 - ls -al | more
 - cat passwd 22
 - cd –
 - chmod

We hope you will stop here and you will keep digging more and more commands but do it after the session.

Check Your Progress 5

- 1 Try to explore the file system, write what is there in /bin, /usr/bin, /sbin, /tmp and /boot. Find and list the devices that are available in your system.
- 2 Make your own subdirectories called rc1 and rc2 in your home directory, mca? Ok, now delete the subdirectory called rc2 .
- 3 Create a file called ignou.txt that contains the words "hello I am student of IGNOU". Now copy this file and paste to other director. Copied? Can you move the file also from one directory to another?
- 4 In the previous question you have a file ignou.txt; change its permission to rwxrwxr-x. You can try different possibilities to changes in its permissions. One possibility may be rwxr-xr-x permissions. Find out what are the different commands available that can be used to change the permissions of a file/files.
- 5 Display the names of all files in the home directory using find .Can you display the names of all files in the home directory that are bigger than 500KB.
- 6 Display a sorted list of all files in the home directory that contain the Word ignou inside them. Hint: Use find and grep and sort. Can you use locate to find all filenames that contain the word ignou?
- 7 Use egrep to try to find out which lines in an ignou.txt file are satisfied by the regular expression given: (^ [0-9]{1,5}[a-zA-Z]+\$)|none and check the result with different combinations of lines.
- 8 Change your password and write down the restrictions for given password.

In this section you have studied a brief introduction of computers, the history, and familiarization with its basic features including the technical description, the advantages and the differences between the two network operating systems: Windows and Linux/Unix. Last but not the least you would have understood the concepts better by undergoing through the interesting exercises

1.6 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

1. a) F 1
b) CTRL+Y
c) CTRL+S
d) CTRL+B
e) Shift +F3
2. Try it yourself
3. Over the past few years the growth of the computer industry has been quiet remarkable and today it is the fastest growing industry in our economy. Nowadays, many schools are equipped with computers for educating their students. Thereby making computers an integral part of education system. Teachers and professors use computers for teaching, giving presentations, assessing various data banks, maintaining database of students, communication in the form of e mails or chat, browsing the Internet and Preparing students to have a competitive edge in the global job market. Computers have revolutionized the learning for students in a big way. They can watch various films on wild life, history, geography, science and encyclopedias with loud sound and excellent picture quality and commentaries on Compact Discs or DVD's.

Check Your Progress 2

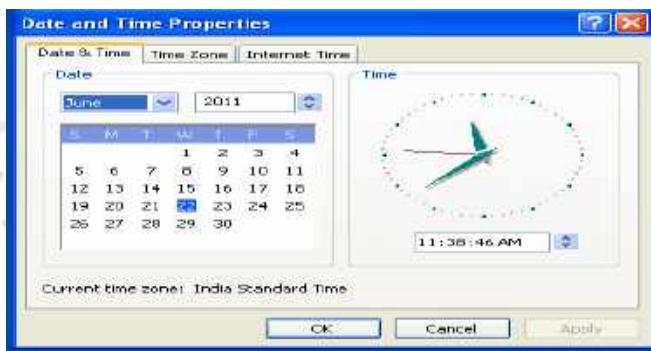
1. Refer Sec 1.3.2
2. Try it yourself.

Check Your Progress 3

1. The computer has a clock located on the right side of the task bar.



You can also check and modify the properties of the clock with the dialog box that appears next. It appears as you double-click on the clock on the task bar.



To change the Date follow these steps:

- 1) Double-click on the clock on the task bar to open the dialog box.
- 2) To change the month, place the pointer on the month box and click with the mouse on the arrow to the right. A list with the months will be displayed. Select the appropriate month.
- 3) To change the year, place the pointer on the year box and with the arrows you can change the year.
- 4) To change the days select it on the calendar that appears.
- 5) Click Apply and OK

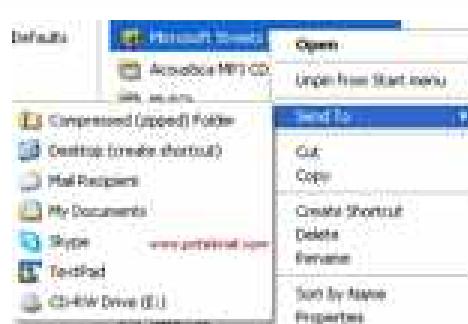
To change the Time do the following:

- 1) Place the pointer on the clock.
- 2) To change the time select the time digits with the arrows to the right and adjust to the necessary time.
- 3) This same process must be done with the minutes and seconds.
2. To create a desktop shortcut for a default folder such as My Computer and My Document:



1. Click on the start button
2. Right click on My Computer or My Document on the right panel of the start menu
3. Click on "Show on Desktop" just like it shows on the picture

3: To create a program desktop shortcut:



1. Click on the start button
2. Select "All Programs"
3. Select and right click the program you want place on the desktop
4. Select "Send To" from the displayed menu
5. Click on "Desktop (create shortcut)"

4. Try it yourself
5. Click on the Start button and choose Control Panel Click on Add or Remove Programs option, a window will display with the three basic options shown on the left side of the picture as it appears below. Then click on Change or Remove Programs.
6. Click on the Start button and choose Search button and type Calculator /notepad / paint. It will open the respective application.

Check Your Progress 4

1. Refer to the section 1.4.1
2. Try it your self

Check Your Progress 5

Try exercise 1-8 yourself.

UNIT 2 WORD PROCESSOR

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2.0 INTRODUCTION

Computers have been in use in businesses, schools, hospitals, homes for many years now. Apart from being used to automate large systems and processes, they have made a big difference in office automation. Day-to-day office tasks such as creating documents, letters, memos, faxes, filing, storing, retrieving, mailing has become simpler and sophisticated with the use of computers. There are many software applications that help to create, edit, save and print documents, letters, mailing labels and reports. Same software can be used by students to create their project reports or assignments, at home to make a list of things to do or to buy and by anyone for any kind of document work.

Software package that enables you to create, edit, print and save documents for future retrieval and reference is known as a **Word Processor**. We will study about Word Processor, its features and how to use it in this unit.

2.1 OBJECTIVES

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

- learn what a Word Processor is and how to use it;
- create, edit, save, preview and print a document;
- format a document with different page layouts, borders, headers, footers and other settings;
- manage and Manipulate text, font, colour, size, table and images; and
- use different features available in word processor to check spelling or grammar, use dictionary or create multiple letters.

2.2 WHAT IS WORD PROCESSOR ?

A word processor is a software program capable of creating, storing, and printing documents. It helps you to create a document, format it, correct your mistakes, save, review and print it.

Word processors vary considerably, but all word processors support the following basic features:

- Cut, copy and paste text
- Insert or delete text
- Set page size and margins
- Search and replace
- Word wrap
- Print

Word Processors that support only above features (and may be few more) are called **Text Editors**. Most word processors, however, are quite advanced and support many additional features as listed below:

- Allows to create, delete, move, copy, rename and search for files.
- Allows to specify font, size, colour, header, footer, page numbering, footnote, cross-reference, bullets and numbering, table, images, graphics, table of contents and indexes.
- Allows to specify page layout, page orientation and margins.
- Allows use of spell checker, thesaurus, macros, merges.
- Allows to open and edit multiple documents at the same time in separate windows.

The word processors that support above features are called full featured word processors. There are many word processors available in the market. We will consider MS Word 2007 for our study. We will understand what the above feature are and how we can use them.

2.3 WORD BASICS

In this section we will cover how to start, open, create, save and close a word document and what do different parts in a Word window stand for. The editing and formatting of the created document will be covered in the next section.

2.3.1 Starting Word

You can start MS Word by either of the following two ways:

- Click on Start → All Programs → Microsoft Office → Microsoft Office Word 2007.
- Double click on the MS Word icon on the desktop (if you have one).

When word opens, a new document with default name as Document1 is opened. For each additional document you open, the number increases by one. Please note that you can open more than one document at a time.

You may also start Word by clicking on a document saved on your hard drive. Word will open automatically and the document will be displayed in the document area.

When you open word from the menu or desktop icon, the screen will look like in Figure 2.1.

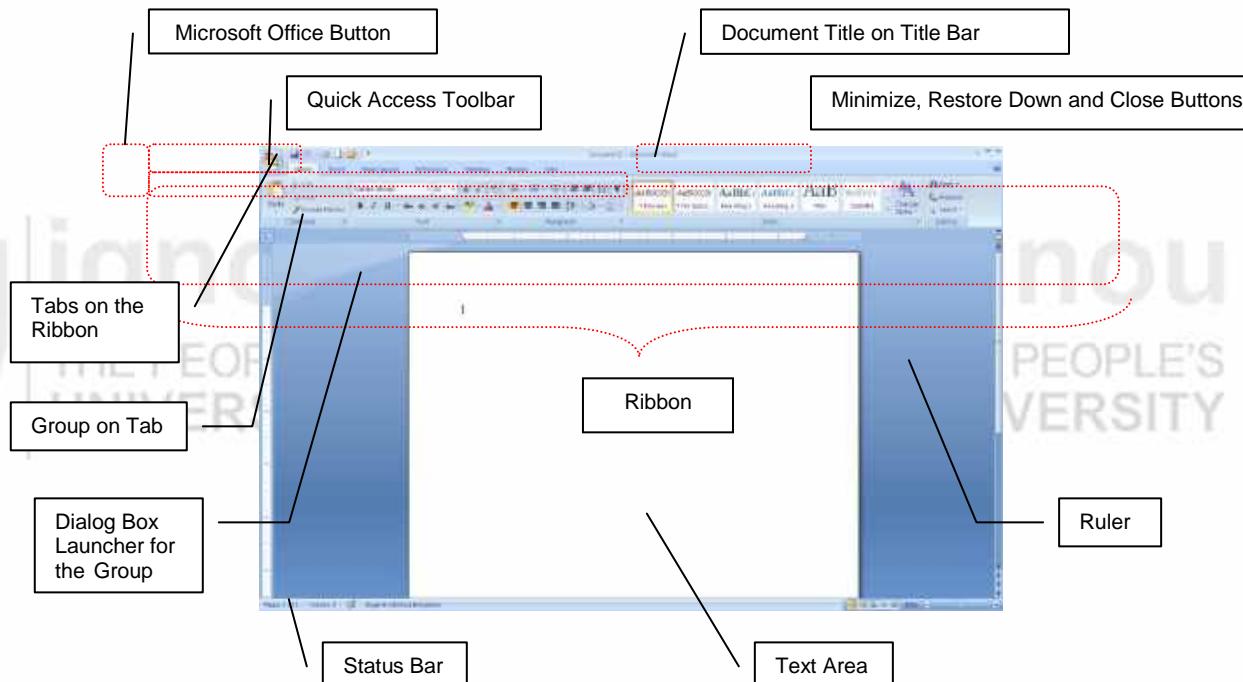


Figure 2.1: Microsoft Word Window

Let us familiarize ourselves with the key commands and resources in Word Window:

The Microsoft Office Button

It is the button in the upper-left corner of the Word Window. When you click on the button, it displays a menu that can be used to create a new document, open an existing document, save a document, print a document and perform many other tasks.

The Quick Access Toolbar

It is present next to the Microsoft Office Button on the top. It provides you access to the commands you frequently use. By default Following appear on the Quick Access Toolbar:

- **Save:** To save your file (you may also press keyboard button Ctrl+S).
- **Undo:** To rollback the action that you last took (Ctrl+Z).
- **Redo:** To reapply the action you rolled back or to repeat an action(Ctrl+Y).

The Title Bar

It is next to the Quick Access toolbar at the top. It displays the title of the document on which you are currently working. By default, the first new document is named as Document1. For each additional document you open, the number increases by one. You may save the documents by any legal filename you want.

The Ribbon

The Ribbon is the panel at the top portion of the document, right below the Title Bar. To begin with it has following seven tabs:

- **Home:** It has basic commands for creating and formatting the documents. It has controls for working with the clipboard, setting fonts, formatting paragraphs, applying styles and using Find and Replace.
- **Insert:** It has commands for inserting pages, tables, pictures, shapes, other illustrations, links, headers, footers, symbols, signature line and much more.
- **Page Layout:** The commands here help to set the layout of the document, apply a theme to the document to set the overall look of the document, set the margins, background colours, etc.
- **References:** It has commands that let you create Table of contents, footnotes, indexes, etc.
- **Mailings:** Has commands for creating mail merges.

- **Review:** Has commands to track changes and add comments to the documents.
- **View:** Helps to change the document views.

(We cover in detail each of the above features in the later sections of this unit.)

Besides these basic tabs, additional tabs appear from time to time, depending on the context we are working in. These tabs are called contextual tabs. For example, if you select a drawing, a Drawing Tools contextual tab appears that has commands to help you manipulate the drawing. These contextual tabs appear in a different colour to make them easy to spot.

The commands on each tab are organized into groups. Hence, a group is a collection of logically related command buttons that you can use to develop or edit your Word document. Commonly used features are displayed on the Ribbon and additional options can be accessed through the dialog box launcher at the bottom-right corner of each group.

The Ruler

The ruler can be found right below the Ribbon. The ruler is useful for document layout purposes. It is used to set the margins, tab stops, align text, graphics, tables and other elements in a document. You may change the setting to show or hide the ruler.

The Text Area

You can type your content in the Text Area. The blinking vertical line is the cursor which marks the insertion point. As you type, text displays at the cursor location. The **vertical scroll bar** on the window helps you to move up and down the document.

The Status Bar

The Status Bar is at the very bottom of the window. It provides information such as the current page and the number of words in the document. You can change what displays on the Status Bar by right clicking on the Status Bar and selecting/deselecting the options from the menu. You may also view your document in one of the following ways using the hot buttons in the status bar:

- **Draft View:** It is used to quickly edit your document. It shows the page in a simplified format and is most frequently used view.
- **Web Layout:** Shows how a page will appear when viewed from a Web Browser.
- **Full Screen Reading:** Shows the page in a way that it makes it easy and comfortable to read your document onscreen.
- **Print Layout:** Shows the document as it will look when it is printed.

- **Outline View:** Displays the document in outline form. The outline view allows you to see either the entire contents of the document, or just chapter headings or section heading and so on.

2.3.3 Setting up Your Word Environment

Before you begin creating Word documents, you may want to set up your Word environment and become familiar with a few key tasks such as how to maximize and minimize the Ribbon, configure the Quick Access toolbar, display the ruler, etc.

Minimize and Maximize the Ribbon

- Right click anywhere in the main menu
- Select **Minimize the Ribbon** in the menu that appears. This will **toggle** the Ribbon on and off.

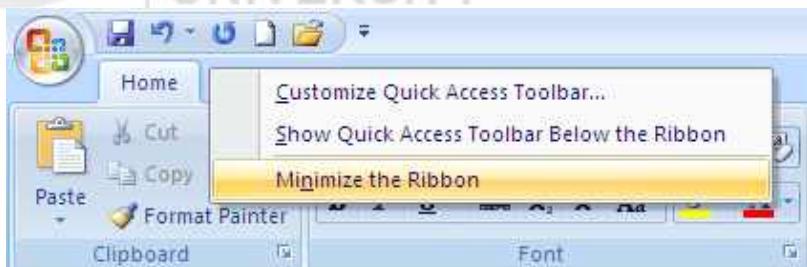


Figure 2.2 : Minimize the Ribbon

The check mark beside ‘Minimize the Ribbon’ option indicates the feature is active. You may choose to use this option, if you prefer not to use the Ribbon, but use different menus and keyboard shortcuts. This has the advantage of giving you more screen space to work on the document.

Add Commands to Quick Access Toolbar

- Click the arrow (customize quick access toolbar) to the right of the Quick Access toolbar.
- Select the command you wish to add from the drop down menu. The command will appear in the Quick Access Toolbar



Figure 2.3 : Adding Commands to Quick Access Toolbar

You may want to add frequently used commands to your Quick Access Toolbar, to make the specific Word features more convenient to you.

Display or Hide the Ruler

- Click the View Ruler icon over the scrollbar.



Figure 2.4 : View Ruler Icon

The View Ruler icon is a toggle button that shows or hides the ruler.

Customize the Status Bar

- Right click anywhere on the Status Bar.
- From the menu that appears, select the options that you want to see on the Status Bar. Each click on an option will toggle it between show and hide on the Status Bar.

Customizing the Environment Using Word Options

The **Word options** menu allows you to customize Word 2007 according to your preferences.

- Click the Microsoft Office Button
- Click on 'Word Options' button located at the bottom of the menu.



Figure 2. 5: Word Options Button

When you click on ‘Word Options’ button, an extensive menu will open. It has more than hundred configurable options, not including submenus!

You can set your preferences for Autocorrect, printing, saving, custom directories, colour scheme, spell check, grammar check, updating fields and much more. In addition this menu contains help options, such as repairing Microsoft Office or changing security settings. You may not be able to understand most of these options for now. We will take up some examples now and cover some more options while we progress through this unit.

- **Change the Colour of the Office Ribbon:**
 - a. Click the **Office Button**.
 - b. Click the **Word Options**.
 - c. On the **Popular Tab**, under **Color Scheme**, select the preferred colour.
- **Change the Default Document Folder:**
 - a. Click the Office Button.
 - b. Click the Word Options.
 - c. On the Save Tab, under Save Documents, click Browse button next to the Default File Location text box.
 - d. Navigate to and click the folder you want to be your default.
 - e. Click OK twice.

- **Reorder Items on Quick Access Toolbar:**
 - a. Click the Office Button.
 - b. Click the Word Options.
 - c. On the **Customize Tab**, under **Customize Quick Access Toolbar**, select the command and then use the up/ down arrow key to change its position on the bar.

2.3.4 Creating a New Document

You can create a new document as follows:

- Click the **Microsoft Office Button**.
- Select **New**. The New Document dialog box appears.
- Select **Blank Document** under ‘Blank and Recent’ section. It will be highlighted by default.
- Click **Create**. A new, blank document appears in the Word window.

You may also use keyboard shortcut Ctrl+N to create a new document.

2.3.5 Opening an Existing Document

You can open an existing document in one of the following ways:

- Click the **Microsoft Office Button**.
- Select **Open**. Select the required document in the dialog box.
OR
- Use keyboard shortcut Ctrl+O to select and open an existing document.
OR

If you have recently used document then

- Click the **Microsoft Office Button**.
- Choose from the Recent Documents section.
OR
- Go to Windows Explorer. Find your document.
- Right mouse click on the document and select **Open**.

2.3.6 Saving a Existing Document

- Click the **Microsoft Office Button**.
- Select **Save** from the menu.
OR
- Use keyboard shortcut Ctrl+S
OR
- Use Save on the Quick Access Toolbar

On using any of these options, the document is saved in its current location with the same file name. If you are saving the document for the first time, then **Save As** dialog box appears which accepts the document name and location (folder) where it is to be saved.

Using Save As Option

You may use Save As option as below:

- Click the **Microsoft Office Button**.
- Select **Save As** from the menu. The Save As dialog box appears.
- Select the location where you wish to save the document.
- Enter the name for the document
- Click the Save button

The Save As option can be used to:

- Create a backup copy of the document by saving it at another location or by different name.
- Save the document as a template
- Save the document in a format that is fully compatible with Word97-2003
- Save the document in other formats, for example PDF

2.3.7 Working with Multiple Documents

Multiple documents can be opened simultaneously if there is such a need. To see the list of open documents:

- Click on **View** tab of the Ribbon
- Click on **Switch Windows** in the Window group. A drop down list of all open documents is displayed.

The current document has a checkmark besides its name. You may select any document from the list to make it current.

2.3.8 Closing a Document

To close a document:

- Click the **Microsoft Office Button**.
- Select **Close** from the menu.

The current document closes. The next document in the list becomes current. If there is no other open document, then only Word window is there.

2.4 EDITING AND FORMATTING TEXT

In this section we will study how to add, delete, insert, copy, paste, drag and drop text in a document and then how to design a creative and effective document using the formatting features of Word.

2.4.1 Text Basics

In this section we will learn how to insert, select, delete, copy, paste, drag and drop text.

To Insert Text

- Move the mouse to the location where you wish the text to appear in the document and left click the mouse there.
OR
- Use the arrow buttons on the keyboard to reach the location where the text should appear.

The insertion point (blinking cursor) appears. Start typing the text at the insertion point. You may also use the following keyboard shortcuts or **Tab** or **Enter** keys to move through the document:

- Home: To reach the beginning of the line
- End: To reach end of the line
- Ctrl+Home: To reach beginning of the document
- Ctrl+End: To reach end of the document

To Delete Text

- Place your cursor next to the text you wish to delete.
- Press the **Backspace** key on the keyboard to delete the text on the left of the cursor.
- Press the **Delete** key to delete the text on the right of the cursor.

To Select Text

- Place your cursor next to the text you wish to select.
- Left-click your mouse and while holding it down, drag your mouse over the text to select it. Release the mouse button. The selected text gets highlighted.

OR

- Press the **Shift** key on the keyboard and use arrow keys to highlight the text.

When you select a text or image using mouse, a **Mini Toolbar** with formatting options appear. This happens only when the option has been selected in **Word**.

Shortcuts for selecting a portion of the text are:

- To select **Whole Word**: double-click within the word OR use Shift+Ctrl+arrow(right or left) keys on the keyboard.
- To select **Whole Paragraph**: triple-click within the paragraph OR use Shift+Ctrl+arrow(up or down) keys on the keyboard.
- To select **Entire Document**: Use Editing → Select → Select All from the Home Tab OR
- press Ctrl+A

To Cut, Copy and Paste Text

- Select the text you wish to cut or copy.
- Click the **Copy** command on the Home Tab OR use the keyboard shortcut CTRL+C to copy the text.

OR

- Click **Cut** command on the Home Tab OR use the keyboard shortcut CTRL+X to cut the text.
- Set the cursor where you wish to paste the text
- Click the **Paste** command on the Home Tab OR the keyboard shortcut CTRL+V. The text will appear at the cursor position. In case of copy, there will be a duplicate copy of the selected text. In case of cut, the selected text will be moved from its original place to the new cursor position.

To Drag and Drop Text

- Select the text you wish to copy.
- Left-click your mouse and while pressing the mouse button, drag the text to the location where you wish it to appear. The cursor will have a text box under it to indicate that you are moving text.
- Release the mouse button and the text will appear at the desired position.

2.4.2 Formatting Text

In this section you will learn how to manage the font, font size, colour, indentation, justification, paragraphs, styles, etc to create an effective document.

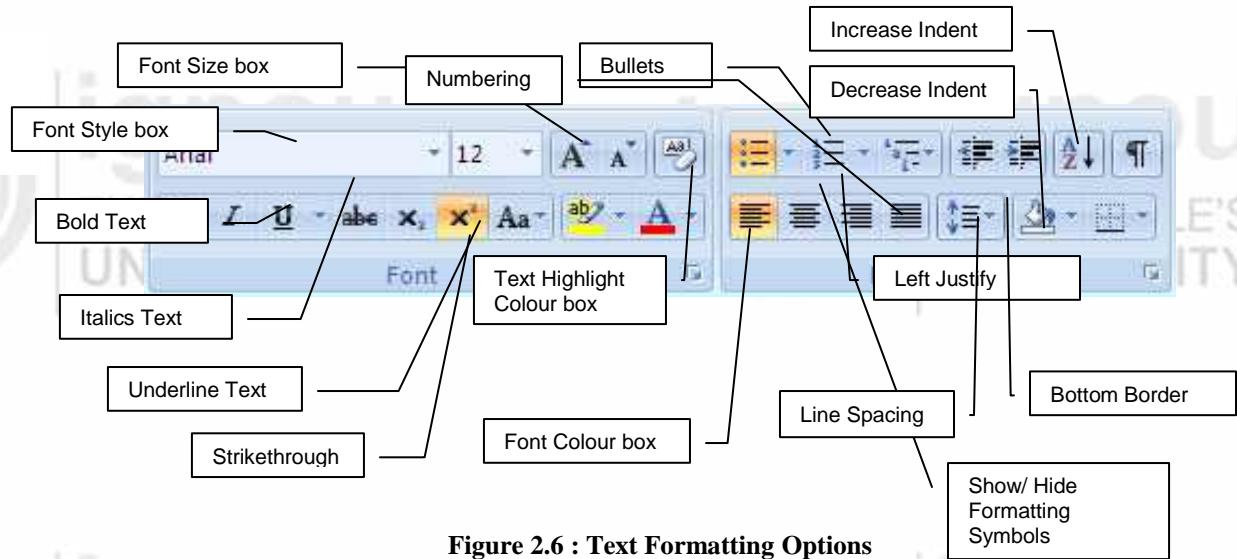


Figure 2.6 : Text Formatting Options

To understand how to use text formatting features we will work towards writing following text:

Invitation for

36TH ANNUAL CONCERT

- Open a new document and type the following text:
Invitation for 36th Annual Concert

Use Enter key for Newline: To get the text in two lines as above

- Set the cursor right before 36 and press **Enter** key from the keyboard. You will get the text as Invitation for 36th Annual Concert.

Change the Font: to change the font of the above text:

- Select the text **36th Annual Concert**.
- Click on the drop down arrow next to the font style box in the **Font Group** of the Home Tab. A drop down menu appears.
- Move the cursor over various font styles. A **live preview** of the font will appear for the selected text.
- Choose the font called **Baskerville Old Face** from the menu. Font style will change for the selected text.
- Now select **Invitation for** and set the font to **Bodoni MT** for this text.

Change the Font Size:

- Select the text **36th Annual Concert**.
- Click on the drop down arrow next to the font size box in the **Font Group** of the Home Tab. A drop down menu appears.

- Move the cursor over various font sizes. A **live preview** of the font size will appear for the selected text.
- Choose the **28** as the font size. Font size will change for the selected text.
- Now select **Invitation for** and set the font size to **18** for this text.

Change the Font Colour:

- Select the text **36th Annual Concert**.
- Click on the drop down arrow next to the font colour box in the Font Group of the Home Tab. A font colour menu appears.
- Move your cursor over the various font colours. A live preview of the colour will appear in the document.
- Choose the colour of your choice for the text. You have a choice of lot many colours than in the menu. Click on **More Colors** at the bottom of the menu to access the Colors dialog box. You can choose any colour from there also.

Note: You must have noticed that whenever you select text, a Mini Toolbar appears. You may use that toolbar also to format the selected text. The toolbar appears only if it is set in the Word Options menu.

To use the Bold, Italic and Underline Commands

- Select the text **Invitation for**.
- Click the Bold command in the font group. The selected text becomes bold.

Similarly you may use Italics or underline command whenever needed. You may also use keyboard shortcuts once you have selected the text:

Bold: Ctrl+B

Italics: Ctrl+I

Underline: Ctrl+U

To change the Text Case

- Select the text **36th Annual Concert**.
- Click the **Change Case** command in the Font group on the Home tab.
- Select **UPPERCASE** form the drop down list. The selected text changes to all uppercase.

To Change the Text Case

- Select the text **36th Annual Concert**.
- Select **Center Align** text from the Paragraph group on the Home Tab. The selected text is centered.

There are four alignment options:

Align Text Left (Ctrl+L): Aligns all the selected text to the left margin.

Center (Ctrl+E): Aligns text an equal distance from the left and right margins.

Align Text Right (Ctrl+R): Aligns all the selected text to the right margin.

Justify (Ctrl+J): Justified text lines up equally to the right and left margins.

To Add the Border

- Select the text around which you wish to have a border.
- Click on the drop down arrow of **Border** command in the Paragraph group on the Home tab.
- Choose what kind of border you want from the drop down list. We will choose **Outside Borders** for our purpose.

To Add the Superscript or Subscript

There are instances where we need text below or above the baseline, for example in mathematical formulae (X^3) or chemical symbols (H_2O). To learn how to achieve this effect, we take the following example:

$$(a - b)^2 = (a + b)^2 - 4ab$$

- Type the following text

$$(a - b)^2 = (a + b)^2 - 4ab$$

- Select the text 2 after $(a - b)$.
- Select **Superscript** from the **font** group in Home Tab. $(a - b)^2$ becomes $(a - b)^2$. Similarly change $(a + b)^2$ to $(a + b)^2$.

You can choose **Subscript** from the Font group in Home tab to give the subscript effect to the select text.

2.4.3 Formatting Paragraphs, Adding Lists and Working with Styles

In Word, when you type content, each time you press Enter key, a new **paragraph** is created. You can format each paragraph by setting the font, indentation and alignment, specifying the space between two paragraphs or between lines in a paragraph.

Styles are set of formats like font size, colour, alignment, etc that you can apply to a paragraph all together in one go.

To Format Line Spacing

- Select the text you want to format.
- Click on line spacing command in the **Paragraph** group on Home tab.
- Select any of the spacing options from the drop down list

OR

- You may set it in the Paragraph dialog Box that appears when you choose **Line Spacing Options...** from the drop down menu. Set the appropriate value in the Line spacing drop down box.

To Format Paragraph Spacing

- Click on line spacing command in the **Paragraph** group on Home tab.
- Click the **Add Space Before Paragraph** or **Remove Space After Paragraph** from the menu.

OR

- You may select Line Spacing Options... to open the Paragraph dialog box.
- Set the **Before** and **After** points in the Paragraph section.

Line spacing is measured in lines or points, which is referred to as leading. When you reduce the leading, you automatically bring the lines of text closer together.

Using Indents and Tabs

Indentation is a good way to draw attention to a specific text. You may use **Show/Hide** command in the Paragraph group of the Home tab to see the non printing characters such as spacebar or Tab key markings. This is particularly useful while working with tabs and indents.

- Use the **Tab key** to indent a single line of text. You can also indent multiple lines together by selecting all the lines and then pressing Tab key. Shift+Tab will decrease the indent.
- Multiple lines can also be indented using **Indent commands** in the Paragraph group on the Home tab. You can use these commands multiple times.

Modify Default Indent Setting

- Select the text for which you would like to modify the indent setting.
- Select the **Page Layout** Tab.
- In the Paragraph group, under Indent, set the values for **Left** and **Right Indents**.

The Tab Selector

You can set tabs to get several lines of text indented properly. Without any tabs added, each press of the tab key moves the cursor along by one inch. You can specify precisely where you want your text to start after you press the tab key, so that you get the layout you want.

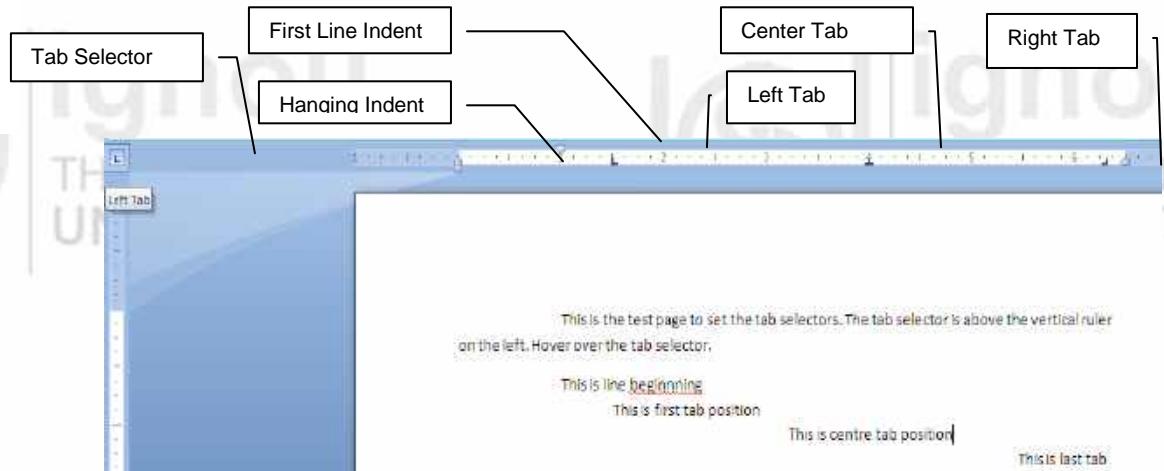


Figure 2.7 : Tab Selector

The tab selector is above the vertical ruler on the left. The tab option changes when you click on the tab selector. To set the tab stop:

- Click the tab selector till you see the tab stop you want to use.
- Click at the point on the horizontal ruler where you want that tab stop.
- To remove the tab, just click and drag it off from the ruler.

The tab options are:

Symbol Tab Type



- Left Tab - Moves the text right as you type
- Center Tab – Centers text according to the tab
- Right Tab – Moves text to the left as you type
- Decimal Tab – Aligns decimal numbers using the decimal point
- Bar Tab – Draws a vertical line of the document
- First Line Indent – Inserts the indent marker on the ruler and indents the first line of text in a paragraph
- Inserts the hanging indent marker and indents all lines other than the first line

Working with Lists

Bulleted and numbered lists can be used in your documents to arrange and format text to draw emphasis. To create a new list:

- Select the text you want to format as a list.
- Click the Bullets or Numbering command in the Paragraph group on the Home Tab.
- Click the bullet or numbering style you want to use. It will appear in the document.

- When you position your cursor at the end of the list item and press Enter, an item is added to the list.
- You can also change the bullets or numbering style anytime. Select the text in the existing list and use the Bullets or Numbering command in the Paragraph group to select an alternate bullet or numbering style.
- You can use **Define New Bullet** or **Define New Number format** to change the bullet style and colour or number style and font.

Applying Styles

Styles are powerful tools that can help you create professional looking documents easily. A **style** is a predefined combination of font style, colour, size of text that can be applied to selected text.

Create a new Style

- Click the arrow in the bottom right corner of the Styles group on the Home Tab. This opens the Styles task pane.
- There are three buttons at the bottom left corner of the Styles task pane. These buttons are **New Style**, **Style Inspector** and **Manage Style**. Click **New Style** button. A dialog box appears.
- Enter the name of the style and set all the formatting requirements like font style, size, alignment, justification, etc.
- If you want the style to be available to all the new documents from now onwards, then select the option **New Document based on this template**.

Selecting and Applying a Style

- Select text to format.
- In the Style group on the Home tab, hover over each style to see a live preview in the document. Click **More** drop down arrow to see additional styles.
- Click to select the style. The selected text is formatted in the selected style.

OR

- Click Change Styles command on the Ribbon.
- Select the style set from the menu that appears. Change is reflected in the entire document.

Format Painter Command

Format Painter is a copying tool that allows you to copy formatting from text to text, or from one graphic or table to another. Format Painter is available in the **Clipboard** group Home Tab.

- Click the formatted text or graphics.
- Click on Format Painter button. The cursor will change.

- Click the unformatted text or graphics to change the style. The text or graphics will format exactly as the previous section.

2.4.4 Working with Tables and Illustrations

A **table** is a grid of cells arranged in horizontal rows and vertical columns. Tables can be customized and are useful for various tasks such as presenting text information and numerical data for financial reports, catalogs, etc.

An **illustration** like Pictures, Shapes, ClipArts, Charts, etc make documents visually more appealing and adds clarity and readability to the document.

Creating a New Table

- Place the cursor where you want table to appear
 - Select the **Insert** Tab
 - Click Table command
 - Drag your mouse over the diagram squares to select the number of rows and columns in the table. Click to create the table with selected number of cells.

Modifying the Table.

When you select a table in the document, **Design** and **Layout** tabs appear under **Table Tools** on the Ribbon.

- Using commands on the **Layout** Tab, you can make a variety of modifications to the table such as adding or deleting columns and rows, merge or split cells, change cell size, align cell text, change text direction, etc.



Figure 2.8 : Layout Tab

- Using the **Design** Tab, you can choose a Table Style and modify table border or shading.

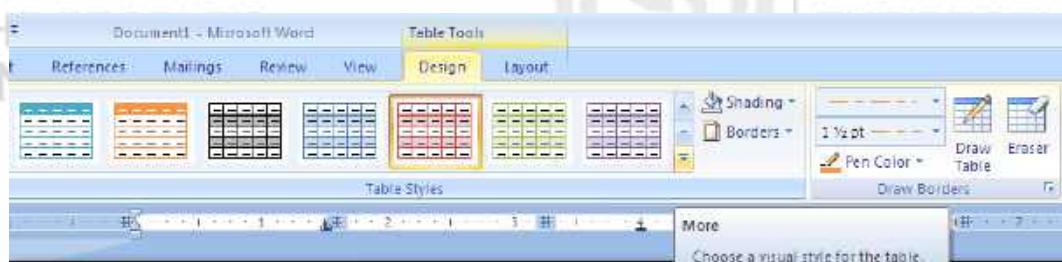


Figure 2.9 : Design Tab for Table Tools

- Click on the down arrow of table styles for **More Styles**.
- Choose the option **New Table Style...** OR **Modify Table Style...** at the bottom of the menu.

Adding/ Deleting Row or Column with right mouse click

- Place the cursor in the row below/above which you wish to add the row.
- Right click the mouse for a menu to appear.
- Select **Insert → insert rows below** OR **insert rows above** OR **insert columns to the left** OR **insert columns to the right** option as per your requirement.
- You can also use **Delete** option from the menu to delete the rows or columns.

Convert Existing Text to a Table

- Select the text you wish to convert.
- Select the **Insert** tab.
- Click the **Table** command.
- Select **Convert Text to Table** form the menu.
- A Dialog box appears. Choose the correct option at **Separate text at**.

Inserting and Modifying Illustrations

- Place your cursor where you want the illustration.
- Click the **Insert** Tab on the Ribbon.
- Click on Picture/ ClipArt/ Shapes/ SmartArt/ Chart depending on your requirement from the **Illustrations** group.
- The dialog box will open and you can choose the illustration of your choice.
- When you choose a shape, you have to draw it on the document after your selection. Other illustrations are automatically copied once you have chosen them.
- You will notice that following contextual Tabs appear depending on the illustration:
 - Picture/ ClipArt : Format under Picture Tools
 - Shapes : Format under Drawing Tools
 - SmartArt : Design and Format under SmartArt Tools
 - Chart : Design, Layout and Format under Chart Tools
- Using the above options on the Ribbon, you can change the style, size, colour, position, alignment, orientation, etc of the illustration.
- You can also do your setting using the Right mouse click on the picture.

- When you have text and shapes overlapping one another, you can use **Bring to Front** and **Send to Back Ordering** options so that they overlap, but still are visible. The Order option is available when right click on the object.

2.5 DOCUMENT FORMATTING, PROOFING AND PRINTING FEATURES

In this section we will learn Word features that are applicable to whole document and not just text or paragraph. We will also learn what features to use to make our document look professional and polished.

To Change Page Orientation

- Select **Page Layout** Tab on the Ribbon.
- Click **Orientation** command in the Page Setup group.
- Choose the orientation you want – **Landscape** (horizontal) or **Portrait** (vertical).

To Change Paper Size

- Select **Page Layout** Tab on the Ribbon.
- Click **Size** command in the Page Setup group.
- A drop down menu appears with all the available paper sizes. Current size is highlighted.
- Choose the size option. Page size of document changes.

To Set Page Margins

- Select **Page Layout** Tab on the Ribbon.
- Click **Margins** command in the Page Setup group.
- Choose the predefined margins from the list.

OR

- Customize your margins by selecting **Custom Margins** from the menu and entering the desired margins in the appropriate fields.

To Insert a Break

- Select **Page Layout** Tab on the Ribbon.
- Place your cursor at the insertion point
- Click **Breaks** command in the **Page Setup** group. A menu will appear.
- Choose the appropriate break. A **Page break** moves text from the insertion point to a new page. A **Section break** creates a barrier between parts of the document for formatting purposes. We will study about sections a little later in the unit.

To Insert a Blank Page

- Position the cursor before which you need to add a blank page.
- Select **Insert Tab** on the Ribbon.
- Select **Blank Page** from the Pages group.
- A blank page is added before the insertion point. This option should be used minimally since at times it poses formatting problems.

To Add Borders to Page

- Select **Page Layout Tab** on the Ribbon.
- Click **Page Borders** command in the Page Background group.
- In the Page Border Tab select the appropriate border. Apply to Whole document for border on all the pages of the document.

To Add Background Colour / Pattern/ Shading to Page

- Select **Page Layout Tab** on the Ribbon.
- Click **Page Color** command in the Page Background group.
- You can choose a colour from the menu or select **Fill Effects...**
- The Fill Effects dialog box appears. It has four tabs: Gradient, Texture, Pattern and Picture. You may set any one of them at a time.

To Add Watermark to the Page

- Select **Page Layout Tab** on the Ribbon.
- Click **Watermark** command in the Page Background group.
- You may choose from the pre-existing ones in the list OR setup a custom picture or text watermark.
- The Watermark will appear on all the pages of the document.

Working with Headers and Footers

The **header** is a section of the document that appears in the top margin, while the **footer** is a section that appears in the bottom margin.

- Select **Insert Tab** on the Ribbon.
- Select Header from the Header & Footer group.
- You can either select from the built-in options from the list OR Blank Header/ Footer OR Edit Header/ Footer from the menu.
- The **Design** tab with Header and Footer tools appears. It has all the header/ footer design option that you can use for your document.



Figure 2.10 : Design Tab for Header & Footer Tools

- Type the information in the header and the footer. You may insert Date & Time, Page numbers, Author, etc. You also have an option to specify different header/ footer for first page of the document or for even and odd numbered pages.

To Create a Document in Columns Layout

Columns are used in many types of documents, but are most commonly used in newspapers, magazines, academic journals and newsletters. To add columns to a document:

- Select the text you want to format.
- Select the **Page Layout** Tab.
- Click on **Columns** command in the **Page Setup** group.
- Choose the number of columns you want.
- The document changes in the column format.

Applying Themes

A **theme** is a set of formatting choices of colour, font and styles that can be applied in combination to an entire document. To apply a theme:

- Select the Page Layout tab.
- Click the Themes command. Please note that the document should not be in compatibility mode for the Theme group to be enabled.
- Select a Theme from the list. The formatting like font styles, sizes, colours, lines and fill effects would change.

You cannot apply a Theme to a document without applying styles first. Themes look for and replace the formats of each of the styles.

Create Custom Theme

- First **Create New Theme Colours** using Colors command in Themes group of Page Layout. Use drop downs to change the colours for each part of the document and then enter the name for the theme colour. Save.
- Similarly **Create New Theme Fonts** and select Effects.
- Now, Click Themes command and select **Save Current Theme**.
- Enter the theme name and save.

By default, Word automatically checks your document for spelling and grammar and indicates the errors by coloured lines.

- A red line is indicates misspelled word.
- A green line indicates grammar error.
- When there is an error, just right-click on the red/green underlined and select the correct word from the suggested list. You may also choose to **Ignore** the underlined word.

You can also wait and the spelling and grammar check after completing the document. Click the **Spelling and Grammar** Command in **Proofing** group on the **Review** tab.

Find and Replace Text

If you realize that you need to change a word in the document, for example some date, location, name, etc that you know exists in the document but don't know where exactly it is you can use Find option.

- Click **Find** in the **Editing** group. You can also use Ctrl+F keyboard shortcut.
- In the Find tab enter the text you are looking for.
- You may go to the occurrence one by one using Find Next or use Find in... to see all the occurrences.
- If you want to replace the text with some other text, then use the **Replace** tab in the dialog box. Enter the text to replace with.
- You can replace once by one (Replace button) or all in one go (Replace All). And if you don't want to replace an occurrence, then click Find Next.
- You can also directly use **Replace** command in the Editing group OR Ctrl+H.

AutoCorrect Option

Autocorrect option provides feature using which you can replace as you type. It helps to correct typos and misspellings as they occur. For example, if you accidentally type 'teh' Word changes it to 'the'. This feature saves time and helps eliminate errors.

Autocorrect is also used to apply special formatting, for example, (C) is changed to the copyright symbol.

Customizing AutoCorrect

- Click **Office Button**.
- Click **Word Options**.
- Select **Proofing** in the left pane.

- Click **Auto Correct Options...** button.
- Select the AutoCorrect tab.
- In the section Replace text as you type, under **Replace** add the abbreviation or the text you want to replace.
- Under the label **With** enter the correct text that you want.
- Click Add and then OK.

Thesaurus

Thesaurus quickly shows the synonyms for a word that you type.

- Right-click the word and choose **Synonym** from the menu that appears.
 - A menu listing synonyms for the word appears.
 - Choose the appropriate word
- OR
- Click the **Review** Tab.
 - Click Thesaurus in the Proofing group.
 - **Research** task pane opens with the synonyms listed of the selected word.

Preview before Printing

- Click **Office Button**.
- Select Print → Print Preview. The document open in the Print Preview mode.
- Click **Print** to print the document or **Close Print Preview** to come back to the document in original mode.

You can modify page margins, orientation, page size, etc in Print Preview mode.

To QuickPrint the Document

- Click **Office Button**.
- Select Print → QuickPrint
- The document prints to the default printer.

To Print the Document

- Click **Office Button**.
- Select Print → Print. The Print dialog box appears.
- Select the pages you would like to print – All pages, Current page or range of pages.
- Select the number of copies.
- Check the **Collate** if you are printing multiple copies of a multipage document.
- Select the printer from the drop down list.
- Click on Options... button and you can set other printing options, for example if you need to print the background colour or not.
- Click OK to print.

2.6 OTHER WORD FEATURES

There are many other features in Word that help us to create professional and error-free documents. Let us learn more about those features.

Inserting HyperLinks

A hyperlink is a piece of Text or image in an electronic document that can connect readers to another portion of the document or a different web page. To insert a Hyperlink:

- Select the text or image you would like to make hyperlink.
- Right-click on the text or image and select **Hyperlink** option from the menu.
OR
- Select **Insert** tab.
- Click **Hyperlink** in the Links group. The Insert Hyperlink dialog box appears. The selected text will be in the **Text to Display** field OR it will be disabled for an image.
- Type the Web address in the **Address** field and Click OK.
- The image or text will now be a hyperlink
- You can use options Edit Hyperlink, Remove Hyperlink to Open Hyperlink that appear when you right click on the hyperlink.

Understanding Sections

Sections are the basis of Word's page layout formatting. You can divide your document into any number of sections. Each section can have its own page formatting with respect to paper size, margins, page orientation, number and spacing of columns, header, footer, footnotes, endnotes, page numbering or line numbering. A single page can contain multiple sections.

Create a Section

- Position the cursor where you want the new section to begin.
- Click **Page Layout** tab on the Ribbon.
- Click Breaks button in the **Page Setup Group**.
- Choose one of the Section Breaks from the drop down list:

Next Page: The new section begins from the following page.

Continuous: The new section begins from the next line of the same page.

Even Page: The new section begins on the next even numbered page.

Odd Page: The new section begins on the next odd numbered page.

Creating an Index of a Document

Indexes help to locate specific portions of the document easily. Creating an index is a three step process:

- Mark all the words and phrases within your document that you want to appear in the index.
- Create the index from the marked words.
- Carefully review the index created and fix if there are any issues.

Marking Index Entries

- Select the word or phrase you want in the index.
- Click **References** Tab
- Click **Mark Entry** in the **Index** group of the tab OR press Alt+Shift+X. It opens the Mark Index Entry dialog box.
- Ensure that the content in the Main Entry Field is correct and click the **Mark** button.
- To index an entry under a different word, type the alternative entry in the Main Entry Field and click the Mark button again.
- Mark any additional index entries by highlighting them in the document and clicking the Mark button.
- After you mark all of the index entries you want, click the Close button.

Inserting the Index

- Place the cursor where you want Index to appear.
- Select the **Reference** Tab on the Ribbon.
- Click **Insert Index** button in the **Index** group.
- Select the index style from the **Formats** drop down in the Index dialog box that opens.
- Set the other controls as per your needs.
- Click **OK**

The index is inserted into the document.

Adding Footnotes and Endnotes

Footnote is the additional information that is found at the bottom of a page. Often a footnote will contain the source of the information or additional information about the text contained in the document.

Endnote is additional information or credits given at the end of the document instead of at the end of each page.

To insert a footnote or an endnote:

- Place the cursor where you want the little footnote reference number to appear in the text.
- Click on the **References** Tab.
- Click the **Insert Footnote/ Insert Endnote** button in the **Footnotes** group.
- Type the footnote/ endnote.

To make any changes:

- Click on the arrow in the lower right corner of the **Footnotes** group to launch the Footnote and Endnote dialog box.
- Make the required changes. You can change a footnote to endnote or vice versa as needed, using the **Convert** button in the dialog box.
- To delete a footnote, select the footnote reference number in the text and press Delete.

Building Table of Contents

Table of Contents (TOC) is a listing of all the headings (each with the page number) you designate throughout your document beforehand. When you create a TOC, Word searches your document for heading paragraphs to include in the table, recognizing them by the styles you assign to them.

- Apply Heading styles to your chosen headings.
- Move the cursor to the place where you want to see your TOC.
- Click **Reference Tab**.
- Click Table of Contents button in the Table of Contents group.
- Choose the TOC style you wish to use from the menu list.
- To Customize, click the TOC button and select **Insert Table of Contents...**
- A Table of contents dialog box appears. Choose the options for your table:

Show Page Numbers: to display/ not display the page numbers in TOC.

Right-Align Page Numbers: to place page numbers either right next to the corresponding text or at the right margin.

Tab Leader: to change or remove the dotted line that connects each TOC entry to the page number

Formats: to select one of several predefined formats for the TOC.

Show Levels: to specify which heading level to include in the table.

Re-Building Table of Contents

After you create TOC, it does not reflect later changes you make to the document. You need to update or rebuild it as follows:

- Click the Update Table button in TOC group on References tab.
- Click OK to update the table.

Adding Comments

Comments are simple notes, suggestions, questions, thoughts, Ideas or advice that can be transparently added to the document without altering the text. Comments are always labeled with your initials and a sequential number. If number of people are commenting on the document, then each persons' comment appear in a different colour. To add a comment in your Word Document:

Adding Comments

Comments are simple notes, suggestions, questions, thoughts, ideas or advice that can be transparently added to the document without altering the text. Comments are always labeled with your initials and a sequential number. If number of people are commenting on the document then each persons' comment appear in a different colour. To add a comment in your Word Document:

Comment [N1]: This first comment that am adding here. The comments works

Figure 2.11 : Adding Comments

- Select the text for which you wish to add a comment.
- Click the **Review** Tab.
- Click on **New Comments** button in the Comments Group. In the markup area, you see a comment bubble containing the comment number and writer's initials.
- Type your comment. Comment is added in the markup area.
- To close the comment window click the X (Close) button.

Track and Review Changes

To note the changes in a document, you need to activate revision tracking feature.

- Click Review Tab.
- Click Track Changes button in the Tracking group.
- To turn off revision, click the track changes button again. The only clue that you have properly activated revision tracking is that Track Changes button appears highlighted in the Ribbon.

With revision tracking, any new text that you add appears in red underline. Text you delete is colored with red strikethrough.

To turn off revision, click the track changes button again. The only clue that you have properly activated revision tracking is that Track Changes button appears highlighted in the Ribbon.

With revision tracking, any new text that you add appears in red underline. Text you delete is colored with red strikethrough.

Figure 2.12 : Adding text with Track Changes On

Begin at the start of the document and Click **Next** button in the **Changes** group of Review tab to go to the next change in your document.

- To accept the change, click Accept button.
- To reject the change, click Reject button. Change is removed from the document.
- You can also accept or reject all changes in one go.
- You can also right click any revision mark to accept or reject it.

Save the final document.

Document map enables you to see a quick overview of a document's structure, especially when using the heading styles.

- Click **View** tab on the Ribbon
- Select **Document Map** check box in Show/ Hide group. A DocumentMap task pane opens, summarizing various heading styles in use.
- Click a heading inside the map to instantly jump to that part of your document.

Protect Document

You can protect your document from being modified or changed by other.

- Click the **Review** tab on the Ribbon.
- In the **Protect** group, click the Protect Document button.
- Choose an option from the drop down list. You can limit the formatting styles and restrict certain types of document editing.

2.7 MAIL MERGE

Mail Merge is a tool that allows you to easily produce personalized multiple letters, labels, labels and more using information stored in a list, database or spreadsheet.

To use mail merge:

- Select Mailings Tab on the Ribbon.
- Click on the **Start Mail Merge** command
- Choose **Step by Step Mail Merge Wizard...**

The Mail Merge Task Pane appears that will guide you through the **six main steps** to complete the task. You will have many decisions to make during the process. The following is an example of how to create a form letter and merge the letter with a data list.

- Select Letters for the document type in the Mail Merge Task Pane.
- Click **Next:Starting document** at the bottom of the task pane to move to Step 2.
- Select the Starting Document. Choose **Start from a template** and then select any template from **Letters** tab for our example.
- Click **Next>Select recipients** at the bottom of the task pane to move to Step 3.
- Select **Type a new list** button, since we don't have an existing list of recipients.
- Click on **Create** in the task pane to create a data source. A New Address List dialog box appears.

- Enter the data only for the columns Title, First Name, Address Line1, City, Pin Code. Enter the complete name in the First Name column itself. Click **New Entry** to add more than one record.
- You may Customize the address list by clicking on the customize button. You can add new columns, delete the column you don't need, rename a column or change the column order in the **Customize Address List** dialog box. For example, we will delete the columns Last Name, State and Country from the column list. Select these columns one by one and click delete button after each selection. You will need to confirm each deletion. After deleting all the required columns, rename the column 'First Name' to 'Name'. Click Ok to save the changes.
- After data entry, when you click OK, it asks for the file name and location. Provide the required information and click **Save**.
- The **Mail Merge Recipients** dialog box appears and displays all the records in the list.
- You can refine the recipients list using sort, filter or other options available in the dialog box.
- Click OK once you have ensured that the data list is correct.
- Click Next:Write your letter** to move to Step 4.
- Since we had started with a template, we need not type any letter. Else, you can type a letter now if you don't have one.
- Also notice <<AddressBlock>> and <<GreetingLine>> in the letter. This is where the personalized information will appear in the completed letter after merging.
- To see how to add these information, simply place your cursor where you want to insert the information. Click on Address Block or Greeting Line and a dialog box appears. Specify what and how you want the information to appear and Click OK. You can see a placeholder has appeared in the document.
- You can display more fields by using the option **More items...** from the task pane and selecting the required field from the Insert Merge Field dialog box.
- Once you have set all the place holders for the information and completed your letter, click **Next:Preview your letters**.

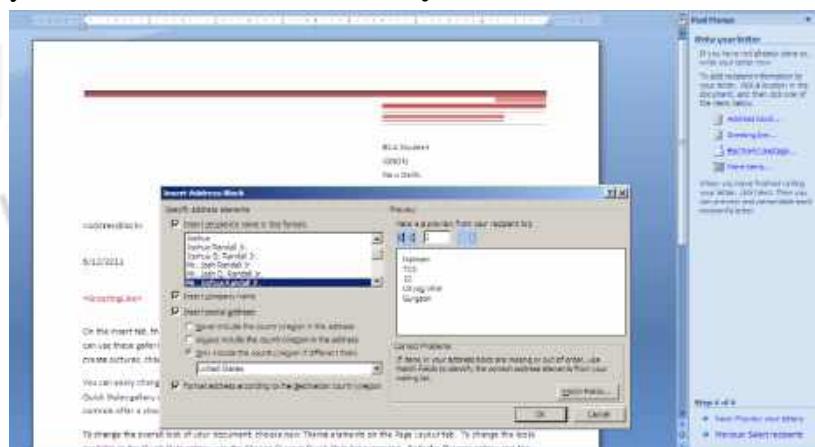


Figure 2.13 : Mail Merge – Setting Address Block

- When you have previewed the letters to ensure that the information from the data records appeared correctly in the letter, click **Next:Complete the Merge**.
- Click **Print** to print the letters. Select All and click OK.

2.8 SUMMARY

Word Processor software is the key to quickly create a formatted and professional looking document. Its features allow us to create a document with any kind of layout, formatting, data, graphics, tables and for any purpose. The document once created can be saved and revisited for further improvements. It helps us to create an error free content, enables us to ensure that we will get what we want through preview option and eventually print the document.

Word processor is an extremely useful tool for all kinds of people. It helps businesses to create legal copies, letters, letterheads, memos, mailing lists, reference documents. It helps students to prepare their project reports, assignments, to do list, create work for research and publication. It is useful at home to write letters, create shopping list, resume's and cards.

Hence, the utility of a feature rich word processor is immense and abound.

2.9 LIST OF USEFUL KEYBOARD SHORTCUTS

Keystroke	Action
F1	Word Help
Ctrl+S	Save the document
Ctrl+O	Open an existing document
Ctrl+N	Open a New document
Ctrl+P	Print the document
Ctrl+W	Close the document
Ctrl+C	To copy text to the clipboard
Ctrl+X	To cut text and paste it on the clipboard
Ctrl+V	To paste text from the clipboard
Ctrl+Z	Undo/ rollback previous action
Ctrl+Y	Reapply/ repeat an action
Ctrl+B	Bold the selected text
Ctrl+U	Underline the selected text
Ctrl+I	Italicize the selected text
Ctrl+L	Align Left
Ctrl+E	Center
Ctrl+R	Align Right
Ctrl+J	Justify
Ctrl+A	Select the whole document
Ctrl+F	Find Text

Ctrl+H	Replace Text
Home	Beginning of a line
End	End of a line
Ctrl+Home	Beginning of the document
Ctrl+End	End of the document
Page Up	Up one Screen
Page Down	Down one Screen

2.10 LAB EXERCISE

1. Open Word. Set the Word environment as follows:
 - a. Minimize the Ribbon
 - b. Display the Ruler
 - c. Add New and Open commands to the Quick Access Toolbar
 - d. Show Quick Access Toolbar below the Ribbon
 - e. Customize Status Bar to show Formatted /Page Number, Line Number and Caps Lock on/ off.
 - f. Close Word Window without saving anything.
2. Using the right mouse click at appropriate location, do the following:
 - a. Add the Word Options menu to the Quick Access Toolbar
 - b. Add following items in this order to the Quick Access Toolbar:
Format Painter, Font, Font size, Bold, Italic and Underline.
 - c. Remove font size icon from the Quick Access Toolbar
3. Using ‘Word Options’ do the following customizations:
 - a. Add ‘Style’ to the Quick Access Toolbar
 - b. Add a Separator before ‘Style’ added as above.
 - c. In the ‘Popular’ tab check ‘Show Mini Toolbar on selection’ and ‘Enable Live Preview’
 - d. Set ‘Save Autorecover Information’ to every 5 minutes
 - e. Enable ‘Checking Spelling as you Type’ option
 - f. Enable ‘Show Shortcut Keys in Screenshot’ option
4. Create a new Word Document. Save it by the name FirstDocument in a folder called IGOUBCA. Now save the same document
 - a. by the name SecondDocument in the same folder IGOUBCA.
 - b. In a different folder but by the name FirstDocument
 - c. Save it as PDF file
 - d. Save it in a format compatible with Word 2003

You should now have both FirstDocument and SecondDocument open in the Word window. Open one more Word document. View the list of all the open documents. Switch to FirstDocument. Close all documents.

5. Design a flyer for sale at a Garments shop. Use different font style, size, colours, effects, alignments, etc. to create it. It should contain the text 'Now 40% 50% off'.
6. Create following lists:
 - a. A multilevel day wise list of things to do. The days should be numbered (1,2,3...) and for each day, things to do should be in alphabetical order(a,b,c...)
 - b. A bulleted shopping list. Also change the line spacing of the list
7. Create a Tab delimited list of subjects and marks as follows:

S No.	Subject	Marks
1	English	79
2	Maths	95

 And so on...
- Now convert this list into a table. Give a shade of any colour to the first row.
8. Create a new document. Type in some text with a heading. Create your own Style and format the text using that style. Create your own table design for the document. The design should have red coloured borders in dotted or dashed line. Create a table using the table design you created.
9. Create a new document. Add a Picture from the sample pictures. Resize it to make it smaller. Add fifteen lines text to the document for the picture. Tight wrap the text around the image. Now set the image at the center of the page using Position option. Change the shape of the picture to oval. Save the document.
10. Create a three page document. Set its background colour and add 'confidential' as the watermark. Give your document a title which should be displayed in the header. The header/ footer of the first page should be different from other two pages. Also add author name and date/ time in the header. The footer should have the page number.
11. Create a Newsletter in two-column layout. Each page should have a border. And page should be Landscape oriented.
12. Insert an index for a document. The document should be at least a four page document. You may copy the text from anywhere else to create the document.
13. Build Table of contents for a document. You may use all the headings from this unit. For your purpose.

14. You are applying for a job at lot of places. Create a standard cover letter and use mail merge to generate the customized letters. You will need to create a database of all the companies where you wish to apply. Also generate labels for the same.

2.11 FURTHER READINGS

Word 2007 All-In-One Desk Reference for Dummies By Doug Lowe.

Teach Yourself Word 2007 By Moira Stephen.

Word 2007 for Dummies By Dan Gookin.



UNIT 3 SPREADSHEET

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3.0 INTRODUCTION

Every business has numerical tasks to be performed, be it related to accounts, taxes, sales or budgeting. Businesses also need graphs and charts for analysis and projections. At homes, we track our own budgets and investments. Mathematics and Engineering students deal with big numbers, formulas and calculations. Almost all of us deal with tables, data and calculations in some or the other form. There are many software packages available to assist us in all these number based functions. Electronic spreadsheet is most common of them.

In this unit, we will study how we can use electronic spreadsheet to store, maintain, manage, manipulate and organize our data for budgeting, analysis and

planning purposes or how we can use it to track students performance, weather data or inventory and maintain friends list, customer list, etc.

3.1 OBJECTIVES

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

- learn what a Spreadsheet is and how to use it;
- create, edit, save, preview and print Workbooks;
- format worksheets with different settings such as margins, headers or footers;
- store, search, retrieve, sort and filter tabular data;
- manage and Manipulate data using functions and formulas; and
- create graphical charts and perform analysis functions.

3.3 WHAT IS A SPREADSHEET ?

Spreadsheet is basically a grid consisting of horizontal rows and vertical columns. This format has traditionally been used in accounting to present book-keeping ledgers.

Electronic spreadsheet is a computer application that simulates the paper worksheet to organize data into rows and columns and stores various types of data.

Each intersection of rows and columns is called a cell where the data is stored to be used in calculations within the spreadsheet. Electronic spreadsheets have lot of in built features and tools such as functions, formulas, charts, and data analysis tools that make it easier to work with large amount of data. It provides ability to perform mathematical calculations quickly and has flexibility to perform quick recalculation in case of any data change.

Electronic spreadsheets can be used in any area or field that works with numbers and are commonly found in the accounting, budgeting, sales forecasting, financial analysis and scientific fields. It can be used to create and maintain a list, store database records, create charts or graphs, compare numerical or financial data.

There are quite a few electronic spreadsheet programs available like Excel, OpenOffice Calc or Google spreadsheets. We will consider MS Excel 3007 for our study. It comes bundled in MS Office which is an office automation tool.

3.3 EXCEL BASICS

In this section, we will cover how to start Excel, open, save and close a workbook and what different parts of Excel Window stand for.

3.3.1 Starting Excel

You can start MS Excel by either of the following two ways:

- Click on Start → All Program → Microsoft Office → Microsoft Office Excel 2007.
- Double click on the MS Excel icon on the desktop (if you have one).

When Excel opens, a new document (called Workbook in Excel) with default name as Book1 is opened. For each additional workbook you open, the number increases by one. Please note that you can open more than one workbook at a time. By default each workbook contains three worksheets. You may increase or decrease the number of worksheets in a workbook. How we do it, we will learn later in this unit.

You may also start Excel by clicking on a workbook saved on your hard drive. Excel will open automatically and the workbook will be displayed in the Excel window.

When you open Excel from the menu or desktop icon, the screen will look like in Figure 3.1.

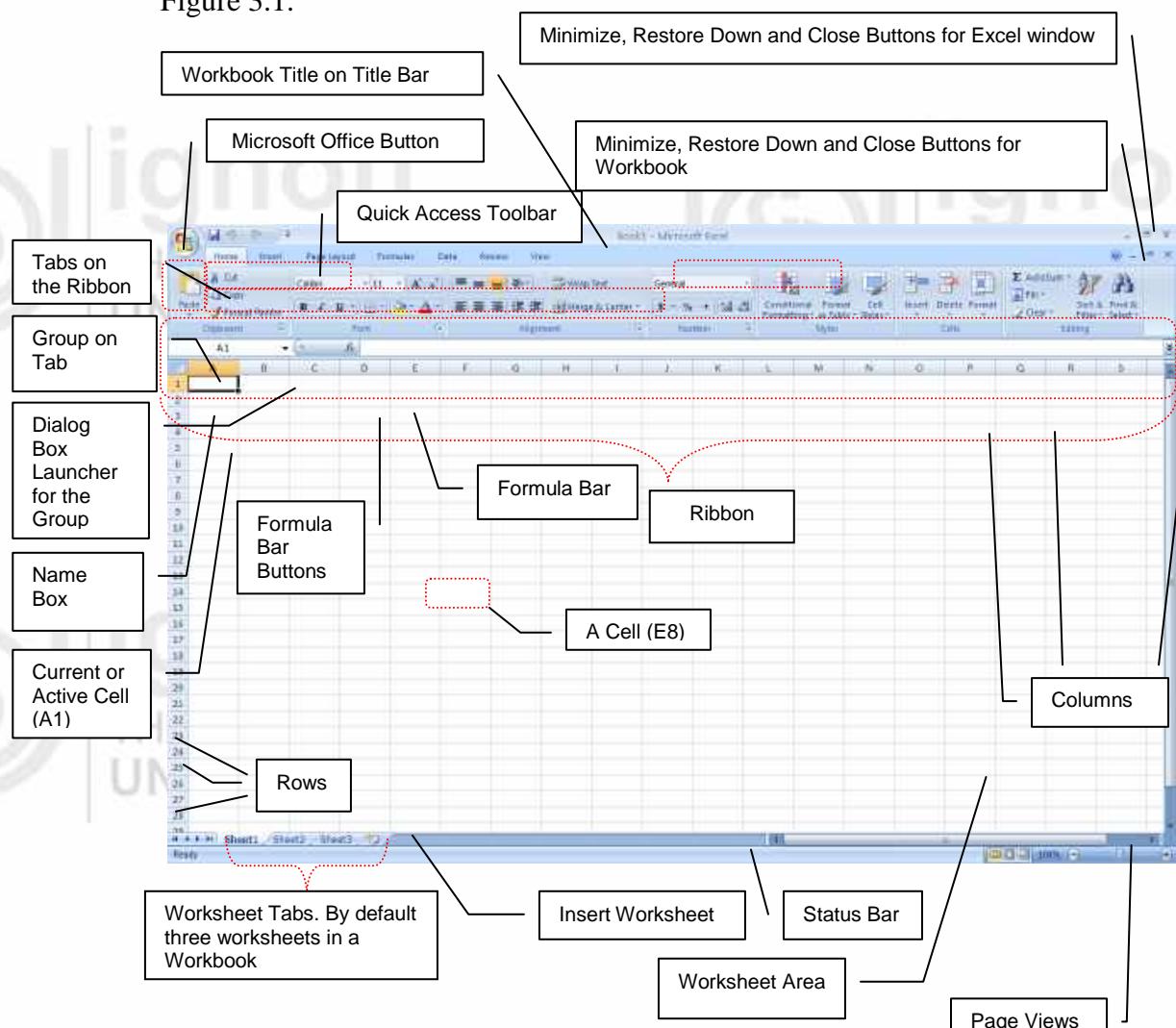


Figure 3.1: Microsoft Excel Window

3.3.2 Commands and Resources in Excel Window

Let us familiarize ourselves with the key commands and resources in Excel Window:

The Microsoft Office Button

It is the button in the upper-left corner of the Excel Window. When you click on the button, it displays a menu that can be used to create a new workbook, open an existing workbook, save a workbook, print and perform many other tasks.

The Quick Access Toolbar

It is present next to the Microsoft Office Button on the top. It provides you access to the commands you frequently use. By default Following appear on the Quick Access Toolbar:

- **Save:** To save your file (you may also press keyboard button (Ctrl+S)).
- **Undo:** To rollback the action that you last took (Ctrl+Z).
- **Redo:** To reapply the action you rolled back or to repeat an action (Ctrl+Y).

The Title Bar

It is next to the Quick Access toolbar at the top. It displays the title of the workbook on which you are currently working. By default, the first new workbook is named as Book1. For each additional workbook you open, the number increases by one. You may save the workbooks by any legal filename you want.

The Ribbon

The Ribbon is the panel at the top portion of the document, right below the Title Bar. To begin with it has following seven tabs:

- **Home:** It has basic commands for creating, formatting and editing the spreadsheets. It has controls for working with the clipboard, fonts, alignment, number, styles, cells and editing.
- **Insert:** It has commands for inserting tables, pictures, shapes, other illustrations, links, charts, header, footer, etc.
- **Page Layout:** The commands here help to set the layout of the spreadsheet, apply a theme to set the overall look, set the margins, orientation, size, backgrounds, etc.

- **Formulas:** It has commands that help you use different formulas and functions.
- **Data:** Has commands to import, query, view data from external sources, sort, filter or manage data.
- **Review:** Has commands to add comments, protect sheet, protect workbook, share workbook, etc.
- **View:** Helps to change the display of the worksheet area.

Besides these basic tabs, additional tabs appear from time to time, depending on the context we are working in. These tabs are called contextual tabs. For example, if you select a chart, a Chart Tools contextual tab appears that has commands to help you design and format the chart. These contextual tabs appear in a different colour to make them easy to spot.

The commands on each tab are organized into groups. Hence, a group is a collection of logically related command buttons that you can use to manage a Worksheet. Commonly used features are displayed on the Ribbon and additional options can be accessed through the dialog box launcher at the bottom-right corner of each group.

The Formula Bar

The formula bar is divided into three sections:

Name Box: Located on the left most side of the formula bar, it displays the address of the current cell

Formula Bar Buttons: Middle section of the formula bar with indented circle on the left (to increase or decrease the size of the name box) and **function wizard** (labeled fx) on the right. When you start entering data in the cell, **Cancel** () and **Enter** () buttons also appear.

Cell Contents: Right side of the formula bar displays the cell entries.

The Worksheet Area

The worksheet area displays all the cells. It is in the cells that you enter, format or edit your data.

The Status Bar

The Status bar appears at the very bottom of the Excel window and provides such information as the sum, average, minimum, and maximum value of selected numbers. You can change what displays on the Status bar by right-clicking on the

Status bar and selecting the options you want from the Customize Status Bar menu. You click a menu item to select it. You click it again to deselect it. A check mark next to an item means the item is selected.

3.3.3 Setting up Your Excel Environment

Before you begin working on your spreadsheet, you may want to set up your Excel environment and become familiar with a few key tasks such as how to maximize and minimize the Ribbon, configure the Quick Access toolbar, display/hide the formula bar, change page views etc.

Minimize and Maximize the Ribbon

- Right click anywhere in the main menu
- Select **Minimize the Ribbon** in the menu that appears. This will **toggle** the Ribbon on and off.

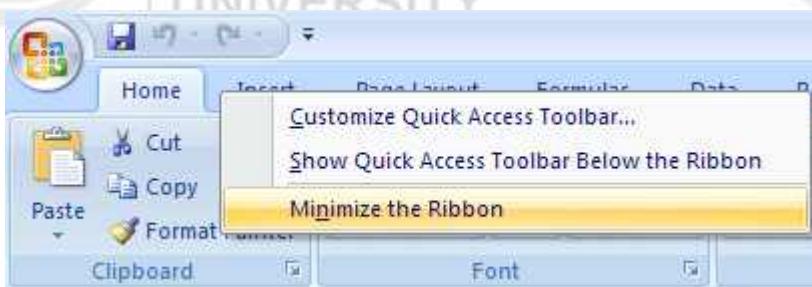


Figure 3.2 : Minimize the Ribbon

The check mark beside ‘Minimize the Ribbon’ option indicates the feature is active. You may choose to use this option, if you prefer not to use the Ribbon, but use different menus and keyboard shortcuts.

This menu also has option to **Show Quick Access Toolbar Below the Ribbon**, instead of at the top. You can also Customize Quick Access Toolbar using the option available in this menu. Choosing this option displays the window as shown in figure 3.

Add Commands to Quick Access Toolbar

- Click the arrow (customize quick access toolbar) to the right of the Quick Access toolbar.
- Select the command you wish to add from the drop down menu. The command will appear in the Quick Access Toolbar

You can also select **More commands...** from the menu to open the screen as shown in Figure 3.3. Here you can one by one add commands to the toolbar or remove commands from the toolbar to make specific features easily accessible.

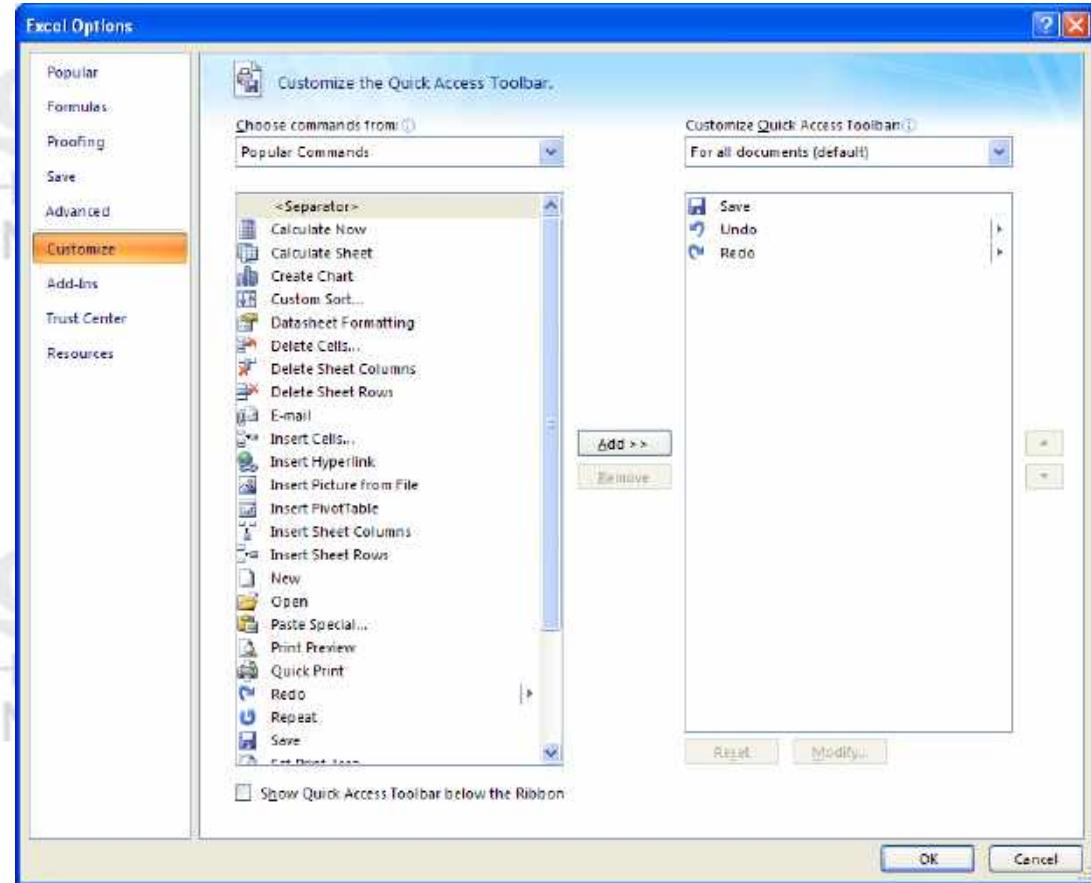


Figure 3.3: Customizing Quick Access Toolbar

Display or Hide the Formula Bar

- Click the **View Tab** of the Ribbon.
- In the **Show/ Hide** group check/ uncheck against formula bar to show/ hide formula bar.

Expand Formula Bar

The **Expand/ Collapse formula bar** button is present at the far right end of the formula bar.



Figure 3.4: Expand Formula Bar Button

Click on the button to expand or collapse the formula bar.

Customize the Status Bar

- Right click anywhere on the Status Bar.
- From the menu that appears, select the options that you want to see on the Status Bar. If the option is selected a check mark appears before it. Ensure that **View Shortcuts** and **Zoom Slider** options are selected.

Zoom In and Out

- Locate the **zoom bar** in the bottom, right corner.
- Left-click the **slider** and **drag** it to the left to zoom out and to the right to zoom in.

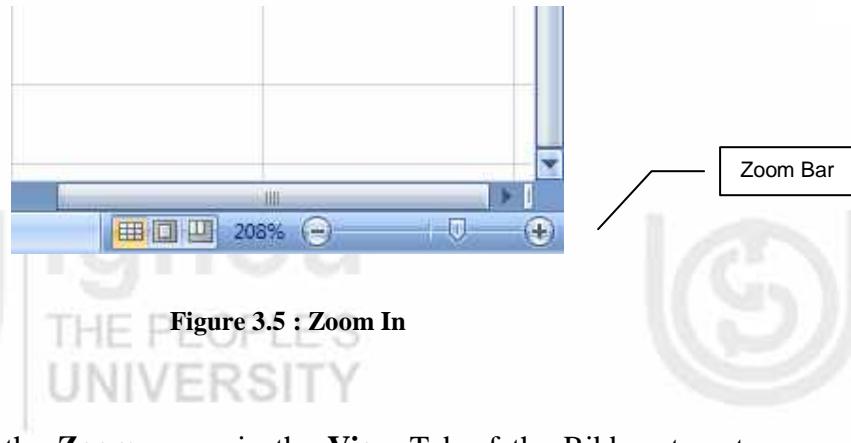


Figure 3.5 : Zoom In

You can also use the **Zoom** group in the **View** Tab of the Ribbon to set your zoom.

Change Page Views

- Locate the **Page View options** in the bottom, right corner. Click on an option to select it. Different page view options are:
 - **Normal:** This is the default view.
 - **Page Layout:** This view is very helpful from printing point of view. When you select this view, you are able to see the header block, all the margins around the worksheet, the vertical and horizontal rulers and the column and row headings also appear differently. This view shows how exactly the workbook would look like when you print it.
 - **Page Break:** This view is useful to determine where the page will break when you are trying to print an Excel sheet that spans multiple pages.

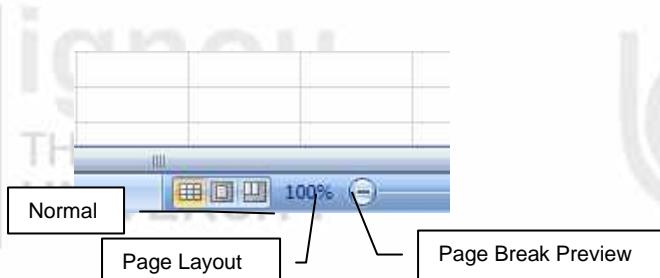


Figure 3.6 : Page Views

You can also set the page view using **Workbook Views** group in the **View** tab on the Ribbon.

Customizing the Environment Using Excel Options

The **Excel Options** menu allows you to customize Excel 3007 according to your preferences.

- Click the Microsoft Office Button
- Click on ‘Excel Options’ button located at the bottom of the menu.

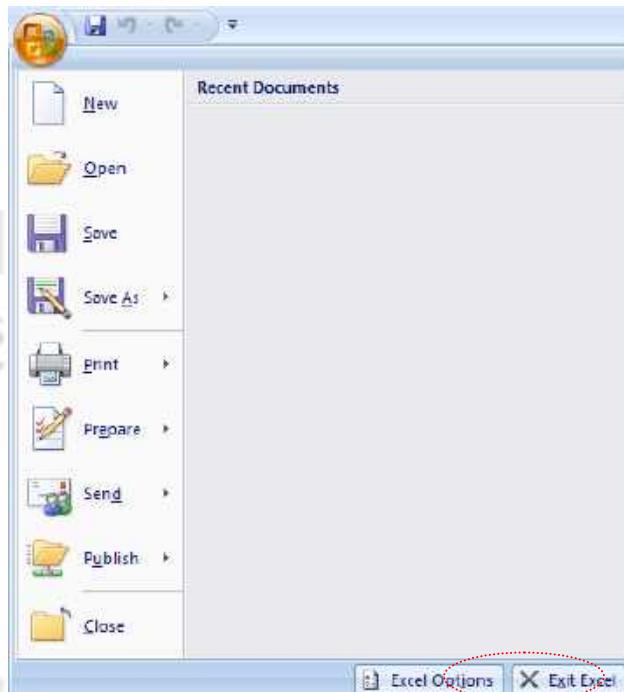


Figure 3.7 : Excel Options Button

When you click on Excel Options button, an extensive menu will open.

Using **Excel Options** menu, you can personalize your work environment with the mini toolbar, Live preview, colour schemes, customize sort and fill sequence, auto correction setting, modify default options for new workbooks, calculation options, specify options for editing, copying, pasting formulas, calculations and other general setting.

3.3.4 Creating a New Workbook

You can create a new workbook as follows:

- Click the **Microsoft Office Button**.
- Select **New**. The New Workbook dialog box appears.
- Select **Blank Workbook** under ‘Blank and Recent’ section. It will be highlighted by default.
- Click **Create**. A new, blank workbook appears in the Excel window.

You may also use keyboard shortcut Ctrl+N to create a new workbook. Please note that when you first open Excel, it opens with a blank new workbook.

If you want to create a new document from a template, explore the templates and choose one that fits your needs, instead of choosing new blank workbook.

3.3.5 Opening an Existing Workbook

You can open an existing document in one of the following ways:

- Click the **Microsoft Office Button**.
- Select **Open**. Select the required workbook in the dialog box.
OR
- Use keyboard shortcut Ctrl+O to select and open an existing document.
OR

If you have recently used workbook then

- Click the **Microsoft Office Button**.
- Choose from the Recent Documents section.
OR
- Go to Windows Explorer. Find your document.
- Right mouse click on the document and select **Open**.

3.3.6 Saving a Existing Document

- Click the **Microsoft Office Button**.
- Select **Save** from the menu.
OR
- Use keyboard shortcut Ctrl+S
OR
- Use Save on the Quick Access Toolbar

On using any of these options, the workbook is saved in its current location with the same file name. If you are saving the workbook for the first time, then **Save As** dialog box appears which accepts the workbook name and location where it is to be saved.

Using Save As Option

You may use Save As option as below:

- Click the **Microsoft Office Button**.
- Select **Save As** from the menu. The Save As dialog box appears.
- Select the location where you wish to save the workbook.
- Enter the name for the workbook.
- Click the Save button

The **Save As** option can be used to:

- Create a backup copy of the workbook by saving it at another location or by different name.
- Save the workbook in a format that is fully compatible with Excel97-2003
- Save the workbook as macro-enabled or binary workbook.

3.3.7 Working with Multiple Workbooks

Multiple workbooks can be opened simultaneously if there is such a need. To see the list of open workbooks:

- Click on **View** tab of the Ribbon
- Click on **Switch Windows** in the Window group. A drop down list of all open workbooks is displayed.

The current workbook has a checkmark besides its name. You may select any workbook from the list to make it current.

3.3.8 Closing a Workbook

To close a workbook:

- Click the **Microsoft Office Button**.
- Select **Close** from the menu.

The current workbook closes. The next document in the list becomes current. If there is no other open document, then only Excel window is there.

3.3.9 Closing Microsoft Excel

- Click the **Microsoft Office Button**. A menu appears.
- Click **Close**. Excel closes.

3.4 ENTERING, EDITING AND FORMATTING DATA

Excel treats different types of data differently. You enter all kinds of data in a **cell** in the worksheet. An Excel workbook can hold any number of worksheets and each worksheet is made up of more than seventeen billion cells. Each cell can hold any of the following three **types of data**:

- **A numeric value** : It can be numbers (example 300.40), dates (example 4-Feb-2011) or times (example 3:35 am). There are many different format options available in Excel for the display of numerical values.
- **Text** : Text in Excel can be used as labels for values, headings for columns or worksheet or for any kind of instructions. Text that begins with a number is still considered as text.

- A Formula :** Formulas can be entered in a cell where eventually the result of the formula is displayed. We will study more about formulas later in this unit.

A worksheet can also hold charts, diagrams, pictures and other objects. These objects aren't contained in cells. Rather, they reside on the worksheet's draw layer, which is an invisible layer on top of each worksheet.

In order to enter or edit data in a cell, that **cell must be current**. Excel indicates that a cell is current in following ways:

- A dark black border (called the cell cursor) appears around the cell.
- The cell address appears in the Name box of the formula bar. A **cell address** is combination of Column Letter(s) and Row number that intersect at that cell position. For example, if the cell address is A3, it means it is at the intersection of column A and row 3.
- The cell column heading (letters) and row heading (number) is shaded for that particular cell.

3.4.1 Moving around the Worksheet

Excel has many ways to move the cell cursor around the worksheet to the cell where you want to enter new data or edit existing data:

- Click the desired cell, provided the cell is displayed within the visible section of the worksheet area.
- In case, cell is not visible, then you may use horizontal or vertical scroll bars to move to that part of the worksheet that contains the desired cell.
- Press F5 to open the Go To dialog box. Type the cell address in the reference and press Enter or click OK. The cell cursor moves to the desired address.
- Press CTRL+G. This again opens Go To dialog box.
- Click in the Name box of formula bar and enter the address of the desired cell. Press Enter. Cursor moves to the specified cell.
- You can also use the arrow and tab keys as specified below to move the cell cursor to the desired cell:

To Move	Keys to Press
One cell on right	Tab or right arrow key
One cell on left	Shift+Tab or left arrow key
One cell up	Up arrow key
One cell down	Down arrow key
To cell A1	Ctrl+Home
To last cell with any data (last column and last row)	Ctrl+End
Up or Down one screen	PgUp or PgDn
First cell of the current row	Home

3.4.2 Selecting Cells, Rows or Columns

If you wish to perform a function on a group of cells, you must first select those cells by highlighting them.

3.4.2.1 Selecting Cells

You can either use a mouse or a keyboard to select the desired group of cells:

Using Keyboard: To select cell A1 to C5 –

- Go to cell A1.
- Press F8. This anchors the cursor and ‘Extend Selection’ is displayed in the Status bar.
- Use arrow keys to select the desired cell area.
- Press Escape (Esc) to come out of the Extend mode.

Using Mouse: To select cells A1 to C5, as shown in figure 8 –

- Click on cell A1.
- Keep the left mouse key pressed and drag the mouse to C5.

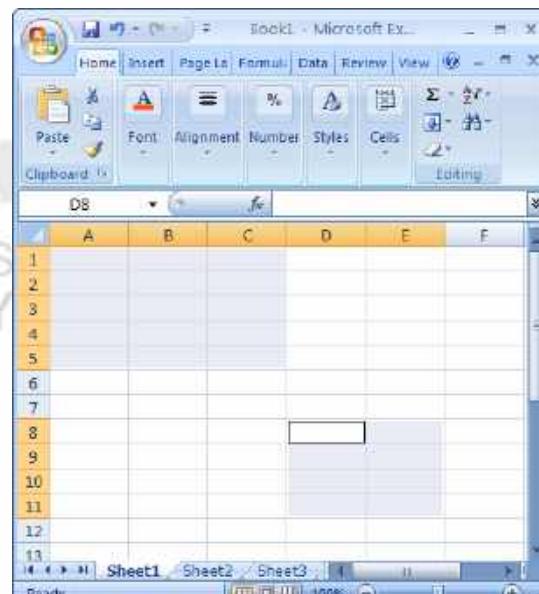


Figure 3.8: Noncontiguous Selected Cells

You can also select noncontiguous area of the worksheet using mouse. Press **Ctrl** key along with the left mouse key while dragging to select the cells.

To select a particular row or a column, just click on that particular row or column heading. For example, if you want to select row number 3, then just click on number 3 in the row heading and the entire row will be highlighted. When you take the cursor over the row heading, then it changes to a right arrow. Similarly, when you take the cursor over the column heading, then it changed to a down arrow.

3.4.3 Entering Data

There are different ways to enter data in Excel: in an active cell or in the formula bar.

To enter data in an **active cell**:

- Click in the cell where you want the data.
Begin typing. Note that the text appears in formula bar also.

To enter data into the **formula bar**:

- Click the cell where you would like the data
- Place the cursor in the Formula Bar
- Type in the data in the formula bar

Please note that you can use **Alt+Enter** to go to next line within a cell. **Alt+Enter** in a cell works similar to Enter key in a word document.

3.4.4 Deleting Data

- Select the cell(s).
- Press the **Delete** key to delete the entire contents of a cell(s).
OR
- Double click in a cell. The insertion point appears in the cell.
- Press **Backspace** to delete one character at a time. Press **Enter** to confirm changes.

You can also make changes to and delete text from the formula bar. Just select the cell and place your insertion point in the formula bar and use backspace or select the whole text and use delete.

3.4.5 Editing Data

To change entire contents of a cell:

- Select the cell and start typing the new data.
- Press Enter to confirm the change.

To modify a part of the cell,

- Select the cell and switch to **edit mode**. You can switch to edit mode by following ways:

- Press F3 once you have selected the cell. The Status changes to ‘Edit’ from ‘Ready’ in the status bar.

OR

- Double click in the cell to switch to edit mode.

Once you have made your changes, press Enter to confirm changes or press Esc to cancel changes.

You can also make changes in the **Formula bar**. Select cell. Click in the formula bar. Make the required changes. Press Enter to confirm or press Esc to cancel changes.

3.4.6 Working with Cells, Rows and Columns

Copy/ Cut and Paste

If you need to duplicate data in some cell(s), you can use copy & paste option. In case you need to move the data from one cell to another, then you use cut & paste option.

To copy data:

- Select the cell(s) that you wish to copy. This is the source location.
- On the **Clipboard** group of the Home tab, click **Copy** OR use Ctrl+C OR select **Copy** option from menu that appears when you right mouse click on the selected cell(s). The border of the selected cell(s) will change appearance and the data from the selected cell(s) is copied onto the clipboard.

To cut data:

- Select the cell(s) that you wish to cut. This is the source location.
- On the **Clipboard** group of the Home tab, click **Cut** OR use Ctrl+X OR select **Cut** option from menu that appears when you right mouse click on the selected cell(s). The border of the selected cell(s) will change appearance and the data from the selected cell(s) is copied onto the clipboard.

To paste data:

Once you have copied or cut data from the source location, you paste it to the destination location.

- Select the cell(s) where you would like to paste the data. This is the destination location.
- On the Clipboard group of the Home tab, click **Paste** OR use Ctrl+V OR use right mouse click menu option. The source information will now appear in the new destination cells.

If you use **cut**, then the information at the source location is removed automatically after the paste operation has been performed. If you use **copy**, then you have same information at both source and destination locations. Also, in case of copy, the copied information remains selected with changed border (even after the paste operation), until you perform next action or press Esc or double click the selection to deselect it.

Drag and Drop

Drag and drop works similar to cut and paste that you move information from one cell(s) to another. To drag and drop data from one point to another:

- Select the cell(s) that you wish to move.
- Position your mouse pointer near one of the **outside edges** of the selected cells. The mouse pointer should change from a **white, block cross** to a **black, thin cross with 4 arrows**.
- Click and hold the mouse button and **drag** the cells to the new location. As you drag the selected cells, the outline of the cells will change.
- Release the mouse button and the information appears in the new location.

Please note that for drag and drop to work, it should be enabled in Excel Options.

Undo and Redo

Undo and **Redo** buttons are present in the Quick Access Toolbar. You can also use keyboard shortcuts Ctrl+Z and Ctrl+Y for undo and redo respectively.

The undo command allows you to correct your mistakes in the worksheet. The redo button becomes active when you use undo. It lets you undo what you have undone. If you want to undo last action, then click on the Undo button. You can also click the arrow key next to the Undo button to open a list of previous actions. You can choose from the list to undo multiple actions at the same time. Please note that once you have saved the file and made a change to the worksheet, then you cannot undo any action performed before the save.

Insert Cell

You can insert a cell either **above a cell** or to the **left of a cell**. Keeping this in mind,

- Select the appropriate cell.

- Click arrow on **Insert** command from **Cells** group in the Home tab. If you click on the Insert button, a cell is inserted above the selected cell. But, if you click the arrow then a menu opens.
- Choose **Insert Cells** option. **Insert dialog** box opens.
- Choose the appropriate option.

OR

- Select the appropriate cell.
- Right mouse click on the cell. A menu opens.
- Select **Insert...** option from the menu. **Insert dialog** box opens.
- Choose the appropriate option.

Insert Row or Column

You can insert a row **above** a particular row or a column to the **left** of a particular column. While keeping this in mind,

- Select a cell in the appropriate row/ column.
- Either use right mouse click OR **Insert** command in **Cells** group of the Home tab on the Ribbon (as done to insert a cell above).
- In the **Insert** dialog box choose the appropriate option for row/ column.

OR

- Press right mouse button on the row number (above which you want to insert a row) in row heading on left of the worksheet OR press right mouse button on the column letter in column heading (left of which you want to insert the column) at the top of the worksheet. A menu opens.
- Choose **insert** option from the menu. A row is added above the selected row OR a column is added to the left of the selected column.

Delete Cell, Row or Column

To delete cells, rows, and columns:

- Place the cursor in the cell, row, or column that you want to delete
- Click the **Delete** button on the **Cells** group of the Home tab
- Click the appropriate choice: Cell, Row, or Column

OR

- Use right mouse click on the cell, row number in row heading or column letter(s) in column heading.
- Choose **Delete** option from the menu.

Modify Column Width

There are various ways that you can use to modify column width:

- Position the cursor over the **column line** (line that divides the two columns) in the column heading. A horizontal double arrow will appear.

- Click the mouse and **drag** the cursor to the right to increase the column width or to the left to decrease the column width.
- Release the mouse button.

OR

- Click the column heading of a column you wish to modify. The entire column will be highlighted.
- Click the **Format** command in the **Cells** group on the Home tab. A menu will appear.
- Select **Column Width** to enter a specific column measurement

OR

- select **AutoFit Column Width** to automatically adjust the column so all the text will fit.

OR

- Right mouse click the column heading. A menu will appear.
- Select **Column Width...** from the menu.
- Enter the specific column measurement.

Modify Row Height

There are multiple ways that you can use to modify row height:

- Position the cursor over the **row line** (line that divides the two rows) in the row heading for the row you want to modify. A vertical double arrow will appear.
- Click the mouse and drag the cursor upward to decrease the row height or downward to increase the row height.
- Release the mouse button.

OR

- Click the row heading of a row you wish to modify. The entire row will be highlighted.
- Click the **Format** command in the **Cells** group on the Home tab. A menu will appear.
- Select **Row Height** to enter a specific row measurement OR select **AutoFit Row Height** to automatically adjust the column so all the text will fit.

OR

- Right mouse click the row heading. A menu will appear.
- Select **Row Height...** from the menu.
- Enter the specific row measurement.

Hide or Unhide Rows or Columns

To hide or unhide rows or columns:

- Select the row or column you wish to hide or unhide.
- Click the **Format** button on the **Cells** group of the Home tab. A menu appears.
- Under **Visibility** heading, click on Hide & Unhide option.
- Choose the appropriate option from sub menu that appears: Hide Rows or Hide Columns or Unhide Rows or Unhide Columns as per the requirements.

3.4.7 Data and Formatting

Auto Fill

Auto Fill feature fills cell data or series of data in a worksheet into a selected range of cells. If you want the same data copied into the other cells, you only need to enter data in one cell. If you want to have a series of data (for example, serial number) fill in the first two cells in the series and then use the auto fill feature. To use the Auto Fill feature:

- Enter the required data in the cell. For example, if you wish to enter 1 in all cells from A1 to A10, then just type 1 in cell A1. Similarly, if you wish to enter numbers 1 to 10 in cells A1 to A10 then enter 1 in A1 and 3 in A3.
- Now select the cell(s) with value(s) (just A1 OR both A1 and A3 depending on the case)
- Bring your cursor at the bottom right corner of the selection so that it changes from large white cross to a small, thin, black cross. Now the cursor is positioned over the fill handle.
- Click your mouse at the fill handle and drag it till all the cells you want to fill are selected (till A10 in our example).
- Release the mouse button and all the selected cells are automatically filled.

You can use the fill handle to fill cells horizontally or vertically.

Aligning Values

In Excel, the data in a cell can be aligned both horizontally and vertically. The default horizontal alignment is left for the text data and right for the numerical data. Vertically, both text and numerical data are bottom aligned. You can change the default alignments as per your requirement:

The steps to change alignment are:

- Select the cell(s) for which alignment needs to be changed.
- Choose horizontal/ vertical alignment command from the **Alignment** group in the Home tab.

In the Figure 3.9, you can see the how the data can be positioned in a cell by choosing the appropriate combination of horizontal and vertical alignment values.

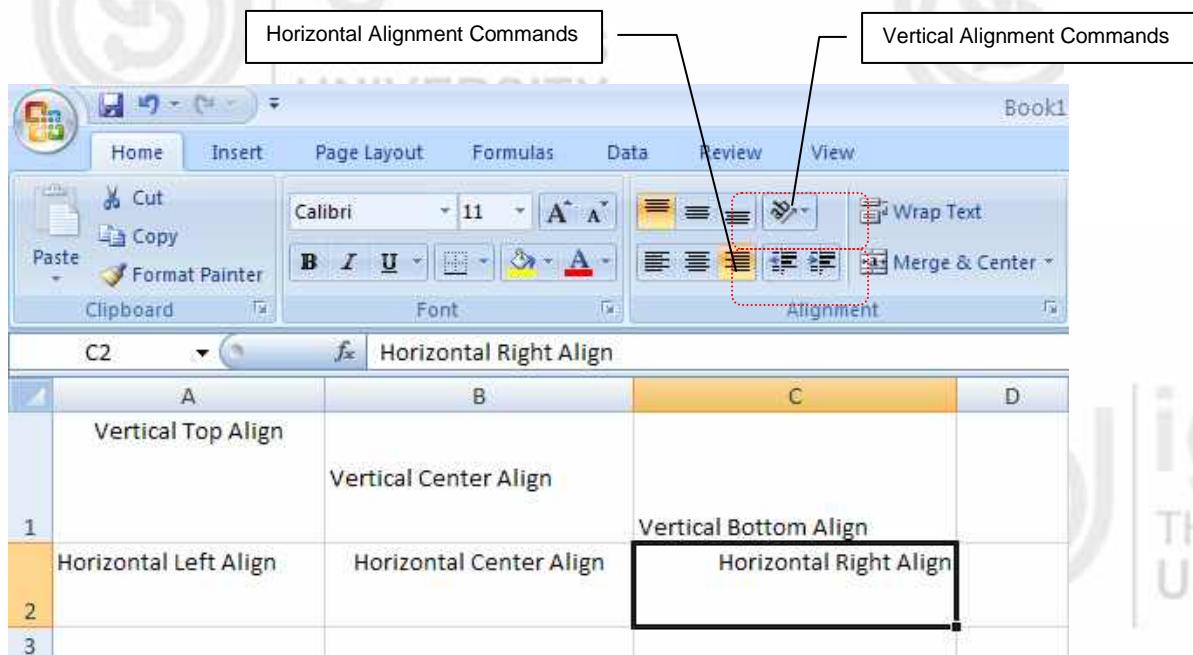


Figure 3.9: Horizontal and Vertical Alignments

Wrap Text

Wrap text command enable multiple text line inside a single cell. When you type text that is too long to fit in the cell, either the text is not displayed completely or it overlaps the next cell if it is empty. If you do not want it to overlap the next cell, you can wrap the text.

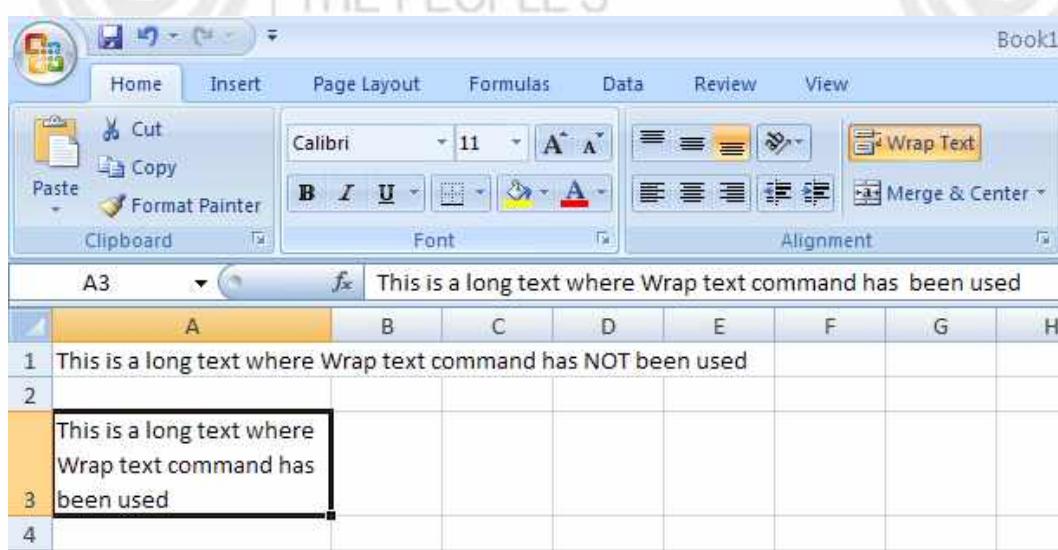


Figure 3.10: Text Wrapping

- Select the cell(s) where you wish to wrap the text.
- Click on **Wrap Text** command from **Alignment** Group in Home Tab. The text would change to multiline text.
- Set the column width and row height as needed.

Merge Cells

Sometimes, you may want to center a piece of text over several columns or rows. This is specially the case when you want to give a title to a section of your worksheet. This can be done through merging the cells (shown in Figure 3.11).

- Select the cell you want to merge. In our example in Figure 3.11, we have merged cells A1 to E1 for the title ‘Student Marks’.
- Click **Merge and Center** Command in **Alignment** group of Home tab. The selected cell will be merged together to become one cell (the cell address now will be A1).

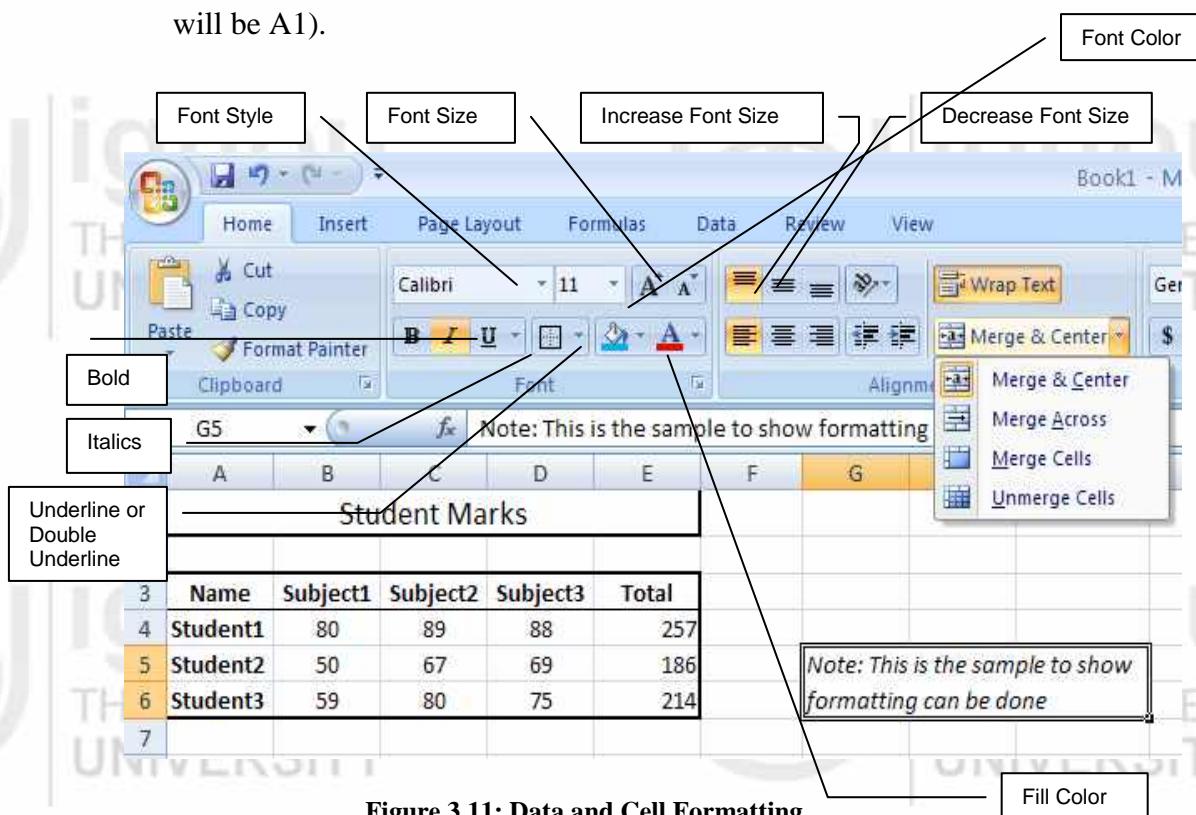


Figure 3.11: Data and Cell Formatting

In Figure 3.11, we have also merged cells, G5 to I6 for the Note. To do this, again

- Select the cells.
- Click the arrow for Merge and Center command. The menu opens.
- Choose **Merge Cells** option from the menu.

In case, you want to unmerge the merged cell for any reason:

- Select the merged cell.
- Click the arrow for Merge and Center command. The menu opens.
- Choose **Unmerge Cells** option from the menu. The cells will be unmerged.

Format Data as Bold, Italicized, Underlined or Double Underlined

The data in the spreadsheet can be formatted to make it more presentable. For formatting:

- Select the cell(s).
- Either click the appropriate command(s) (**Bold**, Italic, Underline, Double Underline) in **Font** group of the Home tab OR use keyboard shortcuts as below:

Command	Keyboard Shortcut
Bold	Ctrl+B
Italicize	Ctrl+I
Underline	Ctrl+U

For double underline format, click the down arrow next to Underline command. Choose **Double Underline** from the menu that opens.

In our example in figure 11, the Headings are in bold and Note is in italics.

Change Font Style

To change the font style,

- Select the cell(s).
- Click the drop-down arrow next to the **Font Style** box on the Home tab.
- Select a **font style** from the list.

As you move over the font list, the Live Preview feature previews the font for you in the spreadsheet.

Change the Font Size

To change the font size,

- Select the cell(s) you want to format.
- Click the drop-down arrow next to the **Font Size** box on the Home tab.
- Select a **font size** from the list.

Change the Text Colour

To change the Text Colour,

- Select the cell(s) you want to format.
- Click the drop-down arrow next to the **Font Color** command. A color palette will appear.
- Select a color from the palette.

OR

- Select **More Colors....** A dialog box will appear.
- Select a color.
- Click **OK**.

Add a Border

To add border(s),

- Select the cell or cells you want to format.
 - Click the **drop-down arrow** next to the **Borders** command on the Home tab. A menu will appear with border options.
 - Click an option from the list to select it.
- You can change the **line style** and **color** of the border.

In Figure 3.11, we have added thick border to the title and borders to the table, column heading and the note.

Add a Fill Color

To change the Text Colour,

- Select the cell or cells you want to format.
 - Click the **Fill command**. A color palette will appear.
 - Select a color.
- OR
- Select **More Colors....** A dialog box will appear.
 - Select a color.
 - Click **OK**.

You can use the **fill color feature** to format columns and rows, and format a worksheet so that it is easier to read.

Format Numbers, Dates and Times

Excel treats dates and times as special type of numeric value. You can format any of these data as per your requirements:

- Select the cell(s) you wish to format.
- Click the drop-down arrow next to the **Number Format box** in **Number Group** in Home tab.
- Select one of the options for formatting numbers.

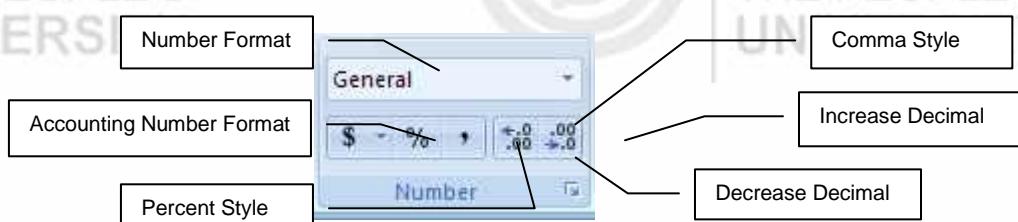


Figure 3.12 : Number Group in Home Tab

By default, the numbers appear in the General category, which means there is no special formatting.

In the Number group, you have some other options. For example, you can change the another currency format, set numbers to percents, add commas, and change the decimal location.

When you click on the dialog box launcher (arrow at the bottom right corner of the group), the Number tab of the **Format Cells** dialog box opens as in Figure 3.13. From here you can choose the specific format for number, date or time.

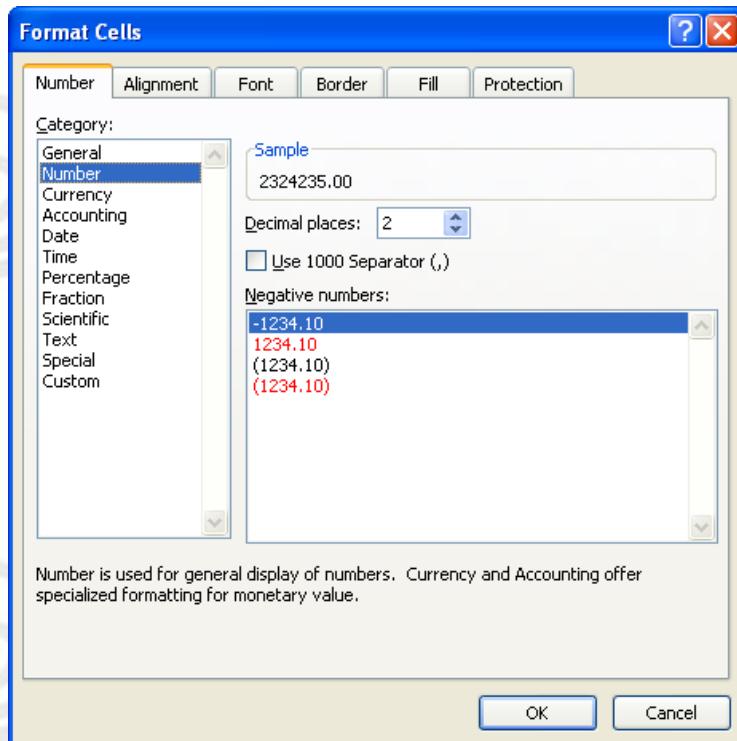


Figure 3.13: Number Tab of Format Cells Dialog box

Please Note: For any of the above formatting options, you can also right mouse click in the selected cell(s) and then choose **Format Cells...** option from the menu that opens. The Format Cells dialog box will appear with different tabs for number formatting, alignment, font, border, fill and protection.

You can also use **Format Painter** in Clipboard group of Home Tab to copy format from one cell to another.

3.5 FORMULAS AND FUNCTIONS

Formulas and Functions enhance Excel's capability calculating and manipulating data for analytical purposes.

3.5.1 Formulas

A formula is a set of mathematical instructions that can be used to perform calculations. Formulas are started in the formula box with an = sign. A Formula may consist of:

- **Operators** : Symbols (+, -, *, /, etc.) that specify the calculation to be performed.
- **References** : The cell or range of cells that you want to use in your calculation.
- **Constants** : Numbers or text values that do not change.
- **Functions** : Predefined formulas in Excel.

3.5.1.1 Create a Simple Formula

We will learn to create a **formula to add two numbers**:

- Click the cell where you want the formula to be defined (for example cell A3).
- Type = sign to let Excel know that a formula is being defined.
- Type the two numbers to be added with the operator. For example type 35+1330 in cell A3 (after = sign). Press Enter.
- The result of the above addition operation is displayed in the cell A3, instead of the formula that we had typed. If you select A3, the formula appears in the formula bar.

We can now modify the above formula to **add contents of two cells** instead of the constant values:

- Click the cell where you want the formula to be defined and the answer will appear (for example cell A3).
- Type = sign to let Excel know that a formula is being defined.
- Type the cell number (example A1) that contains the first number to be added. Then type + operator and then the cell number (example A3) that contains the second number to be added. For example type A1+A3 in cell A3 (after = sign). Please note, if a cell does not contain a number then it is treated as containing zero.
- Press Enter.
- The result of the above addition operation is displayed in the cell A3. Cell A3 will display the value 333.

Change the value in cell A1 to 300, and notice that the value in cell A3 automatically changes to 334.

3.5.1.2 Create a Simple Formula using Point and Click Method

To create a formula using mouse:

- Click the cell where the answer will appear (B3, for example).
- Type the equal sign (=).

- Click on the first cell to be included in the formula (B1, for example).
- Type the operator sign (+ for addition or – for subtraction or * for multiplication or / for division).
- Click on the next cell in the formula (B3, for example).
- Press Enter or click Enter button on the formula bar.

3.5.2 Using Cell References

When a cell address is used as part of a formula, it is called a **cell reference** because instead of entering specific numbers into a formula, the cell address referring to a specific cell is being used.

You have used **Fill Handle** in the auto fill feature in section 3.4.7. The same feature can be used to copy formulas from one cell to another. For example, if you have the formula =A1+B1 in cell C1, and you can use the fill handle to fill the formula into cell C3. Note that the formula won't appear the same in C3 as it does in C1. Instead of =A1+B1, you will see =A3+B3 in cell C3. This is called **Relative Reference** where cell references in formulas has changed cell addresses relative to the row and column they are moved to. In relative reference, formulas **automatically adjust** to new locations when they are pasted into different cells. Sometimes, our requirement is such that we don't want this change of cell address on pasting. To achieve this, cells must be addressed by **Absolute Reference**.

In **Absolute cell references**, a formula **always** refers to the **same cell** or cell range used in it. If a formula is copied to a different location, then the cell address remains the same. An absolute reference is designated in the formula by the addition of a **dollar sign** (\$). It can precede the column reference or the row reference, or both. Examples of absolute referencing are:

\$A1 - here the column will not change when copied.

A\$1 – here the row will not change when copied.

\$A\$1 – here both row and column will not change when copied.

In the above example, if we have formula as =\$A\$1+\$B\$1 in cell C1 and we copy this formula in cell C3, then you will still see =\$A\$1+\$B\$1 in cell C3.

3.5.3 Linking Worksheets

Sometimes, you may want to use the value from a cell in another worksheet within the same workbook in a formula. For example, the value of cell A1 in the current worksheet and cell A3 in the second worksheet can be added using the format "sheetname!celladdress". The formula for this example would be "=A1+Sheet3!A3" where the value of cell A1 in the current worksheet is added to the value of cell A3 in the worksheet named "Sheet3".

3.5.4 Functions

A function is a built in **pre defined formula** in Excel. One of the key benefits of functions is that they save your time since you do not have to write the formula yourself. For example, you could use an Excel function called **Average** to quickly find the average of a range of numbers.

Excel has hundreds of different functions to assist with your calculations. Each function has a particular syntax, which must be strictly followed for the function to work correctly.

3.5.4.1 Function Library

The function library is a large group of functions on the **Formula** Tab of the Ribbon. These functions include:

AutoSum: Easily calculates the sum of a range

Recently Used: All recently used functions

Financial: Accrued interest, cash flow return rates and additional financial functions

Logical: And, If, True, False, etc.

Text: Text based functions

Date & Time: Functions calculated on date and time

Math & Trig: Mathematical Functions

You can visit each of these functions in the library to know more about them.

3.5.4.2 Insert a Function

To insert a function:

- Click the cell where you want the function applied
- Click the Insert Function button on the formula bar. The **Insert Function** dialog box opens.
- Choose the function from the dialog box. You may search on a particular function in the dialog box or change the category and select the function. Help for each function is available right there in the dialog box.
- Click OK. **Function Arguments** dialog box opens.
- Select the cells or range of cells for function arguments and click OK.
- The Function is added to the formula bar

3.6 WORKING WITH WORKSHEETS

In this section we will learn to name, add, delete, group or ungroup worksheets. We will also learn to format a worksheet for printing.

3.6.1 Name a Worksheet

The default names of Worksheets are Sheet1, Sheet3 and Sheet3. Since these names are not useful and descriptive, we will learn to rename the worksheet.

You can rename a worksheet using any of the following ways:

- Right mouse click on the Sheet1 tab. Menu appears as shown in figure 14(a).
- Select option **Rename**. The name Sheet1 is highlighted by a black box and becomes editable.
- Type the new name at the tab.
- Press Enter. The worksheet is renamed.

OR

- Click the Format command of the Cells group in Home Tab. A menu appears as shown in Figure 14(b).
- Select option **Rename Sheet** under Organize Sheet. The sheet name is highlighted by a black box and becomes editable.
- Type the new name at the tab.
- Press Enter. The worksheet is renamed.



Figure 3.14: Renaming a Worksheet

3.6.2 Insert a New Worksheet

You can add worksheets to the workbook anytime you want. The new sheets added will be named as Sheet4 and so on. There are many ways that you can add a new worksheet:

- Click on the **Insert Worksheet icon** near the worksheet tabs OR press Shift+F11.
- A new worksheet **after** the last tab will be added.
OR
- Right mouse click on the worksheet tab.
- Choose **Insert...** from the menu (shown in Figure 14(a)). Insert dialog box opens.
- Select **Worksheet**. Click Ok
- A new worksheet **before** the selected tab will be added.
OR
- Click the down arrow of **Insert** command in the Cells group of Home Tab. A menu appears.
- Choose Insert Sheet from the menu.
- A new worksheet **before** the selected worksheet will be added.

3.6.3 Delete a Worksheet

Any number of worksheets can be deleted irrespective of the fact that they contain any data or not. But, there should be at least one worksheet in the workbook. To delete a worksheet:

- Right mouse click on the worksheet tab.
- Choose **Delete** from the menu (shown in Figure 14(a)).
- The selected worksheet is deleted.
OR
- Click the down arrow of **Delete** command in the Cells group of Home Tab. A menu appears.
- Choose Delete Sheet from the menu.
- The selected worksheet is deleted.

3.6.4 Grouping Worksheets

If the multiple worksheets of a workbook contain identical formula and formatting, then you can group them together. When the worksheets are grouped together, then any change made to one worksheet will be applied to all other worksheets in the group. You can group both contiguous and noncontiguous worksheets. To group **contiguous** worksheets:

- Click on the first worksheet tab.
- Press the **Shift** key.

- While holding the Shift key, click the last worksheet tab you want in the group.
- Release the Shift key.
- All the sheets from the first sheet to the last sheet are now grouped. The tab colour will now change to white indicating that they are grouped together.

To group noncontiguous worksheets:

- Click on the first worksheet tab.
- Press the **Ctrl** key.
- While holding the Ctrl key, select all the other worksheets you want in the group.
- Release the Ctrl key.
- All the sheets that you selected while keeping the Ctrl key pressed would be grouped together and sheet tabs will appear white.

3.6.5 Ungrouping Worksheets

To ungroup worksheets:

- Right mouse click one of the worksheets in the group.
- Select **Ungroup Sheets** from the menu.

3.6.6 Reposition Worksheets in a Workbook

To change the position of worksheets in a workbook:

- Click and hold the worksheet tab that is to moved until an arrow appears on the left corner of the sheet.
- Drag the worksheet to the desired location

3.6.7 Hide Worksheets

To **hide** a worksheet:

- Right-click on the tab of the sheet you wish to hide.
- Select **Hide**
OR
- Click **Format** button.
- Select **Hide & Unhide** under Visibility in the menu.
- Choose **Hide Sheet** option.

To **unhide** a worksheet:

- Right-click on tab of any sheet.

- Select **Unhide....** A dialog box with the list of hidden worksheets is displayed.
- Choose the sheet to unhide.
OR
- Click **Format** button.
- Select **Hide & Unhide** under Visibility in the menu.
- Choose **Unhide Sheet...** option. A dialog box with the list of hidden worksheets is displayed.
- Choose the sheet to unhide.

3.6.8 Formatting and Printing the Workbook

In this section, we will learn how to set page headers, footers, margin, etc and prepare our workbook for printing.

To Change Page Orientation

- Select **Page Layout** Tab on the Ribbon.
- Click **Orientation** command in the **Page Setup** group.
- Choose the orientation you want – **Landscape** (horizontal) or **Portrait** (vertical).

To Change Paper Size

- Select **Page Layout** Tab on the Ribbon.
- Click **Size** command in the **Page Setup** group.
- A drop down menu appears with all the available paper sizes. Current size is highlighted.
- Choose the size option. Page size of workbook changes.

To Set Page Margins

- Select **Page Layout** Tab on the Ribbon.
- Click **Margins** command in the Page Setup group.
- Choose the predefined margins from the list.

OR

- Customize your margins by selecting **Custom Margins** from the menu and entering the desired margins in the appropriate fields.

To Set Headers and Footers

The **header** is the text that appears in the top margin of every page of the printed worksheet. Similarly, the **footer** is the text that appears in the bottom margin of every page of the printed worksheet. To add header and footer:

- Select **Insert** Tab on the Ribbon.

- Click the Header & Footer button in the Text group. A Design context tab appears under Header & Footer Tools. And worksheet changes to Page Layout view from the Normal view. Page Layout view structures the worksheet so that it is easy to change the format of the worksheet.
- Both Header and Footer are divided into three sections: left, center, right. You can type in your custom header/ footer or you can use predefined headers and footers. Click on Header/ Footer button in Header & Footer group of Design context tab to see the list of pre-defined headers and footers.

To Use Scale to Fit

Scale to Fit is a useful feature that can help you format spreadsheets to fit on a page.

- Select the **Page Layout** tab.
- Locate the **Scale to Fit** group.
- Enter a specific **height** and **width**, or use the percentage field to decrease the spreadsheet by a specific percent.

Be careful with how small you scale the information – you should be able to read it.

To Define a Print Area

At times you may want to print just a part of the whole worksheet. In that case you need to select your print area that you need to be printed. To define your print area:

- Click and drag your mouse to **select the cells** you wish to print.
- Click the **Print Area** command in Page Setup group of **Page Layout** Tab.
- Choose **Set Print Area**. Now, only the selected cells will print. You can confirm this by viewing the spreadsheet in Print Preview.

To return to printing entire worksheet, which is the default setting, click the **Print Area** command and select **Clear Print Area**.

To Print Titles on Each Page

Print Title command allows you to select **specific rows** and/or **columns** to appear on **each** printed sheet. This helps when the worksheet prints into many pages, since we can have row and column heading printed on each page for easy association and readability.

- Select the **Page Layout** tab.
- Click the **Print Titles** command in Page Setup group. The Sheet tab of Page Setup dialog box opens.
- Click the icon at the end of the field **Rows to repeat at top**.
- Select the row headings in the spreadsheet that you want to appear on **each printed page**.

- Repeat for the column, if required.
- Click OK. The selected row/ column will now appear on each printed page.

Preview before Printing

- Click **Office Button**.
- Select Print → Print Preview. The worksheet opens in the Print Preview mode. In Print Preview, you can access many of the same features that you can from the Ribbon, through the Page Setup dialog box. However, in Print Preview you can see how the spreadsheet will appear in printed format.
- Click **Print** to print the document or **Close Print Preview** to come back to the document in original mode.

You can modify page margins, orientation, page size, etc in Print Preview mode.

To Quick Print the Document

- Click **Office Button**.
- Select Print → QuickPrint
- The document prints to the default printer. It bypasses the Print dialog box.

To Print the Document

- Click **Office Button**.
- Select Print → Print. The Print dialog box appears.
- Select the printer from the drop down list.
- Click **Properties** to change any necessary settings.
- Select the pages you would like to print – specific pages, all of the worksheet, a selected area, the active sheet, or the entire workbook.
- Select the number of copies.
- Click OK to print.

3.7 WORKING WITH TABLES AND CHARTS

Excel has features to help you manage and analyze related data. An Excel table stores information in a consistent manner, making it easier to format, sort, and filter worksheet data. Charts allow you to present information contained in the worksheet in a graphic format, which makes information easy to analyze.

3.7.1 Tables

Typically, an Excel table has only column headings and no row headings. Once you have converted the information into a table, you can sort and filter it as per your requirements.

3.7.1.1 Create Table

To create a table you need to have information stored in columns:

- Enter Column Headings for the table. Each heading should be in a different cell in a row. Column headings are also known as field names. The column headings should appear in a single row without any blank cells between the entries.
- Start adding data in the row right below column heading. This is the first record/ row of the table.
- Select any cell that contains the data.
- Click on **Format as Table** button in the **Styles** group of Home tab. A gallery of pre-defined styles of tables appears.
- Choose your table style. A **Format As Table** dialog box appears which has the range of cells to be converted into the table. Also a marquee appears around all the cells of the table, indicating the selection to be converted into a table.



Figure 3.15 : Cell Address to Create a Table

The range of cell to be converted into table in Figure 3.15 is for the Student Marks example that has been shown in Figure 3.11.

- Select **My table has headers** and click OK. The table created will look like as shown in Figure 3.16.

	A	B	C	D	E
1	Student Marks				
2	Name	Subject	Subject	Subject	Total
3	Student1	80	87	88	255
4	Student2	80	89	88	257
5	Student3	59	80	75	214
6					
7					

Figure 3.16 : An Excel Table

By default, the table will be set up with the **drop-down arrows** in the header so that you can **sort or filter** the table, if you wish.

Alternatively, after you have selected cell for table creation, you can also choose the **Table** command button in the **Tables** group of the Insert tab. This opens **Create table** dialog box with the range of cells to be converted into the table (similar to as in Figure 3.15). When you click OK, the table is created in the default style.

If you want to **convert** an existing Excel table back to a normal range of cells, select any cell in the table and then click the **Convert to Range** button on the **Table Tools Design** tab. All data and formatting is preserved. Using **Table Tools Design** context tab, you can change table style, add or delete table rows, resize table, remove duplicates, change table name and perform many more other functions on the table.

3.7.1.2 Sort Data

Sorting allows you to reorder your data. To sort data:

- Select a cell in the column you want to sort (for example, you can choose a cell in **Total** column to sort on total in our Students Marks example).
- Click the **Sort & Filter** command in the **Editing** group on the Home tab.
- In the menu you can choose **Smallest to Largest** or **Largest to Smallest** order for sort.
- For multi level sorting, you can also choose **Custom Sort...** and specify different columns and the order of sort for each in the dialog box.

Alternatively, you can also choose sort options from the **Sort & Filter** group in the **Data Tab**.

3.7.1.3 Filter Data

Filtering allows you to display only data that meets certain criteria. To filter:

- Click the column or columns that contain the data you wish to filter.
- On the Home tab, click on **Filter** button in the **Sort & Filter** group. Drop down arrows appear on column headings. These arrows would already be there if you are using an Excel table.
- Click the arrow in the column heading.
- Choose the appropriate data value(s) to filter from the drop down menu.

To clear the Filter, click the Sort & Filter button and choose Filter again.

3.7.2 Charts

Charts allow you to present information contained in the worksheet in a graphic format. Excel offers many types of charts including: Column, Line, Pie, Bar, Area, Scatter and more. To create a chart we first need to have the data.

3.7.2.1 Add Data

We will use the following sample data in our example. We will create a graph to compare daily attendance of two classes.

	A	B	C
1	Student Attendance		
2			
3	Day	Number of Students in Class A	Number of Students in Class B
4	Monday	25	29
5	Tuesday	27	30
6	Wednesday	30	26
7	Thursday	30	28
8	Friday	28	24

Figure 3.17: Sample Data for creating Graph

This is the **source data** for our chart, since it will be based on this data. Any change in the source data will automatically be reflected in the chart.

3.7.2.2 Create Chart

- Select the cells that contain the data you want to use in the chart, including the column titles and the row labels.
- Click the **Insert** tab on the Ribbon.
- Click on one of the chart options from the **Chart** group. In this example, we will use the **Columns** option.
- Select a type of chart you want to create from the list. For our example, we will use a 3-D Clustered Column. The chart appears in the worksheet. Also notice Design, Layout and Format context tabs under Chart Tools:

Design Tab: has commands to control the chart type, layout, styles, and location of the chart.

Layout Tab: has commands to control pictures insert, shapes and text boxes, labels, axes, background, and analysis.

Format Tab: has commands to modify shape styles, word styles and size of the chart.

3.7.2.3 Apply Layout

To apply the layout:

- Click your chart. The Chart Tools become available.
- Choose the Design tab.
- Click the Quick Layout button in the **Chart** Layout group. A list of chart layouts appears.
- Select the layout. Excel applies the layout to your chart. We have chose layout 9 for our example.

3.7.2.4 Add Labels

Add appropriate Chart title and Axis title to the Chart.

- Click on the Chart Title and Axis title labels and change the labels appropriately.
- You can also add more labels, if required. Click on Layout Tab. Choose Textbox from Insert group. Click on Text box and place it on the chart. We have added a text box in our example to add the week (March1-7, Figure 3.18)

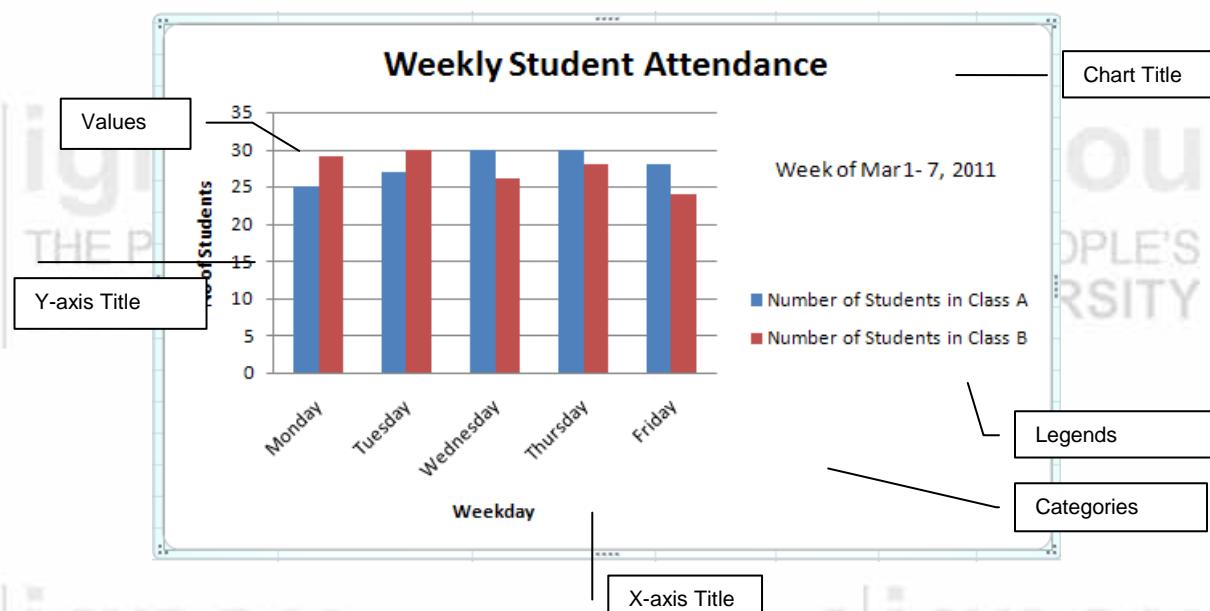


Figure 3.18 : 3D Clustered Column Chart for the Sample Data

3.7.2.5 Switch Data

Switch Data rotates the data displayed on the **x** and **y axes**. It rotates row data to column data and vice versa.

- Choose the **Design** tab.
- Click the **Switch Row/Column** button in the **Data** group. Excel changes the data in your chart.

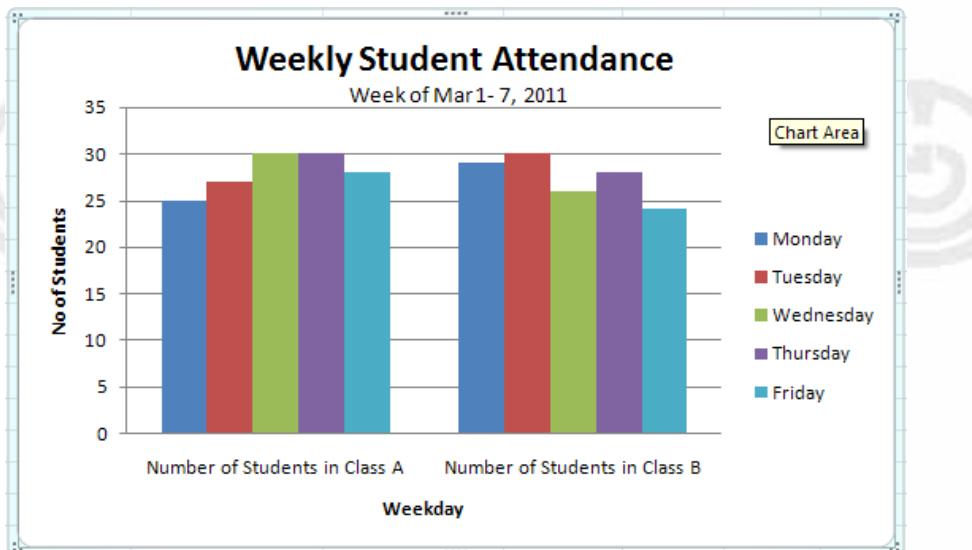


Figure 3.19: 3D Chart after Switch Data has been applied

3.7.2.6 Change Chart Type, Chart Style or Data Range

You can use the Design context tab to change Chart Type, Chart Style or Data Range.

- Select Design Tab.
- Choose the commands as per you requirements:
 - Click on change **Chart Type** from the **Type** group. Select the required type from the dialog box that opens.
 - Click **Select Data** command from the data group. You can make the required changes to the data in the dialog box that opens.
 - You can choose any of the chart styles available in the **Style** group.

3.7.2.7 Move the Chart to a Different Worksheet

- Select the **Design** tab.
- Click the **Move Chart** command. A dialog box appears. The current location of the chart is selected.
- Select the desired location for the chart (the desired location can be an existing worksheet or a New Sheet).

3.8 OTHER USEFUL EXCEL FEATURES

There are many other features in Excel that help us to create professional and error-free documents. Let us learn more about those features.

3.8.1 Conditional Formatting

Conditional formatting allows you to quickly see differences in numbers, patterns and trends at a glance. You can highlight interesting or unusual cell values using different conditional formatting rules. To apply conditional formatting:

- Select the cells you wish to format.
- Select the Home tab and locate the **Styles** group.
- Click the **Conditional Formatting** command. A menu will appear with your formatting options. You can choose from the **predefined rules** or create your **own new rule**.
- Select **one of the options** to apply it to the selected cells. When you choose a predefined rule, a cascading menu will appear. And an additional dialog box may appear, depending on the option you choose. Make the necessary choices, and click OK.

To Remove Conditional Formatting Rules:

- Click the **Conditional Formatting** command.
- Select **Clear Rules**. A cascading menu appears.
- Choose to clear rules from the **entire worksheet** or the **selected cells**.

3.8.2 Freeze Rows and Columns

To freeze row(s) or column(s) mean that those row(s) or column(s) are always visible on the screen and they never scroll. This feature is quite helpful while working with very large worksheets, where we want to see certain rows/ columns all the time (for example labels or headings) to be able to relate and analyze data.

To freeze row or column:

- Select the row below the one you want to freeze and select the column right of one you want to freeze. For example, if you want to freeze row 3, then select row 3 and if you want to freeze column B, then choose column C. If you want to freeze both row and column, then choose the correct cell.
- Click on **View** tab on the Ribbon.
- Click in **Freeze Panes** Command in the **Window** group.
- Select **Freeze Panes** from the menu.
- A thin black line appears below the frozen row and right of frozen column.

To unfreeze the panes, select **Unfreeze Panes** option from the menu that appears when you click **Freeze Panes** command in the **Window** group of the **View** tab.

3.8.3 Find and Replace

To find data or find and replace data:

- Click the **Find & Select** button on the **Editing** group of the Home tab.
- Choose **Find** or **Replace** tab in the dialog box.
- Complete the **Find What** text box.
- Click on **Options** for more search options.
- Use the button **Replace All**, **Replace**, **Find All**, **Find Next** as per the requirements.

3.8.4 Add Comments

Comments are basically notes that can be inserted into any cell in Excel. Comments can be used to explain formulas, cells, and other data in the spreadsheet itself. To add a comment in the Excel worksheet:

- Select the cell where you want to add the comment.
 - Click on **Review** tab on the Ribbon.
 - Select **New Comment** in the **Comments** group.
- OR
- Right click the cell to which you want to add a comment.
 - Select **Insert Comment** from the menu. The comment box appears near the selected cell, displaying the user name.
 - Type your comments in the box.
 - When finished, click any other cell.

A red triangle appears on the upper right corner of the cell, indicating a comment has been attached. When you place your mouse over the cell, the comment appears.

Student Marks					
1	B	C	D	E	G
2					
3	Name	Subject1	Subject2	Subject3	Total
4	Student1	80	89	88	257
5	Student2	50	67	69	186
6	Student3	59	80	75	214
7					

The screenshot shows a Microsoft Excel spreadsheet titled "Student Marks". The table has columns for Name, Subject1, Subject2, Subject3, and Total. A comment box is shown over the Total column. The comment box contains the text "rg: This Total needs to be used to calculate the percentage marks and grade in the final result." and "Formatting can". A red triangle is visible in the top right corner of the cell containing the number 257.

Figure 3.20 : Comment on the Total Column in Student Marks Worksheet

In our example of Students Marks in Figure 3.18, notice a small triangle on top right corner of Total column indicating there is a comment associated with it.

3.8.5 Protect Worksheet

You can protect your worksheet from being modified or changed by somebody else by using **Cell Lock** and Protect worksheet feature. The **Protect Sheet** option is effective only for the locked cells of the spreadsheet. Inversely, cell locking doesn't take effect until you protect your worksheet. Hence, cell lock and protect worksheet work in compliment with each other.

By default all the cells of the Excel spreadsheet are locked. Hence, it gets very simple to protect all the data in a single worksheet just by applying the Protect sheet option.

Unlocking specific cells permits changes to be made to these cells after the protect sheet option has been applied.

Unlock Cells

Cells in a worksheet are locked by default. We will unlock some of them:

- Click on the **Home** tab.
- Choose the **Format** option in **Cells** group to open the drop down list.
- Click on Lock Cell option at the bottom of the list (under Protection).

The Lock Cell option works like an ON/OFF button. Since all cells are initially locked in the worksheet, clicking on the option has the affect of **unlocking** the highlighted cells. If you click on Lock Cell option again, it will lock the selected cells.

Protect Worksheet

Once the cells have been locked, we will protect the worksheet:

- Click on the **Home** tab.
- Choose the **Format** option in **Cells** group to open the drop down list.
- Click on **Protect Sheet...** option at the bottom of the list (under Protection) to open the Protect Sheet dialog box.
- Provide the password if you want to. Password does not prevent users from opening and viewing the worksheet. Choose the other options according to your requirements. Click OK.

Now you can access only unlocked cells on the worksheet.

3.8.6 Convert Text to Columns

Sometimes you might need to split data in one cell into two or more cells. For example, when both first and last names in a worksheet are stored in one cell, but they are required separately, then you can do this easily by utilizing the Convert Text to Columns Wizard. Depending on your data, you can split the cell content based on a delimiter, such as a space or a comma, or based on a specific column break location within your data. To use this wizard:

- Highlight the column in which you wish to split the data
- Click the **Text to Columns** button in **Data Tools** group on the **Data** tab
- Click Delimited if you have a comma or tab separating the data, or click fixed widths to set the data separation at a specific size. Click Next.
- In the next screen you either choose the delimiter (for delimited data) or specify the location where to break the data (for fixed width data). Click Next.
- In the next screen, specify data format and the destination columns for the separated data. Click Finish. Data is separated.

3.9 SUMMARY

Spreadsheets enable working with data easy and effective. It has ability to store, manipulate, format, sort, filter, retrieve, organize, represent and analyze data as per your requirements.

You can save any kind of data, in any format in cells of a worksheet. Multiple worksheets in a workbook enable you to store a large amount of data and manage it efficiently. Formulas and Functions allow easy calculation and manipulation of data. Tables facilitate uncomplicated organization and retrieval of data. Charts are visual display of the information. Additionally, there are many formatting and design features in the Excel program to create and print a professional looking workbook.

A Spreadsheet program is useful in any kind of area, since it is associated with data and information which is an important aspect of all of our lives. You can use it for small purposes like maintaining birthday lists, home budgets or for big ones like creating reports, preparing dashboards, for stock management, shipment planning, as analytical tool in large corporate environments. A Spreadsheet program can be used for any data related purpose.

3.10 LAB EXERCISE

1. Using ‘Excel Options’ do the following customizations:
 - a. Set default two worksheets in a workbook. Original number is three.
 - b. Disable autorecover for your current workbook.
 - c. Set the Recent number of documents to be displayed to two.
 - d. Don’t display grid lines.
 - e. Enable show page breaks.
 - f. Set the Enter key direction so that the cursor moves to right when you press enter in a cell.
2. Open a new workbook. Create a table with two columns. Use columns A and B of the worksheet. The headings for first one should be First Name. Give the heading as Last Name for the second column. Add records in the table. Please ensure that you enter all the data in the lower case. For example, you should enter first name as **rahul** and second name as **gandhi**. Your data should contain multiple records with the same first or last name. Save workbook as Student.xlsx
3. Open Student.xlsx. Create another table using column E and F. Again the heading would be First Name and Last Name. Using string functions, change the names to proper case (for example to Rahul or Gandhi) and store in E and F. Original data should remain. Save and Close the worksheet.
4. Open Student.xlsx. Hide Columns A and B. Rename Sheet1 as Student Name. Delete all the worksheets in the workbook except Student Name. Add Borders to the table. Format heading as: Bold, center aligned, increase font size, change the font colour and the fill of the heading. Save and close.

5. Open Student.xlsx. Sort the records in alphabetical order of the first name. Filter all records with last name Agarwal.

Now use a string function to concatenate the two names (first name and last name) and store in the column D (give heading as Name).

6. Create a new workbook containing Student Marks. Add column headings : Name, English, Hindi, Maths, Science, Social Science, Total Marks, Percentage Marks. Add records to the table. You may copy name from Student.xlsx. Add title to the table. Format the table properly. Use functions to calculate Total Marks and Percentage. Freeze the panes, so that headings don't scroll. Add Headers and Footer to the worksheet. Preview the worksheet. Save as StudentMarks.xlsx and close.
7. Create a table of records with columns **Name** and **Donation Amount**. Donation amount should be formatted with two decimal places. There should be at least twenty records in the table. Create a conditional format to highlight top 3 donations with blue colour and lowest 3 donations with red colour. The table should have a a heading.
8. Use Auto fill feature to fill column B with odd numbers and column C with even numbers. There should be twenty records in each column. Save the workbook as EvenOdd.xlsx
9. Using the workbook EvenOdd.xlsx, create a formula in column D1 to add B1 and C1. Copy the formula from D1 to all other following rows. Also use formula to display the sum of all the values in column B in cell B35. Similarly, for column C in cell C35. Add the label 'Sum' in cell A35. It should be bold and double underlined. Save the workbook.
10. Open workbook EvenOdd.xlsx. Go to Sheet 3. Type the value 1.5 in cell A1. Come back to Sheet1. Create a formula in E1 to multiply the value in D1 with the value in cell A1of Sheet3. Copy the formula to other rows.
11. Create a table of expenses for a house hold. The table will have two column : Expense name and Expense value in percent (it will the total percent spend under this head). Create a Pie Chart for the same data. Examples of Expense heads can be Food, education, utilities, clothing, house rent. The chart should have proper Title, labels and legends.
12. Create a list of names with all the names in column A, stored in the format Last name, First name, for example: Gandhi,Rahul. Use Convert to Text feature to separate the first name and the last name. The original data should not be lost.

3.11 FURTHER READINGS

Excel 3007 All-In-One Desk Reference for Dummies By Greg Harvey.

Teach Yourself Excel 3007 By Moira Stephen.

Microsoft Excel 3007 for Dummies By Greg Harvey.

<http://www.gcflearnfree.org/excel3007>.

UNIT 4 POWER POINT

Structure

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4.0 INTRODUCTION

Office Automation Products are used all over the industry for performing all kinds of tasks like word Processing, mathematical calculations, documents management, Emails, making presentations, creating catalogues and brochures and websites management. Microsoft office products are the most popular for Office Automation.

PowerPoint is the most widely used software for making presentations and slide shows. Now we will learn the Basic features of PowerPoint 2007 which will help us to create a professional presentations, brochures, graphs and charts.

4.1 OBJECTIVES

After studying this unit, you will be able to :

- the basics operations of PowerPoint;
- using Templates and Themes;
- working with animation and movies; and
- working with charts and clip arts.

4.2 BASIC OPERATIONS

PowerPoint is used to create, view and present slide shows that combine text, shapes, pictures, graphs, animation, charts and videos.

Creating a Presentation

This is the first view which one gets when Power Point is opened. This called the **Normal View** of the workspace. There are three main areas in the Normal view:

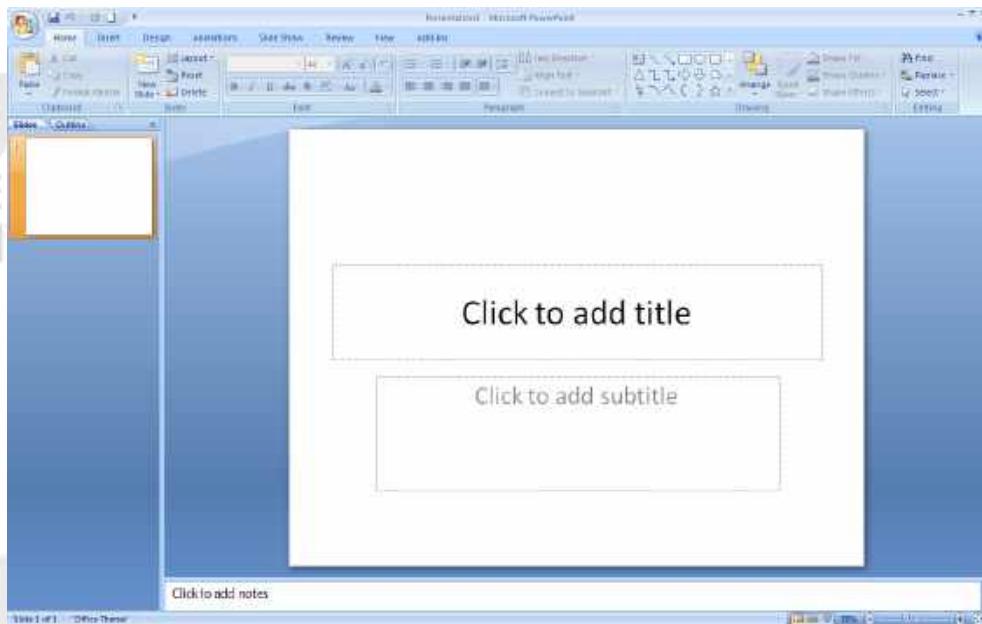


Figure 4.1 : Normal View

- a) **Slide Pane:** This is the big area in the middle where the slide is made. This has boxes with dotted lines called the placeholders. Placeholders contain text items or non-text items like pictures, charts etc.
- b) **Slides Tab:** On the left is the area which has thumbnail versions of the slides in the presentation and the slide which is currently being edited is highlighted.
- c) **Notes Pane:** In the bottom area is the Notes Pane where the notes needed to be referred during the presentation are written.

Inserting a new slide

Each Presentation opens with a single slide. New slide can be added to the presentation by selecting New Slide option on the Home Tab in the menu. This way new Slide gets inserted below the slide selected in the Slides Tab.

The Layout of the slide can also be selected from the gallery of layouts. Once the layout is selected that kind of Slide will get inserted. If no layout is selected the default layout slide will be inserted.

A Slide Layout arranges the content of the slide for e.g., One may want the slide to have a Title and a picture with text or a Title with two pictures with text for comparison or a slide with just a Title placeholder.

The title and subtitle can be written in the Title placeholder. The Content placeholder will contain the text or graphic elements like charts, pictures, movie files etc.

Some of the layouts have two of these content placeholders so that one can put the content text in one and graphics in the other like the example shown in Figure 4.2

Add a new slide to the new presentation and choose the Layout for the same:

- Click **New slide** Option on the **Home** Tab in the menu.
- Click the **Layout** Option on the **Home** Tab. The List of Layouts is displayed.

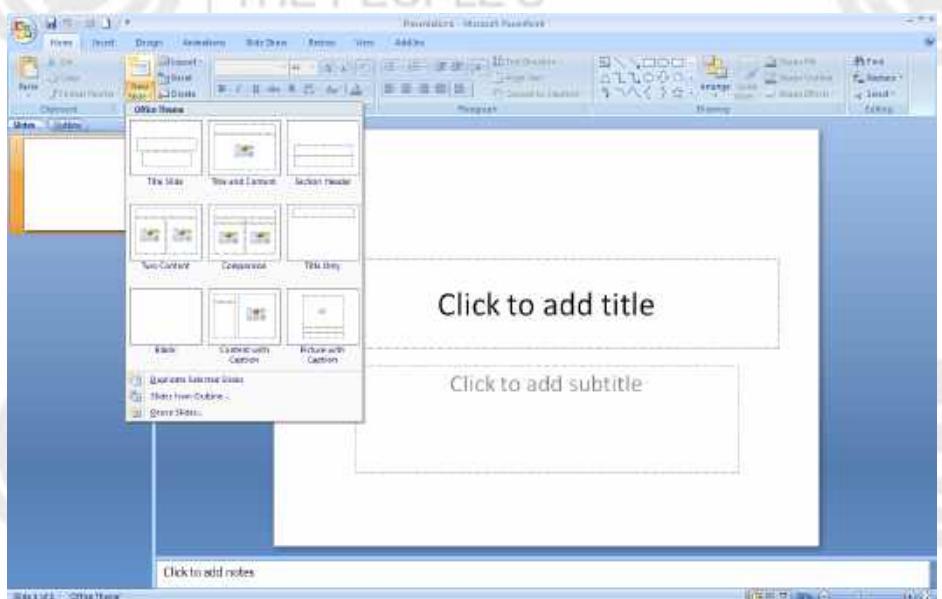


Figure 4.2 : Layout Gallery

- Select the layout for the slide. Every slide can have a separate layout.
- Select two different layouts for the two slides as shown in Figure 4.3.

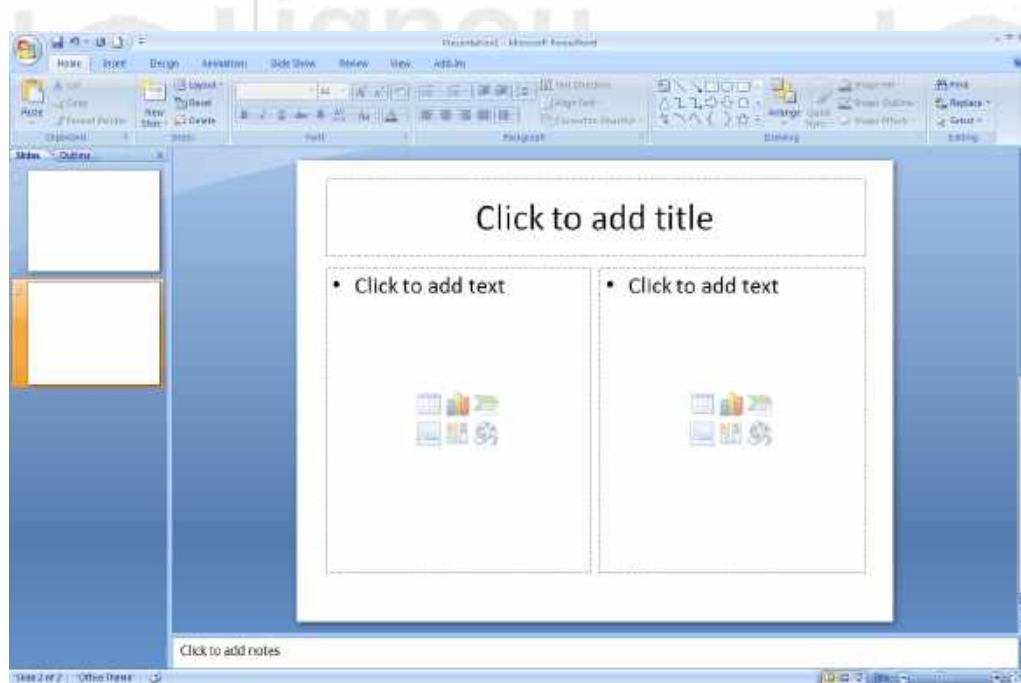


Figure 4.3 : Graphic Layout

- Click on the placeholder to write the title and add text.
- The default formatting of the text is bulleted list. Use the different levels of text within the bulleted list to write major and minor points.
- Select the various commands in the **Font** group on the **Home** Tab menu to change the character formatting such as font size and colour.

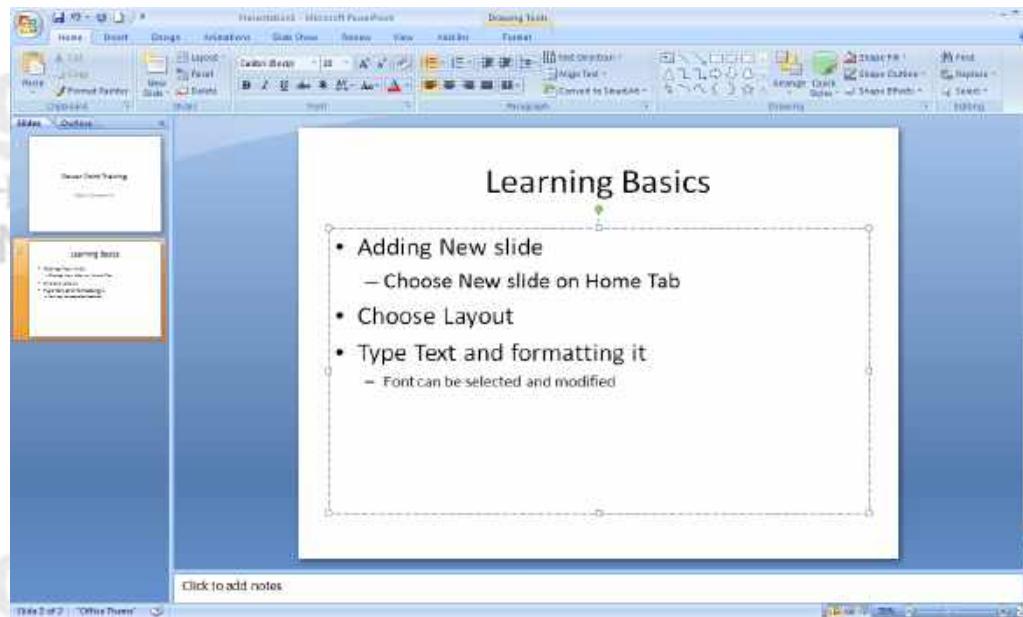


Figure 4.4 : Formatting Text

Notes can be referred to at the time of presentation can be written in the Notes pane at the bottom area of the Normal View. These notes will help to keep the matter in the presentation slides precise and to the point. These can be printed and used by the presenter at the time of giving the presentation.

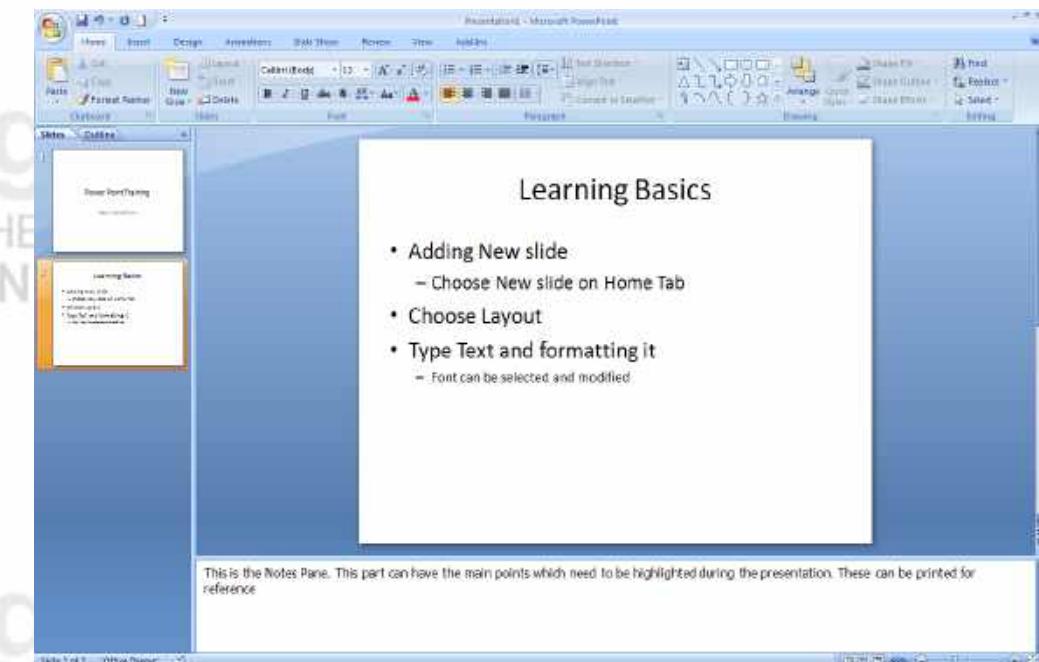


Figure 4.5 : Notes Pane

- Click on the Notes Pane and write notes for the presentation
- To print these notes, select the **Print** Option from the **Microsoft Office** button. Choose the Notes Page option from the **Print What** list.

Opening and Saving a Presentation

One can open a New Presentation or open an existing one using the Microsoft Office menu button.

- Select **New** option to open a new presentation.
- Lists of templates available are displayed as shown in Figure 4.6. Choose any one to open the new presentation in the selected template.

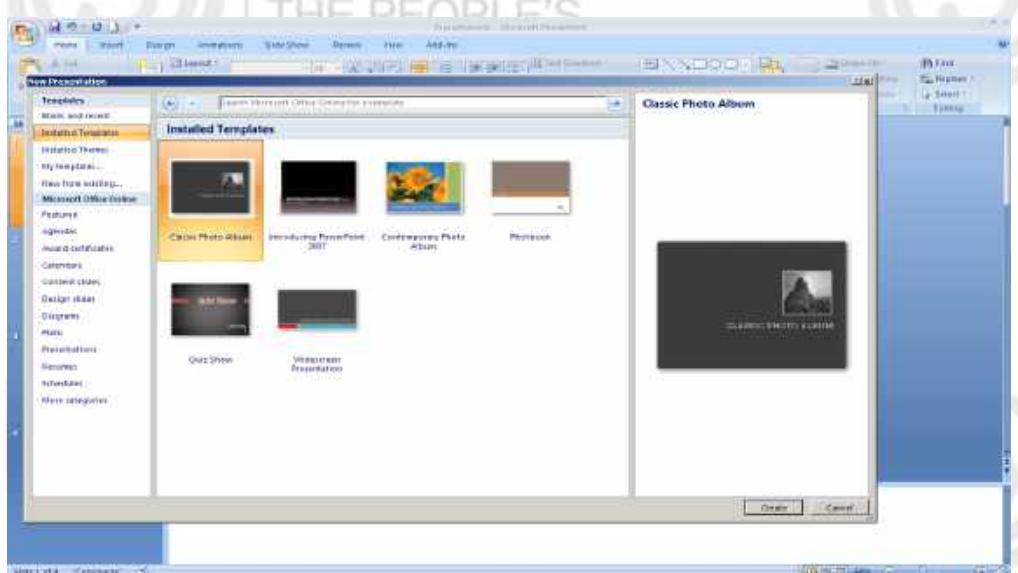


Figure 4.6 : New Presentation

- To open an existing presentation choose **Open** option and select the presentation to be opened.

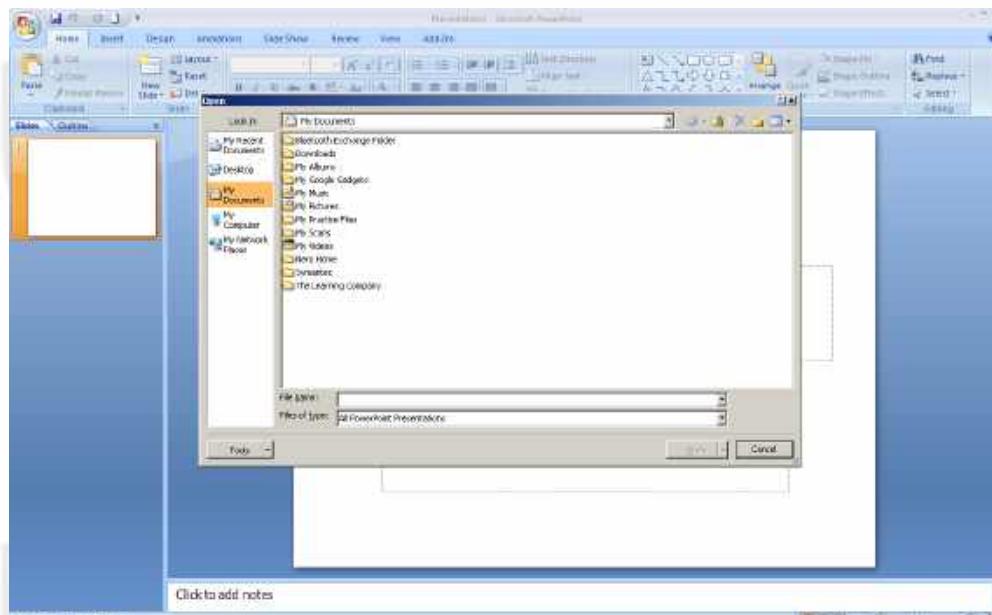


Figure 4.7 (a) : Open an existing Presentation

- To save the Presentation, choose **Save** option from the **Microsoft office** button and give the name for the presentation.

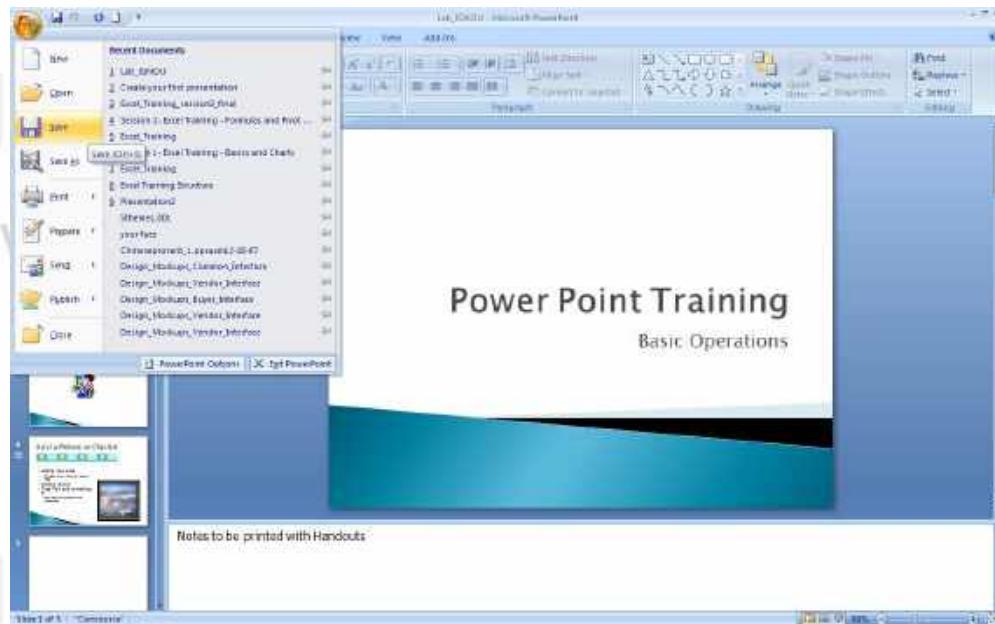


Figure 4.7 (b) : Save a Presentation

Applying a Theme to the Presentation

Every Presentation can be based on a Theme which determines the look and color of the slides and gives the presentation a constant look to all the slides.

A Theme includes the following elements:

- Background design
- Colour scheme
- Font types and sizes
- Placeholder positions

The colour scheme will include the background colours, font colours, fill colours or the shapes, borders and table colours etc. The theme will not affect the layout chosen for the presentation and basic layout will remain the same but will be implemented with the theme.

To choose a Theme for the presentation:

- Click the **Design** Tab on the menu.
- The Theme samples are shown as thumbnails in the **Themes** group.
- When any theme thumbnail is chosen, a preview of the same is shown on the slide
- When the theme is selected by clicking on the thumbnail, it is applied to all the slides in the presentation

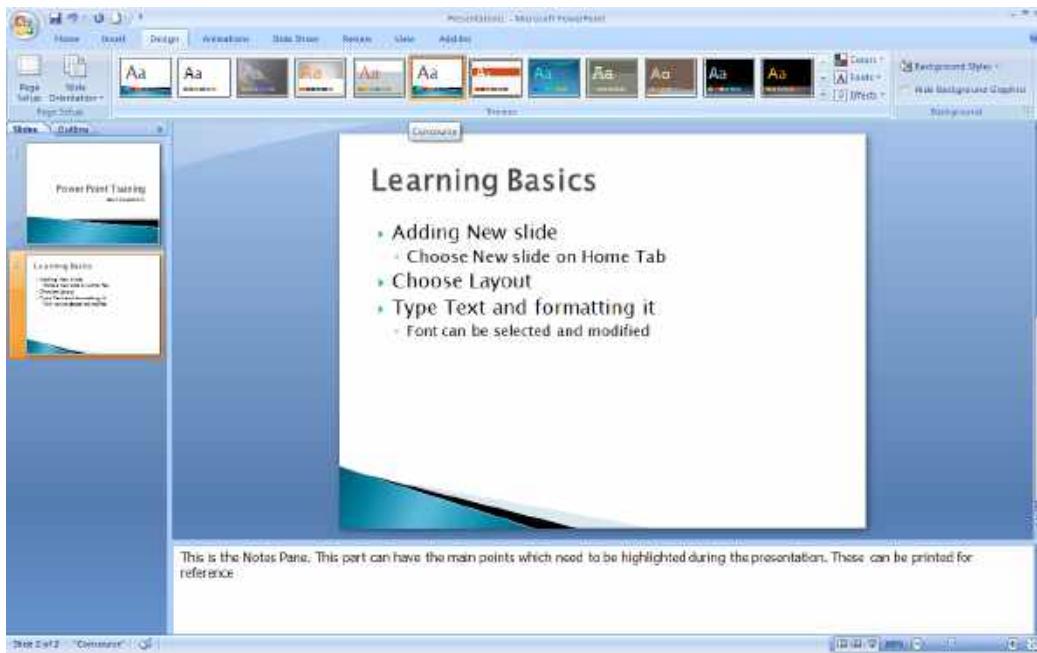


Figure 4.8 : Theme Selection

Every new Presentation is by default opened with the Office Theme. New Theme can be chosen and applied as and when required.

Working with Pictures and Clipart

The Presentation can be given bright and colourful appearance by adding Pictures and Clip Arts. There are two different methods of inserting pictures and non-text items into the slides.

Inserting a Picture

When a new slide is added, different icons appear on the Placeholder. These icons are used to insert the non-text items like pictures, clip arts, animation files etc.

- Click on the **Clip Art** icon in the placeholder.
- The Clip Art pane will open as shown in Figure 4.9. Search for the kind of clip needed.

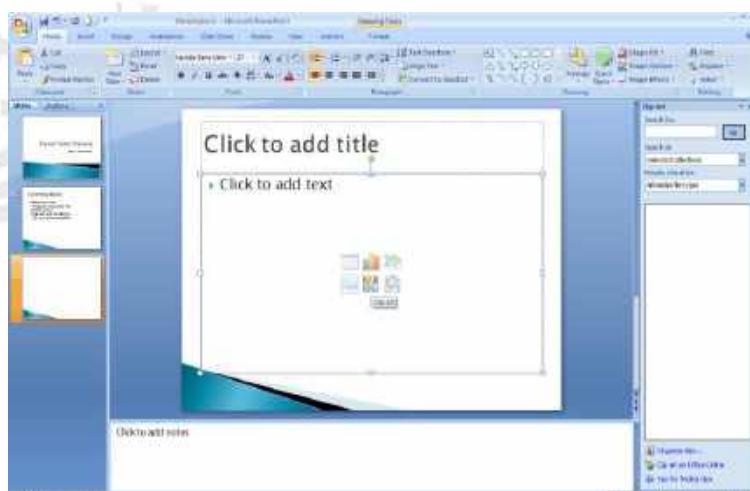


Figure 4.9 : Select Clip art

- Select the Clip that is to be inserted into the slide. The picture will automatically get sized and inserted in the placeholder as shown in Figure 4.10.
- The position and size can be modified as required.

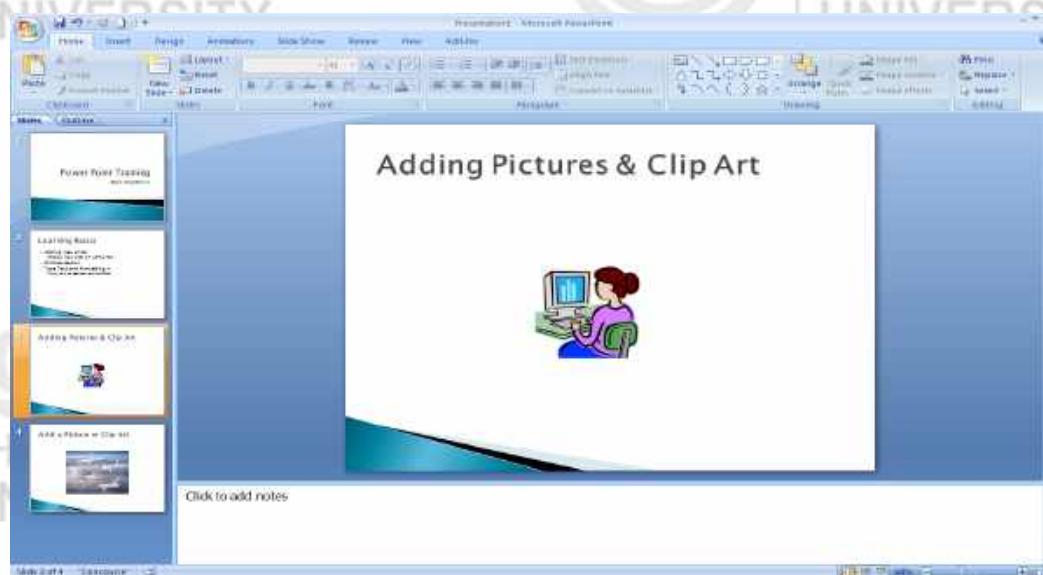


Figure 4. 10 : Clip Art added

Another way is to use the Insert tab in the menu. All non-text items like pictures, sound files, animation files, text boxes, hyperlinks etc. can be added from this menu option.

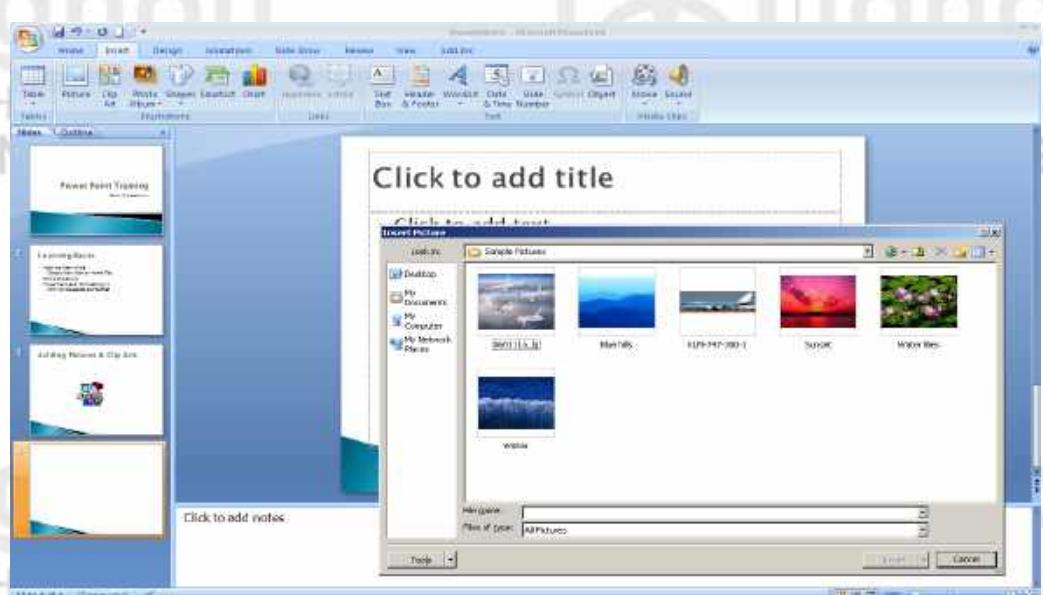


Figure 4.11 : Adding Picture

Once the file is selected, it gets inserted into the slide. The position and size can be modified as required.

Please note that when a picture is added into the presentation it can increase the size of the presentation.

Formatting the Picture

The Picture or Clip Art can be formatted to change the picture brightness, compress the picture, change its contrast, or give new picture styles.

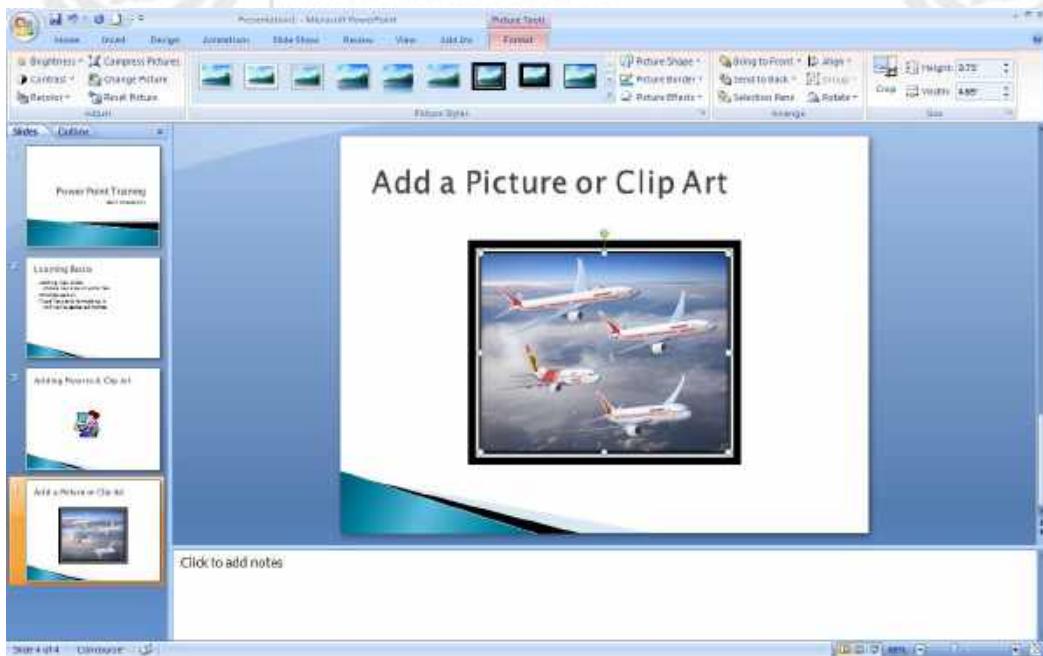


Figure 4.12 : Picture Format

- Click on the Picture or Clip Art to be formatted.
- The **Picture Tools -> Format menu** appears with various options like Picture Brightness, Contrast, Resize, Border, Styles, and Effects etc.
- Any of these can be applied to the selected picture or Clip Art.

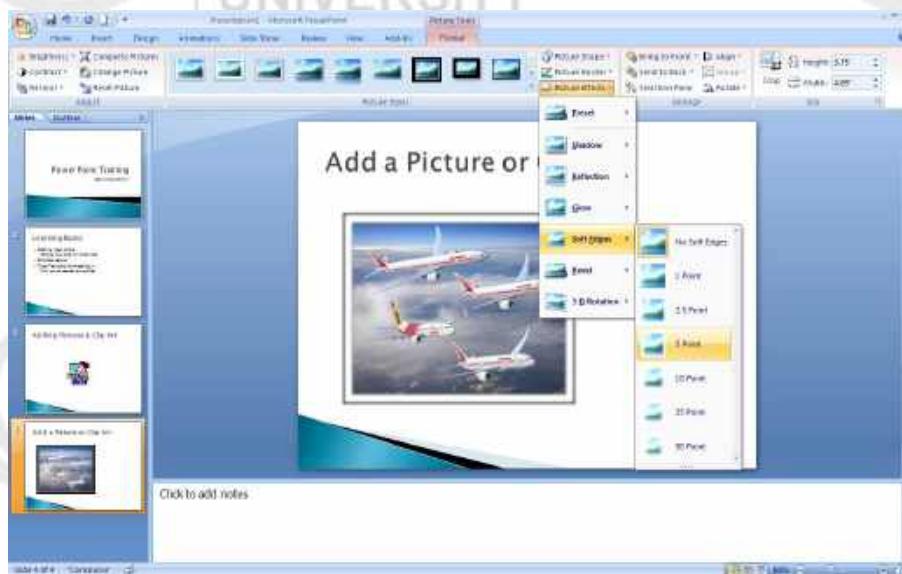


Figure 4.13 : Picture Effects

Arrange the Pictures & Clip Art

After the Picture or Clip Art has been selected and formatted, all the objects on the slide have to be aligned correctly.

- Choose all the place holders that have to be aligned.
- Then use the **Arrange** option in the **Format** Tab to Order, Group and position the objects.

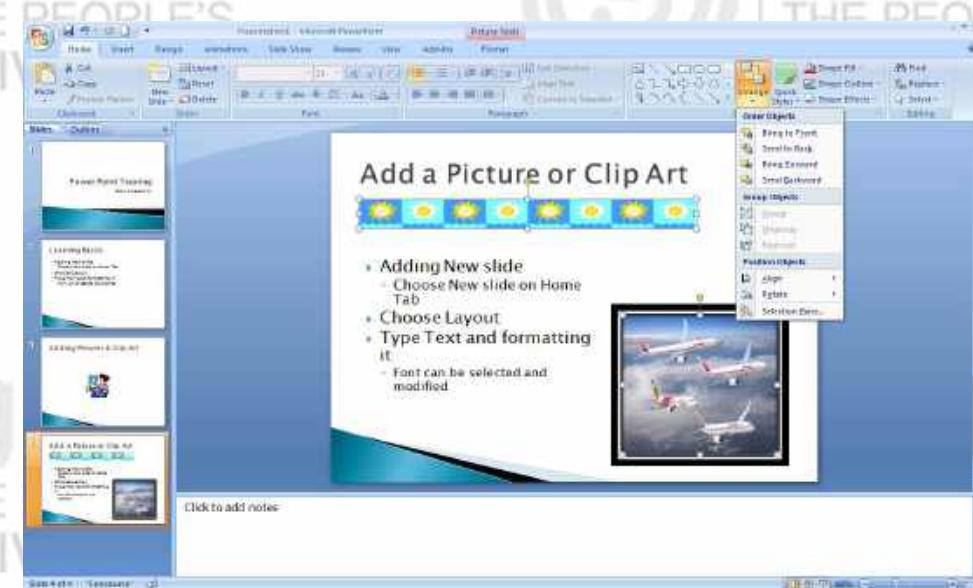


Figure 4.14 : Arrange Objects

Working with Animation and Videos

The Text and objects like charts, graphs, bullets, tables etc can be animated within a presentation. Special sound effects or visual effects including movement can be applied to the objects to control the flow of information or to focus on important points as well as give a better look to the presentation.

There are built-in animation effects within PowerPoint which can be used on the individual slides within the presentation or the layout can be customized. Also, custom animation effects can be created if required.

Apply built-in Animation effect to an object

To apply a built-in animation effect:

- Select the text or object that has to be animated
- On the **Animation** Tab, in the **Animation** group, choose the Animation effect from the Animate list.

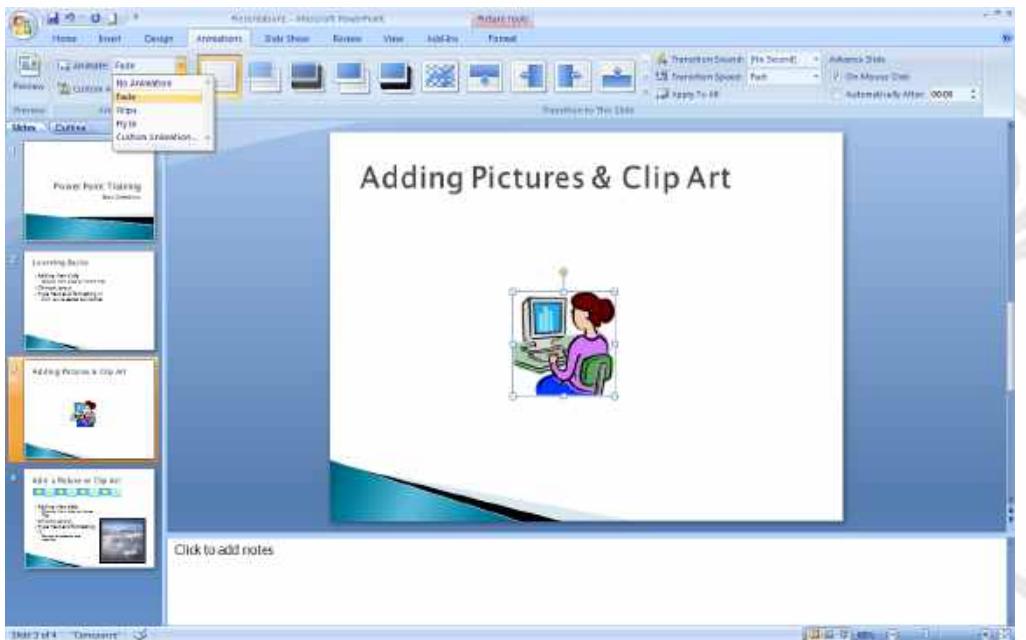


Figure 4.15 : Animate Object

Custom effects can be added by to the objects by choosing the **Custom Animation** option from the Animation Tab.

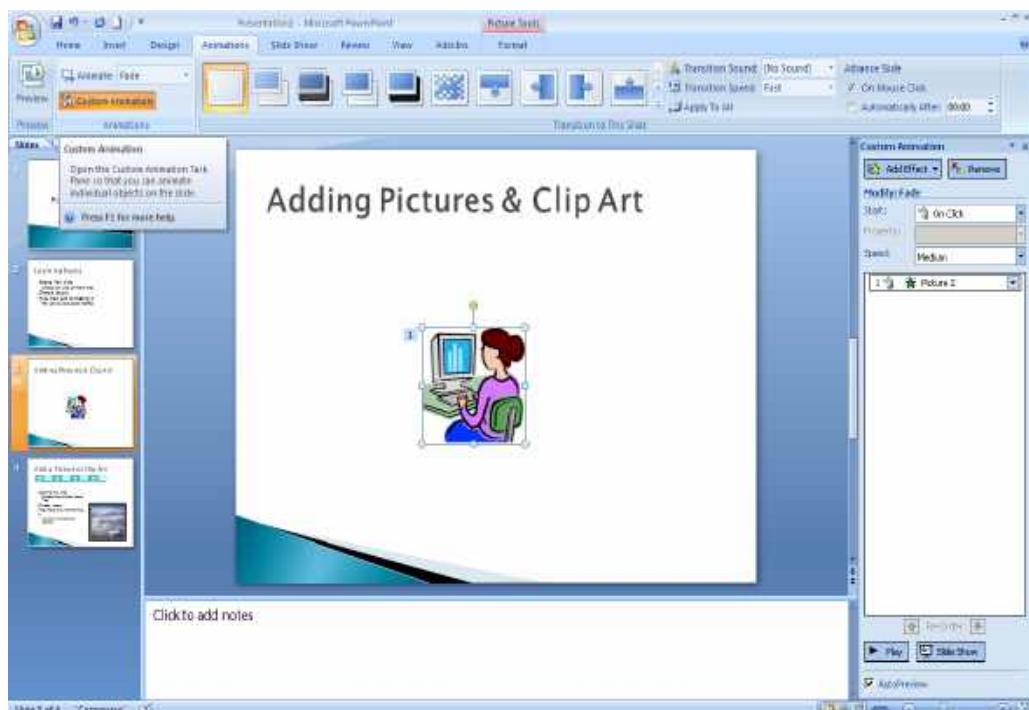


Figure 4.16 : Custom Animation

Adding Slide Transition

PowerPoint provides various types of slide transitions like Blinds Horizontal, Box in, Box out Blinds Vertical, Checkerboard Across, Checkerboard Down etc.

The same transition can be added to all slides or different transition can be applied to different slides.

- Select the Slide from the Slide window to which slide transition has to be applied
- On the **Animation** Tab, in the **Transition to this Slide** group, choose any of the transition effect option.
- The transition speed between the current slide and the next slide can also be set.
- To apply the same effect to all the Slides, Click **Apply to All** option.

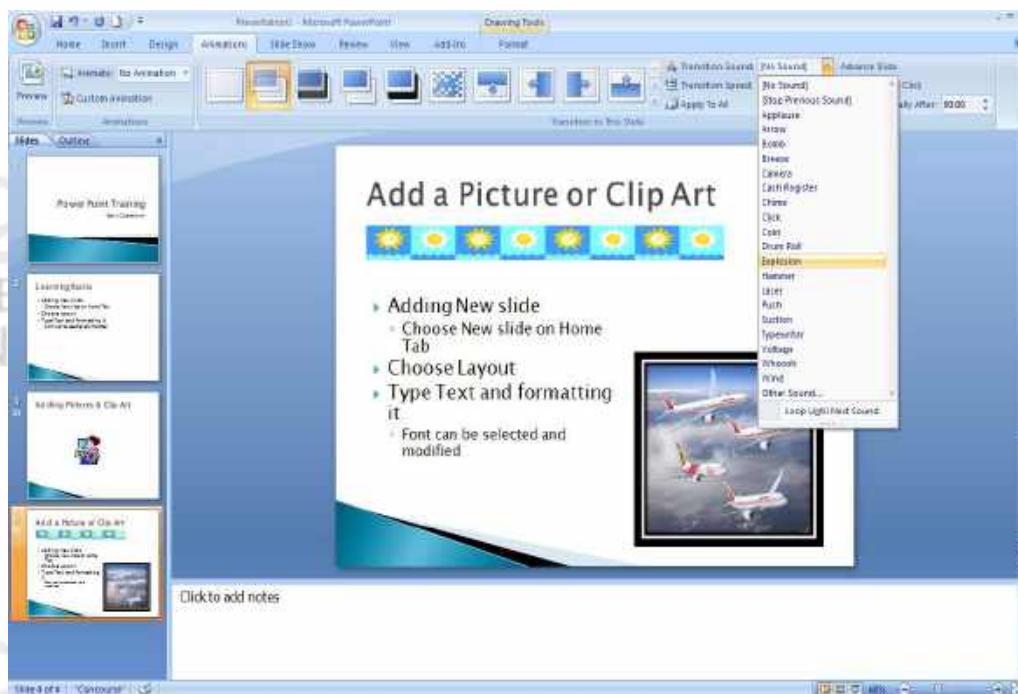


Figure 4.17 : Slide Transition

The sound effect for the Slide transition can also be chosen from the **Transition Sound List**.

Add and Play Movie in a Presentation

Movies are video files with formats such as AVI or MPEG. Animated GIF files which include motion can also be included. Unlike the pictures, clipart drawings etc which are embedded in the presentation, the movie files are linked to the presentation. If the location of the file is modified, the movie file cannot be located.

To add a Movie to the slide:

- In **Normal** View, click the slide to which the movie has to be added.
- On the **Insert** Tab, in the **Media Clips** group, select the **Movie** option.
- Choose the option **Movie from File**, locate the folder that contains the file and then select the file to be inserted.
- Choose from the option to play the movie **Automatically** or **When Clicked**. This will allow the movie to be played either automatically when the slide appears or has to be started explicitly by clicking on the movie button.

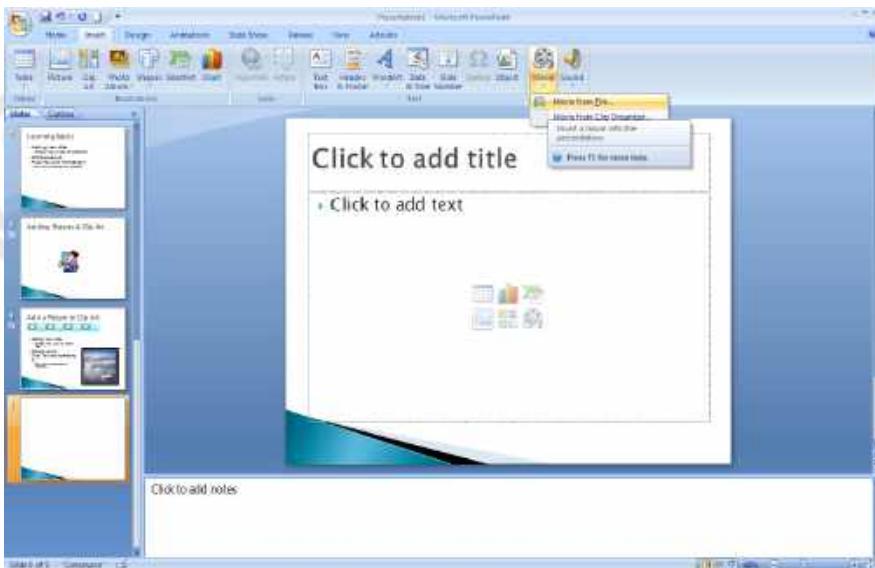


Figure 4.18 : Movie from File

When a movie is inserted, a pause trigger is added called Trigger. This is added because the movie frame has to be clicked within the slide to play the movie. The movie can be played Full Screen also by choosing the **Play Full Screen** option.

Viewing and Printing the Presentation

Once the Presentation is ready, one has to prepare to present it. It can be viewed as slide show on the computer first. Spell check utility can be used to run spelling checked. Notes can be viewed in Print Preview mode to see how they would look when printed.

Rearranging and adding or deleting slides

The order of the Slides can be changed at any point of time.

- To rearrange the slides, Choose **View** tab from the menu and select the **Slide Sorter** option.
- Here all the slides are shown as thumbnails. Any slide can be selected and moved around to re-arrange the order of the slides.

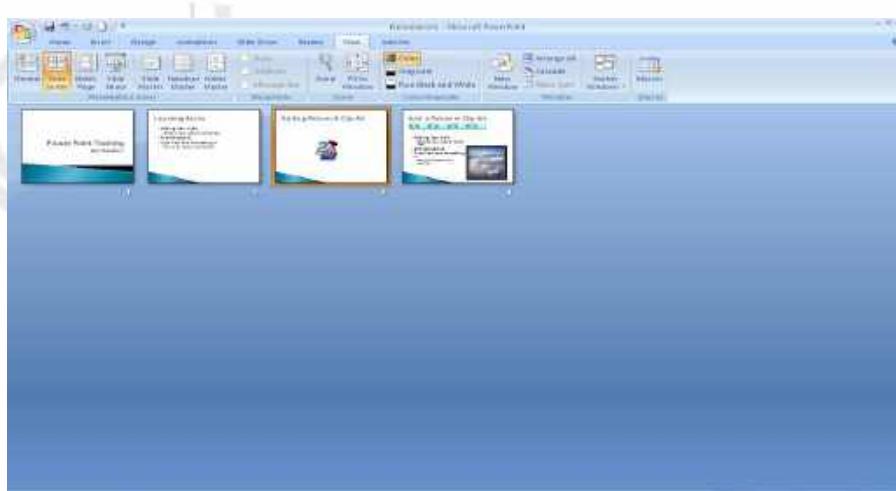


Figure 4.19 : Slide Sorter

In the **Slide Sorter** view mode, any slide may be deleted by choosing the **Delete Slide** option on the Home Menu. And new slide can be added by choosing the **New Slide** option on the **Home** tab.

Viewing the Presentation

After the Presentation is prepared, it can be viewed in Slide Show mode which will give an idea as to how the slides will appear during the presentation display.

- To open **Slide Show** mode, Click **Slide Show** tab and click **Start Slide Show** to start from first slide or current slide. It can also be started by clicking on the **Slide Show** button on the lower right part of the PowerPoint window.
- The Slides will start appearing on the computer screen.
- Once can navigate through the slides either by using the **Slide show toolbar** at bottom of screen or simply by clicking the mouse button.
- To come out of this mode simple press **ESC** key at any point. This will return the view to **Normal** mode.

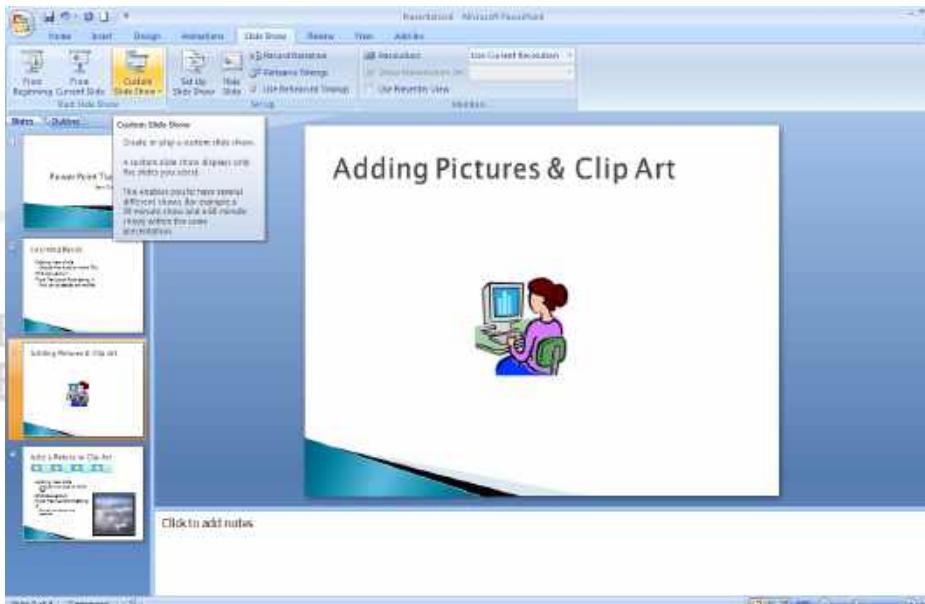


Figure 4.20 : Customizing Slide Show

Once can also set up a Custom Slide show to display only a selected list of slides. This feature helps to create a 30-minute show or a 60-minute show from the same presentation as and when required.

Spell Check, Print Handouts and Notes

To remove any spelling errors, the Spell check option can be used.

On the **Review** tab, in **Proofing** group, click **Spelling** and then choose the correct options as the spell checker moves from one slide to another.

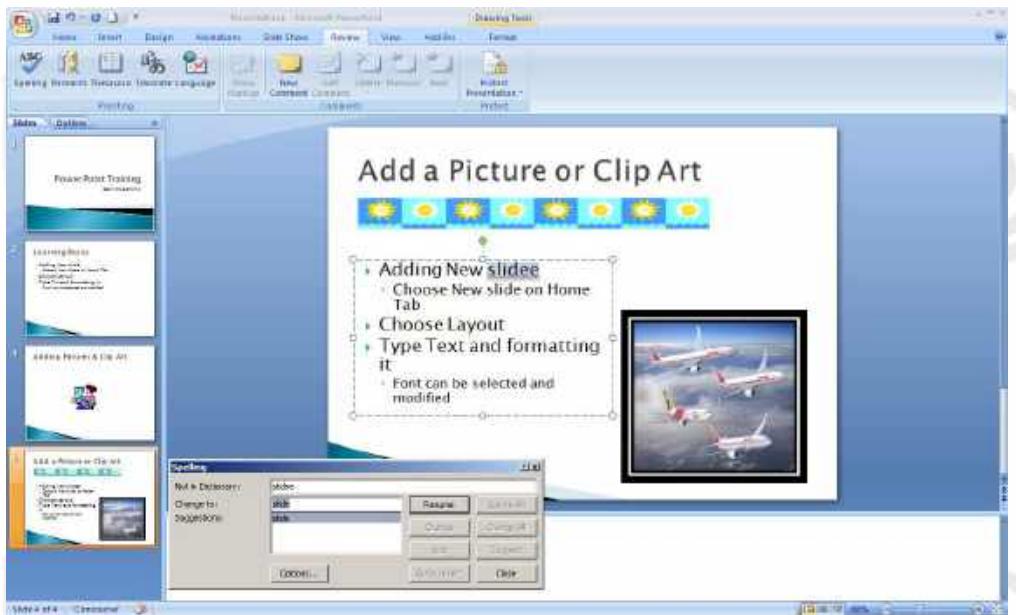


Figure 4.21 : Spell Check

The Handouts for the audience or the Notes for the speaker can be printed using Print Preview option on the Microsoft Office button.

- Select the **Print Preview** option on the **Microsoft Office** button.
- Select **Handouts** from the **Print What** list.
- Choose one of the **Handout** types from the list
- As the Handout type is selected, the same is displayed in the preview mode to show it will look when printed in the selected format.

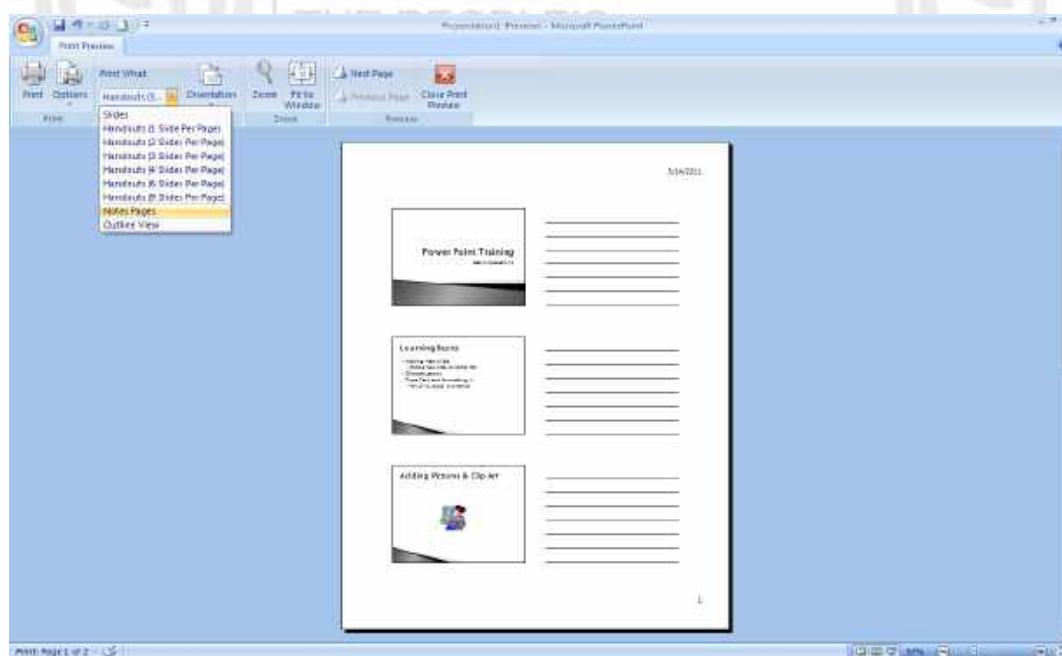


Figure 4.22 : Print Handouts

To Print the Notes for the Speaker, select the Notes Page option from the Print What List as shown in Figure 4.23.

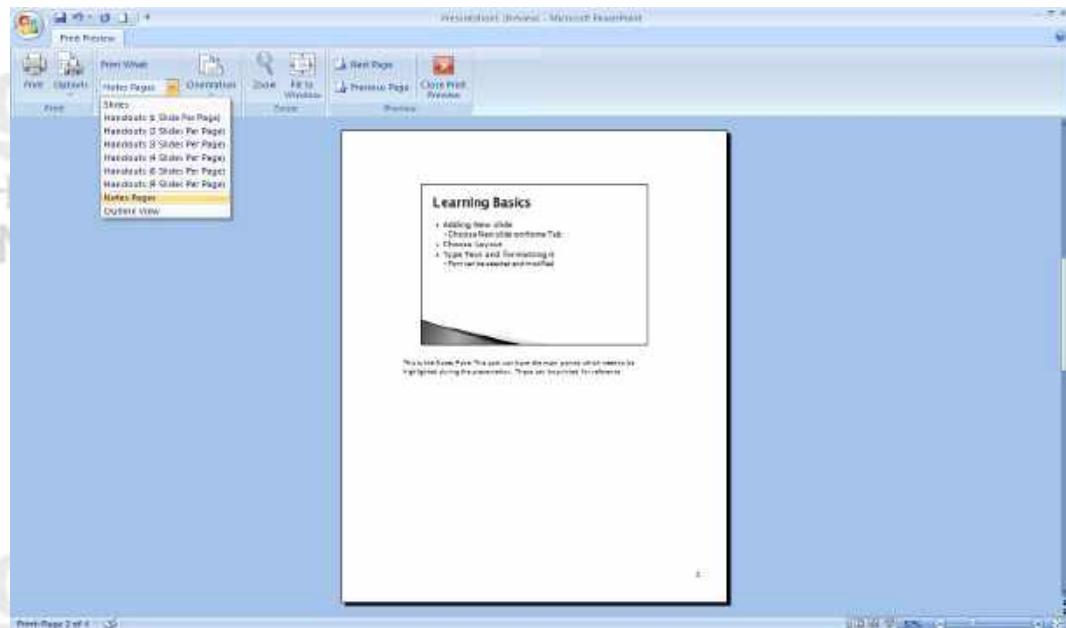


Figure 4.23 : Print Notes

4.3 LAB EXERCISES

1. Take any consumer product of your choice. Make a marketing presentation with at least 10 slides. Use different customized Animation Effects on Pictures and Clip Art on any four of the ten slides?
2. How can a Presentation be reviewed by another person and how are comments added to it?
3. Create a Presentation on “Advantages of Fast Communication in Today’s world” with three different Slide Transitions with Sound effect?
4. How can a Power Point presentation be saved as a RTF file?
5. Create a Photo Album in PowerPoint?
6. Suppose you have already created a presentation for photo album and now you want to do the following:
 - Add slides to this presentation? How will you add slides to this presentation?
 - After creating the photo album, you realized that one of the slides will look better if it had different layout, how do you change the slide layout?
 - Before printing, you want to preview the slides to check the album.
 - Print the copies of your photo album.
7. Create a Presentation for sales presentation with following features:
 1. All the slides should follow common design i.e. same title style, same footer with confidential clause, page numbers.
 2. All slides should have slides notes.

8. Make a short presentation on Cloud Computing technology describing the evolution of the Operating systems?

- For each of the slide you should have Timer based Transition
- Write Speaker Notes for each slide
- Add a video to at least two slides which can be run in Play Full Screen option

4.4 SUMMARY

In this Lab Session, you have learnt how to do the Basic operations on PowerPoint application. You have also seen how a presentation can be made interesting and more exciting using different layouts, various themes, and applying animation and sound effects.

There are lot more features which can be explored further to make your Presentation better and attractive.

4.5 FURTHER READINGS

- Microsoft Office Online Support
- Microsoft Office PowerPoint 2007 for Dummies by Doug Lowe

UNIT 5 E-MAIL

Structure

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5.0 INTRODUCTION

Office Automation Products are widely used in industry for performing all kinds of tasks like word processing, mathematical calculations, documents management, managing E-Mail, making presentations, creating catalogues and brochures and managing websites. Microsoft Office products are the most popular for Office Automation.

Outlook is among the most widely used software for communication through e-mail. Now we will learn the basic features of Outlook 2007 which will help us to manage our communication and make it more efficient.

5.1 OBJECTIVES

After studying this unit, you will be able to :

- basic operations of Outlook;
- managing Contacts;
- calendar and Scheduling Tasks.

5.2 BASIC OPERATIONS

Outlook is used for communication using e-mail, managing contacts, scheduling tasks and appointments using calendar.

Sending An E-mail

Creating and sending an e-mail is perhaps the most frequent task that is performed using Outlook.

- On the File menu, point to **New**, and then click **Mail Message**

- In the subject write the e-mail subject
- Add the recipients' e-mail addresses in the To: and Cc: boxes as needed.
- In the BCc box, add those recipient's e-mail addresses to whom the e-mail has to be sent as copy but the other recipients should not know that the e-mail has been copied to them
- Write the e-mail matter in the space provided.
- Press **Send** to send the e-mail to the recipients.

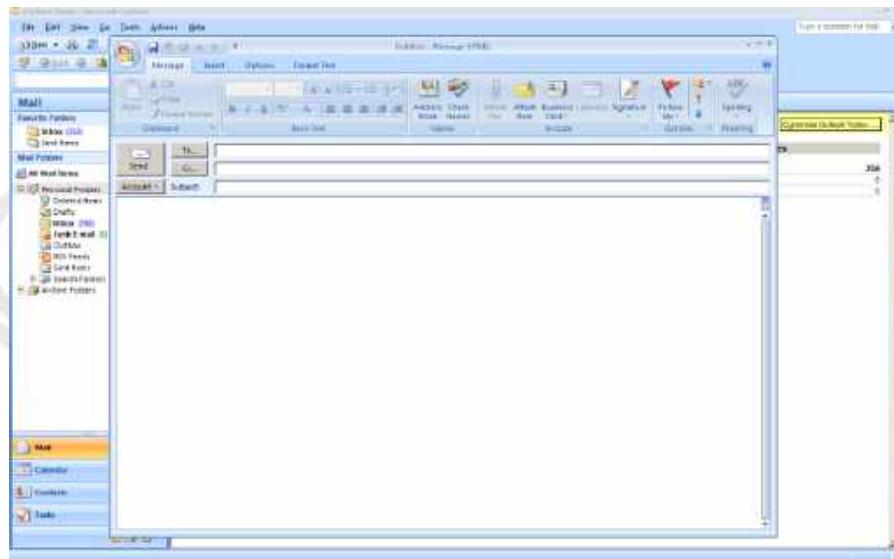


Figure 5.1 : New Message

Assign the Level of Importance

The level of importance for a message can be set so that recipients can see the indicator in their Inbox before they open the item. Setting the level of importance also enables the recipients to sort their messages by importance. Please note that this does not expedite or retard the transmission of the message in any way. It is for the information of the recipient only.

- On the message tab, in the Options group choose the **Button** to set the level to High Importance
- Choose the symbol **Button** to set the importance to low level.

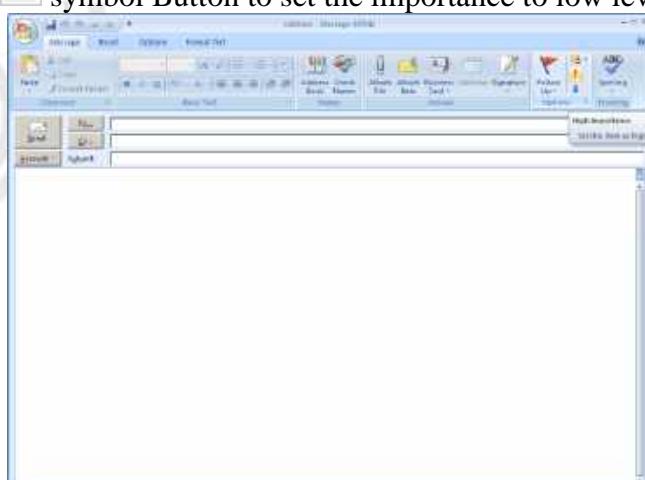


Figure 5.2 : Delivery Importance

Changing the Appearance of the E-mail

One can change the appearance of the e-mail message by changing the font, colour of the font and the background colour.

- On the Message tab, in the Basic Text group, you can select the font, font size, font style (bold, italic, and underline), font color, and text highlighting.
- On the Format tab, in the Font group, you can select the font and font size; increase or decrease the size by one increment; change the font style (bold, italic, underline, strikethrough, subscript, superscript); change the case, the font color, and the text highlighting; and remove all font formatting.
- On the Mini toolbar that appears when you select text, you can select the font, increase or decrease the size by one increment, select a theme, use the Format Painter, select the font style (bold, italic, and underline), and highlight text.



Figure 5.3 : Change Font Size

Add a Signature to the E-mail

You can create a default signature to be added to all your outgoing messages, or you can insert a signature manually into outgoing messages on an individual basis. Do one of the following:

To Insert a signature automatically:

- On the **Message** tab, in the **Include** group, click **Signature**, and then click **Signatures**.
- On the **E-mail Signature** tab, in the **Select signature** to edit list, select the signature that you want.
- Under **Choose default signature**, in the **New** messages list, select the signature that you want.
- If you want to include a signature in messages that you reply to and in messages that you forward, in the **Replies/forwards** list, select the signature. If you don't want a signature in these messages, select none.
- Click **OK**.

To add the default signature to a current message, on the Message tab, in the Include group, click Signature, and then select the signature.

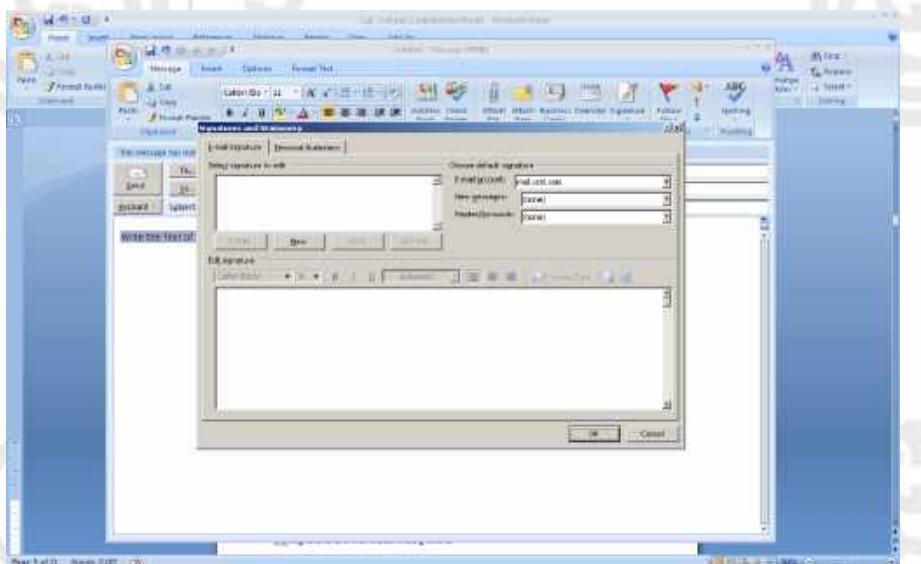


Figure 5.4 : Add a signature

To insert a signature manually, On the Message tab, in the Include group, click Signature, and then select the signature that you want.

Note : You can also access the signature options that are available on the Message tab after you click Reply, Reply to All, or Forward in an open message.

Add an Attachment

One can attach files and pictures etc to the e-mail message and send them to the recipient.

- On the **File** menu, click **New**, and then click **Mail Message**.
- On the Message tab, in the Include group, click **Attach File**, and then click **File**.

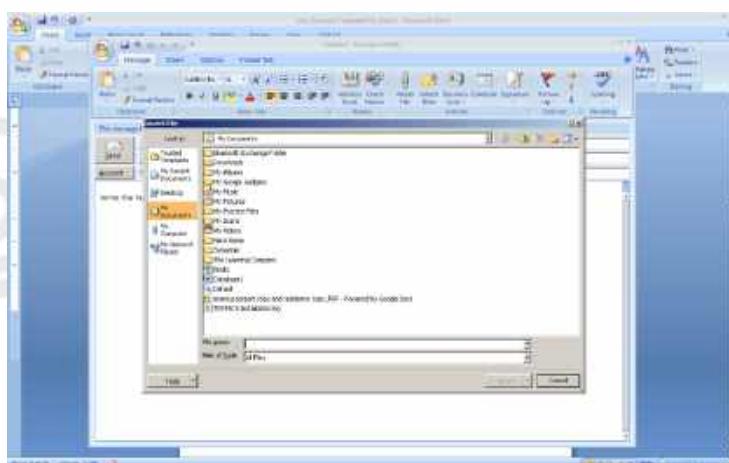


Figure 5.5 : Add Attachment

- Browse to and select the file that you want to attach, and then click Insert.

The selected file will get attached with the e-mail message and will be delivered to the recipient with the message that is sent.

5.3 MANAGING CONTACTS

One can add new contacts (contact: Person, inside or outside of your organization, about whom you can save several types of information, such as street and e-mail addresses, telephone and fax numbers, and Web page URLs.) to the Outlook Contacts by typing all the information directly in the contact form, or you can use other Outlook features that automatically fill in some of that information for you. Each of your contacts is also displayed as an Electronic Business Card. Any changes that you make to a contact are automatically made to the corresponding Electronic Business Card, and *vice versa*.

Create Contacts using Contacts

Contacts can be created with the Contacts directly.

- On the **File** menu, point to **New**, and then click Contact.
- Type a name for the contact.
- Enter the information that you want to include for the contact.
- To specify how you want the contact's name to appear in the To line of a message, type a name in the Display As box.

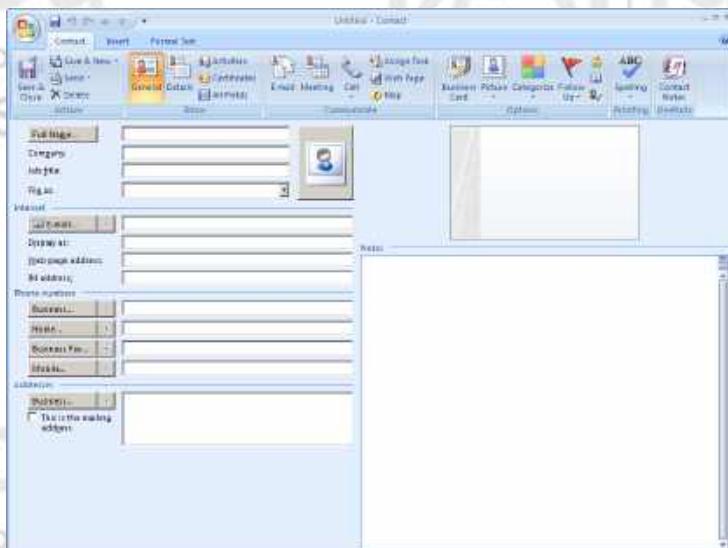


Figure 5.6 Create a Contact

- To enter multiple entries for a field, such as more than one phone number or e-mail address, click the down arrow next to the field.
- If you have more than one mailing address for a contact, select the **This is the mailing address** check box to establish which address is to be used during a mail merge.

When one receives an e-mail message, the sender information can be used to create a contact in your address book.

- Open or preview the e-mail message that contains the name that you want to add to your contact list.
- Right-click the name of the sender who you want to make into a contact, and then click Add to Contacts on the shortcut menu.
- In Outlook, there is no option to add contact information automatically to Contacts or Address Book when you reply to a contact.

Create a Contact from an Electronic Business Card

When you save an Electronic Business Card received in an e-mail message, you create a new contact. If you already have a contact by the same name, you can save the duplicate as a new contact or update the original.

- In an open message, right-click the card, and then click **Add to Contacts** on the shortcut menu. The new contact opens in the contact form.
- On the **Contact** tab, in the **Save** group, click **Save & Close**.
- If you already have a contact with the same name, Outlook detects the duplicate. Do one of the following:
 - Select **Add** the new contact. This creates a duplicate contact, including a contact form and Electronic Business Card.
 - Select **Update** the information. Existing duplicate contacts are listed. Double-click the contact to update it, and then update the information on the contact form and save it.

Find a Contact

When one needs to find a contact, you will have to search for the contact using his/her details in the address book. The Contacts can be arranged in different Views such as Business Cards, Address Cards or a Table View. A View is a different arrangement or format which help us to look at the same information in different ways. This can be done using the drop down list in the Toolbar Options. In order to perform the Search, any of the following methods can be used:

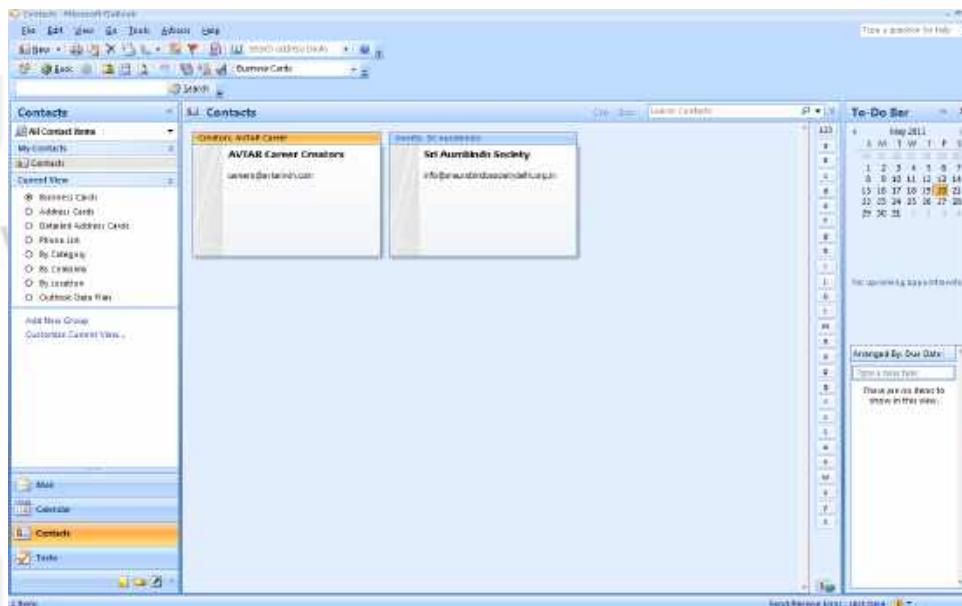


Figure 5.7: Search Address Book

- On the **Search** toolbar, type the name of the contact or any other information based on which the search has to be made such as street and e-mail addresses, telephone and fax numbers, and Web page URLs.

You can enter a partial name, such as Hari Sh, a first or last name, an e-mail alias, a display name, or a company name. To quickly open a contact that you previously searched for, click the arrow in the Search Address Books box and select a name.

- In any of the card views such as Business Cards or Address Cards, click a letter in the alphabetical index displayed next to the cards.
- In any table view, such as Phone List or By Company, click a column heading to sort the contacts by the criteria that are associated with the column. Some examples of column headings are Full Name, Job Title, Company, and Categories.

Calendar and Scheduling Tasks

The Calendar can be used to set up reminders for tasks, schedule appointments, meetings etc.

Set or remove Reminders

Typically, reminders are associated with tasks and deadlines. However, reminders are versatile and can be used with calendar items, e-mail messages, and contacts as well as tasks.

To set or remove reminders in appointments and meetings, do one of the following:

For all new appointments or meetings that you create

- On the **Tools** menu, click Options.
- To have a reminder automatically turned on or off for new appointments or meetings, on the Preferences tab, in the Calendar group, select or clear the Default reminder check box.

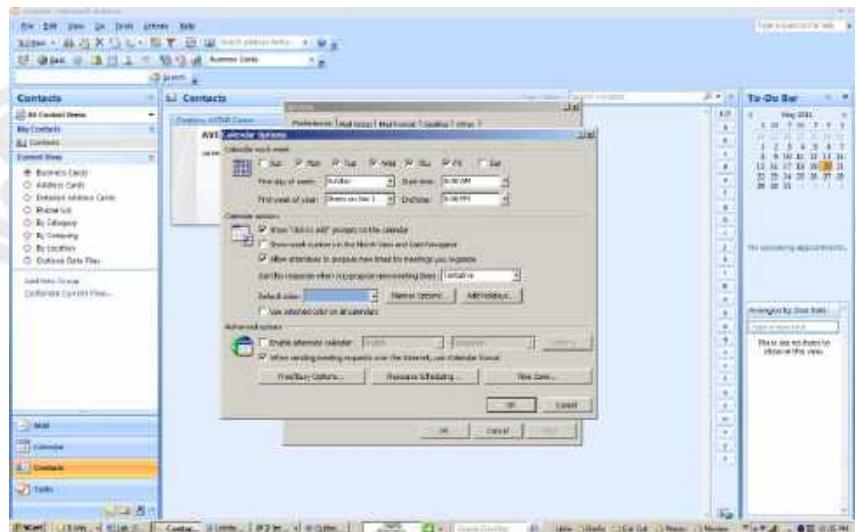


Figure 5.8: Reminder Options

- If you select the check box, enter the amount of time before the appointment or meeting when you want the reminder to appear.

For existing appointments or meetings

- Open the appointment or meeting.
- If the **Open Recurring Item** dialog box is displayed, you must decide whether to change the reminder for the occurrence that you opened or for the entire series. Click either Open this occurrence or Open the series, and then click OK.
- On the **Appointment** tab, in the Options group, in the Reminder list, select the amount of time before the appointment or meeting when you want the reminder to appear. To turn a reminder off, select None.

Schedule an Appointment

Appointments are activities that you schedule in your calendar that do not involve inviting other people or reserving resources.

- On the File menu, point to New, and then click Appointment.
- In the Subject box, type a description.
- In the Location box, type the location
- Enter the start and end times. One can type specific words and phrases in the Start time and End time boxes instead of dates. For example you can type Today, Tomorrow, New Year's Day, Two Weeks from Tomorrow, Week from Yesterday, Three days before New Year's Day, and most holiday names.
- Select any other options that you want.
- To make the appointment recur, on the Appointment tab, in the Options group, click Recurrence.
- Click the frequency (Daily, Weekly, and Monthly, Yearly) with which the appointment recurs, and then select options for the frequency.
- Click OK.
- On the Appointment tab, in the Actions group, click Save & Close.



Figure 5.9: Creating an Appointment

Change an Appointment

Open the appointment that you want to change and do one of the following:

To Change options for an appointment that is not part of a series:

- Change the options, such as subject, location, and time, that you want to change.
- On the Appointment tab, in the Actions group, click Save & Close.

To Change options for all appointments in a series:

- Click Open the series, and then change any options, such as subject, location, and time, that you want to change.
- To change recurrence options, on the Recurring Appointment tab, in the Options group, click Recurrence, change the options, such as time, recurrence pattern, or range of recurrence, and then click OK.
- On the Recurring Appointment tab, in the Actions group, click Save & Close.

To Change options for one appointment that is part of a series

- Click Open this occurrence.
- On the Recurring Appointment tab, change the options, such as subject, location, and time that you want.
- On the Recurring Appointment tab, in the Actions group, click Save & Close.

Schedule a Meeting

A Meeting is an appointment where different people are invited and resources can be reserved. One can create and send meeting requests and reserve resources for face-to-face meetings or for online meetings. When you create a meeting, you identify the people to invite and the resources to reserve, and you pick a meeting time. Responses to your meeting request appear in your Inbox.

- On the File menu, point to New, and then click Meeting Request.
- In the Subject box give the subject of meeting and specify the location or venue of meeting in the Location box



Figure 5.10 : Location Box

- Give the meeting start and end time in the Start and End time drop box. One can even make the meeting an all day event by clicking on the checkbox.
- Type any information that you want to share with the recipients, attach any files
- On the Meeting tab, in the Show group, click Scheduling Assistant. The Scheduling Assistant helps to find the best time for your meeting.
- Click Add Others, and then click Add from Address Book.
- In the Select Attendees and Resources dialog box, in the Search box, enter the name of a person or resource that you want to invite to the meeting
- If you want to make the meeting recur, on the Meeting tab, in the Options group, click Recurrence, select the recurrence pattern, and then click OK.

Change a Meeting

In case any meeting has to be changed, it can be done as follows:

- Open the meeting that you want to change.

- Change any options, such as subject, location, and time, that you want to change.
- To change recurrence options, on the Recurring Meeting tab, in the Options group, click Recurrence, change the options, such as time, recurrence pattern, or range of recurrence, and then click OK.
- Click Send Update.

5.4 LAB EXERCISES

1. Write an e-mail to the Student Evaluation Division stating that you have not received your Semester Mark Sheet. In the e-mail use the following features:
 - Mark the e-mail to different recipients
 - Mark a Blind Carbon Copy to yourself
2. Change Reminder Options using the Preference Group and see the effect in your e-mail settings.
3. Make an appointment for Project Weekly Meetings and make it reoccur every Friday morning at 10am.
4. Write an e-mail inviting your friends to your Birthday Party. Make your own Signature and add it to the e-mail message. Add a word attachment which gives them the venue route.
5. Use an Outlook feature to send out a default message when you go on personal vacations / holidays.
6. Suppose one of your colleagues named 'Vikas' is sending across a large number of e-mails which you wanted to delete automatically. Please use outlook features to configure your account to achieve this functionality in your mailbox.
7. Suppose you have been getting a lot of junk mails that have filled your mailbox, how can you permanently get rid of all these junk mails?
8. Out of the junk e-mail folder, there are some messages from your friend named 'Arti' which were redirected into junk mails folders. You don't want her e-mails to be marked as junk in future. What should you do to achieve this?
9. Create a rule which allows all high priority mails from your professor to an important folder unless subject says 'Unimportant' and then flag these mails for follow-up.
10. How can you set up an alert on the desktop to notify you whenever an e-mail arrives in your inbox?

5.5 SUMMARY

In this Lab Session, you have learnt how to do the Basic operations on E-mail application. You have also seen how to write e-mails, change the appearance of your e-mails, how to use Outlook to schedule appointments and reminders and how to manage your Contacts Address Book.

There are lot more features which can be explored further to make better and more efficient usage of Outlook software.

5.6 FURTHER READING

- Microsoft Office Online Support.

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UNIT 6 BROWSING AND DISCUSSION FORUM**Structure**

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6.0 INTRODUCTION

In today's world, you repeatedly hear the terms Internet, going online, surfing the net, browsing and searching. If you want any information on any topic, you say you can look up online, or search the net. People all over the world, from all walks of life use the Internet. They look for availability of movie tickets, local

restaurants in an area, jobs availability, research papers on varied topics in areas touching any aspect of life, etc. on the Internet.

Since, Internet has become so important, its use is considered an essential aspect of computer use. In other words, mastering the Internet is one of the first things to do to get the most from the computing experience.

6.1 OBJECTIVES

After going through this unit, you will be able to

- learn how to use the Web Browser;
- learn how to search the information on the Web;
- learn different ways to communicate, interact and collaborate on the Web; and
- learn how Internet can be used to create different online communities.

6.2 BROWSING THE WEB

Browsing the web is similar to surfing the channels on TV. On TV, you continually change channels until you find a program of your interest; this is known as channel surfing. Similarly, on the Web you select a link by clicking on the word or picture to open a new document or picture. Progressively clicking through the Web by triggering the links that interests you is known as **browsing**, a term synonymous with surfing the Net.

6.2.1 The Browser

A **Web Browser** is a software application you use to surf the Web. It is a program designed to find the hypertext documents on the Web and then open those documents on your computers.

Microsoft **Internet Explorer**, Mozilla **Firefox** and Google **Chrome** are the popular Web browsers of current times.

We will consider Google Chrome for our study.

6.2.2 Launching the Browser

Click on the **Start** menu button.

Choose **All Programs** option.

Click on Google Chrome option.

Note: Before you launch the browser, please ensure that your computer is connected to the Internet.

The browser window opens as shown in the Figure 6.1. The page that opens when you launch the browser depends on your browser settings. The browser can be customized as follows:

1. Click the wrench icon  on the browser toolbar.
2. Select **Options** from the pull down menu.
3. Set the **Startup** and **Homepage** sections.

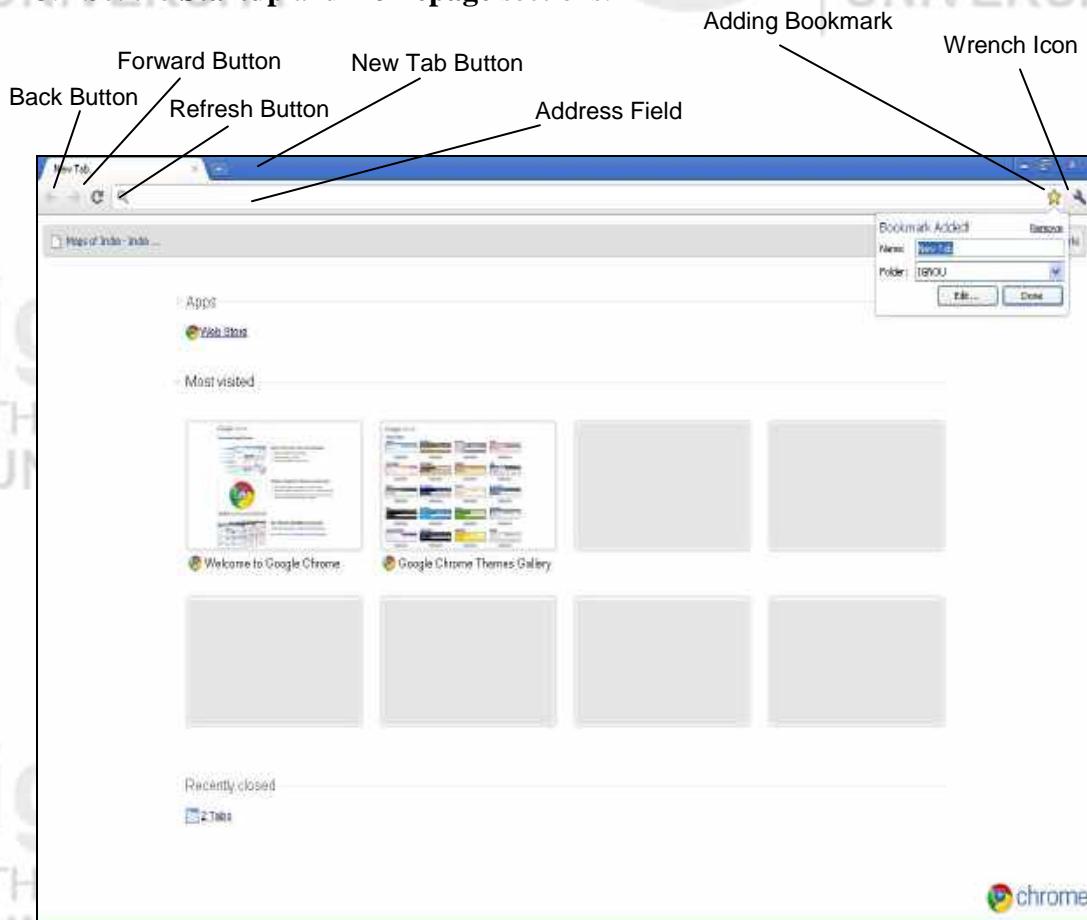


Figure 6.1 : Google Chrome Web Browser

6.2.3 Enter URL's in Address Field

Every place on the Web has a global address known as a **Uniform Resource Locator (URL)**. A URL uniquely identifies the Website or its associated pages.

1. Click once in the address field to position your cursor there. In case there is an address already there, delete it.
2. Type www.mapsofindia.com and press enter
3. The website will open.

6.2.4 Create New Tab

1. Click on New Tab button on the top of the browser.
2. Type www.ignou.ac.in in the address field. And press enter
3. The IGNOU website opens.

You can navigate between the two tabs that you have opened.

6.2.5 Bookmark Web Page

You can Bookmark your favorite or most frequently visited pages. This allows you to go directly to those pages from the Bookmarks list, rather than type the URL. If you have too many Bookmarks in the list, you may organize them in folders and sub folders for easy access.

A single click on the star adds the page to the Bookmarks list and the star changes to yellow color. If you click the star again, the bookmark is removed.

In the IGNOU tab

1. Click on the star at the end of the address line to bookmark the page.
2. Star color changes to yellow. A small bookmark window opens.
3. Leave the bookmark “Name” as is.
4. Click on the drop down button for folder and “Choose another folder”.
5. In the pop up window, click on create new folder and give the new folder any name.
6. Click OK button.

The page bookmark is stored in the new folder that you created.

To see how your bookmarks have been organized,

1. Click the wrench icon  on the browser toolbar.
2. Choose “Bookmark Manager”.
3. A bookmark manager tab opens and displays all the bookmark folders/ subfolders and pages.

6.2.6 Remove Bookmark

In the IGNOU tab

1. Click on the yellow star at the end of the address line to bookmark the page.
2. A small bookmark window opens.
3. Click on the ‘Remove’ hyperlink on the right side of the window.
4. The star color changes to white and the bookmark is removed.

Bookmarks can also be deleted through the Bookmark Manager.

6.2.7 Navigation Buttons

At the top left of the browser you should see a row of navigation buttons – back and forward buttons.

The Back button takes you to previously opened web page. Conversely, the Forward button moves you to ahead to the page you visited before you clicked the Back button. When you Right-click on the Back or Forward buttons, a list pops up that shows the whole path you followed.

6.2.8 History List

The browser creates a History list of the web pages visited earlier.

1. Click the wrench icon  on the browser toolbar.
2. Choose “History” from the menu.
3. A History tab opens which lists all the previously visited pages.

6.2.9 Downloading Files

Downloading means to copy files from the Internet to your machine. You can download any type of file – text, pdf, exe, spreadsheet, audio, video or image file from the internet as long as either it is a freeware or you have paid for it. Any file or image on the Internet is copyrighted if it not freeware and it is illegal to use the material for commercial purposes without getting permission from the copyright owner.

Images: You can copy an image by using the right mouse click on the image and selecting the ‘Save image as...’ option. You can also click the ‘Download’ button to download the pictures as on the website www.freeclippictures.com.

Audio, Video and other files: Normally, you have to click on the ‘Download’ button to copy the file on your computer. When the browser displays ‘Save’ or ‘Save As’ dialog box, choose where you want to save the file.

6.3 SEARCHING THE WEB

Search Engines are tools that help you find specific information and websites on the internet. There are many search engines available, but we will consider Google’s search engine for our reference.

6.3.1 Basic Search

1. Go to www.google.co.in. The site opens as shown in Figure 6.2. You may change the language and see how all the labels change. We will use English for our purposes.

2. You can also change your search preferences through the link ‘Search Setting’.
3. Type whatever you want to search for in the Search Box and hit Enter or click Google Search button. All the words that you have typed will be used for the search. For example type **printer**.
4. A list of all the web pages that have **printer** in it will be displayed with links to their websites.
5. Also it gives the number of results below the search box.
6. The more words you use for your search, the more restrictive it becomes. For example if you use **color printer**, it gives less number of results. And if you use **color inkjet printer**, it gives still lesser number of results.
7. You may also check that the search is case insensitive.



Figure 6.2 : Google India Search Engine

6.3.2 Advanced Basic Search

1. **Phrase Search(" ")**: By putting double quotes around a set of words, you are telling google to consider the exact words in that exact order without any change. For example search for *Mohandas K. Gandhi* and for “*Mohandas K. Gandhi*”. See the difference in number of results.
2. **Search within a specific website (site:)**: Google allows you to specify that your search results must come from a specific website. Search on *gurgaon site:timesofindia* will return pages on gurgaon but only from *timesofindia.com*.

3. **Term to exclude (-):** Attaching a minus sign immediately before a word indicates that you do not want pages that contain this word to appear in your results. The minus sign should appear immediately before the word and should be preceded with a space. Example, search on *color printer -inkjet* lists all color printers that are not inkjet.
4. **Fill in the blanks (*):** The * is a wild card character. For example if you search on *Google **, it will give you results about many of Google's products.
5. **Search as is (+):** By adding + immediately before the word, you tell the search engine to match that word as is, and not to look for its synonym in the search.
6. **The OR operator:** Used to search for *either* of several words, instead of all the words.

6.3.3 Advanced Search

With Advanced Search, you can search for pages that...

- contain ALL the search terms you type in
- contain the exact phrase you type in
- contain at least one of the words you type in
- do NOT contain any of the words you type in
- is written in a certain language
- is created in a certain file format
- was updated within a certain period of time
- contain numbers within a certain range
- within a certain domain, or website
- don't contain "adult" material

6.4 DISCUSSION FORUMS AND GROUPS

Discussion Forums are online communities of people with similar interests. Members of a forum can communicate, discuss, share and comment on an idea through messages. There are many forums available on the net, each dedicated to a specific subject, like karate, travel, gardening, cooking, vintage cars, Photoshop, aviation, laser eye surgery, etc. Anyone can register on the forum website and become a member of the forum. Registering gives you the opportunity to contribute your ideas and share your views with other members. Some examples of discussion forum websites are *karateforums.com*, *photoshopforums.com* and *discussions.hardwarecentral.com*.

Each discussion forum has a group of community users who are knowledgeable about the subject matter. These users are called **moderators** who are responsible for the quality and effectiveness of the discussions. They keep the discussions

fresh and clean by starting new topics and removing inappropriate content. Any new topic in the forum is called a ‘**Thread**’ and all the messages associated with a thread are called ‘**Posts**’.

Discussion Groups like Google Groups or Yahoo Groups are based on the concept of mailing list. You create and see the threads using e-mail and only people who are subscribed to that group are able to see the threads (e-mails).

Unlike discussion forum, a discussion group does not need any additional hardware or software for its set up. We will study setting up and using a discussion group in detail, taking Yahoo Groups as our example.



Figure 6.3: Yahoo Groups Main page

6.4.1 Creating a Yahoo Group

1. Go to <http://in.groups.yahoo.com/>. You get the screen as above
2. Click on the link ‘Start your group’. If you already have a Yahoo Id then login using that, else click on the ‘Create New Account’ button. Enter all the details asked for and a new Yahoo Id will be created for you.
3. Select the category for the Group you want to create. For this you need to be sure of the purpose of your group. Since we will be creating a community of BCA students, we select ‘Schools and Education’ and then ‘classmates’ on the next page.
4. Click on ‘Place my group here’ on the next page.
5. We will give the name and email address for our group on the next page. Since this group is for all BCA students at centre A, we will name it as ‘BCACenterA’ for our purpose. We will give ‘BCACenterA’ for the email address too. You may give any name and address as per your requirements. Click ‘Continue’ button to go to the next screen.

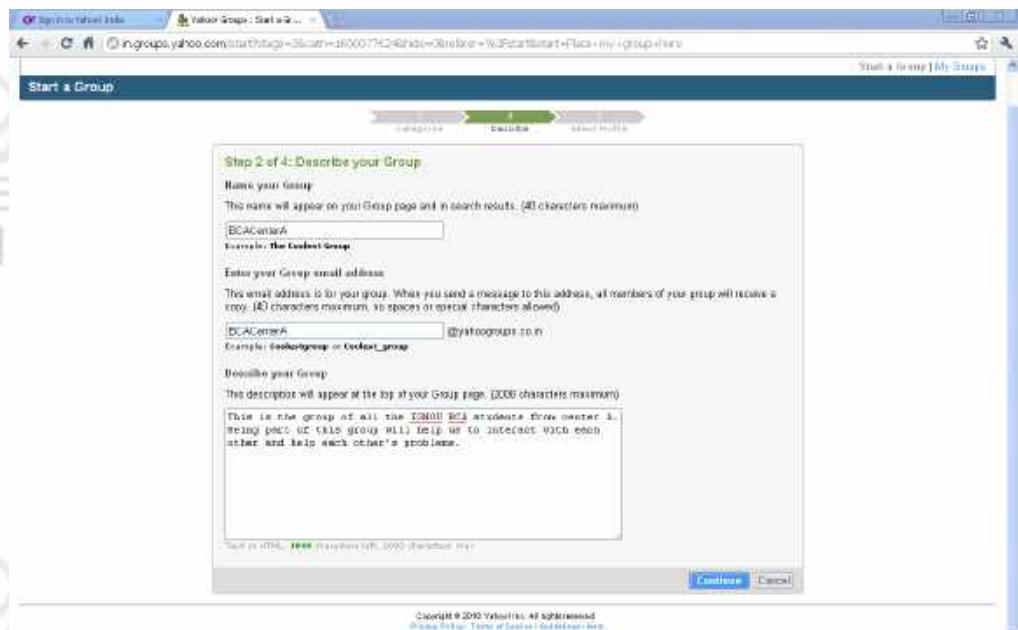


Figure 6.4: Setting up the group

- Once the group is created you see the following details on the screen:

Group name:	BCACenterA
Group home page:	http://in.groups.yahoo.com/group/BCACenterA
Group email:	BCACenterA@yahoogroups.co.in

- Now you can customize your group and define who all can join the group or post messages, whether or not messages are archived, whether or not to list your group in Yahoo! Groups directory or whether an approval is required to join the group, etc. You can also invite your friends and other people to join the group. The creator of the group becomes the **moderator** by default. The moderator could define on how the group should be used, add or remove people from the group, etc.

6.4.2 Joining a Yahoo Group

There are two ways that you can join a group:

- Search for the group in Yahoo groups. Login using your Id and then send a request to join the group. Once your request is approved by the moderator, you become the member.
- The second way is that you receive the invite to join the group and then you join the group.

6.4.3 Posting a message

Once you are a member of a group, you can login to the group and post a message. All the members of the group will receive an email about your post and anybody can reply to that post.

The screenshot shows a web browser window displaying a Yahoo! Groups discussion forum. The title bar reads "BCACenter - Yahoo! Groups". The main content area is titled "Messages" and shows a list of 6 messages. The messages are:

- Re: Difference between Discussion Forum and Discussion Group ... Discussion group is based on a small...
- Difference between Discussion Forum and Discussion Group There are some confusions about the difference between the two, so I have started this topic for a discussion...
- How do you set up A discussion Forum Can anyone please tell me how does one go about setting up a discussion forum. And how different is it from a discussion group? ...
- Re: What are the different ways to communicate on the Internet. ... With Google Docs...
- Re: What are the different ways to communicate on the Internet. Dulito Chat Instant Messenger...
- What are the different ways to communicate on the Internet. Hi All, I am compiling a list of different ways that we can communicate on the internet. I will start with the list and then anyone can add to it. Email...

At the bottom of the list, there is a message footer: "Message 1-6 of 6 | Message 1 | Message 2 | Message 3 | Message 4 | Message 5 | Message 6 | Start Topic".

Figure 6.5: View of message posts

You can reply to a post by one of the following two ways:

- Reply to the email received.
- Post a reply to the original message in the group interface.

6.5 WIKI

A Wiki is a website that has a collection of web pages which can be easily created, viewed and modified by anybody using a Web browser, over the internet. It encourages communication, sharing and collaboration on documents across internet. Wikis can be used for a large variety of tasks, from personal note-taking to collaborating online, creating corporate intranets, knowledge management systems, online community, and managing a traditional website.

A Wiki website can be created using wiki engine or wiki software on a web server. The wiki software stores the content including all the current and previous revisions in either data files (database system) or in flat files. There are many wiki software available; some like Confluence and Drupal Wiki are paid while other like TiddlyWiki and TWiki are free of charge.

The main features of Wiki are:

- Simplified creating and editing of web pages.
- Documents can be written and worked upon by all in collaborative manner.
- Pages are stored at a central shared location and document histories are recorded.
- Simplified formatting, use of simple markup and easy creation of links.
- Organized web sites.

6.5.1 Creating the Wiki

To learn create wiki pages, we can use existing hosted wiki software and start adding to it. We will use Wikispaces for our purpose.

1. Go to www.wikispaces.com
2. Click on ‘Wikis for individuals and groups’.
3. Create login on the next page by providing username, password and email and click on ‘Join now’ button.



Figure 6.6 : Joining the Wiki Spaces

4. You come to the Dashboard. Click on ‘Create a new Wiki’.
5. Give the Wiki Name, set the permissions and type. Click on ‘Create’ button on the next screen.
6. You can close the ‘Getting Started’ help screen after reading it. The page that you see is your first Wiki page.
7. Click ‘Edit’ to make changes to this page.

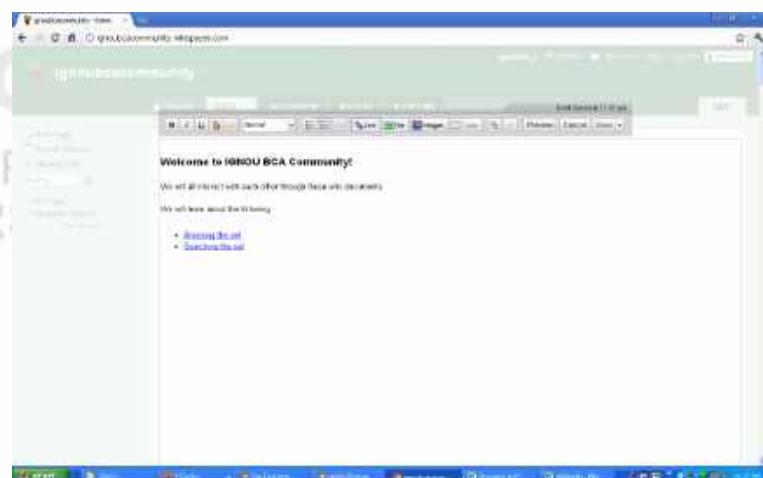


Figure 6.7: Editing the Wiki Page

8. After making changes, click ‘Save’ button. You may preview the page before saving it.
9. Since you have created this wiki space, you are its owner. You may invite other people to contribute to this wiki.
10. Click on ‘Manage Wiki’ in the left hand side menu. Choose ‘Invite People’. Once the invited people join the wiki, they can add to the content of the wiki. You can also see recent changes to the wiki or the page.

Any number of people can share notes and ideas through wiki. They all can contribute towards building the wiki content.

6.5.2 Wikipedia

Wikipedia is a free encyclopedia in many languages that anyone can edit. It is a great example of a large wiki and is run on MediaWiki wiki engine.

Wikipedia is written collaboratively by largely anonymous Internet volunteers who write without pay. Anyone with Internet access can write and make changes to Wikipedia articles (except in certain cases where editing is restricted to prevent disruption or vandalism). Users can contribute anonymously, under a pseudonym, or with their real identity, if they choose.

Over the last few years, Wikipedia has become one of the largest reference websites worldwide attracting several million users each month.

To understand how Wikipedia is written and how one can make changes to it, do the following:

1. Go to www.wikipedia.org
2. Click in ‘Log in/ Create Account’ on top right corner. Create your account. You reach the Wikipedia Introduction page.



Figure 6.8: Wikipedia Introduction

3. Explore the different tabs. When you go to the ‘Tutorial’ page, you will get a new set of tabs. Click on ‘Editing’ tab. And then ‘try editing in the sandbox’. You get the screen as in Figure 6.9.

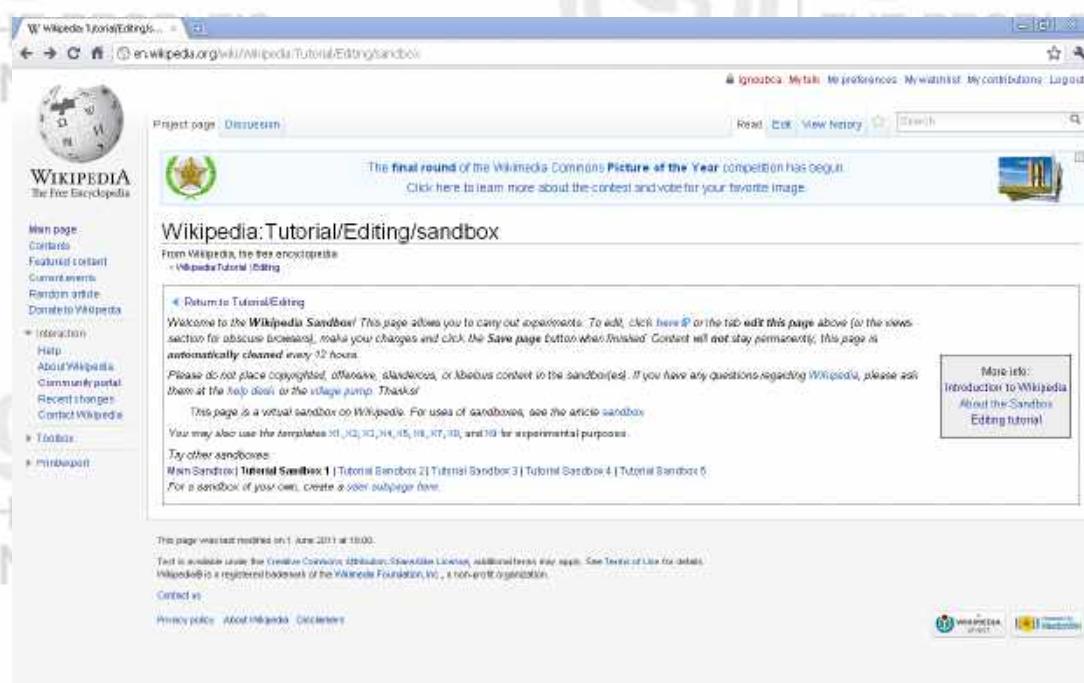


Figure 6.9: Editing in Wikipedia Sandbox

4. Click on Edit and start making changes to the page. Save your changes.

This will give you a fair idea about how you can edit wiki content.

6.6 GOOGLE DOCS

Google docs is a free web-based Word processor, Spreadsheet, Presentation, Form etc along with online data storage solution from Google. To use this, one does not need to buy any specific Office suite of products (ex MS Office etc). This is Google’s Software-As-A-Service (SaaS) version of the Office suite.

Since Google docs is web based, you can access it from anywhere through the Internet, you need not worry about copying it to transfer it somewhere else, or about its latest version and you can easily share it with anybody for real time collaboration.

6.6.1 Using Google Docs

1. Go to the URL (website) – <http://docs.google.com>. You will get a screen like the one below.



Figure 6.10: Google Docs Login Page

2. You can use an existing account (ex Gmail, yahoo) to login on the right hand side of the above screen. If you don't have an existing account, you can easily create one using your last name, first name, preferred user name (if available) etc. Once you login, you get the screen as in Figure 6.11.
3. On the left hand side of the window, if you click on Button 'Create New', you would see the drop down options (Document, Presentation, Spreadsheet etc) as shown Figure 6.11.
4. Select 'Document' option from the drop down. Type some text here. You may format it as any word document.



Figure 6.11: Google Docs Home Page

5. Click 'Save' button on top right corner. When you save the file, it will ask you to enter the document name. Notice that there is a 'Share' button also. This can be used to share the document. We will discuss about sharing a little later.
6. Give the file name as 'Test document for IGNOU BCA Student' and by default this document is saved on the Google server.
7. You can also download this document locally on the computer in various formats such as DOC, PDF, RTF etc. By default, the document is saved in the folder –C:\Documents and Settings\dell\My Documents\Downloads on your computer.

8. You may also upload an existing document from your machine using the upload button.

Similarly, you can work on other types of docs such as spreadsheet, presentation etc.

6.6.2 Sharing the Document

In Google Docs, to share a document means to give someone else access to that document. This can be done in two ways:

- Email the document as an attachment
- Invite others to read or edit the document online.

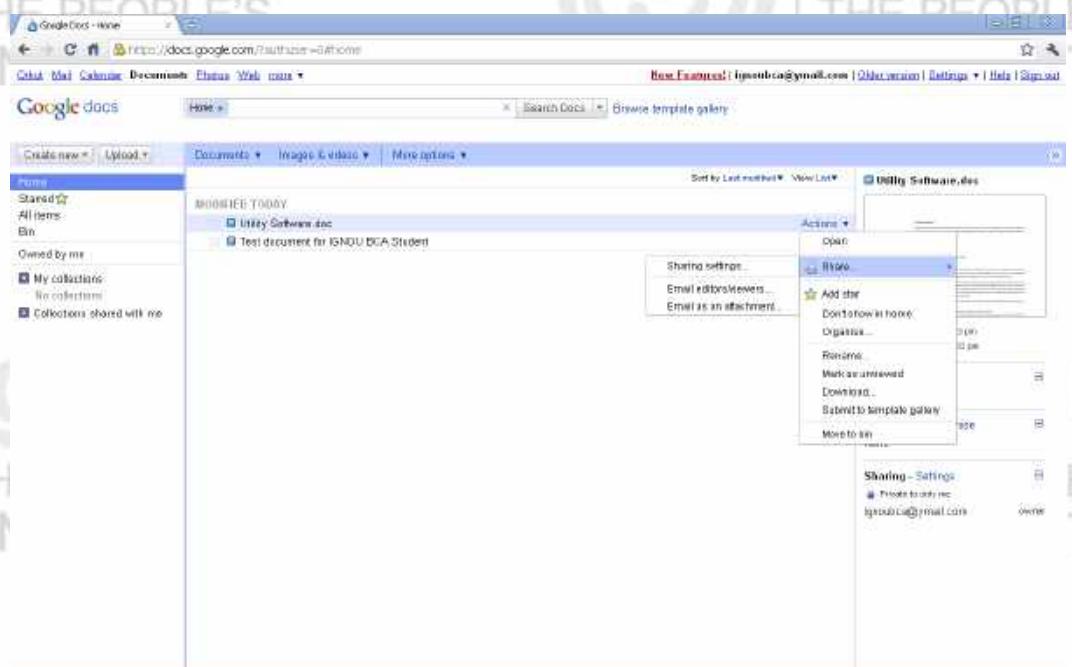


Figure 6.12: List of Documents in Google Docs

1. Bring your cursor on a document name in the list, the word ‘Action’ appears on the right side. When you click on that drop down arrow, a menu appears with ‘Share’ as an option.
2. Choose Share. Another sub menu opens up. ‘Email as an attachment’ emails the document.
3. Click on ‘Email editors/viewers’. This option is used to invite people to either view the document or to collaborate (view and edit) on the document. The people you have invited must have Google Docs account to view the document.
4. A shared document is marked as ‘Shared’ in the list on the main page.

Lab Exercise 1 (Browsing the Web)

1. In Google Chrome do the following:
 - Set it as the default browser.
 - Set www.ignou.ac.in as your home page.
 - Show 'Home' button in the tool bar.
 - Create a folder 'Search Engines' in the Bookmark Manager.
 - Go to the site www.yahoo.com and bookmark it. Save the bookmark in the folder 'Search Engines' created above. Similarly, bookmark the sites www.google.com and www.bing.com and save the bookmarks in the same folder.
 - Check your history.
 - Go to the home page directly using the home button.
 - Create another folder called 'email'.
 - Go to www.hotmail.com and bookmark it in 'email' folder.
 - Delete the 'email' folder.

(Note: For all above options use icon  on the browser toolbar)

2. Open Internet Explorer and do the following :

- Set IE as your default browser.
- Set blank page as the home page.
- Change the appearance of the browser.
- Go to many different sites.
- Delete your history.
- Explore different tabs and options under Internet Options.
- Add and Delete pages to Favorites.

(Note: For all above options use Tools → Internet Options from the main menu)

3. Open Mozilla Firefox

- Explore its menu options
- Do all the exercises that you have done for Chrome and IE in question 1 and question 2.

4. Go to site www.hyundai.co.in and copy the image of all Hyundai cars on our computer.

Lab Exercise 2 (Searching the Web)

1. Use different Search Engines available – for example www.live.com, www.ask.com, www.about.com, www.shopzilla.com, www.yahoo.com, www.find.com, www.monster.com. Determine what each search engine can be used for. Name two more search engine that are not in the given list.

Lab Course

2. Go to Google India site. Set the number of results on a page from 10 to 15. Save your settings.
3. You want to buy a LCD TV. You want to compare only Sony and Samsung TV. Create a search string that gives only Sony and Samsung TV's in the result list and not Toshiba or LG TV's
4. Search on the author Erich Segal
 - Search on all the books written by Erich Segal.
 - Search on Erich Segal who is not an author or writer and has not written any story.
5. You want know the travel to Agra from Delhi by road. You have no idea about the distance and the direction. Using the internet search, find out all the details you need.
6. Search for all the museums you can visit in Mumbai.

Lab Exercise 3 (discussion Forums and Groups)

1. You and your friends are planning to go on a camping trip. Create a Yahoo group so that all the friends interact and plan for the trip. One of you can be a moderator who creates the group and invite all your friends to join the group. Each one can contribute to the discussion and planning of the trip, for example to decide on the location, things to take, bookings, etc.
2. Create a group in Google Groups.
3. Register for the forum on <http://www.proud2bindian.in> and participate in the discussion on the active topics. Check the latest posts, latest threads and popular forums.
4. You want to set up your own Discussion Forum Community. Think of a subject for your forum. Search the Internet and study the hardware and software requirements to set up a forum. List all the steps need to be taken. Also note down free and paid forum software available.

Lab Exercise 4 (Wiki)

1. You and your friends are planning to go on a camping trip. Set up a wiki and invite all your friends to join it. Create a link to the place where you would be going and a list of items that need to be taken. Ask your friends to update the list if they can bring any item from the list. This way everybody will know who is bringing what through the page.
2. Discuss how the communication in the above case (question 1) is different from communicating through email or through discussion group.
3. Search the Internet for different wiki engines available. Consider any five and compare them.

4. Go to www.pbworks.com and setup a wiki there. Develop wiki content in collaboration with few friends. Check the page history. Compare the revisions of the page.

Browsing and Discussion Forum

Lab Exercise 5 (Google Docs)

1. Create a new document in Google Docs. Share it with two other people. One should have only view access.
2. Create a presentation on Google docs. Ask your friend to review it and comment on it. Use ‘Discussion’ option for your discussions on the presentation.
3. Create a spreadsheet on your computer. Upload it to Google Docs.
4. You are a group of four people who are working together on a project report. Create a report on Google Docs and work on it simultaneously, each from your own machines. Check different versions of the document.

6.8 SUMMARY

World Wide Web is one of the most used services of the Internet. You can search the internet for any kind of information. You can create communities of people with similar interests to interact with each other. There are tools like Wiki and Google Docs available to create, share, contribute and collaborate on content online. Internet has made it easier for physically distant people to connect with each other and work together. It has brought people closer.

6.9 FURTHER READINGS

- Internet Technologies at Work By Fred T. Hofstetter Tata McGraw-Hill Edition.
- Information Technology - The Breaking Wave By Dennis P. Curtin, Kim Foley, Kunal Sen, Cathleen Morin Tata- McGraw-Hill Edition.
- Introduction to Computers By Peter Norton Sixth Edition Tata McGraw-Hill Publishing Company Limited.
- Wiki for Dummies By Dan Woods, Peter Thoeny.
- The Internet for Dummies By John R. Levine.
- Google Docs 4 Everyone By Steve Holzner, Nancy Holzner.