

BRILLIANT BOOKS

COMPUTER CONCEPTS

ers of Digital Generation

6



Based on Windows 7 & MS Office 2007

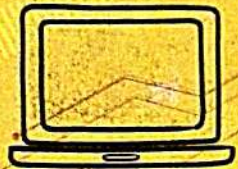


COMPUTER CONCEPTS

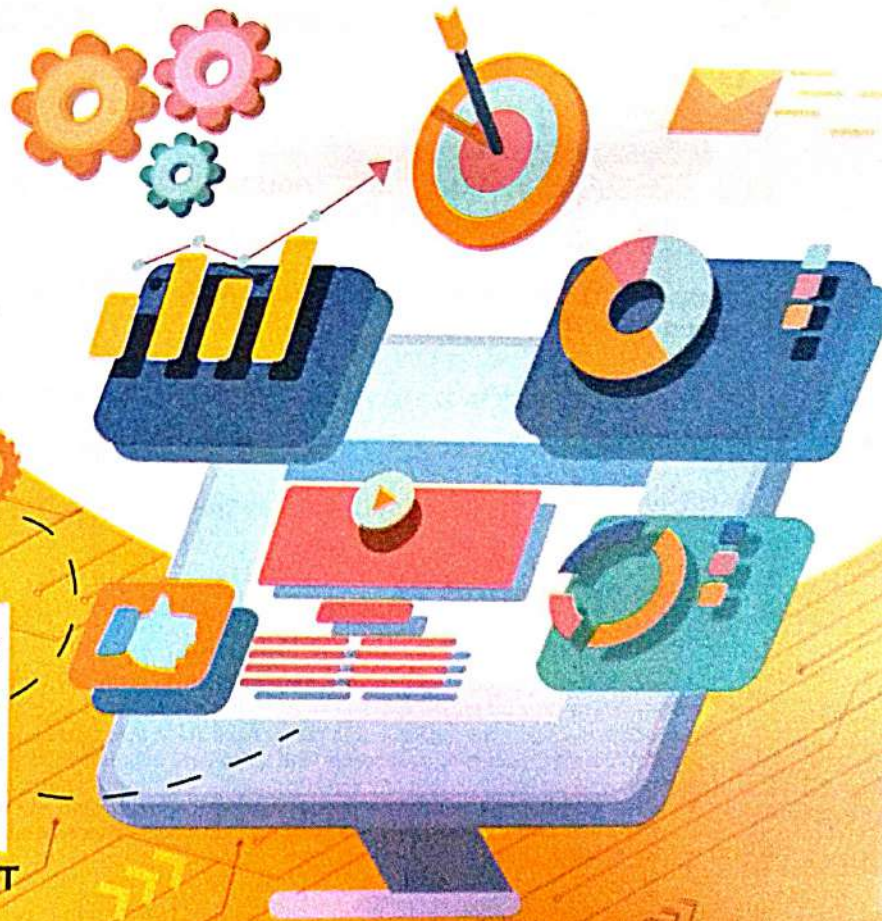
For Learners of Digital Generation

6

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BRILLIANT
BOOKS





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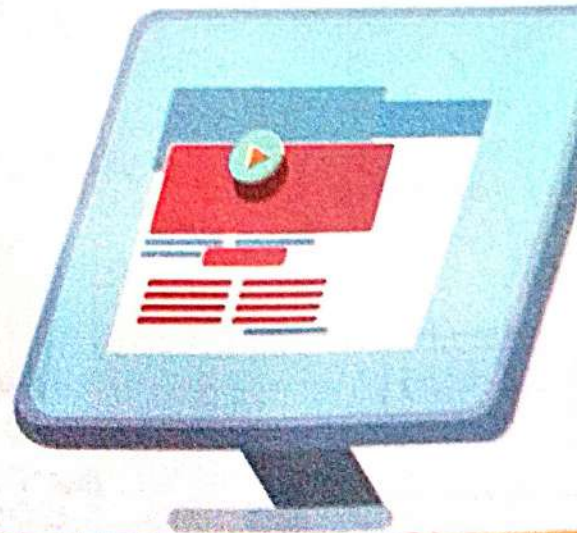


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Preface

Computer Science in the school curriculum deals with computers and their applications. Today, irrespective of geographical, economic and social parameters, computers have become an integral part of our lives. The fast pace of advancing technology coupled with the numerous fields in which computers are used makes it essential for children to become familiar with computers and their applications. It is imperative that the basic knowledge of computers is imparted to children as early as possible. This will give them enough scope to explore and experiment with a myriad of applications.

Computer Concepts— *For Learners of Digital Generation*, a series for grades 1 to 8, is a diligent effort to provide the best and comprehensive understanding of the subject. Simple language, real-life connections to explain abstract concepts, activities, information and facts make the entire learning experience lively and fun.

This series focuses on— Windows 7, MS Office 2007, MSW Logo, Tux Paint, QBASIC, Flash CS3, HTML, Visual Basic 2008 and Internet.



Salient Features of the Series :

- **Lesson Extract** outlines the objectives of the chapter.
- **Chapter Content** starts with an engaging introduction. The text is supported with pictures and relevant screenshots.
- **For your Info (Information)** gives extra and useful information for memory reinforcement.
- **Time to Drill** interspersed within each chapter to check the alertness of the students.
- **Lab Visit** provides more activities that can be done in the lab.
- **Test Papers** provide sample questions to assess students' understanding of the concepts learnt.



A series that will prove to be a treasure house for overall digital development.

We expect that *Computer Concepts* will help students make computers their Digital Buddy and useful in all real-life situations. We look forward to your response to the series and to any suggestions you may have to improve the same.


—The Publishers



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Lesson Extract

- ❖ Basic Operations of a Computer
- ❖ Applications of a Computer
- ❖ Computer Design—Hardware, Software
- ❖ Relationship between Hardware and Software
- ❖ Data Hierarchy
- ❖ Types of Computers

A computer is an electronic device which accepts the data from the user, processes it and gives the desired output. It is a machine capable of performing calculations with the help of mechanical computing devices. It is a collection of hardware and software components that help us to accomplish many different tasks.

BASIC OPERATIONS OF A COMPUTER

A computer basically performs five major operations or functions :

1. It accepts data or instructions by way of inputs.
2. It stores data.
3. It can process data required by the users.
4. It gives result as an output.
5. It controls all operations inside the computer.

APPLICATIONS OF A COMPUTER

Computers are used for the following purposes:

- They are used at homes for playing games, listening to music, storing addresses and telephone numbers and many other things.
- They are used in schools for preparing lessons, teaching different subjects, preparing projects, etc.
- They are used in offices for maintaining office records, communicating important information through e-mails, calculating data, etc.
- They are used for creating animation films and advertisements.
- They are used in banks, hospitals, space centres, airlines, railway reservation offices and many different places for commercial purposes.

COMPUTER DESIGN

A computer has two main parts :

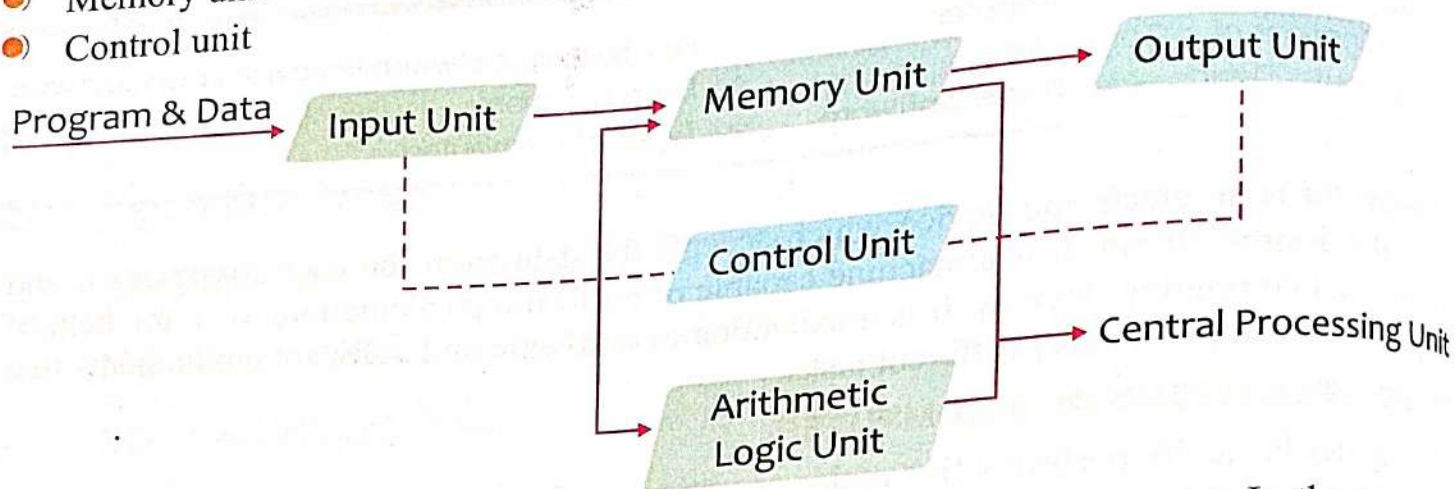
1. Hardware
2. Software

1. HARDWARE

A computer performs some operations to solve problems. For it, the various components of a computer system must perform and co-ordinate these operations.

Organization of Computer Components : The major functional units of a computer are :

- Input units
- Memory unit
- Control unit
- Output units
- Arithmetic logic unit



The input unit reads and accepts instructions or data given to the computer. In the memory unit the instructions and data are stored. All the intermediate and final results are also stored in the memory. The arithmetic logic unit (ALU) is the place where arithmetic and logical operations are performed. The control unit reads the instructions stored in the memory, interprets and executes them. When arithmetic and logical operations are to be performed, they are done using the arithmetic unit. When the results need to be printed, the control unit activates the output unit and the results get printed.

The control unit, memory and the ALU put together are called the central processing unit (CPU) of the computer.

Input Units

Input devices accept data from a user and convert them into a form that can be understood by the computer. Some common input devices include Keyboard, Mouse, Joystick, Scanner, etc. You have already studied about these input devices in your previous classes. Let's know about some more input devices.

Barcode Reader

A barcode reader or barcode scanner is an electronic device for reading printed barcodes. A barcode is a printed horizontal strip of vertical bars which are used for identifying specific items. It consists of a light source, a lens and a light sensor.



Optical Mark Reader (OMR)

Optical mark reader is an input device used for capturing human-marked data in document forms such as surveys and tests.



The use of OMR is not limited to schools or data collection agencies; many businesses and health care agencies use OMR to streamline their data input processes and reduce input error.

Optical Character Reader (OCR)

Optical character reader, usually called OCR, is used to do mechanical or electronic translation of handwritten, typewritten or printed text into machine-encoded text. It is widely used to convert books and documents into electronic files. It is also used to computerize a record-keeping system in an office, or to publish the text on a Website. OCR software now has been attached in a scanner and mobile phone also.

Magnetic Ink Character Reader (MICR)

Magnetic ink character reader is an input device used for character recognition technology by the banking industry to facilitate the processing of cheques and debit/credit cards. The technology allows computers to read information (such as account numbers) from printed documents. Unlike barcodes or similar technologies, MICR codes can be easily read by humans.

Output Units

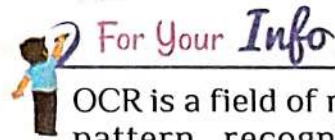
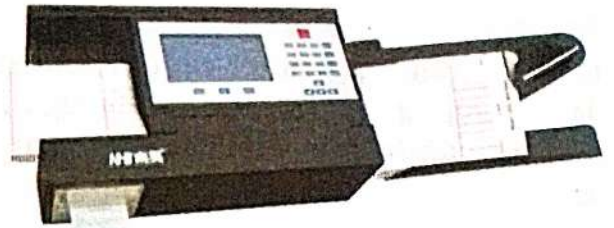
Output units convey information from the computer to the user. The various output units are: Monitor, LCD Projector, Printer and Plotter.

Monitor

It is used to display images that a computer program generates. Like a television, it also has a cathode-ray tube (CRT) to display images on the screen. Now, monitors are available with flat-panel using liquid-crystal-display (LCD) to produce images.

LCD Projector

LCD projector is a type of video projector for displaying video images or computer data on a screen. It is commonly used in organizations for displaying PowerPoint presentations during meetings.



OCR is a field of research used for pattern recognition, artificial intelligence and computer vision.



Printer

In computing, a printer produces text and/or graphics of documents in an electronic form, usually on paper or transparencies. Many printers are primarily used as local peripherals, attached to the computer by a printer cable.



Plotter

A plotter is a computer printing device for printing vector graphics. Plotter is used for creating high quality graphics, visuals, charts, graphs, tables or diagrams.



For Your Info

The world's first computer printer was a 19th century mechanically driven apparatus invented by Charles Babbage for his Difference Engine.

Central Processing Unit (CPU)



The central processing unit (CPU) is the primary element that carries out each instruction of the program in sequence, to perform the basic operations of the system. In other words, it performs the arithmetic and logical calculations of the data. The CPU is capable of storing enormous amount of data and processing them at a high speed and producing useful results. The CPU is inside the CPU-box.

The three main components of a CPU are :

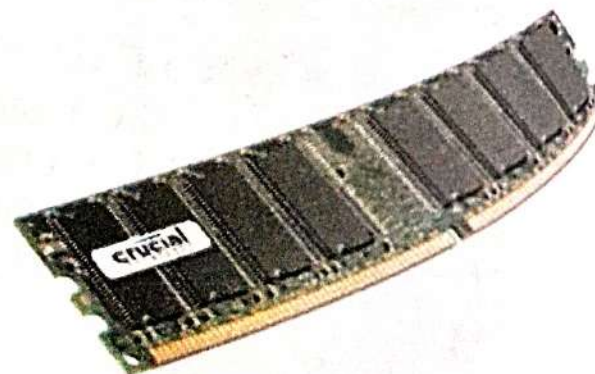
1. **Arithmetic Logic Unit (ALU)** : It performs arithmetic and logical operations.
2. **Control Unit (CU)** : It extracts instructions from memory, decodes and executes them.
3. **Memory Unit (MU)** : The computer has a large storage capacity. The storage capacity of the computer is called its memory. Memory enables the computer to store data and instructions. There are two types of computer memory :

Primary Memory

It is also called working memory or the internal memory. It is the main area in a computer where the data are stored. This memory can be quickly accessed by the CPU for reading and storing. There are two types of primary memory : ROM (Read Only Memory) and RAM (Random Access Memory).

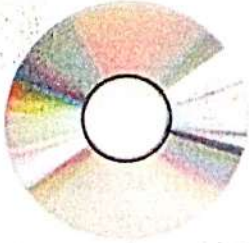
For Your Info

ROM is non-volatile while RAM is volatile, that is, the information stored in RAM is designed to clear when the computer is not on.



Secondary Memory

It is also known as auxiliary memory. It is used for storing data or programs on a temporary or on a permanent basis. The secondary memory is available in the form of storage devices. For example, hard disk, compact disc, flash drive, etc.



The CPU cannot access secondary memory directly while processing information. The data is transferred to the primary memory when required. The computer used its input and output devices to access data stored in the secondary memory.

2. SOFTWARE

Software relates to a set of programs. The software controls the computer hardware parts and makes them operational. In other words, it governs the operations of a computer system.

Categorization of Software : Software is classified into two broad categories :

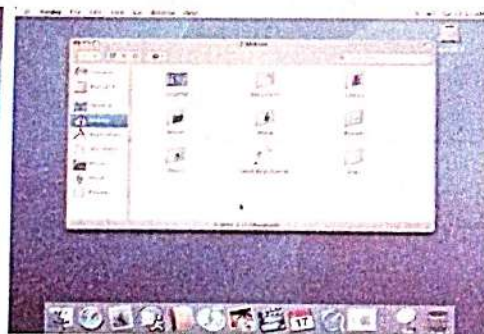
- System Software
- Application Software

System Software

System software performs the basic functions that are necessary to operate a computer system. It controls the various resources of a computer system. The operating system is an example of system software.



Windows 7



MAC OS



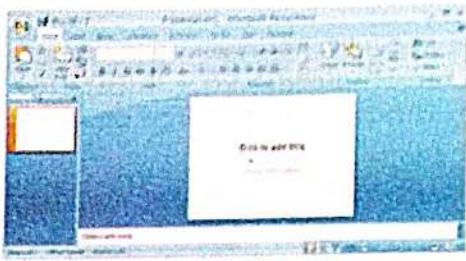
Linux

System software are of three types :

- System control software
- System support software
- System development software

Application Software

Application software consists of programs that are designed to do routinely performed specific tasks, such as payroll, inventory, word processing, graphics, spreadsheets, desktop publishing, etc.



MS PowerPoint



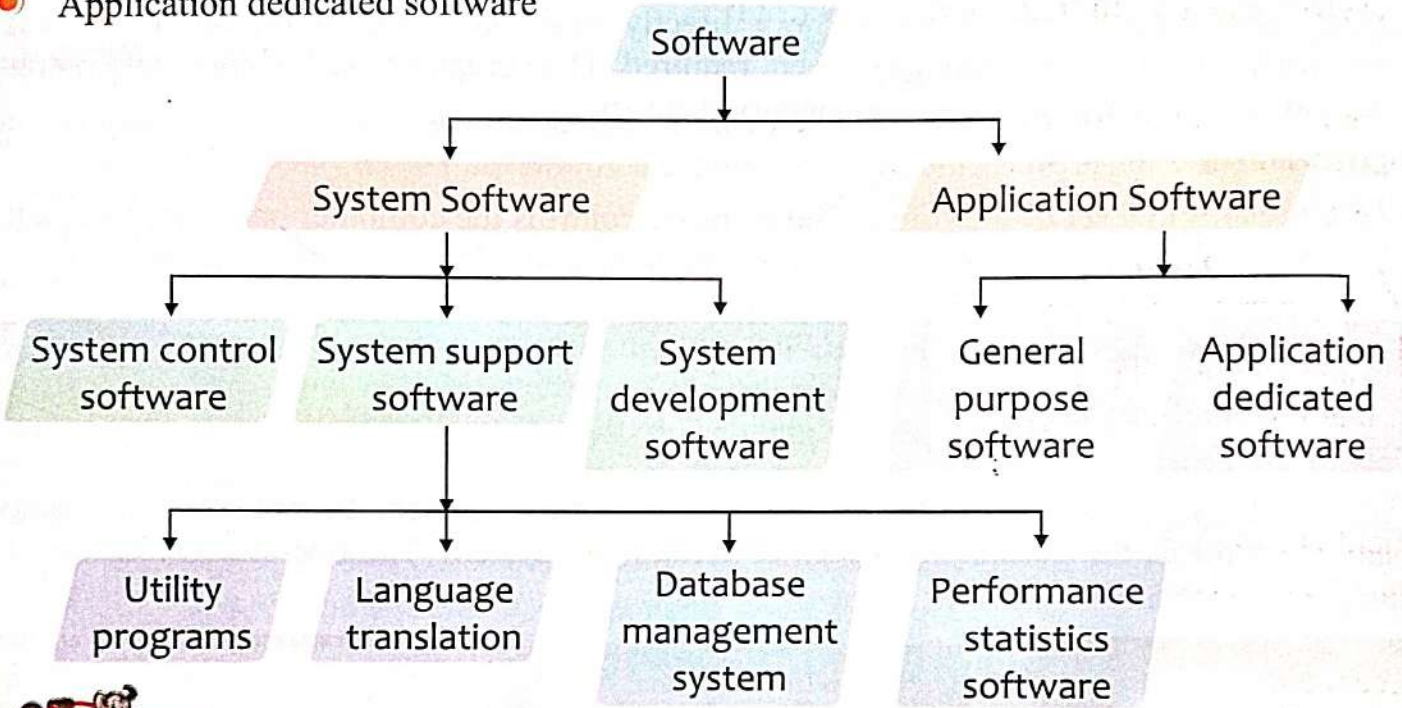
MS Word



CorelDRAW

There are two types of application software :

- General purpose software
- Application dedicated software



- Collect pictures of interfaces of different software which falls into different categories. Make a poster using these pictures.

RELATIONSHIP BETWEEN HARDWARE AND SOFTWARE

The hardware and software together make a computer system. Both are essential components of a computer system. Hardware is the physical component of a computer system, and the software are the instructions or commands that make the hardware components operational. The software is the driving force of a computer.



Hardware - Software Relationship

DATA HIERARCHY

You know that data refer to raw facts and figures, and consist of alphabet, numbers, sounds, pictures, images, etc.

A computer system processes data and gives information that is used for various purposes. The data is stored in the form of bits and bytes in a computer database.

Bit

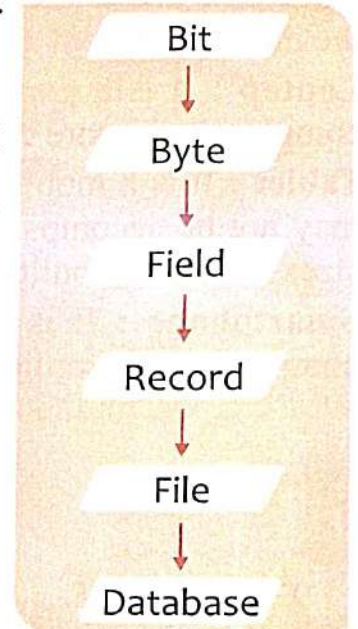
A bit is the short form of **Binary Digit**. A computer system represents data using the digits **0** and **1**. These digits show whether the computer circuits are **ON** or **OFF**. A bit is therefore represented by an electronic circuit that is either **ON** or **OFF**.

Byte

A byte is the collection of **8 bits**. A byte of information is stored by using several bits in a predefined combination called **Bit patterns**. Two such bit patterns are ASCII and EBCDIC.

For Your Info

The full form of ASCII is American Standard Code for Information Interchange and that of EBCDIC is Extended Binary Coded Decimal Interchange Code. A byte represents a character such as A, B, 1, 2, etc.



The ascending order of data hierarchy

Field

A field is a collection of bytes that contains data about an item. For example, the name of a student, his/her age, his/her class, etc.

Record

A record is a collection of interrelated fields. For example, a student's record may contain fields such as name, age, class, subjects, etc.

Files

A file is a collection of related records. For example, a collection of all records of all the students in your class is class file.

Database

A database is a collection of all the files in an organization. For example, files of students, teachers and other staff members of your school make the school database.

TYPE OF COMPUTERS

On the basis of their size and speed, computers are generally classified as follows :

1. Microcomputer
2. Minicomputer
3. Mainframe computer
4. Supercomputer

Microcomputer

Microcomputer was earlier a commonly used term for personal computers. A personal computer assemblage consists of CPU, computer memory (primary and secondary) and various input and output devices. Only one person can use it at a time. It is slow and has

relatively less storage capacity as compared to a minicomputer or a mainframe computer. It is commonly used in classrooms, homes, banks, universities, etc. There are various kinds of microcomputers available nowadays. Let us study about them here.

Desktop : It is a microcomputer designed to fit comfortably on top of a desk, typically with the monitor in front and the system unit on the side.

Laptop : It is a portable microcomputer. You can keep it on your lap. Nowadays, laptop computers are more commonly called **notebook** computers.

Tablet : It is a mobile computer. It offers the users a touchscreen environment that may or may not be accompanied by a stylus (a pointing device). They are available in a variety of sizes and have a built-in/virtual keyboard.

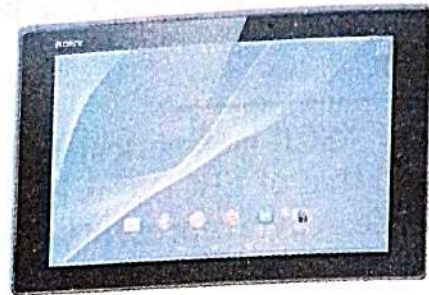
Smartphone : It is a mobile phone built on a mobile OS. It has enhanced features as compared to an ordinary mobile phone like compact digital cameras, GPS, web-browsers, Wi-Fi, broadband facility, etc.



Desktop



Laptop



Tablet



Smartphone

Minicomputer

A minicomputer is much larger than microcomputer and also much more expensive. It thus lies between microcomputers and mainframe computers and are often referred to as **midrange computers**. It possesses most of the features found on a mainframe computer, but on a limited scale. It can still have many terminals, but not as many as the mainframe. It can store a large amount of information, but again usually not as much as the mainframe. It uses an enhanced instruction set to facilitate scientific processing and commercial applications. Medium and small businesses and colleges typically use minicomputers.



Minicomputer

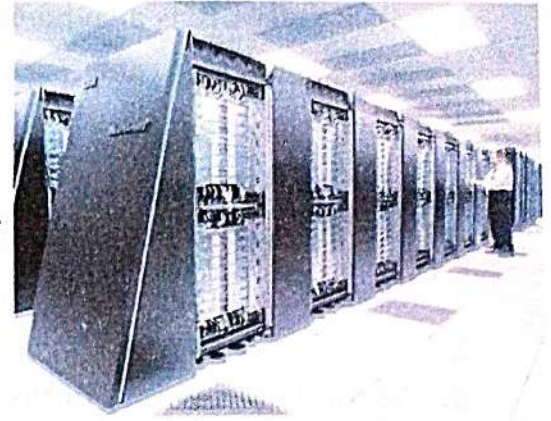
Mainframe Computer

Mainframe computers are very large, often filling an entire room. They can store an enormous amount of information, and perform many tasks simultaneously. They can communicate with many users at the same time and are very expensive. Mainframe computers usually have several terminals connected to them. These terminals look like small computers but they are only devices that are used for sending and receiving information from the actual computer using wires. Terminals can be located either in the same room

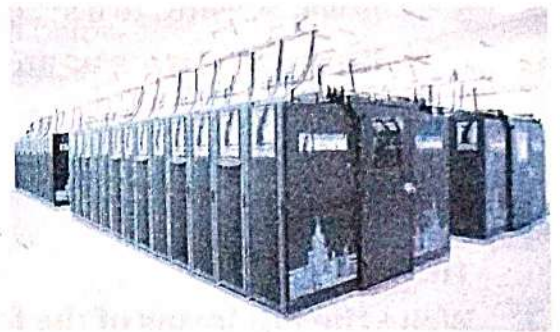
with the mainframe computer, or they can also be in different rooms, buildings, cities, etc. Large businesses, government agencies, banks and universities usually use mainframe computers. Big hospitals, airline reservation companies, and many other big companies prefer mainframe computers because of their capability of retrieving enormous data.

Supercomputer

Supercomputer is one of the many types of modern computing machines which are big, powerful and are capable of doing very speedy calculations. It is because of their high speed processing ability that supercomputer systems are used in animation graphics, weather forecasting, nuclear research work, petroleum research works, crypt analysis, molecular modelling and the likes. The difference between the mainframes and supercomputers is that while mainframe machines are primarily used for a number of purposes, supercomputers are designed to serve a singular purpose.



Mainframe computers



Supercomputer



Boost Your Brain



A. Tick (✓) the right option.

1. is a device used for creating high quality graphics.

<input type="checkbox"/> (a) Plotter	<input type="checkbox"/> (b) Printer
<input type="checkbox"/> (c) MICR	<input type="checkbox"/> (d) OMR
2. Barcode reader is a device used for

<input type="checkbox"/> (a) reading barcode	<input type="checkbox"/> (b) reading magnetic code
<input type="checkbox"/> (c) storing data	<input type="checkbox"/> (d) none of these
3. OCR is used for

<input type="checkbox"/> (a) entering text into the computer	<input type="checkbox"/> (b) reading the optical signals
<input type="checkbox"/> (c) reading the magnetic character	<input type="checkbox"/> (d) all of these
4. Information on cheque is sorted using

<input type="checkbox"/> (a) MICR	<input type="checkbox"/> (b) OCR	<input type="checkbox"/> (c) OMR	<input type="checkbox"/> (d) LCD
-----------------------------------	----------------------------------	----------------------------------	----------------------------------
5. Primary memory is also called

<input type="checkbox"/> (a) internal memory	<input type="checkbox"/> (b) external memory
<input type="checkbox"/> (c) storage memory	<input type="checkbox"/> (d) none of these

6. OCR software is also been attached in
- (a) scanner (b) mobile phone
- (c) both of these (d) none of these

B. Fill in the blanks with the correct word.

secondary memory Random Access programs Read only auxiliary

- memory is non-volatile.
- memory is volatile.
- Secondary memory of the computer is also called the memory.
- The storage device of a computer system is referred to
- Software relates to a set of

C. Classify the following as an input, output or a storage device.

- | | | |
|--------------|------------------------|--------------------|
| 1. Light Pen | 2. Optical Mark Reader | 3. MICR |
| 4. Plotters | 5. Flash Drive | 6. Monitor |
| 7. Scanner | 8. Speaker | 9. Microphone |
| 10. Printer | 11. Compact Disc | 12. Barcode Reader |

D. Write the full forms of the following abbreviations.

- | | | | |
|---------|--------|--------|--------|
| 1. MICR | 2. OCR | 3. RAM | 4. ALU |
| 5. ROM | 6. CRD | 7. LCD | |

E. State whether the following statements are true or false.

- A computer has two main parts : hardware and software.
- Data are entered into a computer using output device.
- CPU is the brain of the computer.
- Secondary memory is used to store data for long term use.
- Data are stored in a computer in the form of words and letters.

F. Answer the following questions.

- Explain the term computer memory.
.....
- Which device is used for reading barcode?
.....
- What is MICR and where is it used?
.....
- What is an Optical Mark Reader used for?
.....
- Explain the two types of memory available in computers.
.....

6. Write short note on the following :

(a) Hardware & Software,

(b) Application software & System software,

(c) Data Hierarchy.

7. How are computers classified on the basis of their size and speed?

Activity Monitor

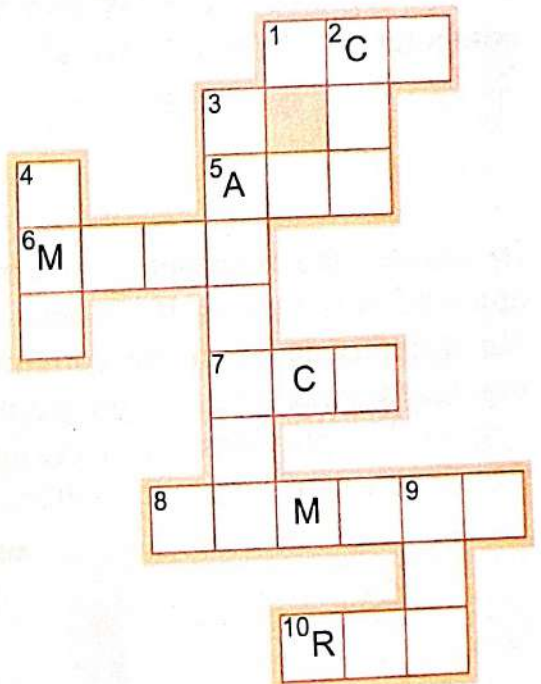
* Solve the following crossword with the help of hints given below :

ACROSS →

1. A monitor with flat panel (3)
5. A part of CPU that performs arithmetic and logical operations (3)
6. Used in banking industry (4)
7. Used to convert printed text into machine-encoded text (3)
8. Storage capacity of the computer (6)
10. A volatile memory (3)

DOWN ↓

2. Performs the basic operations of the computer (3)
3. A scanner to read vertical bars (7)
4. An input device used for reading marked data (3)
9. A non-volatile memory (3)



LAB VISIT

1. Visit your computer lab and prepare a list of hardware being used there.
2. Visit your computer lab and make a list of software installed on the computers.
3. Design your own computer system. Find a magazine or brochure with pictures of computers and related accessories. Cut out pictures of items that you would wish to include in your computer system and paste the pictures on a sheet of paper.

On Teacher's Desk

Ask the students to make a short presentation on the various input, output and storage devices available in the market these days. Relevant pictures and genuine facts can be taken from the internet.





Lesson Extract

- ❖ Operating System
- ❖ Functions of an Operating System
- ❖ Types of Operating System
- ❖ Operating System Interface
- ❖ Popular Operating Systems
- ❖ Importance of Shut Down

You know that an operating system is the most important program in a computer system. It is an integrated set of system software used to manage the different resources of the computer system and its overall operations.

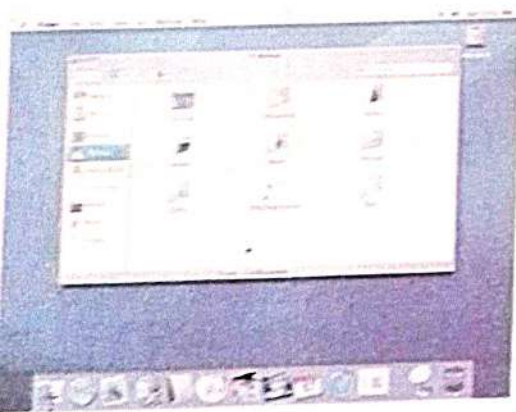
OPERATING SYSTEM

An operating system is an interface between the human user and the computer hardware.

It assists the computer system to run various application programs. It contains instructions to carry out different tasks in the computer system. It is an organized collection of programs in the computer system that provides the necessary environment for the execution of different application programs.



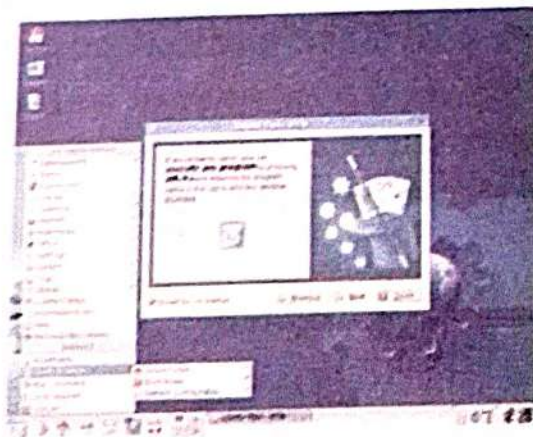
Windows 7



MAC OS



LINUX



UNIX



DOS



In early days computers, there were no operating systems. But all the modern day computers have one or more operating systems. Operating systems are loaded first in the computer system. When you switch on the computer system, the operating system loads automatically. This is called **booting**.

FUNCTIONS OF AN OPERATING SYSTEM

An operating system is responsible for carrying out a number of functions to enable the user and the software to interact with the hardware. Different functions are essential to operate the computer system efficiently.

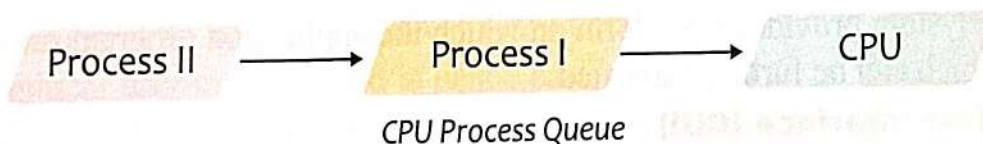
Some key functions performed by an operating system are as follows :

- Process Management
- Memory Management
- Device Management
- File Management

Process Management

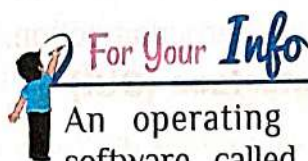
An operating system controls and schedules the processes for execution by the CPU. It is responsible for allocating the CPU's time to each process. You may think of the process as an application, but that does not give the complete picture of how processes relate to the operating system and hardware. An application in MS Office, is indeed a process. However, it may cause several other background processes to begin, such as, virus checks, memory management, etc.

After a job is done or a process is completed, the CPU becomes idle. After that if there are other processes in queue, then the time is allocated to each process of the CPU. This whole system is managed to ensure maximum output from the system.



Device Management

Device management is an important function of an operating system. It co-ordinates and controls the various input and output devices attached to the system. When the system is ready to take input then the input device is made available to the user and when the processing job is over then the output is redirected to the output device.



An operating system needs a software called **device driver**, to recognise the input and the output devices attached to the computer.

Memory Management

Whenever you start any application software, it gets loaded onto the system memory and when you open any file then a copy of that file is loaded onto the memory from the disk. This is done by an operating system. It allocates certain memory area to itself with the help of the booting process and sets aside the remaining area for various application programs.

File Management

A lot of data is stored on the hard disk which in turn is formed of millions of tracks and sectors. At the time of storing data on the disk, it is not compulsory that it occupies the

sectors in a sequence. It is the job of an operating system to read the file from different tracks and sectors when required, and also store it in the available space. Thus, an operating system manages the reading and writing of the file system. It also operates the user and application file access authorisations.

Housekeeping

Housekeeping includes all the services necessary to ensure smooth operation of the computer system, like security, protection, resource accounting, back up, etc.

TYPES OF OPERATING SYSTEM

Single-user Operating System

As the name implies, single-user operating system is designed so that only one user can effectively work on a computer at a time. This is the type of operating system most people use on their desktops and laptops today. Windows 98, DOS and the Mac OS are a few examples of a single-user operating system.

Multi-user Operating System

A multi-user operating system supports multiple users at the same time and/or different times. The operating system must make sure that the requirements of the different users are balanced, and that each of the programs they are using has sufficient and separate resources so that a problem with one user does not affect the entire community of users. For example, UNIX, Windows NT and Novell Netware, can support hundreds and thousands of networked users.

OPERATING SYSTEM INTERFACE

The operating system provides a platform on which the application program runs. It provides an interface which can be further classified.

Character User Interface (CUI)

In CUI, the operating system provides an environment where the user needs to type a command to perform a particular action. For example, Disk Operating System (DOS).

Graphical User Interface (GUI)

In GUI, the operating system provides a graphical environment where the mouse acts as a pointing device. The user can perform an action just by a mouse-click. For example, Windows operating system.

POPULAR OPERATING SYSTEMS

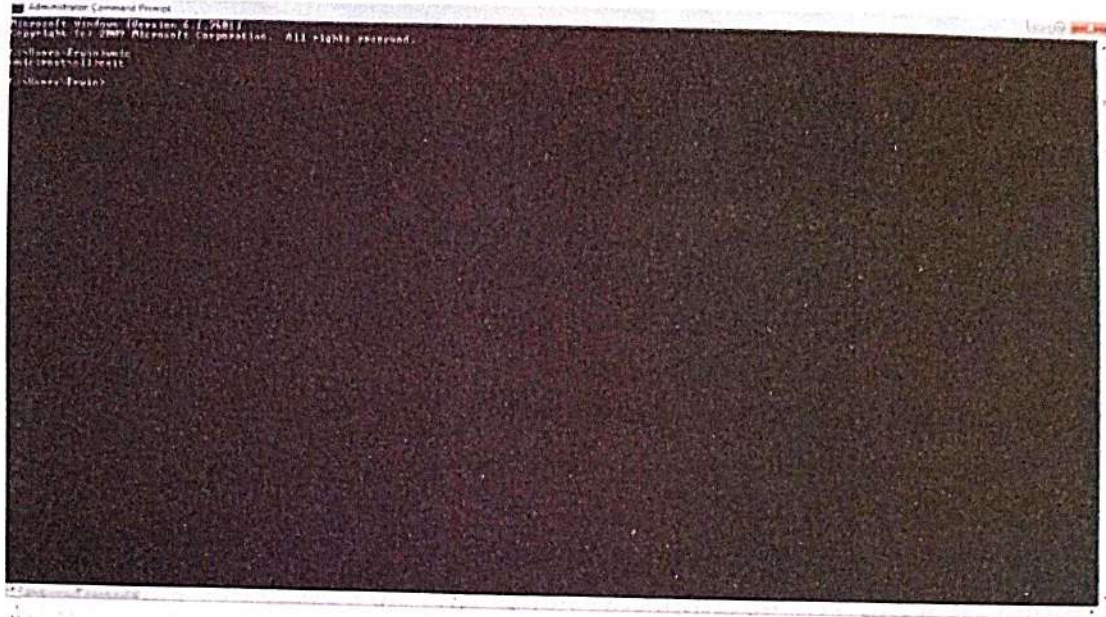
There are many operating systems available nowadays. Some of these are :

- DOS
- MS Windows
- UNIX
- LINUX
- MAC OS

Let us discuss important features of some popular operating systems.

DOS

DOS stands for **Disk Operating System**. It is a single-user operating system developed for IBM or IBM compatible computers in the early 1980s. It comes in two forms : **MS DOS** and **PC DOS**.

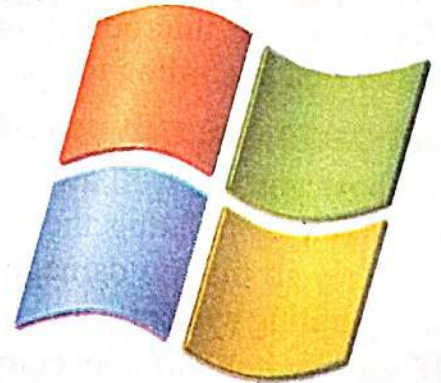


DOS was very popular and widely used in microcomputers. It however, uses a command line interface or character based interface. So after the invention of graphical user interface operating systems, its use declined. It is a single-user operating system, i.e. it can support only one user and one program at a time.

Windows

The Windows operating system was developed by **Microsoft**. It uses a graphical user interface and is hence easier to use. It allows users to interact with the computer system using graphic images and screens.

Windows has many versions. Some of these are : Windows 3.0, Windows 3.11, Windows 95, Windows 98, Windows Me, Windows XP, Windows NT, Windows 2000, Windows 7, Windows 8, Windows 10.

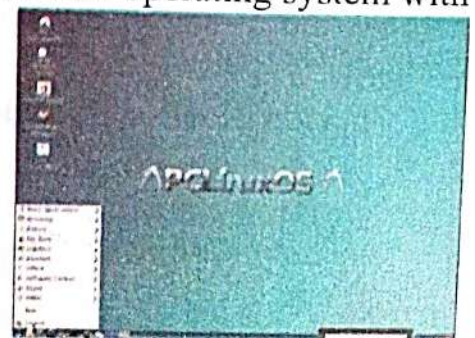


Unix

Unix is a multipurpose operating system. It is used in most types of computers. It is used in microcomputers Minicomputers and Mainframe computers. It is a multi-user, multi-tasking operating system. It uses a command line interface. It is very powerful operating system with secure and stable configuration.

Linux

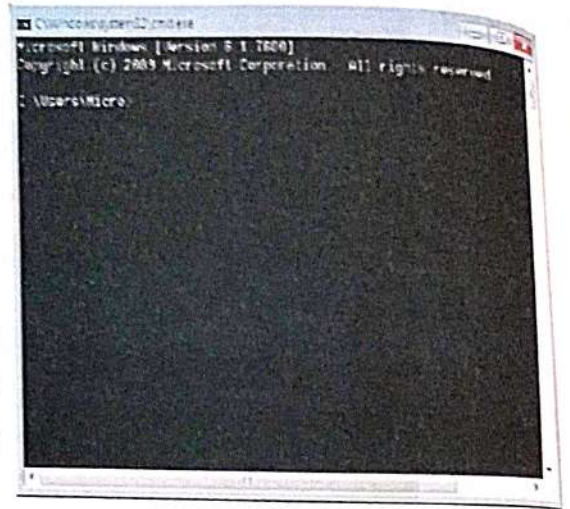
It is a Unix based operating system that uses Graphical User Interface (GUI). It is an open source program and available free of cost. It comes in many versions. It is also very secure and stable operating system. Nowadays it is gaining popularity among its users due to its numerous cost



effective features. Many companies offer Linux with a different look and features. Some of the popular Linux flavours are Mandrake Linux, SUSE Linux, Red Hat Linux, Caldera Linux, Turbo Linux, etc.

Mac OS

The Mac operating system was designed and developed by Apple Corporation for its Macintosh computers in 1984. It uses Graphical User Interface. It is one of the most advanced operating systems, but it can be used only in computers developed by Apple Company. It supports multi-use, multi-tasking features. It is a very secure and stable operating system. It has a very attractive look. It has some extremely advanced features like speech recognition and enhanced multimedia capabilities.



Choosing an Operating System

Operating systems are must for computers nowadays. People purchase the operating system with the computer system. All operating systems are, however, not suitable for everyone. There are many operating systems that are developed for specific purpose and they work effectively in their environment only.

The choice of an operating system depends on the use of the computer system. You cannot use a single user operating system like DOS for multi-user purpose. Also, different types of computers use different types of operating systems. You cannot use an operating system designed for microcomputers in a mainframe or supercomputer. Operating systems are purchased according to the types of computer and its use.

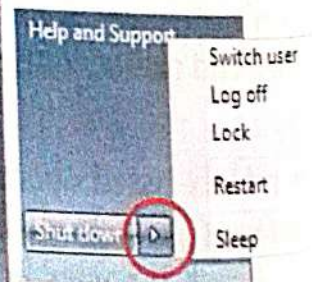
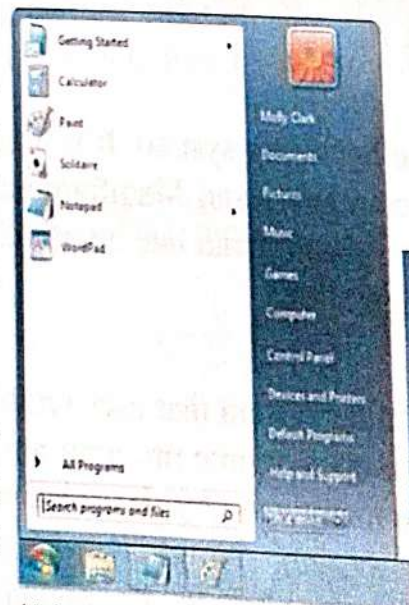
IMPORTANCE OF SHUT DOWN

By now you are well aware that Windows remains in the computer memory till the power is on. After completing the work, these operating system files are sent back to the hard disk properly so that no damage is caused to these files. This process is known as **shut down** of an operating system.

If you switch off the computer without giving a proper shut down command then there are very high chances of losing the data and it may also damage the Windows operating system.

Follow these steps to shut down a computer properly :

1. Click on Start → Shut down option.
2. For other options, click on the arrow right to Shut down option. it generally shows the following options.



Shut down options

Using Start menu to shut down

- **Switch user** : It switches the user without closing the programs currently in use.
- **Log off** : It closes all programs running on the computer, however the computer still runs.
- **Lock** : It locks the computer and the work on programs running can be resumed on unlocking the computer.
- **Restart** : If due to some error the computer needs to be shut down, then it can be restarted by using the **Restart** option. This option shuts down the Windows properly and then starts it again immediately.
- **Sleep** : It puts the computer in a low-power state and saves the work being done so that it can be resumed from the point where it was left off.



Boost Your Brain



A. Tick (✓) the right option.

- An operating system is a software.

(a) Application	<input type="checkbox"/>	(b) System	<input type="checkbox"/>
(c) Utility	<input type="checkbox"/>	(d) None of these	<input type="checkbox"/>
- When you switch on the computer system, the operating system loads automatically. This is called

(a) Booting	<input type="checkbox"/>	(b) Shutting down	<input type="checkbox"/>
(c) Operating	<input type="checkbox"/>	(d) Processing	<input type="checkbox"/>
- Unix uses a

(a) Command Line Interface	<input type="checkbox"/>	(b) Character User Interface	<input type="checkbox"/>
(c) Graphical user Interface	<input type="checkbox"/>	(d) None of these	<input type="checkbox"/>
- Linux is a based operating system

(a) Unix	<input type="checkbox"/>	(b) Windows	<input type="checkbox"/>
(c) DOS	<input type="checkbox"/>	(d) None of these	<input type="checkbox"/>

B. Fill in the blanks with the correct word.

manager Disk Operating System the human System hardware interface Single-user

- An operating system is a software.
- An system is an between user and computer
- DOS stands for
- operating system is selected when one user needs to do one thing at a time.
- An operating system works as a

C. State whether the following statements are true or false.

1. An operating system is not responsible for the functioning of a computer.
2. Various programs run in the computer system.
3. The program in a running state is called a file.
4. There is only one type of operating system.
5. The Windows operating system was developed by Microsoft.
6. Mac OS was developed by IBM.

D. Give difference between :

1. CUI and GUI.
2. Single-user operating system and Multi-user operating system.
3. File Management and Memory Management.

E. Answer the following question.

1. What is an operating system? What are the uses of an operating system?
.....
2. Explain any three important functions of an operating system.
.....
3. Explain the two operating system interface.
.....
4. What are the various types of operating system programs?
.....
5. Why is it important to properly shut down your computer?
.....
6. Write short notes on the following operating system :
(a) DOS (b) Windows (c) UNIX (d) LINUX (e) Mac OS

Activity Monitor

- * Collect the names of as many operating systems with their versions as possible. Make a chart stating the names of these operating system with their types.

Lab Visit

1. The Disk Operating System (DOS) supports CUI. Find out some more details about DOS. You can take the help of your teacher or the Internet.
2. Visit some places where different types of operating systems are used. Write down briefly the uses of the operating systems in these places.



Linux

Linux is a Unix-like computer operating system designed by Linus Torvalds. It was released on 5 October, 1991, when Torvalds was still a student at the University of Helsinki, Finland. Linux is free and an open source operating system software, that is it is free to use, modify and distribute both commercially and non-commercially. Anyone with licenses such as the GNU General Public License can modify and improve the program as per their own requirement. They can even release their improved version to the public. Because of this, Linux has grown from a small number of C files in 1991 to over 370 megabytes of source code in 2009. All this is because, in Linux, you have free access to the source code.

Linux is also multitasking, multi-user operating system which means that many people can run many different applications on one computer at the same time. This differs from MS-DOS, where only one person can use the system at a particular time. When many people are working, then each user is identified by the system through their unique **Login ID**, and **Password**.

Debian, Red Hat Enterprise Linux, Mandriva, open SUSE and Arch Linux are popular Linux distributions. More than 90% of world's 500 fastest supercomputers including top 10 fastest supercomputers run on some variant of Linux. Some key features of Linux are :

Multi-user Operating System

Linux supports multiple users at one time. In these types of OS, there is a server and all the users are provided different terminals.

Free and Open Source

It means it is a free software which can easily be downloaded from the Internet and anybody can use and modify it as per their requirement.

Multitasking

Linux operating system can run on many different computer platforms.

Security

Linux is one of the most secure operating systems. File access permission systems prevent access by unwanted visitors or viruses. Every user needs their own user ID and password.

Portable

A Linux kernel and application program can be installed on any kind of hardware platform.

Hierarchical File System

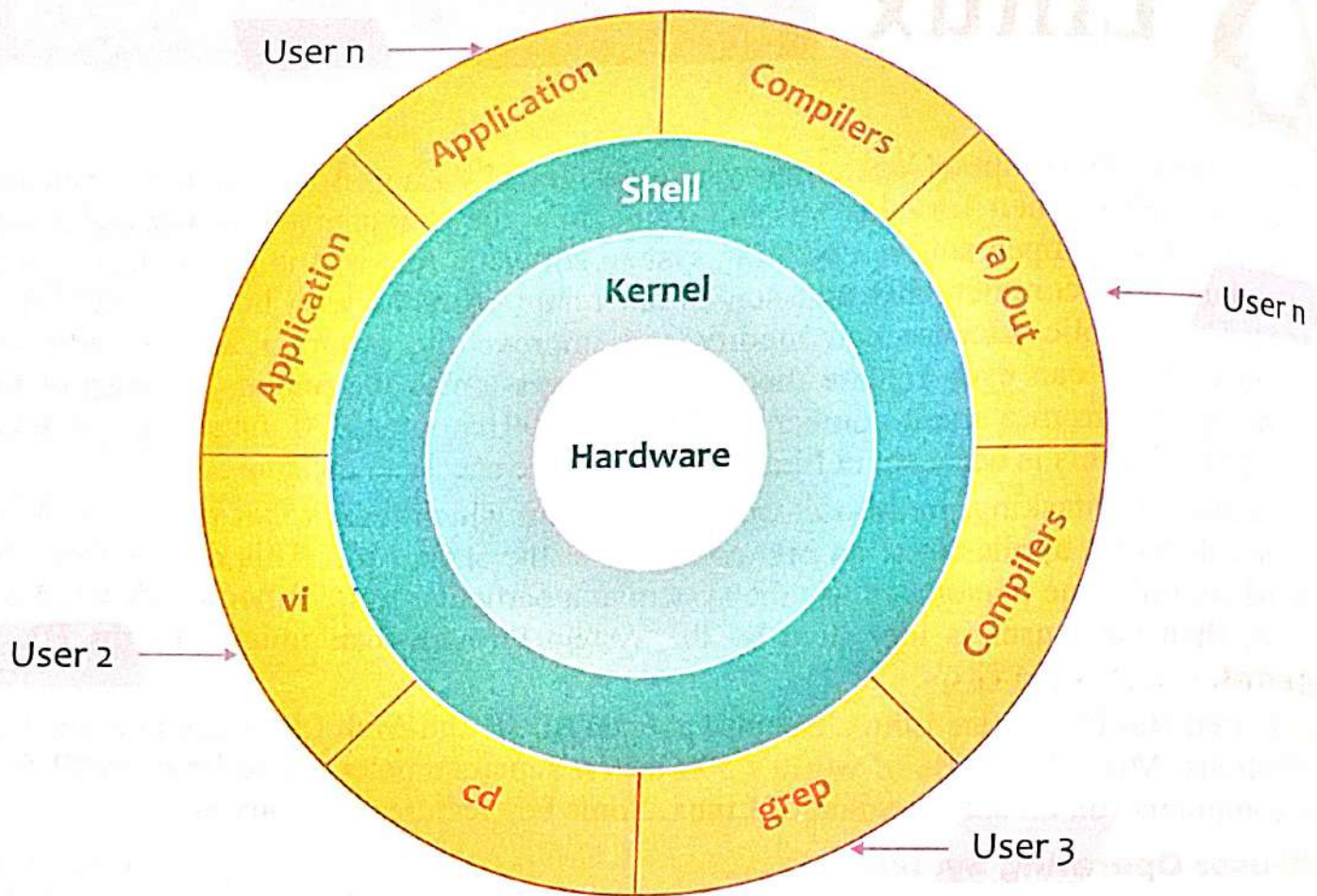
Linux provides a standard file structure in which files are arranged.

Shell

Linux provides a special interpreter program which is used to execute commands of the operating system.

COMPONENTS OF LINUX

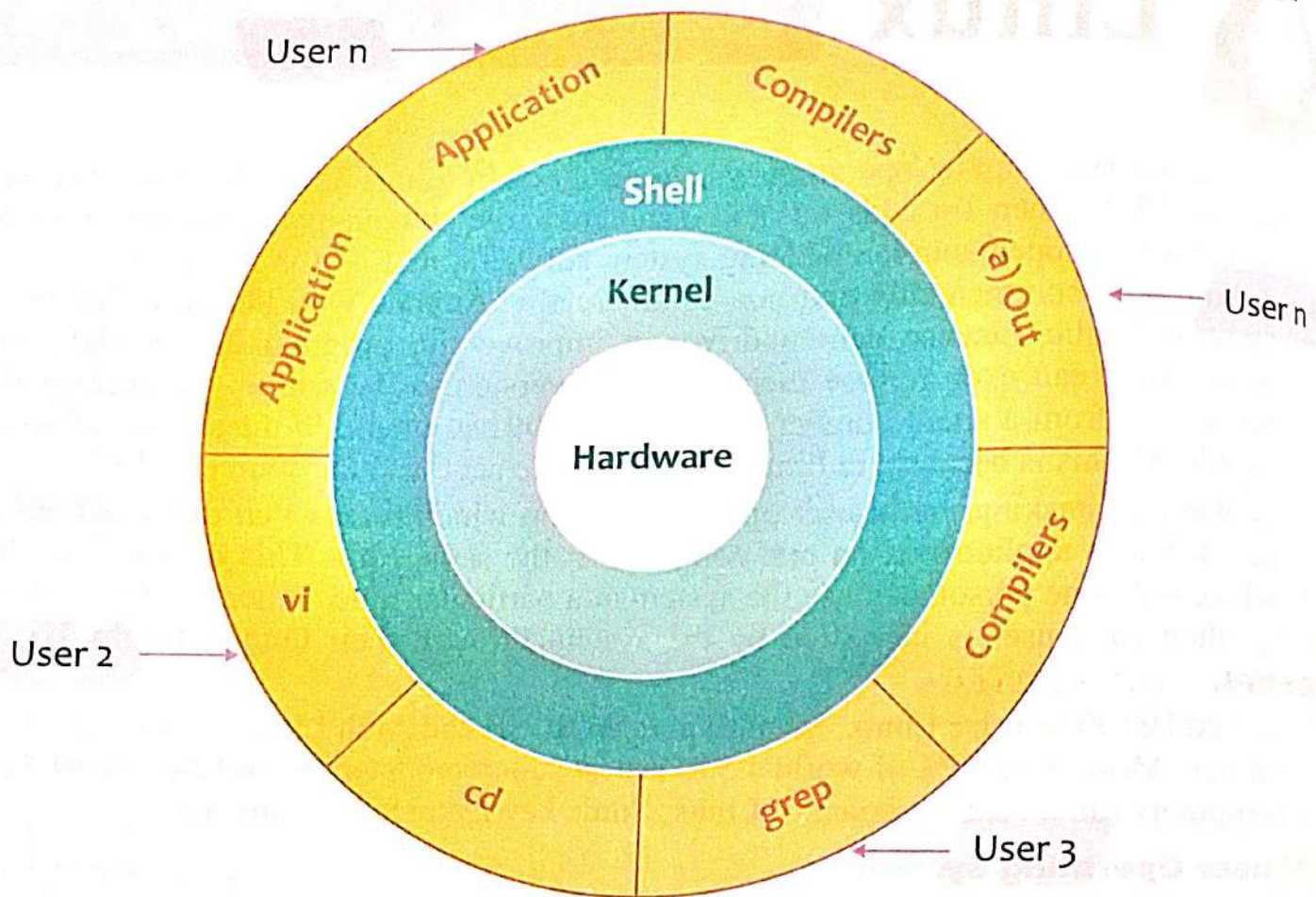
Linux system is divided into following major components/layers (see the figure below):



1. **Hardware** : It consists of all peripheral devices like RAM, CPU, etc.
2. **Kernel** : Kernel is the main part of the operating system. It performs the task of creating and maintaining the Linux environment. It acts as an interface between the hardware and the shell. It also controls the hardware, CPU, memory, hard disk, network card, etc. attached to the computer.
3. **Shell** : It is a program that acts as a command interpreter which is an interface between the user and the operating system. It interprets the commands entered by the user and passes them to the kernel. There are number of different Shells available like Bourne shell (sh), Kornshell (ksh), C Shell (csh). Each provides a slightly different interface between the user and the Linux operating system.
4. **Utilities and Application Programs** : There are the programs like Word Processors, Spreadsheets, Database Management Systems, etc. that are supported by Linux environment.

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3

MS Word 2007 : Advanced Features



Lesson Extract



- | | | |
|------------------------|--------------|------------------------------------|
| ❖ Headers and Footers | ❖ Watermarks | ❖ Increase or Decrease Indentation |
| ❖ Footnote and Endnote | ❖ Drop Cap | ❖ Borders and Shading |
| ❖ Symbols | ❖ Tab Stop | ❖ Page Setup and Margins |
| ❖ Equations | ❖ Columns | ❖ Applying Built-in Styles |

In the previous class, you have learnt about some of the features of MS Word 2007 and the different formatting tips. MS Word 2007 also provides certain additional features that make your work easy and well-structured. You can add page numbers, headers and footers, symbols, equations, watermarks, and can also look up a word in the Thesaurus to find similar words.

HEADERS AND FOOTERS

Header is placed at the top of a page of a document. The footer on the other hand, is placed at the bottom of the page in the document. The Header and Footer usually contain the same information such as page number, date, photograph, time, etc.

The various steps to set header and footer are :

- Click on Header or Footer option from the Header & Footer group of the Insert tab. A built-in style box appears on the screen.
- Choose a style of your choice.
- The Header/Footer Design tab will display on the Ribbon.
- Choose the information (date, time, page numbers, etc.) or type in the information that you would like to have in the header or footer.



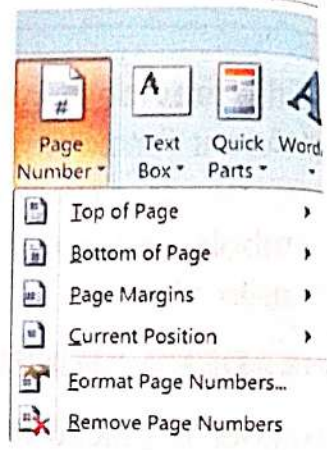
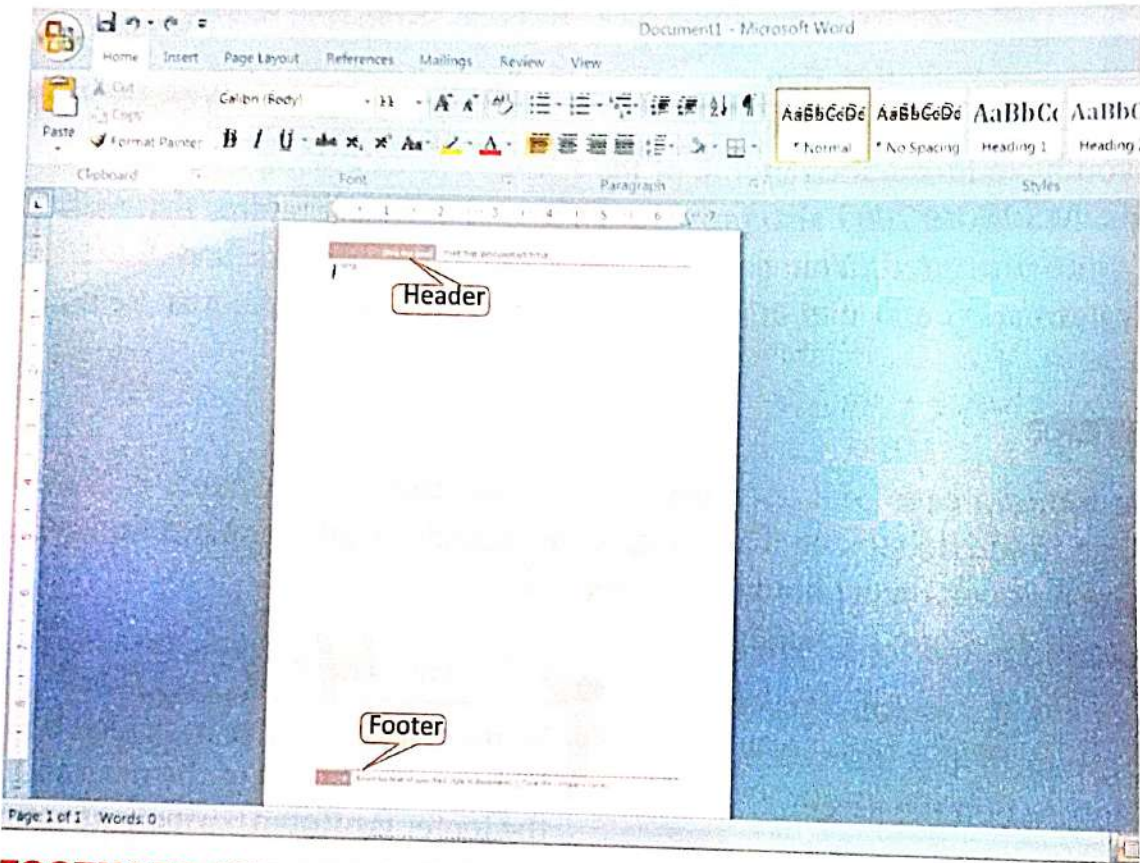
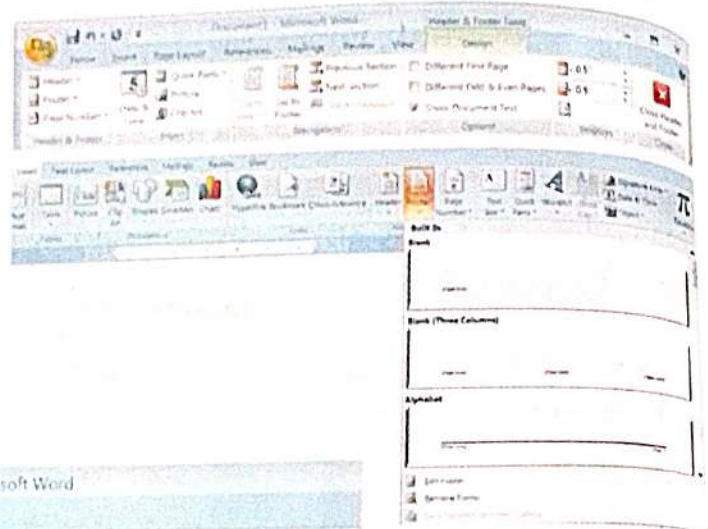
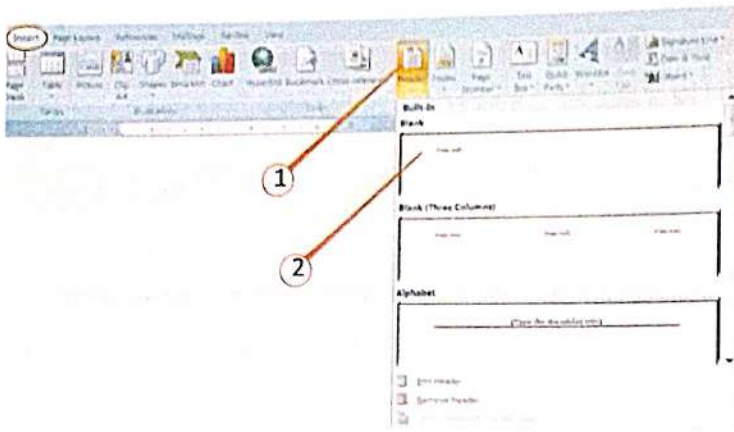
For Your Info

By default the header is printed 0.5 inches from the top of the page and the footer is printed 0.5 inches from the bottom of the page.

The Header and Footer toolbar contains buttons that can help you automatically enter important information in your header and footer. On clicking the Page Number in the Header & Footer group on Design tab, you will get a drop-down menu that contains Format Page Number option.

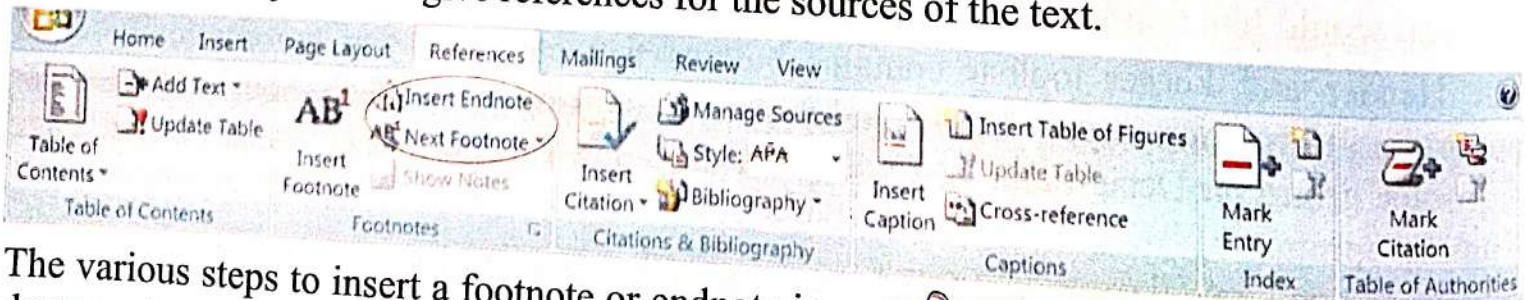
It opens the Page Number Format dialogue box so that you can format your page number in the header or footer.

You can also insert date, time, picture or a Clip Art on the header or footer of the page.



FOOTNOTE AND ENDNOTE

A footnote is generally placed at the bottom of a page whereas the endnote comes at the end of a document. A footnote is used in a document to give comments or references for the text. It helps the reader to understand the text by providing some extra information in it. The endnote is mostly used to give references for the sources of the text.



The various steps to insert a footnote or endnote in a document are :

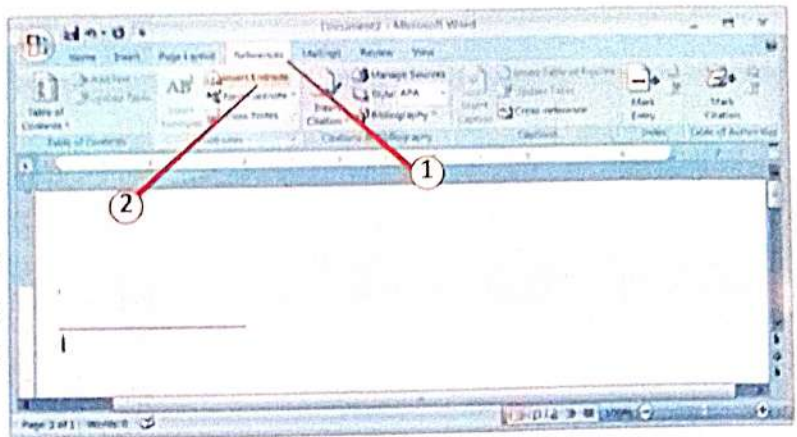
- 1) Go to the References tab on the Ribbon.

Quick Key

Footnote :	Ctrl + Alt + F
Endnote :	Ctrl + Alt + D

- Click on Insert Footnote button of Footnote group to type in the footnote.

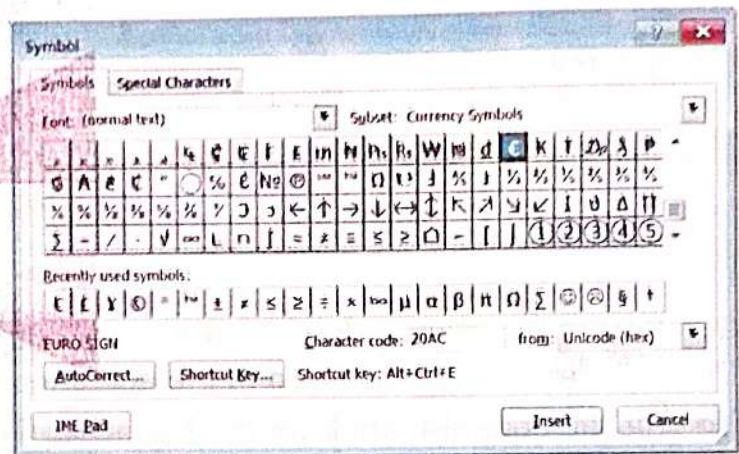
You can also insert footnotes or endnotes by clicking on the arrow at the Footnotes group. A Footnote or Endnote box appears on the screen. Choose the desired options to change Format style and click Insert to apply the change.



SYMBOLS

Symbols are signs or special characters that can be inserted from the Symbol dialogue box. Symbols can be inserted and formatted in a document just like the regular text.

You see many symbols in publications that are not available in your keyboard. For example, the symbol for multiplication is not available on the keyboard but can be selected from MS-Word's Symbol dialogue box.

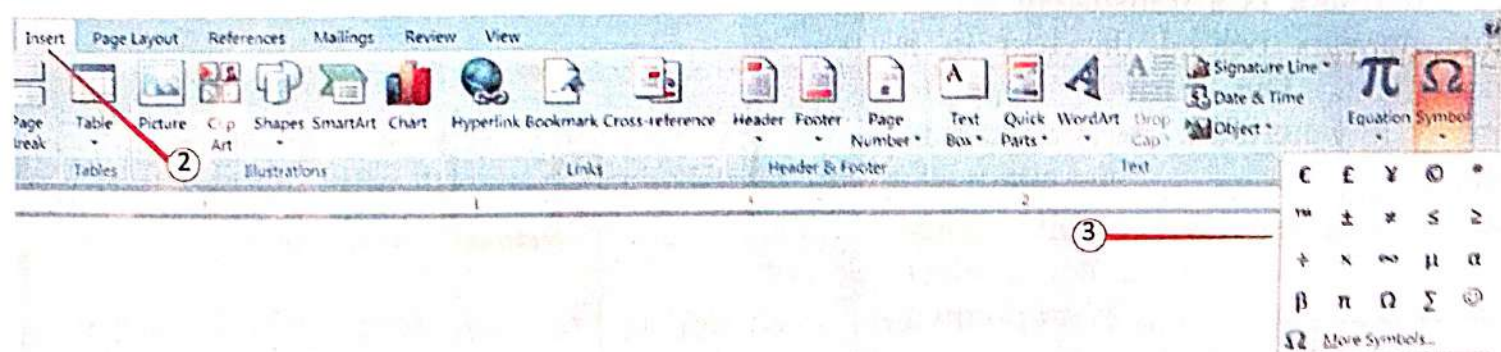


Inserting Symbols

Symbols and special characters are punctuation marks, spacing, or typographical characters that are not generally available on the standard keyboard.

The various steps to insert symbols and special characters are :

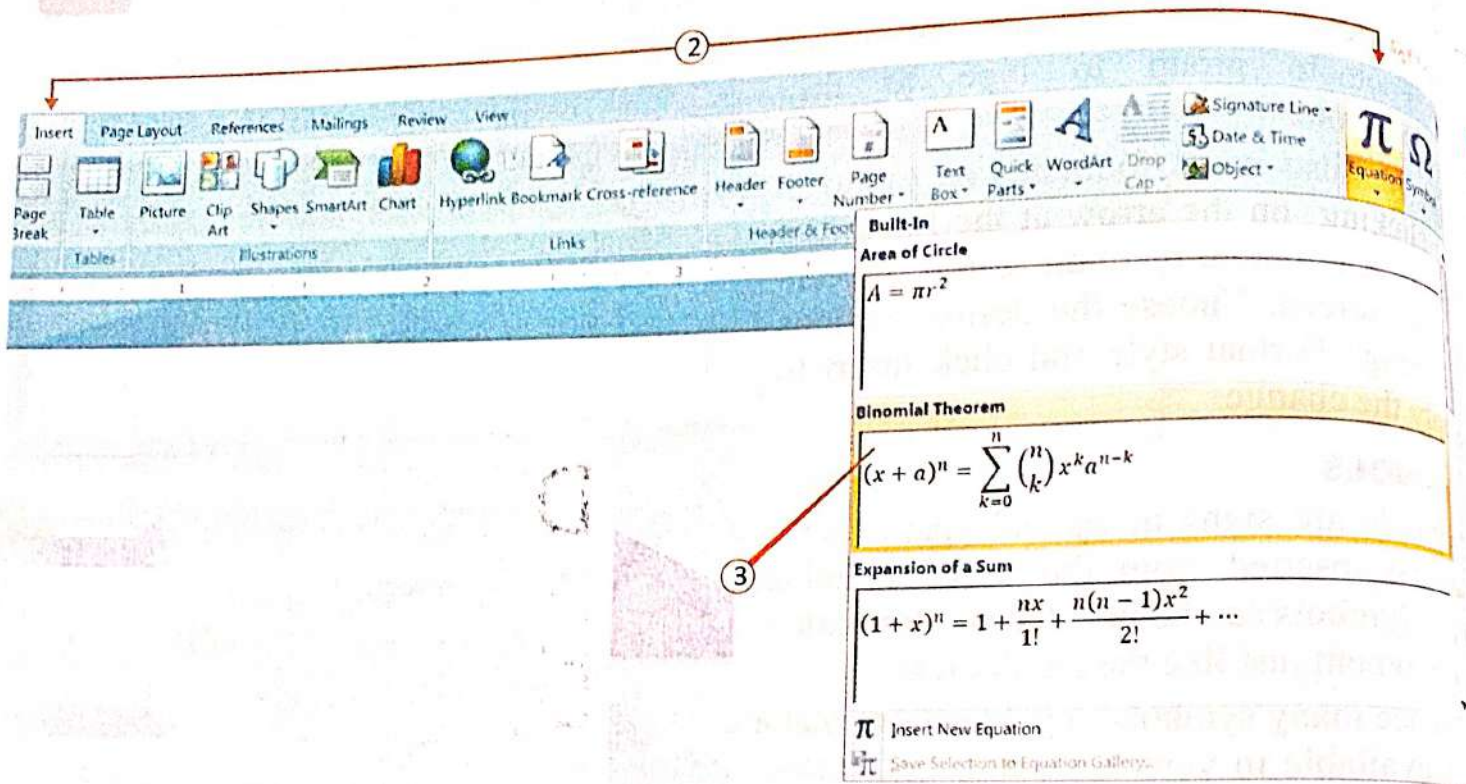
- Put the cursor in the document where you want to insert the symbol.
- Go to the Insert tab and select Symbol group.
- Choose the appropriate symbol from the symbol group.



EQUATIONS

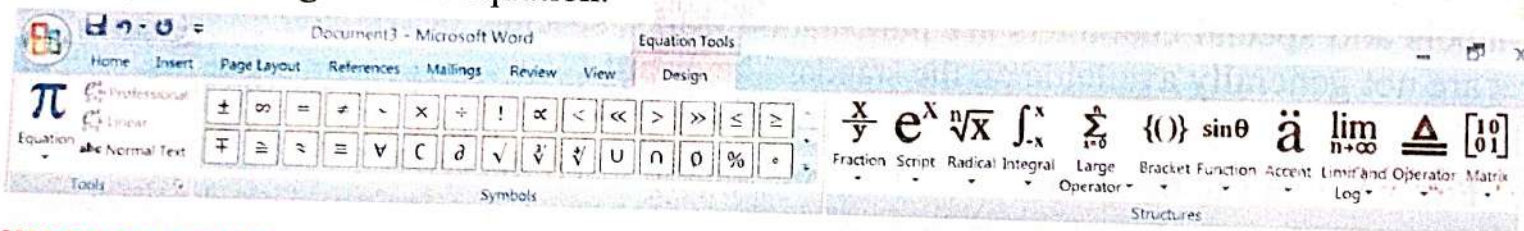
MS-Word 2007 also allows you to insert mathematical equations. The various steps to access the mathematical equation tools are :

- Place your cursor in the document where you want to insert the equation.
- Go to Symbol group on the Insert tab and select Equation button. A drop-down menu appears.



- Select the appropriate equation structure or click Insert New Equation. The required equation will be inserted in the document.

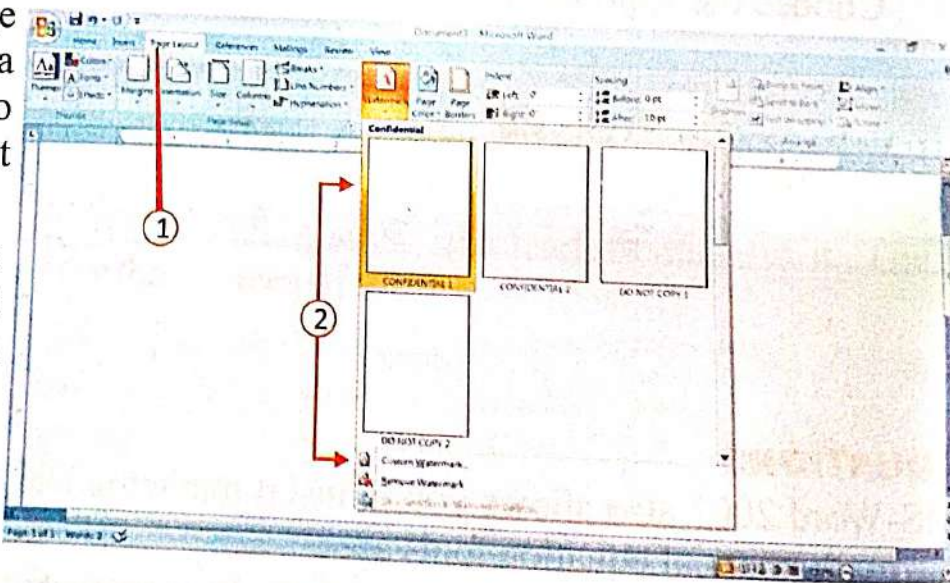
To edit the equation click on the Equation. The Design tab will appear on the Ribbon. Make the required changes in the equation.



WATERMARKS

A watermark is a translucent image that appears behind the text in a document. The various steps to insert a watermark in a document are:

- Go to Page Background group on the Page Layout tab to select watermark button. A drop-down menu appears.
- Choose the Watermark to be included in the document or click on the Custom Watermark to create your own watermark.



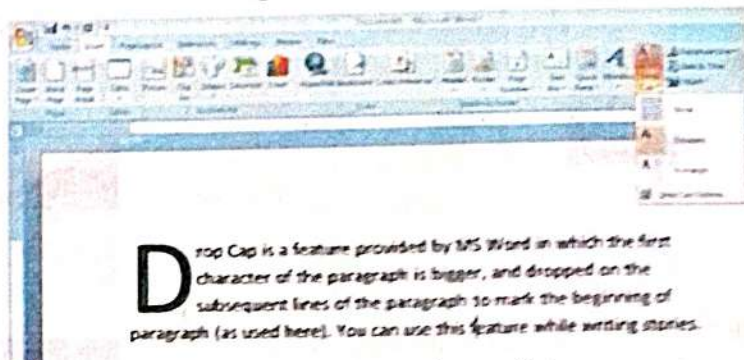
You can thus remove or insert a watermark in your document. To remove a watermark, follow the above steps and click on Remove Watermark option.

DROP CAP

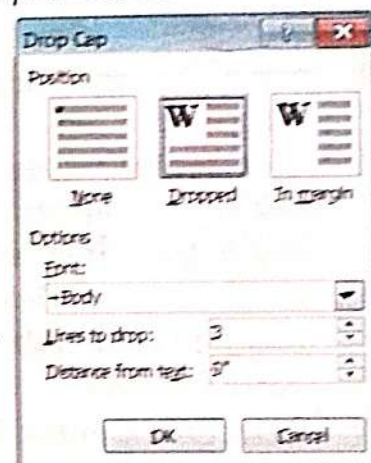
Drop Cap is a feature provided by MS Word in which the first character of the paragraph is bigger, and dropped on the subsequent lines of the paragraph to mark the beginning of paragraph (as used here). You can use this feature while writing stories.

Follow these steps to use Drop Cap feature of MS Word 2007 :

- In the Word 2007 document, click on the position where you want to add the Drop Cap feature.
- Click on **Insert** tab → **Text** group → **Drop Cap** drop-down list.
- Select the **Dropped** option from the drop-down list.
- Click on **Drop Cap Options...** from the drop-down list. The **Drop Cap** dialog box opens.
- Select the desired font of the dropped letter from the **Font:** drop-down list in the **Options** section.
- Select the desired option from the **Lines to drop:** list.
- Increase the distance between the text and the dropped letter with the help of **Distance from text :** list.
- Click on **OK**.



Drop Cap drop-down list



Drop Cap dialog box

TAB STOP





Tab stop refers to a preset text position. The Tab Stop feature in MS Word enables the user to change default distance covered by the Tab key for the preparation of a columnar data in MS Word.

Press the **Tab** key to move the cursor half an inch forward in a MS Word document.

Inserting Tab Stop

Tab Stop can be inserted at any position on the ruler within the margins. When a Tab Stop is set, MS Word automatically removes the default Tab Stops to the left.

There are several types of Tabs that are available in MS Word 2007. A few are discussed here.

- Left Tab**  : With this kind of Tab Stop, text or numbers are left-aligned in the column.
- Right Tab**  : With this kind of Tab Stop, text or numbers are right-aligned in the column.
- Center Tab**  : With this kind of Tab Stop, text or numbers are center-aligned in the column.
- Decimal Tab**  : With this kind of Tab Stop, fractional figures are aligned in such a way that all the decimal points are vertically aligned.

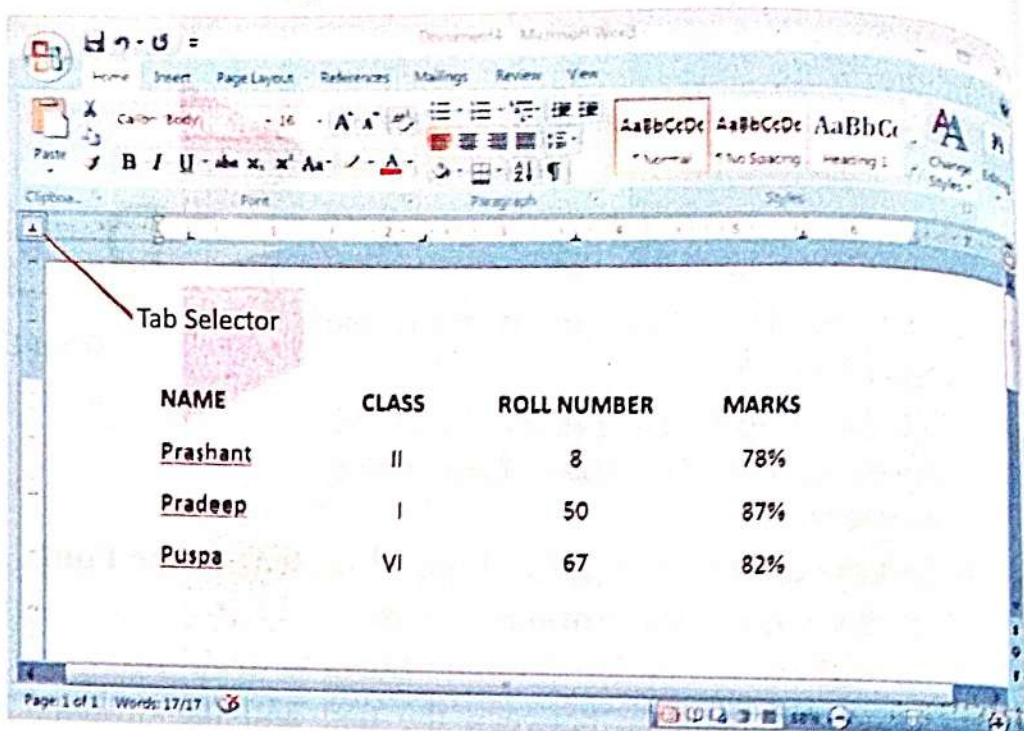
Deleting Tab Stop

Select each tab and drag it towards the document to delete tab stops. Let us create a list of friends to understand this concept. Create this list, a few steps need to be followed.

These are :

- Select the **Left Tab** from the Tab Selector, placed on the left side of the ruler.

- Click at the desired position on the **Horizontal Ruler** to define the location of the **Left Tab Type NAME**.



- Now, select the **Right Tab** from the Tab Selector.

- Click at the desired position on the **Horizontal Ruler** to define the location of the **Right Tab**. Bring the cursor to **NAME** and press the **Tab** key, write **CLASS**.

Inserting Tab Stop

- Select the **Center Tab** from the Tab Selector.

- Click at the desired position on the **Horizontal Ruler** to define the location of the **Center Tab**. Bring the cursor to **CLASS** and press the **Tab** key, write **ROLL NUMBER**.

- Now, select the **Decimal Tab** from the Tab Selector.

- Click at the desired position on the **Horizontal Ruler** to define the location of the **Decimal Tab**. Bring the cursor to **ROLL NUMBER** and press the **Tab** key, write **MARKS**.

- Move to the new line and type the values for each column.

- Move to the next column using **Tab** key.

- Once the list is completed, delete Tab Stop.

COLUMNS

MS Word allows the user to display the data in the form of vertical columns in the same way as it appears in a newspaper. Already created document can also be converted into columns.

How to Make Columns in MS Word 2007?

- Select **Page Layout** tab → **Page Setup** group → **Columns** drop-down list and select the column style of your choice.

- For choosing more column styles select, **More Columns...** option. The **Columns** dialog box opens.

For example, the second bullet in the list given below shows increase indentation. Follow are the ingredients required for making chocolate milkshake.

- 1 glass milk
- 2 teaspoons chocolate powder
- 2 teaspoons sugar
- Blender

How to Decrease Indent

If you want to decrease the indent, which means pushing the text one tab space towards left, then you need to follow these steps.

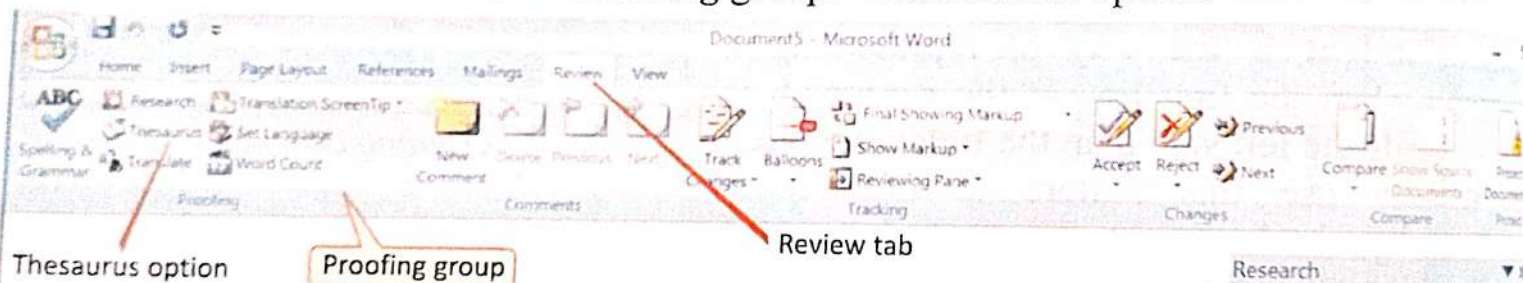
- Place the cursor over the place where you wish to decrease indentation.
- Click the **Home** tab → **Paragraph** group → **Decrease Indent** option.

Thesaurus

Microsoft Office has some features that help you to look up for meanings/synonyms (words with similar meaning) for a given word. One of these features is Thesaurus. The basic function of Thesaurus is to look up synonyms for a particular word. It is just like a dictionary, and can be used for replacing a word with one of its synonyms.

Follow these steps to use the Thesaurus in MS Word 2007 :

- Select the word for which you want an alternative word.
- Click on the **Review** tab → **Proofing** group → **Thesaurus** option.



Using Review tab to access Thesaurus option

- The Research task pane appears.
- The **Search for:** field displays the word you have selected and for which you want another word. It also contains the drop-down list of all reference books. Here, **Thesaurus: English (United Kingdom)** is selected.
- Below it, a list of the suggested synonyms appears. To use one of the words, point to it, click the down arrow key. Click **Insert** or **Copy** from the drop-down list.



Time to Drill

○ Create the following list in a Word 2007 document.

1. Computer Science
2. Social Science
 - ❖ Civics
 - ❖ Geography
 - ❖ History
3. Science
 - ❖ Physics
 - ❖ Chemistry
 - ❖ Biology
4. Mathematics
 - ❖ Arithmetic
 - ❖ Algebra

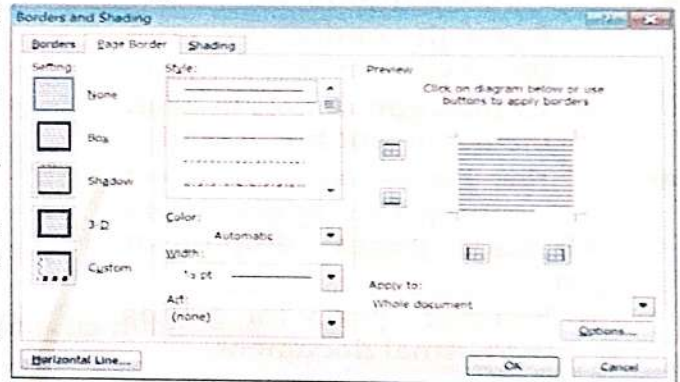
BORDERS AND SHADING

MS Word allows users to add borders and apply shading options to a page and the selected text. A border is a line or a pattern surrounding the page or a cell in the margin area. You can set the text apart from the rest of the document by adding borders and shading.

Applying Shading

The steps to apply shading to a page in MS Word 2007 are given here :

- Select the paragraph(s) where you wish to apply shading.
- Click on **Page Layout** tab → **Page Background** group → **Page Borders** option.
- The **Borders and Shading** dialog box opens. Click on the **Shading** tab.
- Select the colour of your choice in the **Fill** section.
- Select appropriate options from the **Style:** and **Color:** drop-down lists in the **Patterns** section.
- Select the desired option from the **Apply to:** drop-down list in **Preview** section.
- Click on **OK**.



Borders and Shading dialog box

Removing Shading

The steps to remove shading from a page in MS Word 2007 are given here :

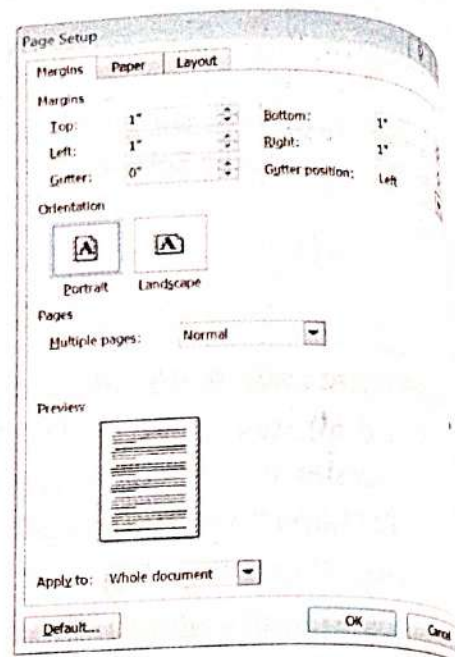
- Select the paragraph from where the shading has to be removed.
- Click on **Page Layout** tab → **Page Background** group → **Page Borders** option.
- The **Borders and Shading** dialog box appears.
- Click on the **Shading** tab.
- In the **Fill** section, click on **No Color** option from the drop-down list.
- In the **Patterns** section, select **Clear** option from the **Style:** drop-down list.
- Click **OK**.

PAGE SETUP AND MARGINS

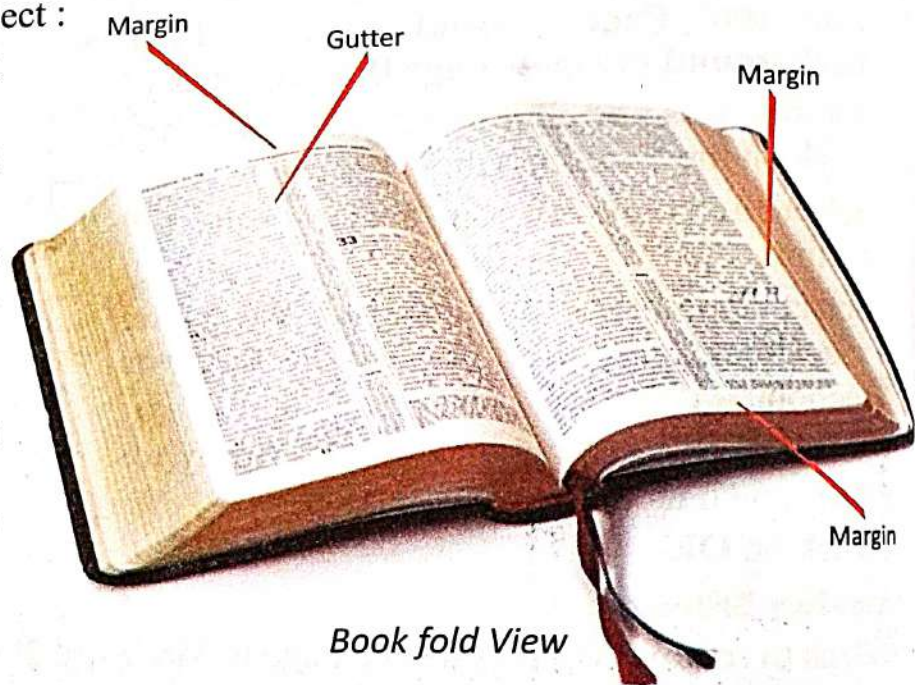
Page margins are the blank spaces near the edges of the page. Texts and graphics are normally confined or set over the printable area inside the margins. However, some items can be positioned on the margins. For example, headers, footers and page numbers.

You generally work using the default Page Margins but you can alter them using the following steps :

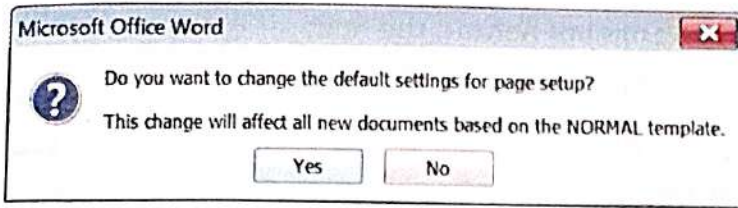
- Click on **Page Layout** tab → **Page Setup** group → **Page Setup** dialog box launcher.
- The **Page Setup** dialog box appears. It has three tabs : **Margins**, **Paper** and **Layout**.
- Select the **Margins** tab.
- In the **Margins** tab in the **Margins** section, select the desired option from :
 - ❖ **Top:**, **Bottom:**, **Left:** and **Right:** lists to increase or decrease sizes of the four margins.
 - ❖ **Gutter:** list to add text space to the side or top margin of a document you plan to bind. A gutter margin ensures that text does not hide due to binding.
- In the **Orientation** section, select :
 - ❖ **Portrait** option to print the document vertically.
 - ❖ **Landscape** option to print the document horizontally.
- In the **Pages** section, select the appropriate option from **Multiple pages:** drop-down list :
 - ❖ **Normal** option for getting the normal document.
 - ❖ **Mirror margins** option for setting the facing pages in a document such as books magazines, etc.
 - ❖ **2 pages per sheet** option for printing two page on one sheet.
 - ❖ **Book fold** option for creating booklets with the specific number of pages.
- In the **Preview** section, select either of the option from **Apply to:** drop-down list :
 - ❖ The **Whole document** option.
 - ❖ **This section** option.
 - ❖ **This Point forward** option
- Click on **Default...** button to reset the default values for the Page Margin. When you click on this button, then you will get the **Microsoft Office Word** dialog box. Click on **Yes** to apply the default settings.
- Click on **OK** for applying these changes in the current document.



Page Setup dialog box



Book fold View



Microsoft Office Word dialog box

APPLYING BUILT-IN STYLES

Styles are used for formatting the text in MS Word. A style is a set of formatting instructions. In MS Word 2007, you have a number of built-in formatting styles. If the available styles do not match your requirements, then you can create your own style. The general idea is to modify a style to suit a particular formatting need, and apply it to the text or a paragraph.

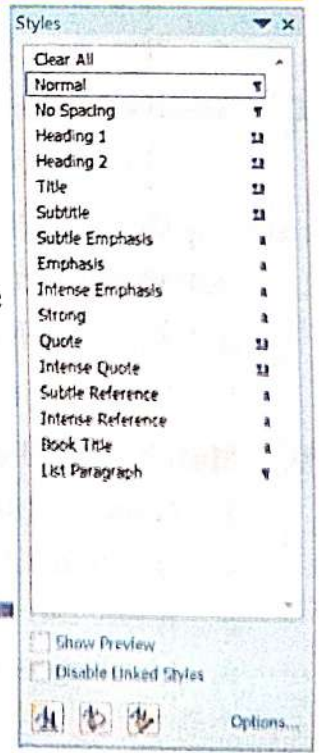
Follow these steps to apply built-in style :

1. Select the text or paragraph.
2. Click on **Home** tab → **Styles** group → **Styles** list. OR
Click on **Styles** dialog box launcher.

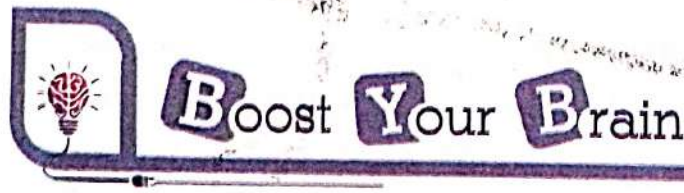
From here you can :

- use down arrow key to choose from the list.
- use **Show Preview** checkbox to see the effect of the style on the document
- use **Clear All** option to remove all styles from the document.

Quick Key	
Apply Heading 1	Alt+Ctrl+1
Apply Heading 2	Alt+Ctrl+2
Apply Heading 3	Alt+Ctrl+3
Apply List Bullet	Alt+Shft+L
Cancel	Esc
Hanging Indent	Ctrl+T
Copy Format	Ctrl+Shft+C
Normal style	Ctrl+Shft+N
Paste Format	Ctrl+Shft+V
Thesaurus	Shft+F7
Insert Format	Ctrl+Alt+F
Show/Hide Option	Ctrl+Shft+*
Insert Endnote	Ctrl+Alt+D
Styles	Alt+Ctrl+Shft+S



Styles Pane



A. Tick (✓) the right option.

1. Which of these is placed at the end of a document?

(a) Header	<input type="checkbox"/>	(b) Footnote	<input type="checkbox"/>
(c) Endnote	<input type="checkbox"/>	(d) None of the above	<input type="checkbox"/>
2. A Footnote in a document is used to:

(a) give comments and references on the text	<input type="checkbox"/>
(b) provide extra information	<input type="checkbox"/>
(c) both (a) and (b)	<input type="checkbox"/>
(d) none of the above	<input type="checkbox"/>

3. A Watermark is a/an image that appears behind the text.
(a) transparent (b) translucent
(c) opaque (d) none of these

4. Which short-cut command is used to insert a Footnote?
(a) Ctrl + Alt + F (b) Ctrl + Alt + E
(c) Ctrl + Alt + D (d) Ctrl + Alt + A

B. Fill in the blanks with the correct word.

Thesaurus translucent 0.5 Indentation Symbols Endnote

1. By default, header is printed inches from the top of the page.
2. are the signs and characters that can be inserted from the symbol dialogue box.
3. represents the first line hanging over the rest of the lines.
4. A Watermark is a image that appears behind the text of a document.
5. The is placed at the end of a document.
6. The is for looking up synonyms for a particular word.

C. State whether the following statements are true or false.

1. You cannot alter the default setting of Page margins.
2. Only pages can be formatted with borders in MS Word 2007.
3. Shading can be applied using Borders and Shading dialog box.
4. You can also give your own styles besides using built-in styles.
5. Drop Cap feature is not of any use in MS Word 2007.

D. Match the following.

- | | |
|---------------------|--|
| 1. Hanging Indents | (a) The text is right aligned. |
| 2. Decimal Tab Stop | (b) The fractional figures are aligned. |
| 3. Right Tab Stop | (c) It can be applied to a text or a paragraph. |
| 4. Shading | (d) The first line is a little more towards the left than the following lines. |
| 5. Mirror margins | (e) It is used for making books and magazines. |

E. Answer the following questions.

1. Define header and footer.

.....
.....

2. Where do you add a footnote and an endnote?

.....
.....

3. Why do you use page numbers in a document?


.....
.....

4. What is the importance of headers and footers in a document?


.....
.....

5. Name the different margins available in Page Setup dialog box.

.....
.....

6. What is the purpose of a Tab key? How can you change its default shift? 

.....
.....

7. Why is a Watermark inserted in a document? 

.....
.....

Activity Monitor

* Design a cover for your school magazine. You may make use of the features of MS Word 2007 learnt in this chapter to do so. The cover page design should have the following.

- An interesting layout
- Attractive page borders
- Title of the magazine
- Name of the school and class at the bottom of the page (Footer)
- Month and year must be highlighted at the top right side (Header)
- Implement the gutter margin on the left position.

Lab Visit

1. Collect or type text matter for an article on Water Conservation and highlight the important function in bold or italics. Add watermark effect in your documents.
2. Make a report on your favourite singer. The report should include :
 - a title page
 - table of contents
 - biography of the singer
 - a list of his/her famous songs
 - a list of awards won by the singer
 - a gallery page showcasing his/her photographs, etc.

4

MS Word 2007 : Using Mail Merge



Lesson Extract

- ❖ Data Source/Address Book
- ❖ Mail Merge Documents
- ❖ Creating the Main Document
- ❖ Choosing the Data Source

- ❖ Writing and Inserting Merged Document
- ❖ Preview the Merged Document
- ❖ Finish the Merging Process

In MS Word, the mail merge option is an important feature. Many times, we need to send a standard letter to many people at a time. For example, a letter announcing a grand meeting in your school may need to be sent to a number of people, including the parents, sponsors and many others. For this we type the body of the letter in MS Word and mail merge makes multiple copies of the letter with names and addresses of persons available in the records.

DATA SOURCE/ADDRESS BOOK

Data source consists of mailing list, for example, name, address, city, pin, telephone number etc. The data is organized in tabular form along with the field names. The data source is associated with the main document, so its field names can be used in the main document and it becomes easy to merge addresses along with the main document.

NAME	ADDRESS	CITY	PIN	TEL. NO.
Kabir	#605, Sector 2	Meerut	250002	2576675
Ridhima	#105, Sector 20	Meerut	250002	2586498
Anika	#24, Sector 35	Meerut	250002	2618090
Manas	#645, Phase 11	Meerut	250002	2264080



For Your Info

The data source can be MS Word Database file containing the address or it can be a database created in other applications, such as MS-Excel, MS Access, etc.

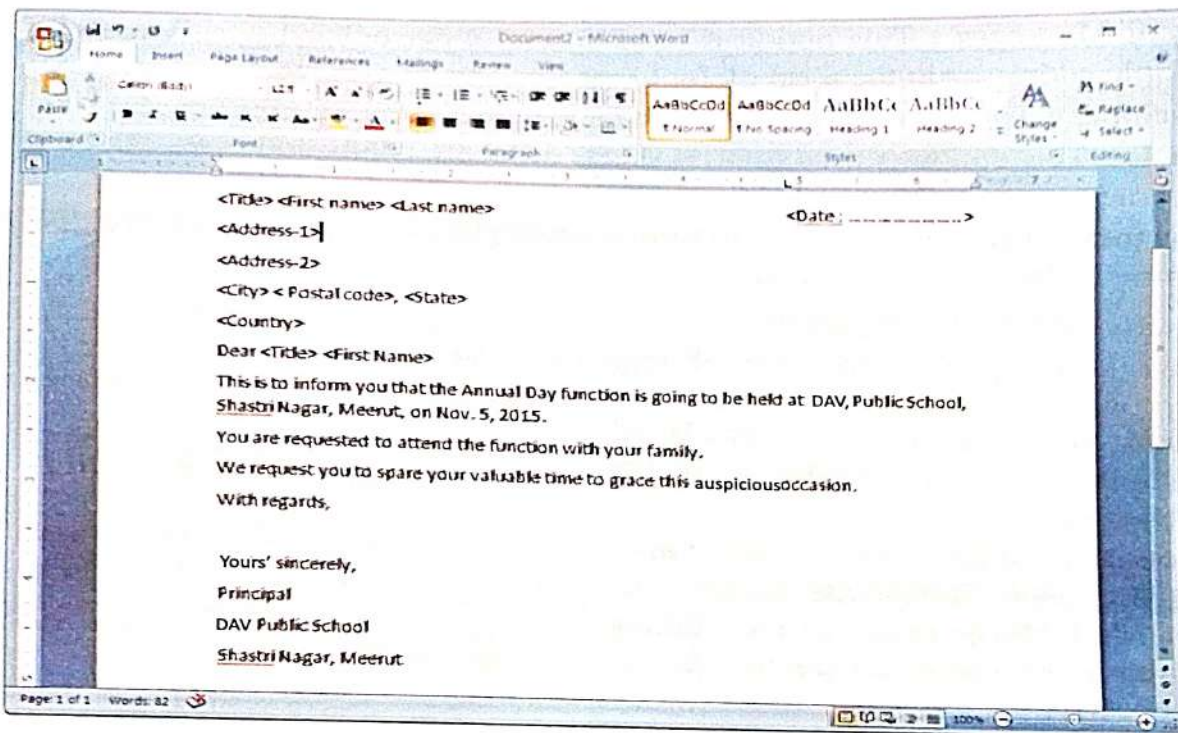
MAIL MERGE DOCUMENTS

The body of the standard letter to be sent to all recipients is called the **Main Document**. It also contains the required field names for carrying out the merge process.

The process of mail merge involves three main steps :

- Creating the main document, containing the body of the letter.
- Creating the data source that contains the records of recipients.
- Merging the data source and the main document.

Mail merge reads the data source and physically merges it with the main document to generate letters for all the records found in the data source. MS Word creates a new



Main Document

document by inserting the new data from the data source into the structure of the template document.

The resultant document of mail merge operation contains copies of the main document along with the information stored in the data file.

Let's study the steps of mail merge in detail.

CREATING THE MAIN DOCUMENT

Using mail merge, you can create letters, e-mail messages, envelopes, labels and directories. The data document holds the text that repeats for all merged documents. On the **Mailing tab**, you can click on **Start Mail Merge** and select the document type.

MS Word offers the following types of documents :

- **Letters** : This option is used for composing and designing mass mailings for which only the recipient information varies. This document type is also used for sending out a formal letter or invoice.

For Your Info

Mail merge is a software function describing the production of multiple documents from a single template form.

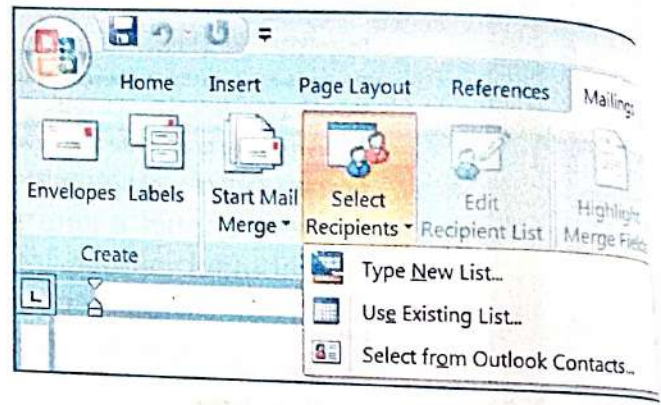


- **E-mail Messages** : This option is used to send a personalized e-mail to each recipient. Multiple addresses in the form of To, Cc or Bcc and be avoided.
- **Envelopes** : This option is used for producing envelopes.
- **Labels** : This option is used to print sheets of labels. Many addresses can be printed on the same page in different label formats.
- **Directory** : This option is used to print a catalogue or any other document that requires printing multiple records per page.

CHOOSING THE DATA SOURCE

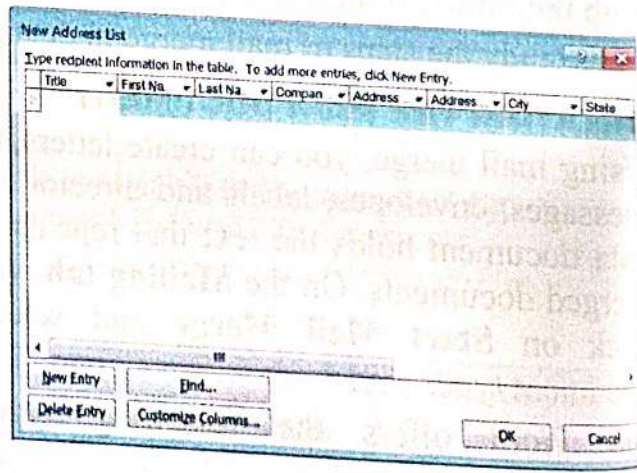
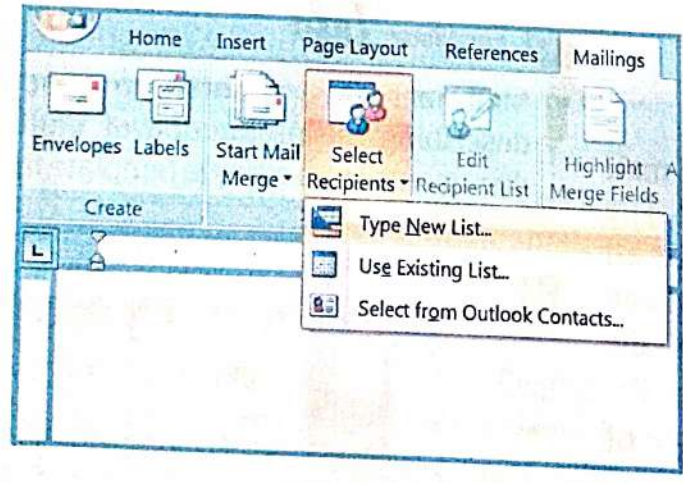
Once you have selected the type of mail merge, you can make your recipient list or data source. Besides creating it in MS Word, you can import it from MS Excel or MS Access database.

The various steps to select your recipient are :
Click on the **Select Recipients** button from the **Start Mail Merge** group of the Mailing tab. A drop-down menu containing various options appears.

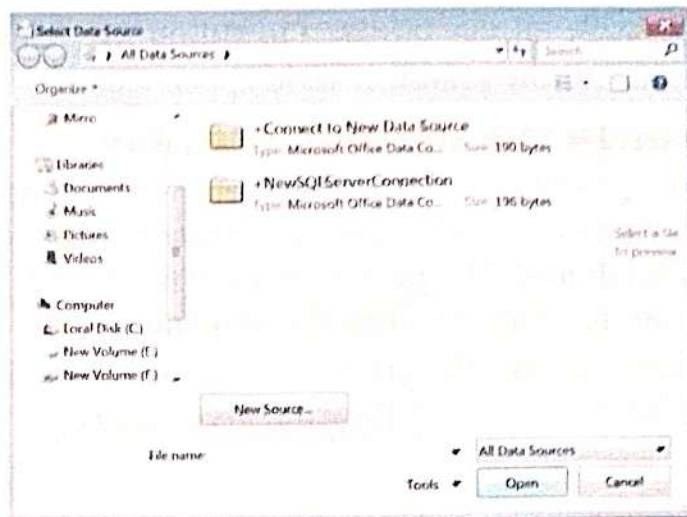
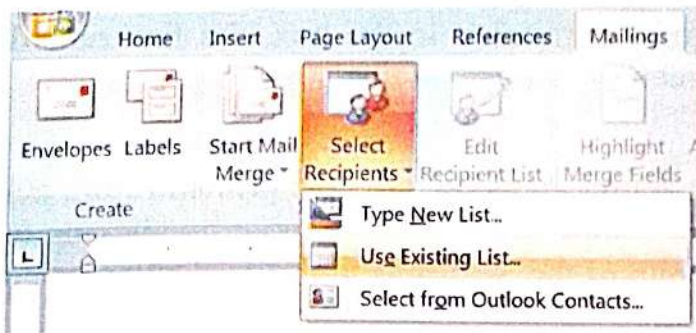


The various options are :

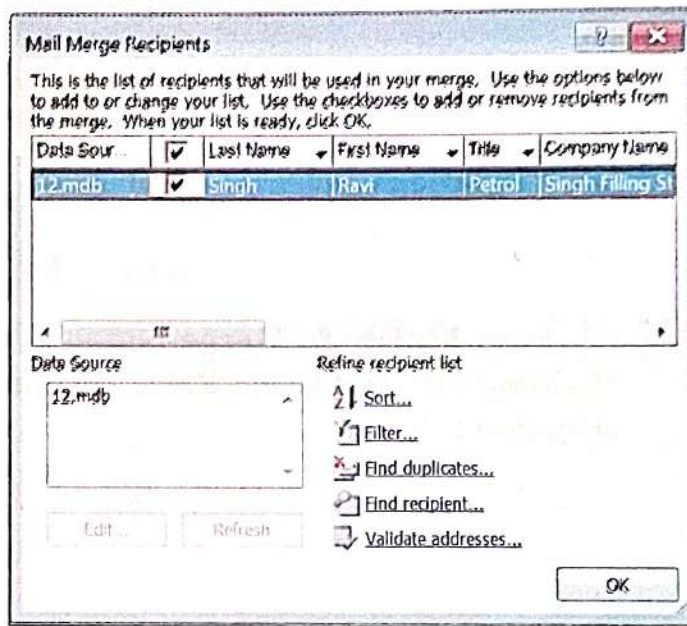
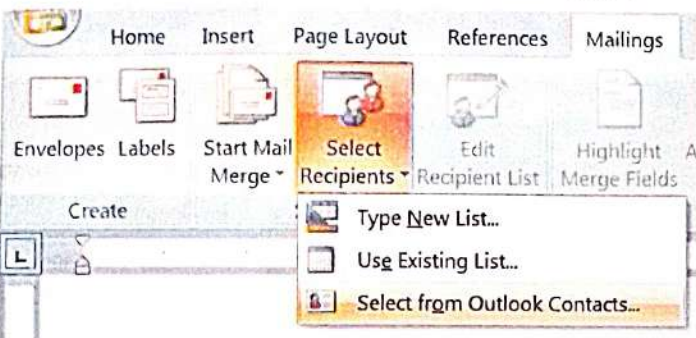
- **Type New List** : When this option is selected, a **New Address List** dialog box appears. Enter the name and address in the dialog box. **Mail Merge Recipient** dialog box is used when you do not want to use the entire database. It is used to select the required recipients.



- **Use Existing List** : When this option is selected, the **Select Data Source** dialog box appears. Navigate to select a data source file. If you have an MS Excel worksheet or MS Access database or another type of data file, click on Use Existing List and then locate your file in the Select Data Source dialog box.



Select from Outlook Contacts : If you want to use your contacts list in Outlook, click on **Select from Outlook Contacts**.

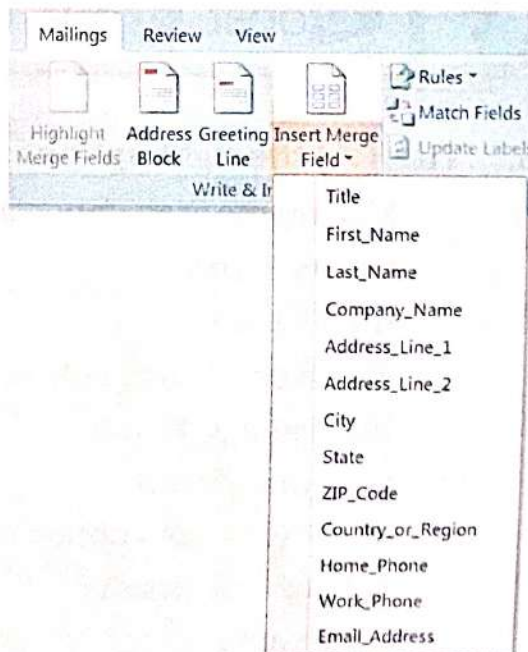


Editing the Recipient List

In MS Word you have the options to select, modify and control your data. On clicking the **Edit Recipient List** from the **Mailings** tab, a **Mail Merge Recipients** window appears. From this window you can select or deselect an individual recipient. You can sort out of filter items in the list.

WRITING AND INSERTING MERGED DOCUMENT

Once you have created your recipient list, you will be able to make the merged document. For this, click on **Insert Merge Field** on **Write and Insert Fields** group of **Mailings** tab. A drop-down menu appears. Select the option you want to choose to insert. Repeat the process until you have inserted all the fields.



PREVIEW THE MERGED DOCUMENT

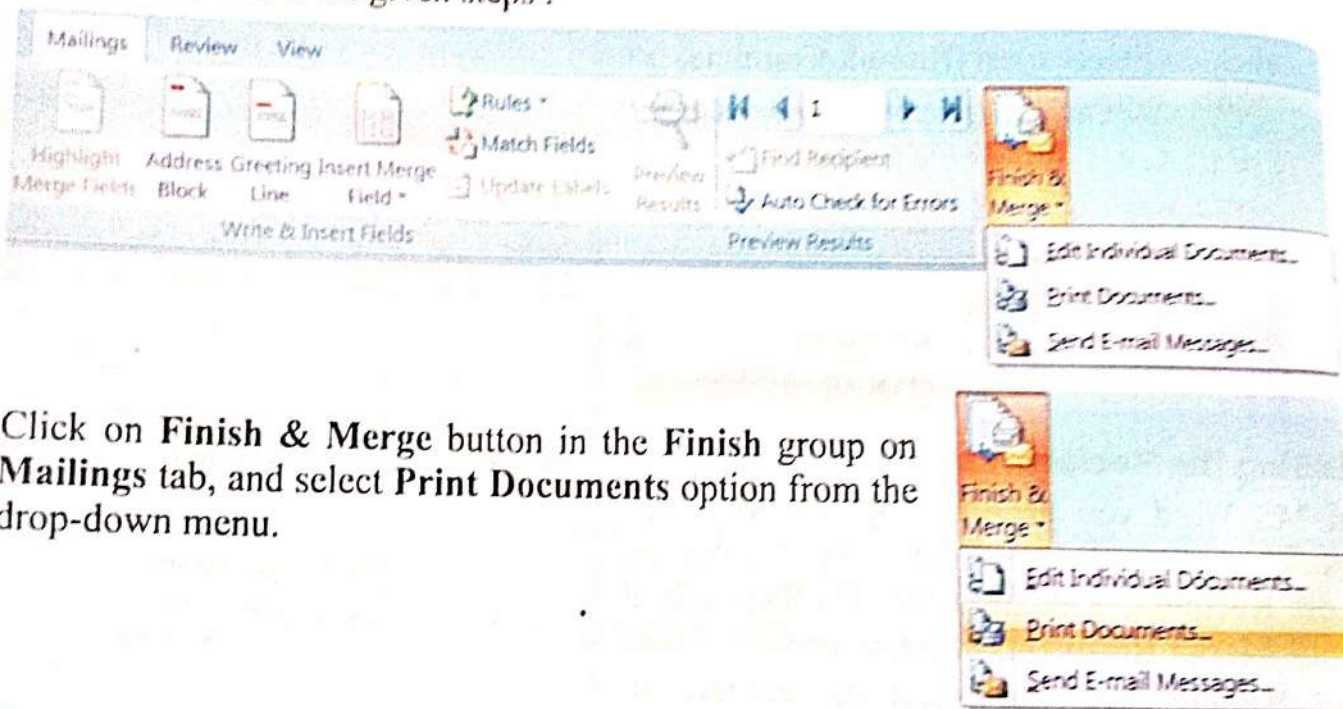
Click on the **Preview Results** button in the **Preview Results** group of the **Mailings** tab. It helps you to navigate through the recipients in the data document. You can search a specific recipient in the data list by clicking on the **Find Recipient** button from the **Preview Results** group of the **Mailings** tab. A **Find in Field** box

appears on the screen. On filling the required information in the box, the first record that matches the search criteria appears on the screen.

FINISH THE MERGING PROCESS

By merging the data document with the data source, you can create a printed result, a new document or an e-mailed document. You can complete your mail merge by clicking on the **Finish and Merge** option from the **Finish** group of the **Mailings** tab and selecting one of the options from the drop-down menu.

You can take the printouts of your letter with the merged data of your data source. In order to print the letters, follow the given steps :



- Click on **Finish & Merge** button in the **Finish** group on **Mailings** tab, and select **Print Documents** option from the drop-down menu.

Boost Your Brain



- A. Tick (✓) the right option.
- Mail merge is an important feature of

<input type="checkbox"/> (a) MS Access	<input type="checkbox"/> (b) MS Word
<input type="checkbox"/> (c) MS Excel	<input type="checkbox"/> (d) MS Window
 - Finish and Merge option is present in group of the tab.

<input type="checkbox"/> (a) Mailings, Finish	<input type="checkbox"/> (b) Finish, Mailings
<input type="checkbox"/> (c) Finish, Insert	<input type="checkbox"/> (d) None of these
 - Preview Results option is present in group.

<input type="checkbox"/> (a) Preview Results	<input type="checkbox"/> (b) Preview
<input type="checkbox"/> (c) Results	<input type="checkbox"/> (d) Messages

4. Type New List is an option in button.

(a) Start Mail Merge

(b) Select Recipients

(c) Edit Recipients List

(d) None of these

B. Fill in the blanks with the correct word.

MS Access Mailings Mail Merge Main Document
MS Excel Preview Results recipient list Data source

1. consists of mailing list.

2. The body of the standard letter to be sent to all recipients is called the

3. is a software function describing the production of multiple documents from a single template form.

4. Data source is also called the

5. The data source can be created in or

6. Preview Results button in the group of the tab is used to preview the mailing result.

C. State whether the following statements are true or false.

1. Data source contains the text that we wish to send to all the recipients.

2. Preview Result option on Mailings tab displays the first record from the data source.

3. Mail merge is used in an organisation to send a standard letter to many people at a time.

4. Another name for address book is Mail merge.

5. The two main components required during a mail merge process are the Main Document and Merge Field.

D. Answer the following questions.

1. What do you understand by the term Mail merge?

.....

2. What is a Data Source?

.....

3. What is a Main Document?

.....

4. Write the important steps involved in Mail merge.

.....

5. Write the steps involved in previewing the Merged Document.

.....

6. Renu has prepared a data source for inviting her friends to her birthday party. Later on she wanted to sort out her friends on the basis of their place of residence. How would she do it?

Activity Monitor

- * Place the six steps to create a merged document in a correct order on the ladder.

Complete the merge

Select starting document

Preview your letters

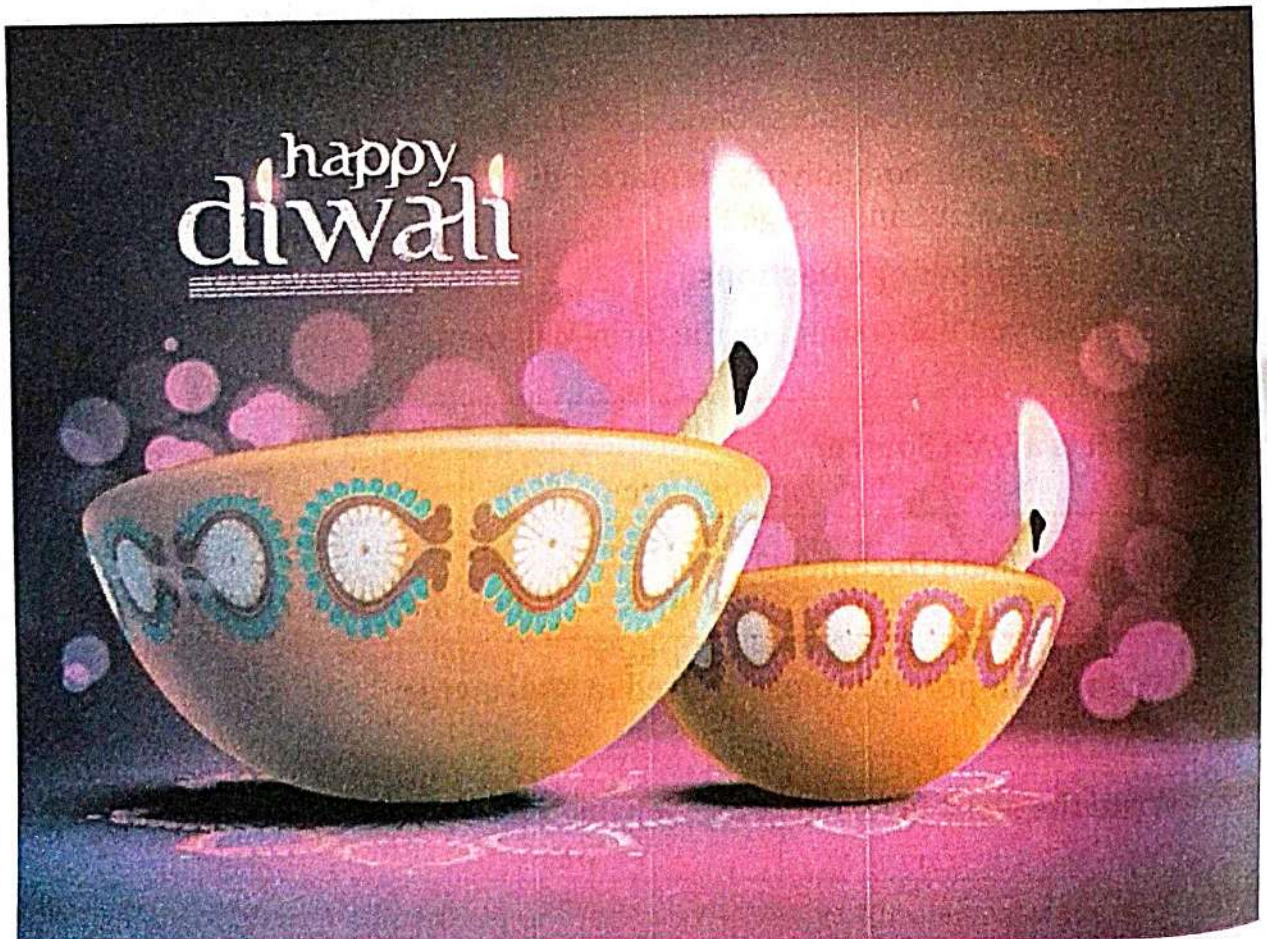
Write your letter

Select the document type

Select recipients



Create a Diwali greeting card for sending it across to your relatives and friends.



Lesson Extract

- ❖ Adding Graphics and Pictures to the Slide
- ❖ Animating Text and Objects
- ❖ Creating Tables
- ❖ Adding Transition
- ❖ Inserting Charts
- ❖ Importing Data from Word
- ❖ Inserting Audio and Video Files

MS PowerPoint is a powerful tool which helps us to communicate our views and ideas effectively using diagrams, photos, cliparts, sounds, colors, designs and animated special effects. It is the most popular presentation software. It is available as part of the MS Office suite.

A PowerPoint presentation comprises of a series of slides. A slide can contain text, graphics, Clip Arts, sounds, movies and animation.

In this chapter, let us find out ways to use graphics and animation to make our presentation attractive to hold the attention and interest of the audience.

You can add sound and music from the files on your computer. You can even download these files from internet or Microsoft Clip organizer. Further more, you can record your own sound and add to the presentation or use music from a CD. Let's quickly review some of the features of PowerPoint.

ADDING GRAPHICS AND PICTURES TO THE SLIDE

Adding Graphics

The Microsoft Clip Organizer contains graphics, photographs, sounds, videos and other media files, called clips that can be inserted and used in a presentation.

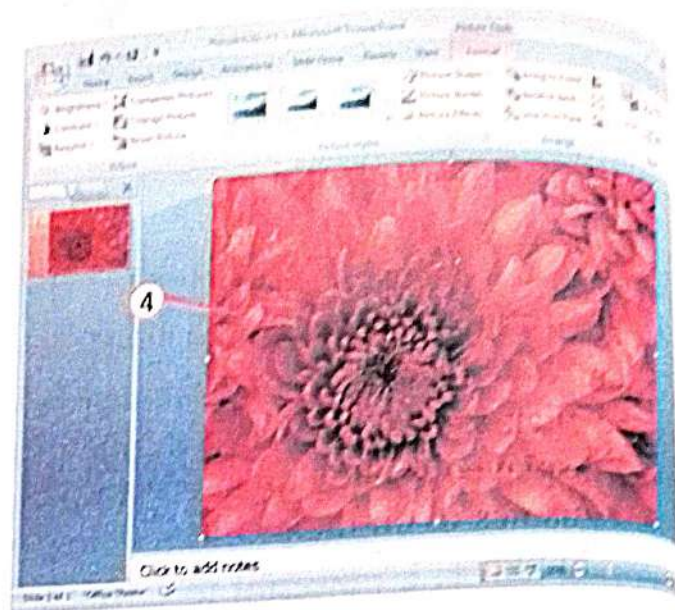
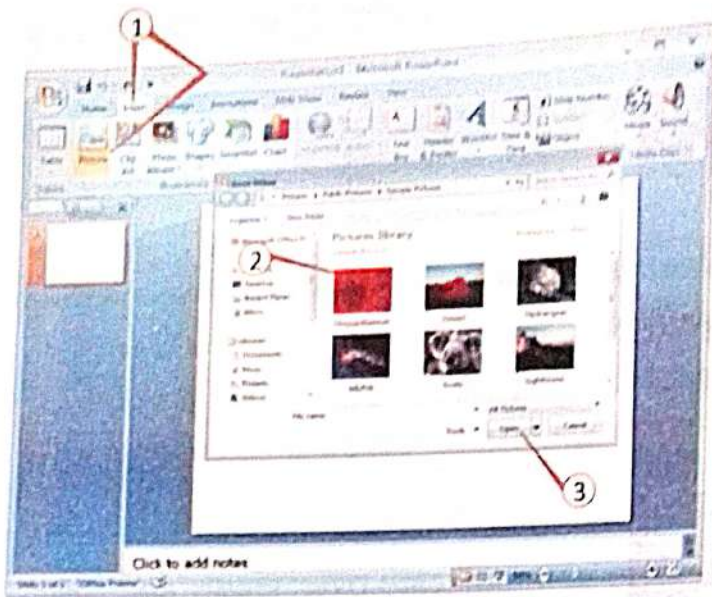
The various steps to add a picture to a PowerPoint slide are :

- Go to the **Insert** tab and select **Picture** button in the **Illustrations** group. An **Insert Picture** dialog box opens on the screen.
- Browse to search the picture from your files on the computer. Select the picture.
- Click on the **Insert** button. The selected picture will be inserted in the document.
- To relocate the graphic, click and drag it to the place you want to reposition it.



For Your Info

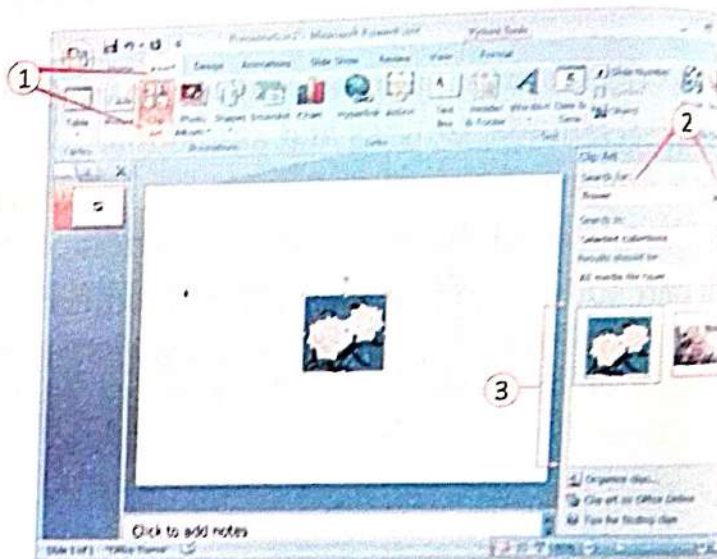
A PowerPoint presentation is stored as a file with .pptx extension.



Adding Clip Art

Clip Arts includes the picture files that can be inserted into a slide of your presentation. The various steps to insert a Clip Art are :

- Go to **Insert** tab to select **Clip Art** button from the **Illustrations** group. The Clip Art task pane will appear.
- In the **Search** for box, type the word or phrase of the picture to be inserted and click on the **Go** button.
- The list of pictures will appear in the task pane.
- Click on the **Clip Art** to insert it in the slide.



Editing Pictures and Clip Art

When a graphic is inserted into a presentation, an additional tab appears on the Ribbon. The **Format** tab allows you to format the pictures and graphics. This tab has four groups :

Adjust : It controls the picture's brightness, contrast and colors.

Picture Style : It allows you to place a frame or border around the picture and add effects.

Arrange : It controls the alignment and rotation of the picture.

Size : It allows you to resize the graphic.



Adding Photo Albums

A photo album is a new feature in PowerPoint 2007 that allows you to create a photo album easily.

Steps to create a photo album on the slides are :

1) Go to the **Insert** tab and click on the **Photo Album** button from the **Illustrations** group. Choose the **New Photo Album** option from the drop-down menu. A Photo Album dialog box opens.

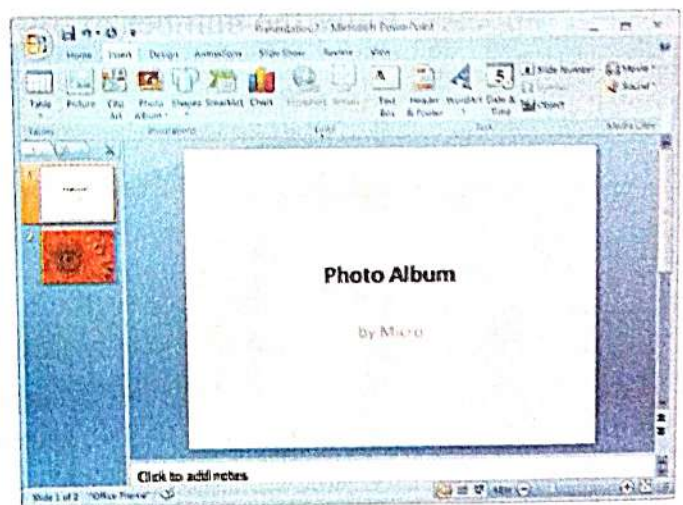
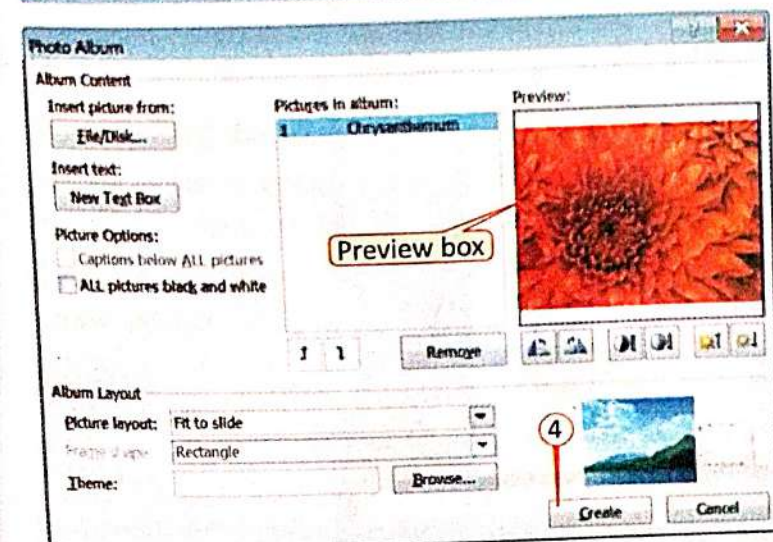
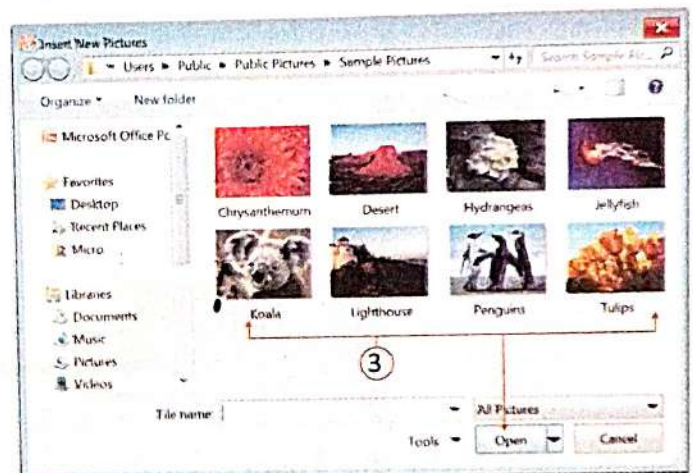
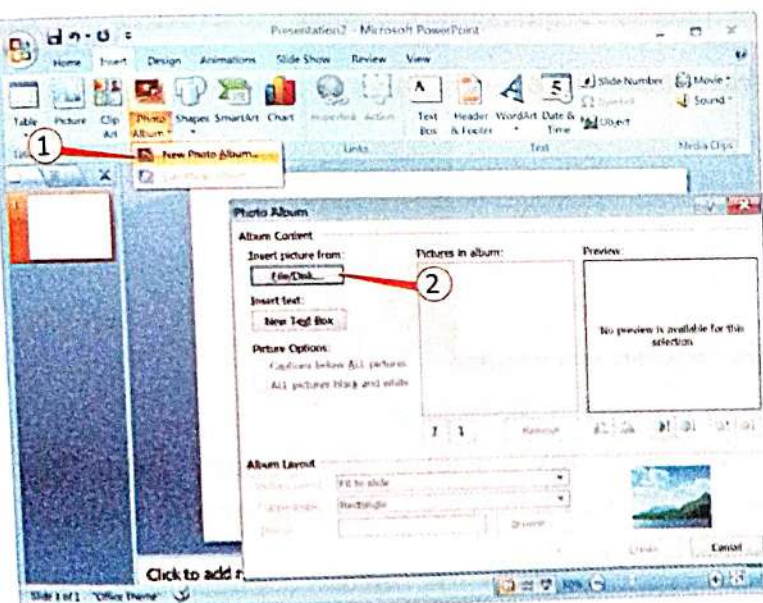
2) Click on the **File/Disk** option to see pictures from your files. Select all the desired pictures and click **Insert**. The last selected picture will be displayed in the Preview box. The numbers and names of all the pictures will be shown in the Pictures in album box.

3) Click on **Create** button to insert the pictures in your photo album.

Once you have created your photo album, you can add text by clicking on the **New Text Box**.

For Your Info

You can even add notes in your photo album for your presentation.

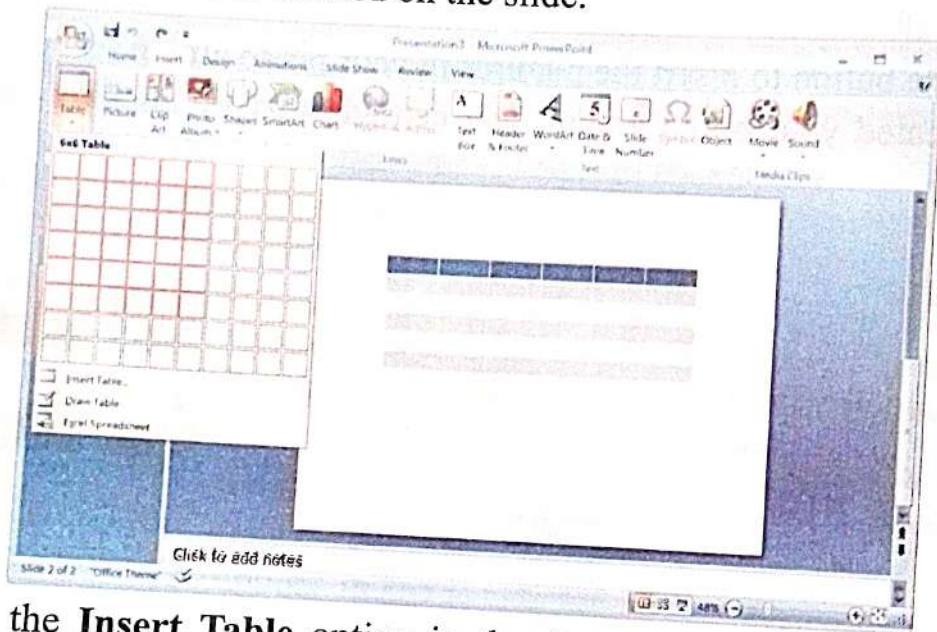


CREATING TABLES

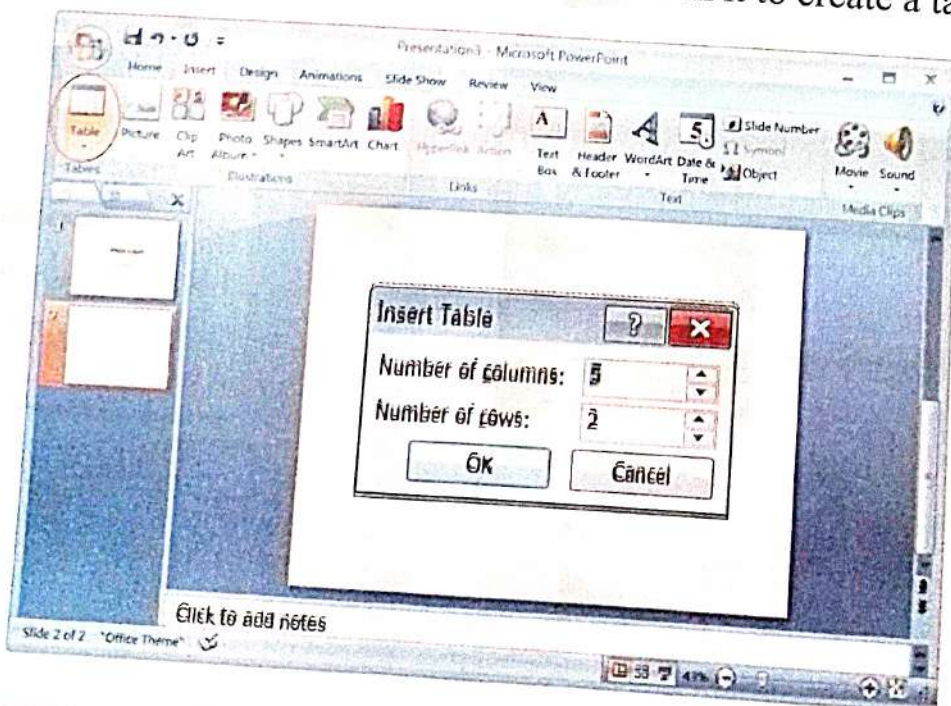
PowerPoint provides additional features to organise the information in a tabular form. A table is a grid made up of rows and columns. The intersections of rows and columns are rectangular boxes. These are called cells. Columns are vertical series of cells whereas rows are horizontal series of cells. A table is used to display data in an organised way in a presentation. It is inserted at the point where the cursor is positioned.

The various steps to insert a table in an MS PowerPoint presentation are :

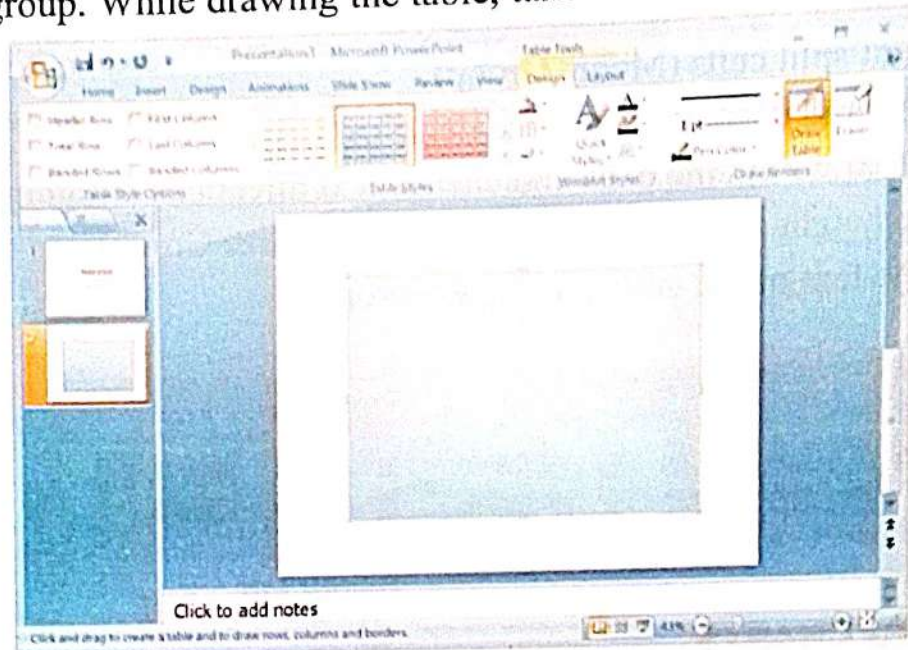
- Place the cursor on the page where you want to insert a table in the presentation.
- Go to the **Insert** tab of the **Ribbon** and select the **Table** button on the **Tables** group. A drop-down menu appears. You can create a table in one of the four given ways.
 - ❖ Highlight the rows and columns for your table in the drop-down grid accordingly the table is created on the slide.



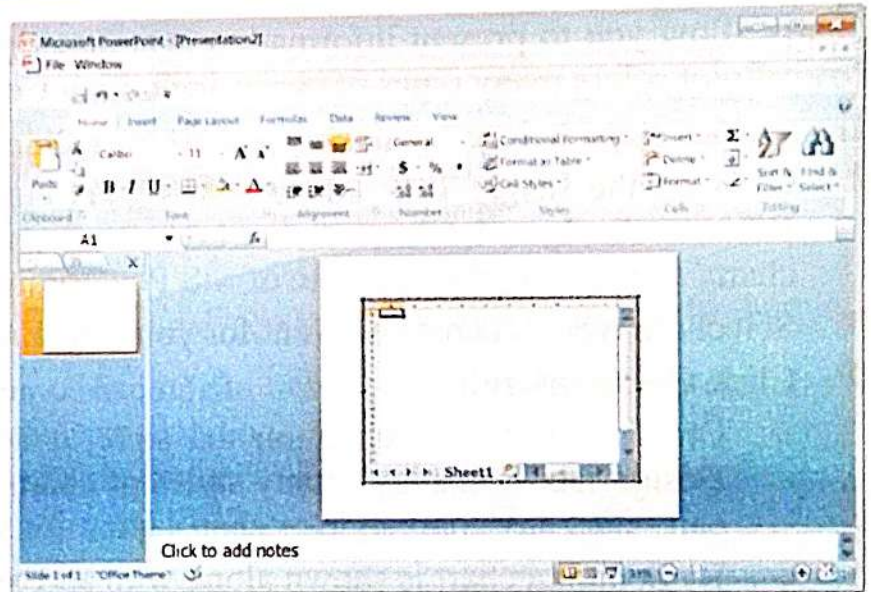
- ❖ Click on the **Insert Table** option in the drop-down menu. An **Insert Table** dialog box appears. Enter the number of rows and columns in it to create a table on the slide.



- ❖ Click on the **Draw Table** option on the drop-down menu. The cursor will change to a pencil. Drag the pencil to create area for your table. The **Table Tools** appear on the ribbon. Create your table by using the **Draw Table** option and selecting a style from the **Table Styles** group. While drawing the table, take care to keep the pencil below the border line.



- ❖ Click on the **Excel Spreadsheet** option on the drop-down menu. A small Excel sheet box will appear. Click and drag the sheet to get the desired size. Click on each cell and type your data.



Modifying and Formatting a Table

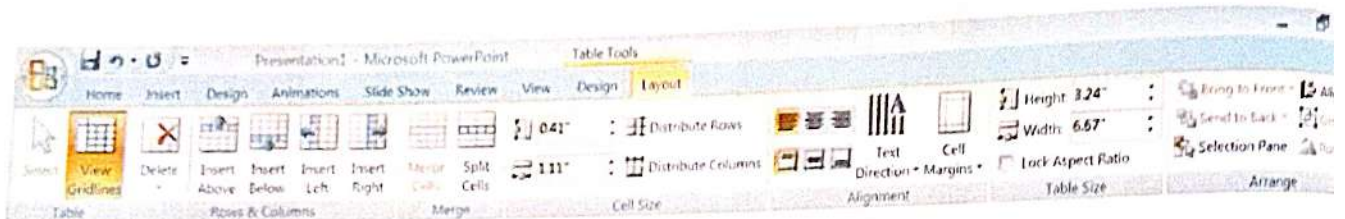
Once a table is created in MS PowerPoint, you can easily modify it. To modify the structure of a table, click on the table. Two new tabs will appear on the **Ribbon: Design and Layout**. Click on the **Design Tab** and choose one of the options from the **Table Styles** group to apply a new design for your table.



Design tab

On clicking the Layout tab of the Ribbon, you get many options to format a table.

- View gridlines and properties (Table Group)
- Insert rows and columns (Rows & Columns Group)
- Delete table, rows and/or columns (Rows & Columns Group)
- Merge of split cells (Merge Group)
- Increase and decrease cell size (Cell Size Group)
- Align text within the cells and change text directions (Alignment Group)
- Fix the height and width of the table (Table Size Group)
- Arrange text of the table (Arrange Group)

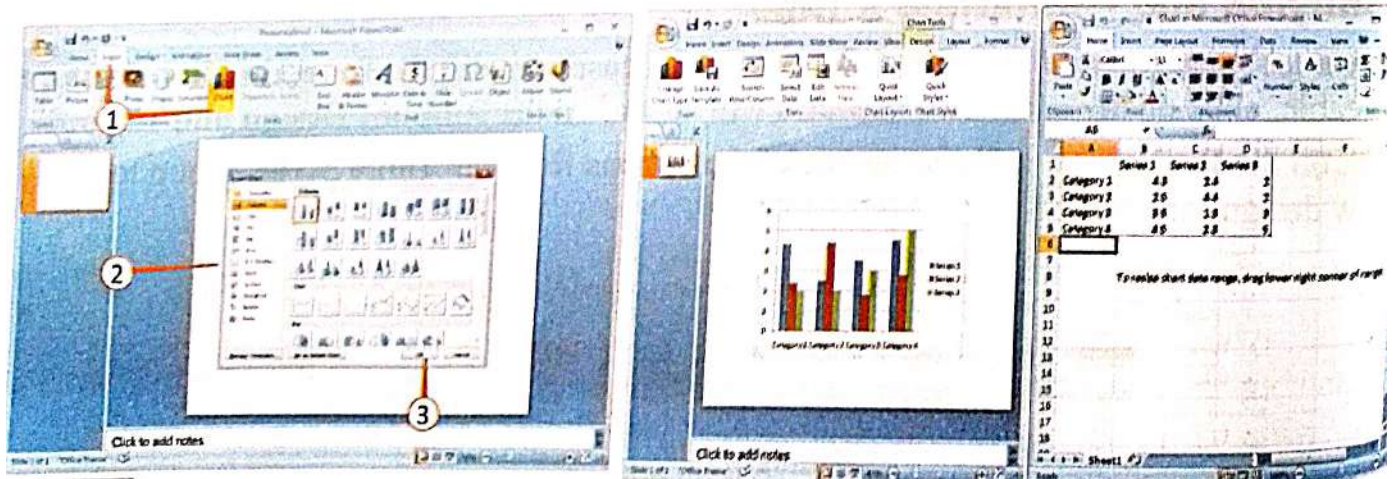


Layout tab

INSERTING CHARTS

Charts allow you to present information contained in a worksheet in a graphic format. Microsoft PowerPoint offers many types of charts including: Column, Line, Pie, Bar, Area, Scatter, etc. The various steps to insert and view a chart on a slide are :

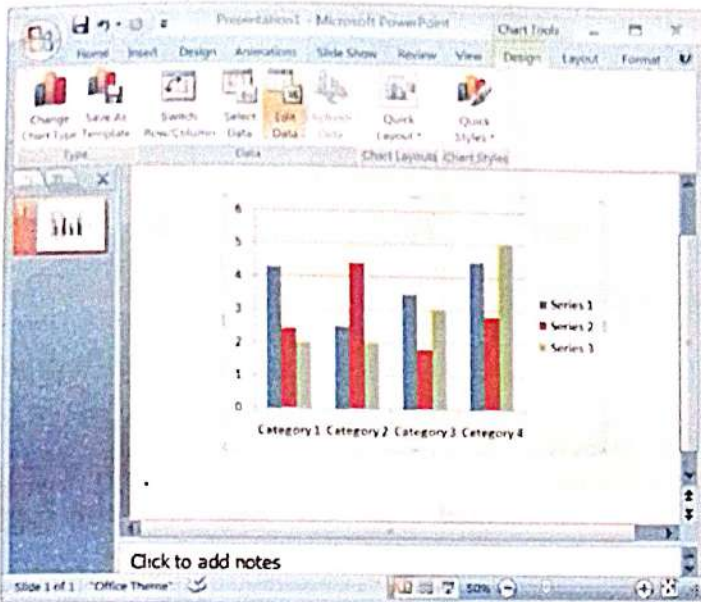
- Click on the **Insert Tab** to select the **Chart** button from the **Illustration** group on the **Ribbon**. An **Insert Chart** dialog box opens on the screen which displays the various charts available in the template of MS PowerPoint.
- Select the type of chart you want for your MS Excel document containing your data.
- Click **OK** to insert it.
 - ❖ Once a chart is inserted on the slide, a new Chart Tools button appears on the Design tab. It displays many styles of charts and chart layouts to choose from. You can select any chart style or chart layout for your data.
 - ❖ By default a chart is shown along with an Excel document containing the data.



Edit Chart Data

The various steps to edit chart data in the presentation are :

- Select the chart.
- Go to the Edit Data in the Data group on the Design tab. The spreadsheet containing the data opens on the screen.
- Edit data in the spreadsheet. The chart in the slide will show the changes in the data of the spreadsheet.



	Series 1	Series 2	Series 3
Category 1	4.3	2.4	2
Category 2	2.5	4.4	2
Category 3	3.5	1.8	3
Category 4	4.5	2.8	5

INSERTING AUDIO AND VIDEO FILES

MS PowerPoint has several features which help you to make the presentation more interesting. It allows you to attach sounds and music to your slide. You can also record your own sound and add to a presentation or use music from a CD. Similarly, you can add a movie or animation to a slide and make your presentation attractive.



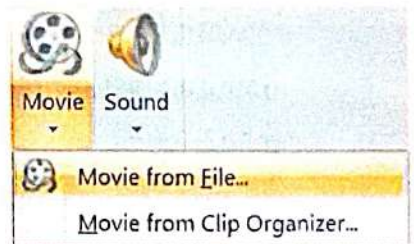
Mind Feeder

A speaker and a sound card are required in the computer to play music and sounds.

Adding Video

Video clips can also be added to a presentation by following these steps :

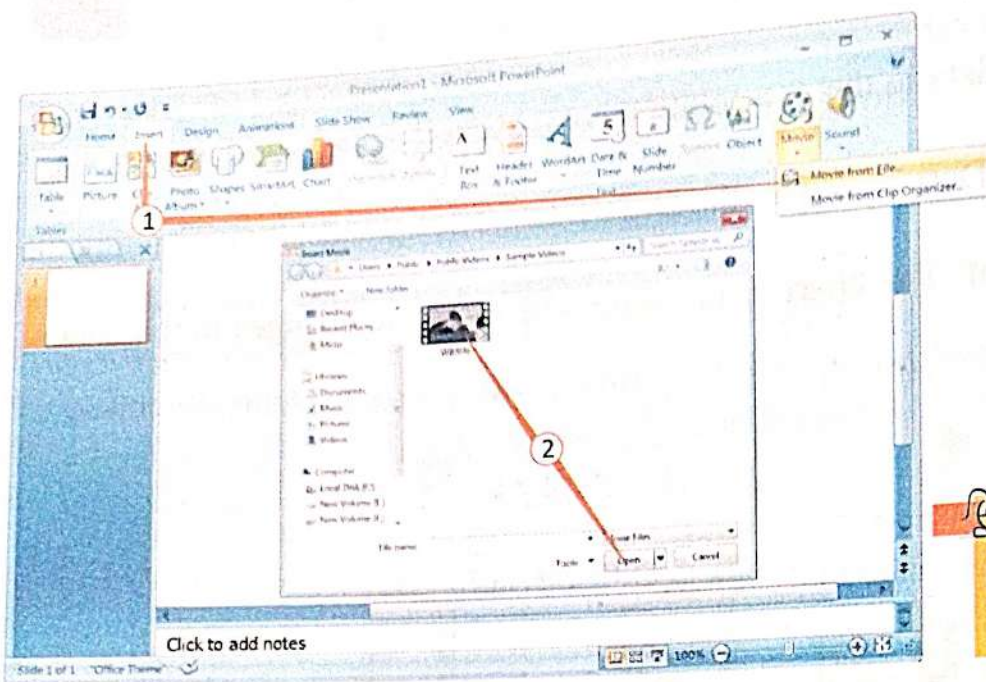
- Click on the **Movie** button in the **Media Clips** group of **Insert** tab. A drop-down menu appears.
- Choose **Movie from File** or **Movie from Clip Organizer**.



On choosing **Movie from File**, an **Insert Movie** dialog box appears on the screen. Browse to select the movie from your files in the computer. Select the type of file and give it a name.

On selecting **Movie from Clip Organizer**, a **Clip Art** task pane appears on the right-hand corner of the screen. Name the **Clip Art** in the **Search for** box and click on **Go**. You can select the type of media file from the **Results**.

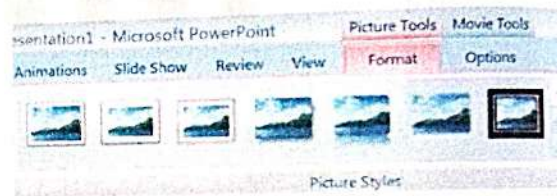
On clicking the **Slide Show** button at the bottom of the screen, you can see the animated form of the **Clip Art**. You can download video clips from Internet and insert them in your slide.



Quick Key
Run a slide show **F5**

For Your Info

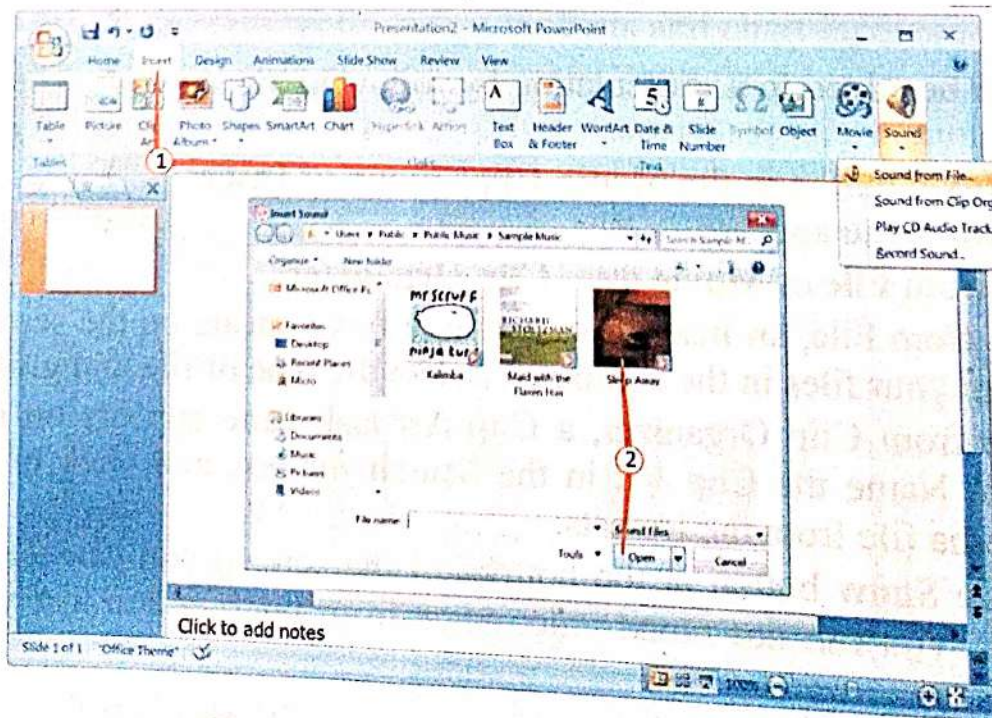
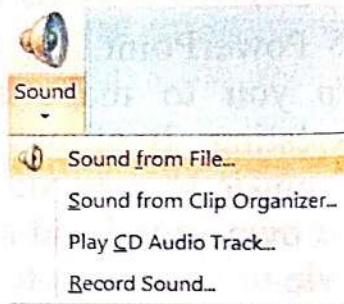
There are many options available to give special effects to the video file selected for the presentation.



Adding Audio

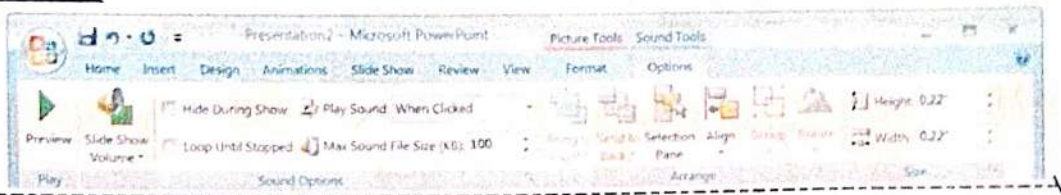
Audio clips can be added to the presentation. The various steps to add an audio clip to a slide are :

- Click on the **Sound** button in **Media Clips** group of the **Insert** tab. A drop-down menu appears on the screen.
- Choose **Sound from File** or **Sound from Clip Organizer** or **Play CD Audio Track** or **Record Sound** option.



For Your Info

You can edit an audio file with the help of the options available on the Format tab.



ANIMATING TEXT AND OBJECTS

Animation is the process by which multiple pages are displayed rapidly in a sequence such that the images appear to be in motion. It is the addition of special visual/sound effects to the text and graphics on a slide.

Animation can be used for any or all of the following purposes :

- To emphasize on important information in the slide.
- To control the order in which information is displayed on the slide.
- To hold the attention and interest of the audience.

You can set the timing and order of the animation.

Slide Animation

Slide animation effects are predefined special effects that you can add to objects on a slide.

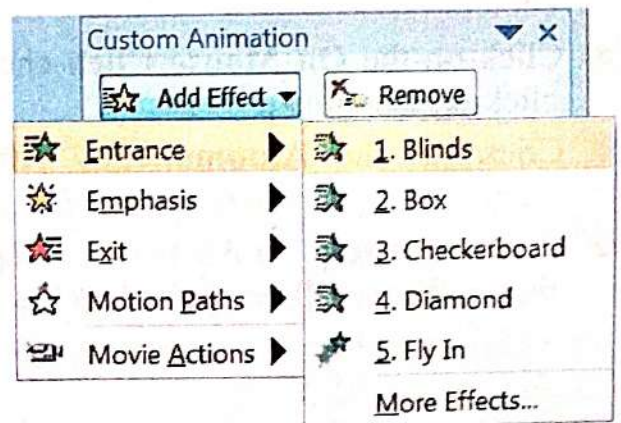
The various steps to apply an animation effect are :



- Select the object you want to animate.
- Click on the **Animation** tab on the **Ribbon** and select **Custom Animation** from **Animations** group.

A Custom Animation task pane appears.

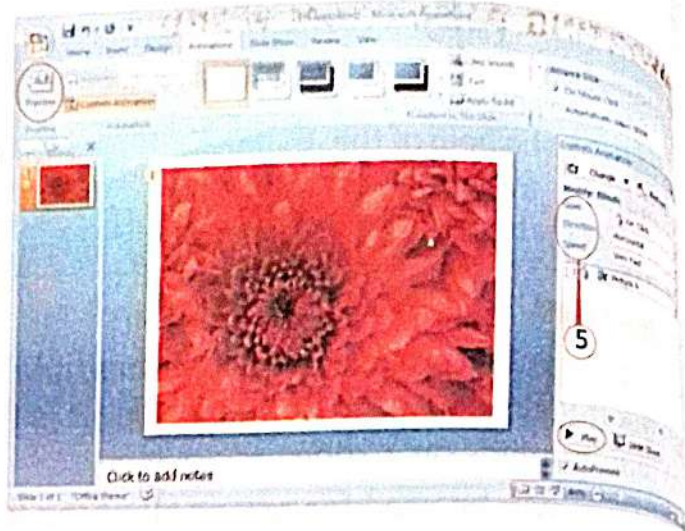
- Click **Add Effect**. A drop-down menu appears on the task pane.
- On selecting one of the options from the drop-down menu, another menu appears. Choose the appropriate effect from the sub-menu.
- In the task pane under the **Modify Box**, there are three other options available : **Start**, **Direction** and **Speed**.



Start has three more choices (1) On click (2) With previous and (3) After previous.

Animation event begins on clicking the mouse on the slide. The other two options change with the change of the effect option. You can see the effect on the slide by clicking the **Play** button or see it in the slide show when you click on the **Slide Show** option.

You can see the preview of the animation on a slide. Select the slide you wish to preview and click on the **AutoPreview** button.



ADDING TRANSITION

Transition effects are the movements you see when one slide changes to another in Slide Show view. Transitions are used to add visual effects to the slides. You can apply transition effects to a single slide as well as to all the slides. Follow these steps to add transition effects:

- Select the slide you wish to modify. Click on **Animations** tab.
- **Transition to This Slide** group appears on the top. By default, **No Transition** is applied to each slide.
- Click on **More** drop-down arrow to display all the transition effects. Click on any transition effect from the displayed choices.
- The current slide will display a preview of the selected effect.
- Select the desired speed from the **Transition Speed** drop-down list.
- Click on the drop-down arrow of **Transition Sound** and select any sound effect of your choice.
- Click on the **On Mouse Click** checkbox if you want to advance the slide manually by clicking the mouse.
- Click on the **Automatically After** checkbox if you want the slide to advance automatically to the next one. You can specify the slide advance timings also.
- Click on **Apply To All** button to apply the selected effects on all the slides. Otherwise, those effects will be applied on the current slide only.



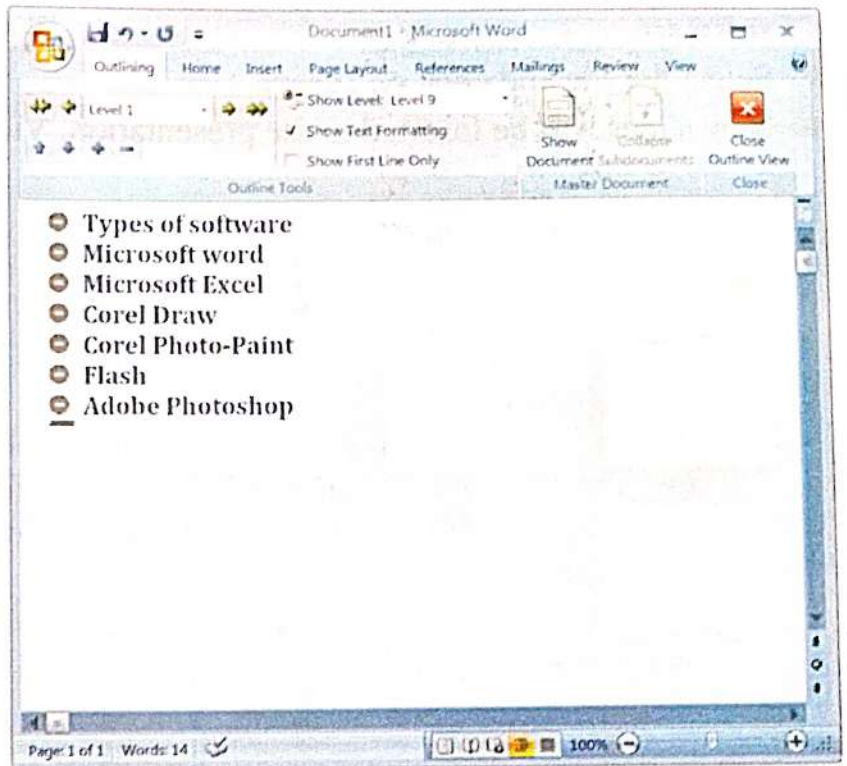
Adding Transition

You can also apply transition effects in **Slide Sorter View**. Open **Animation** tab and select the desired slide transition effect.

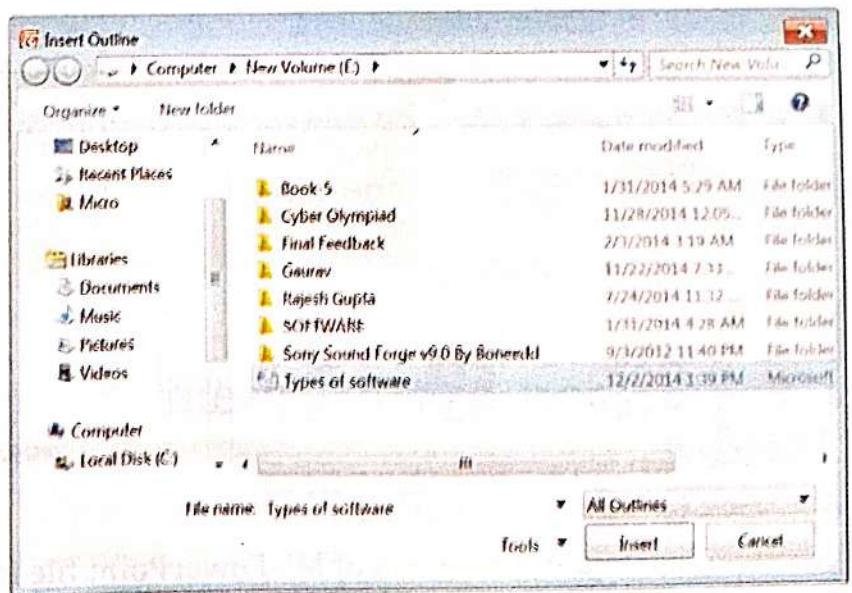
IMPORTING DATA FROM WORD

PowerPoint has the facility to import and use data from Word, Excel, etc. Importing data saves your time and efforts. Follow these steps :

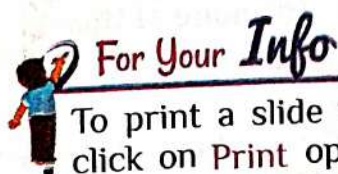
- Click on **Start** → **All Programs** → **Microsoft Office** → **Microsoft Office Word 2007**. Click on the **Outline** button in **Document Views** group on **View** tab.
- Type the text shown in the figure and click on **Close Outline View** button to return to **Normal View**.
- Select “Types of Software”, and apply **Heading 1** from **Styles** group on the **Home** tab.
- Select “Microsoft Word” and choose **Heading 2**.
- Select “Microsoft Excel” and apply **Heading 3** from the selection.
- Similarly, select “Corel Draw” and apply **Heading 3** again.
- Apply **Heading 1** on “Corel Photo-Paint” and **Heading 2** on “Flash” and “Adobe Photoshop”.
- Click on the **Save** button on the **Quick Access Toolbar**. The **Save As** dialog box appears. Type the name “Types of software” in **File name** text box and click on the **Save** button. Now exit from Microsoft Word.
- Start Microsoft PowerPoint and open any existing presentation. Click on **View** tab and select on **Slide Sorter** button.



Importing Data from Word



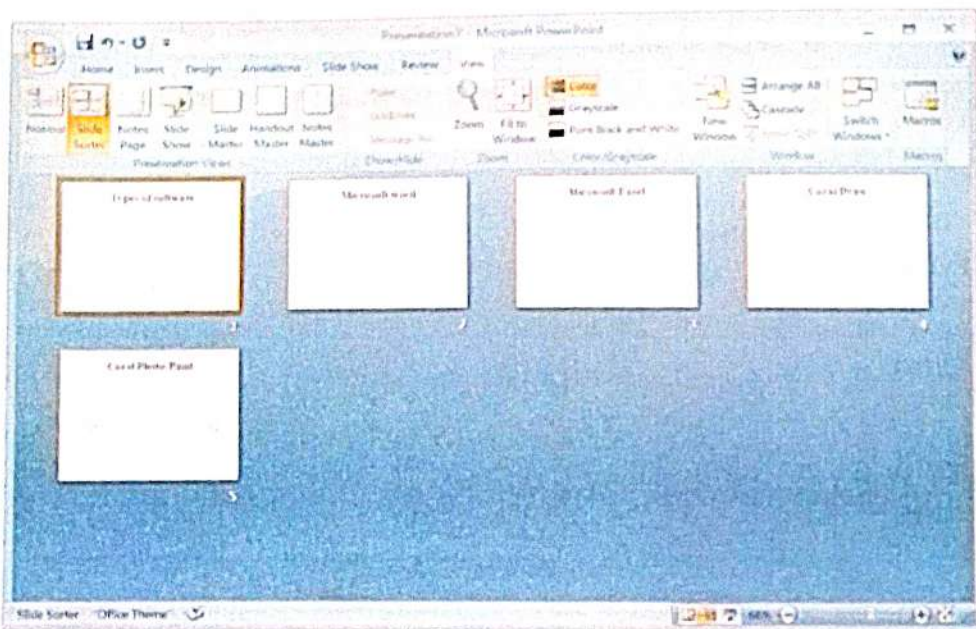
Insert Outline Dialog Box



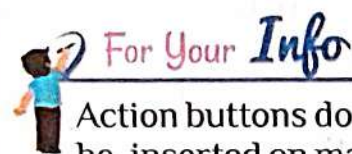
For Your Info

To print a slide with the default settings, click on Print option in the Office Button menu.

- Now, click on the **New Slide** drop-down menu on **Home** tab. Select **Slides from Outline** option.
- The **Insert Outline** dialog box will appear. Browse the location of the Word file-Types of software.
- Select the file and click on **Insert**.
- New slides will be inserted in the presentation. View the new slides.



Importing Data from MS Word to a New Slide



For Your Info
Action buttons do not have to be inserted on master slides. You can insert an action button on a slide, if you wish.

Quick Key

To make a duplicate of the current slide, press

Ctrl + D



Boost Your Brain



A. Tick (✓) the right option.

- The default extension of MS PowerPoint file is

(a) .pptx	<input type="checkbox"/>	(b) .doc
(c) .xls	<input type="checkbox"/>	(d) none of these
- Transitions effects are the movements you see when
 - one slide is created inside another slide
 - one slide changes to another in Slide Show view

- (c) one slide is created after the other
- (d) none of the above

3. Animation is done in PowerPoint

- (a) to highlight the important points
- (b) to hold the attention and interest of audience
- (c) both (a) and (b)
- (d) none of the above

4. Intersection of a row and column is called a

- (a) Table
- (b) Cell border
- (c) Cell
- (d) None of these

5. To preview the transition of current slide, we click on the

- (a) Slide Show button
- (b) Play button
- (c) Nothing
- (d) Anything

B. Fill in the blanks with the correct word.

Apply to ALL transition presentation sound .pptx extension

1. PowerPoint is an application software for creating
2. A PowerPoint presentation is stored as a file with a
3. The way one slide follows the other on the screen is called
4. To apply the transition to all slides click on the button on the Animations tab.
5. We can add sound to a slide by clicking on the arrow next to button.

C. Answer the following questions.

1. What is PowerPoint? How can you insert pictures and clip arts in your presentation?

.....

2. Write the steps to insert a chart in a PowerPoint presentation.

.....

3. How will you edit a chart?

.....

4. What do you understand by Animation? How is it helpful in a presentation?

.....

5. What is meant by Transition?

.....

6. Write the steps to insert a table into a slide.

.....

Activity Monitor

- * Create your presentation on 'My Class'. The presentation should have slides on class teacher, class location in the school premises, subjects taught and subject teacher's details, class strength and children's details, etc.
- * Your school has raised some fund from each class i.e. 1 to 12 for the orphanage of your city/town. The computer teacher has given you the responsibility to keep the records of the fund. Create a table in PowerPoint and define the collection from each class. Further convert the data into a chart.



LAB VISIT

Prepare a PowerPoint presentation on 'My Ambition in Life'.

1. The presentation should basically cover what you plan to do when you grow up.
2. Give transition effects and animations in your slides.
3. Insert pictures and ClipArt wherever required.



Lesson Extract

- ❖ Programming Languages
- ❖ Processing of Computer Programs
- ❖ Algorithms
- ❖ Flowcharts

You have heard about the word **computer programs**. A program is a set of **instructions**, which when executed, makes the computer work in a particular manner. Programs are an integral part of a computer. Computer will be useless if it has no program. Computer program directs a computer how to process and execute data.

PROGRAMMING LANGUAGES

A program is written in some specific language called **programming language**. Since computer does not understand natural languages that you speak, so specific languages are developed for it. Computer understands programs written in these languages. These languages can be easily translated into **machine level language**, which a computer understands using **compilers, interpreters** and assemblers. You will learn about these terms in this chapter at a later stage.

A person who writes a program is called a **computer programmer**. To perform any task, programmer writes the set of instructions or programs in one of the many programming languages.

Programming, with regard to computers is defined as a process of **designing, writing, testing, debugging** and **documenting** a program.

Programming languages are divided into the following types :

- Low Level Languages (LLL)
- High Level Languages (HLL)

Low level languages are **machine oriented** languages. It means, these are directly understood by the computer. These languages are generally machine dependent, i.e. they cannot be easily used on another computer with a different configuration and processor. These languages are difficult for a common programmer to learn.

Low level languages are again of the following types :

- Machine Level Language (MLL)
- Assembly Level Language (ALL)

Machine Level Languages

You know that a computer can understand only special signals, which are represented by 1s and 0s. These two digits are called **binary digits**. Computer understands programs written in binary digits. The language, which used binary digits, is called the machine level language.

Assembly Level Languages

These languages use letters and symbols instead of binary digits. These symbols are called **Mnemonics**. Programs written in assembly level languages are called **assembly codes**. Assembly codes are translated into machine level language instructions. Assembly level language is easier to understand than machine level language.

High Level Language (HLL)

High level languages are easier for a human programmer to understand. They are generally not dependent on any particular computer machine.

Advantages of High Level Languages

There are many advantages of high level languages. These are as follows :

1. **Understandability** : Programs written in these languages are easier to understand and read than in assembly and low level languages.
2. **Debugging** : Debugging simply means to remove **errors** in a program. Errors in programs written in high level languages are easier to find and remove.
3. **Portability** : Programs written for one machine can run on different machines with very minor changes or no changes at all.

Example of High Level Languages

Some examples of high level languages are : BASIC, LOGO, FORTRAN, COBOL, PASCAL, C, C++, JAVA, VC++

BASIC

BASIC stands for **B**eginners **A**ll Purpose **S**ymbolic **I**nstruction **C**odes. It is a very simple language.

LOGO

LOGO stands for **L**anguage **O**f **G**raphic **O**riented. It is also a simple language used to draw figures and do sums.

FORTRAN

FORTRAN stands for **F**ORmula **T**RANslation. It is used by engineers.

COBOL

COBOL stands for **C**ommon **B**usiness **O**riented **L**anguage. As the name suggests, it is used for business purpose.

PASCAL

Pascal is a general-purpose language named after the great scientist and mathematician Blaise Pascal. It is a very powerful computer language. It is used to develop many application programs.

C

C is also a powerful computer language. It uses structured programming approach. It is used widely for developing application programs.

C++

C++ is sometimes known as an enhancement of C language. It used the concept of **object oriented** programming. It is also a very powerful language used to develop different

applications. The user-friendly and an enhanced version of C++ is developed by the name, Visual C++ or simply VC++.

JAVA

Java is a modern day language developed by **Sun Microsystems**. It also uses the concept of object-oriented programming. It is nowadays very popular and used widely.

PROCESSING OF COMPUTER PROGRAMS

High level languages are designed, taking into mind the ease for the programmers. These Languages are not understood by the computer because it only understands 0s and 1s. To make the computer understand a program, it is converted into machine level language.

A high level language is translated into machine level code by a **compiler** or **interpreter**. This process is called **decoding of programs**.

There are three types of translators. These are :

- Assembler
- Compiler
- Interpreter

Assembler

Assembler converts a program written in assembly level languages into machine level language, i.e. assembly code into machine code.

Compiler

Compiler translates the whole program completely in a single operation. A program written in high level language is converted directly into machine level language.

Interpreter

An interpreter translates a program in a **step-by-step** process. It is slower than the compiler process.

ALGORITHMS

Everyone does some work from getting up in the morning to sleep again at night. All works are performed in steps. For example, you get up from bed in the morning, brush your teeth, take a bath, have breakfast and go to school by a school bus. You have to follow these steps in an order. For example, you generally do not take breakfast before getting up from the bed.

Therefore, you need to follow a systematic way to complete any work. These steps of a work or problem together is called Algorithm in computer.

Algorithm is the step-by-step process of solving any problem. You need to write programs in computer language to solve any problem in a computer. Programs are a set of instructions.

Algorithms are written in a step-by-step procedure before writing the actual computer program. So, algorithms are an important part of program development.

FLOWCHARTS

A flowchart is a graphical representation of an algorithm in which steps are laid out in a logical order.

In a flowchart technique, each operation is represented by drawing a specific geometric shape. These flowchart symbols are connected by arrows to illustrate the sequence of operations. A flowchart conveys all information visually by using standard symbols to represent these different functions. It uses arrows to represent the sequence in which the instructions should be performed.

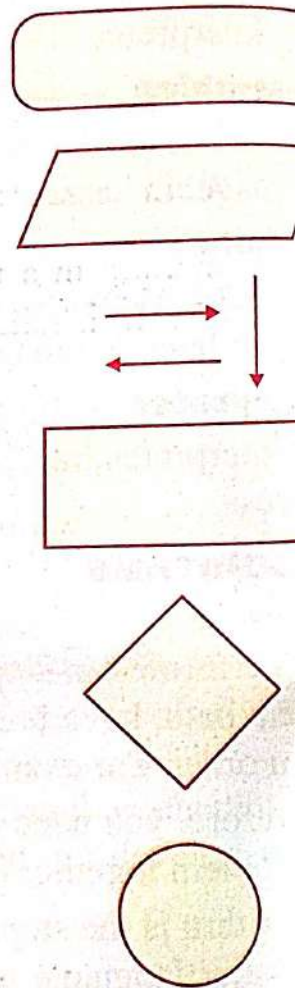
Thus, a flowchart conveys the following information :

- The sequence in which steps should be performed.
- The steps involved in obtaining user input or giving an output.
- The steps describing processing of data.
- The different conditions involved in handling the process.
- The steps to be repeated.

Standard Flowchart Symbols

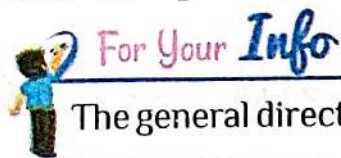
Before we start drawing our first flowchart, let us get familiar with the standard flowchart symbols.

- **Start/Stop symbol** : This symbol is used to indicate the beginning or the end of the sequence of steps.
- **Input/Output symbol** : This symbol is used to indicate the acceptance of inputs from a user or the output or the result concluded.
- **Flow lines** : The flowchart symbols are connected with the help of flow lines. The arrow direction represents the flow of the sequence.
- **Processing symbol** : This symbol is used to represent any step that involves the processing of data.
- **Decision Box** : This symbol is used to represent a step in the algorithm that involves a decision taken on the basis of a specific condition. Decision box may have two branches leading out of it to represent the cases of the condition being true or false.
- **Connector** : This symbol is used to connect any two points of the flowchart to indicate the flow or sequence of steps, especially when the flowchart, involves multiple steps.



Simple Flowchart

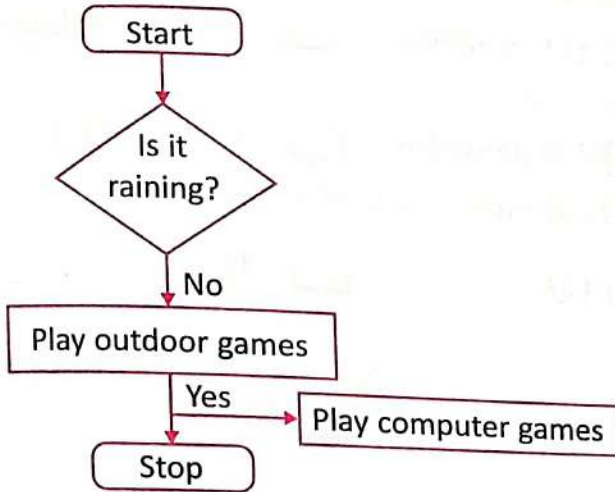
Let's now draw a simple flowchart to find the areas of a circle, if its radius is given.



The general direction of flow in any flowchart is from top to bottom or left to right.

Branched Flowchart

Sometimes, the flow of steps in an algorithm can branch into multiple paths based on how a particular condition works out. For example, suppose you are deciding how to spend the evening. You could play basketball if it does not rain. But if it rains, you need to have an alternate plan involving indoor games.

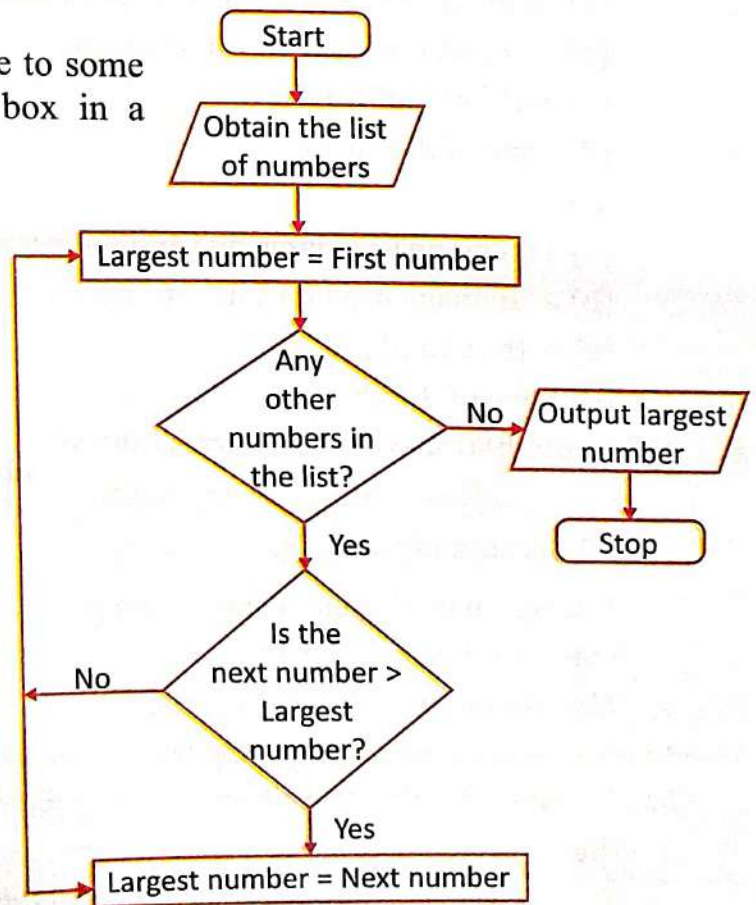


A branched flowchart

This branching in a flowchart is caused due to some conditions. It is shown by the decision box in a flowchart.

Looping Flowchart

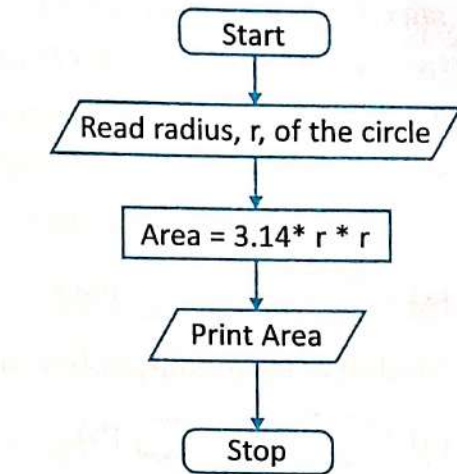
Sometimes, some steps in an algorithm have to be repeated for a given number of times. This is known as a loop. A loop is the sequence of instructions that repeats a specified number of times until a particular condition is met. Let's look at the flowchart corresponding to the algorithm for finding the largest number in a list of numbers. This is an example of looping flowchart.



A looping flowchart



A flowchart can have only one Start and one Stop symbol.



A flowchart to find area of a circle



Boost Your Brain



A. Tick (✓) the right option.





1. can be defined as a set of instructions that can be followed to perform specific task such as solving a logical or mathematical problem.

- (a) Algorithm
- (b) Flowchart
- (c) Connetor
- (d) None of these





2. A flowchart is a graphical depiction of a/an

- (a) program
- (b) symbol
- (c) algorithm
- (d) flow chart

3. symbol is used to indicate the beginning and end of a program.

- (a) 
- (b) 
- (c) 
- (d) 

4. Symbol of input/output box in a flowchart is

- (a) 
- (b) 
- (c) 
- (d) 

5. Program is

- (a) an algorithm written in a programming language and executed by computer.
- (b) steps written in English language.
- (c) both (a) and (b)
- (d) none of the above

6. Java is

- (a) a machine level language and not frequently used.
- (b) a language used for internet-based applications.
- (c) both (a) and (b)
- (d) none of the above

B. Fill in the blanks with the correct word.

Algorithm binary digits Computer program Loop
 Programming language Compiler or interpreter Machine Oriented

1. A program is written in specific language called

2. Low level languages are languages.

3. The computer understands programs written in

4. is a step-by-step process of solving a problem.

5. An algorithm that is written in a programming language is called a

6. High level languages are translated into the machine language by

7. A is the sequence of instructions that repeats a specified number of times until a particular condition is met.

C. State whether the following statements are true or false.

1. A program is a set of instructions.
2. A program written in assembly language is called a compiler code.
3. High level languages are easier to understand.
4. There are three types of translators.
5. The general direction of flow in any flowchart is from top to bottom or left to right.

D. Match the following.

- | | |
|--------------------|---|
| 1. A flowchart | (a) is used for input and output steps. |
| 2. An oval | (b) is used to connect two different parts of a flowchart. |
| 3. A parallelogram | (c) is a graphical representation of steps for solution to a problem. |
| 4. A diamond | (d) is used to represent start step. |
| 5. A circle | (e) is used for decision making step. |

E. Answer the following questions.

1. What do you understand by the term programming?

.....

2. What is a low level language?

.....

3. What is a high level language? Write some of its advantages?

.....

4. What are compiler and interpreter?

.....

5. What is a flowchart? Why are flowcharts useful?

.....

6. What is branching and looping?

.....

Activity Monitor

* Draw the symbols used in the preparation of flowcharts in various sizes. Fill the symbols with different colours. Write the names of the symbols.

* Draw a flowchart to find the sum and average of three given numbers.



LAB VISIT

Draw flowcharts in MS-Paint for the following :

1. Steps required to switch on a computer.
2. Steps required to shut down a computer.
3. Steps required to watch a movie stored in a CD.

7

Programming with QBASIC : An Introduction



Lesson Extract

- ❖ What is QBasic?
- ❖ Starting QBasic
- ❖ Saving a Program
- ❖ Running a Program
- ❖ Exiting and Opening QBasic
- ❖ Character Set of BASIC
- ❖ Constants and Variables
- ❖ Operators
- ❖ QBasic Statements

You know that computer is a machine that processes the data and gives the desired result. The set of instructions given to the computer is called program. These instructions must be written in a programming language that the computer can easily understand. BASIC is one such programming language. There are different versions of BASIC such as GW-BASIC, Turbo, BASIC, QBASIC, VISUAL BASIC, etc.

WHAT IS QBASIC?

QBasic is one of the versions of BASIC. QBasic stands for Quick Beginners All Purpose Symbolic Instruction Code. Some of its features are :

- It is a simple computer language.
- It is very easy to learn and use.
- It uses English like words and mathematical symbols to write programs.
- It is a high level programming language.
- It helps us to write, edit and execute programs.

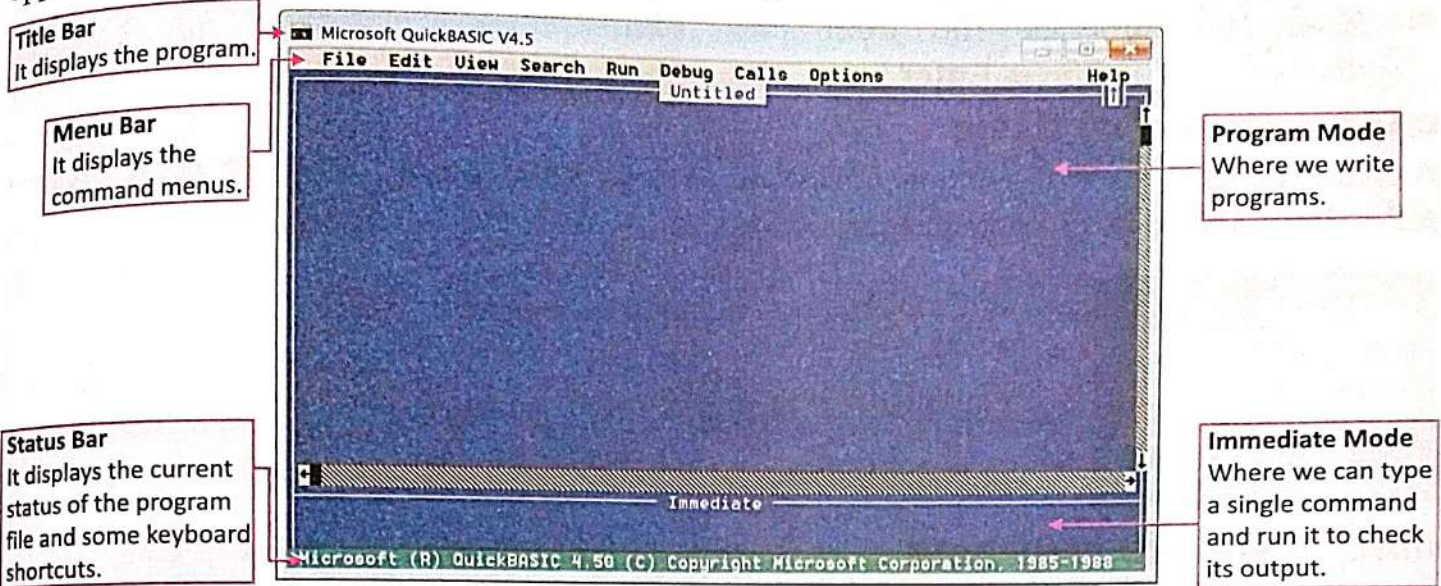
STARTING QBASIC

Look for the QBasic icon on your desktop and double-click on it to start it.

QBasic window appears with a welcome message on the screen when you open its 4 version. The welcome message does not appear in QBasic 7.1.



Press Escape key to clear the Welcome Message box and the following window QBASIC appears. Type the program, as shown in the given picture.

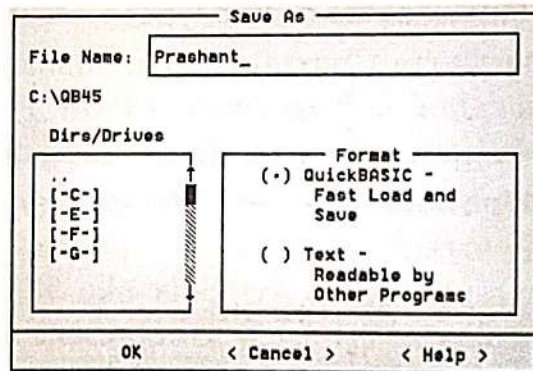


QBasic Program Window

In QBasic, the interpreter executes the program line-by-line. If it finds any error, it displays an error message and stops the execution.

SAVING A PROGRAM

Click on the **File** menu and select **Save As** option. Give a meaningful name to your program in the 'File Name' : text box and press the Enter key. Your file will be saved with the name given by you and extension **.BAS** will be added to it automatically. The file name should not exceed more than 8 characters.

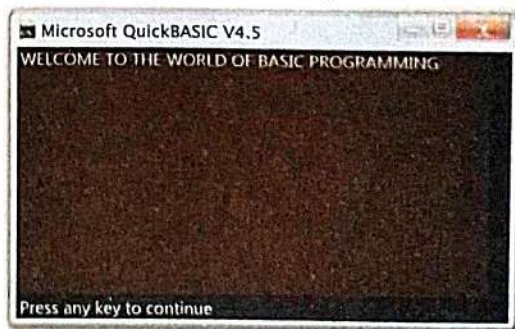


Save As Dialog Box

RUNNING A PROGRAM

To see the output of a program you need to run the program. There are many ways to run a program in QBasic which are as follows:

- By pressing **F5** key.
- By selecting **Run** menu and clicking on **Start** option.
- By typing **RUN** in the Immediate mode and pressing the **Enter** key.



Output Screen

EXITING AND OPENING QBASIC

- To exit a QBasic window, click on **File > Exit**.
- To open an existing program, press **Alt+F** key. The **File** menu will open.

For Your Info

To start a new program, click on **File** menu and select **New Program** option.

- Highlight **Open** command from the displayed options and press **Enter**.
- Select the program file from the displayed list and press **Enter** key.

Quick Key

Press key to select File menu and Press N key to select New Program option

Alt + F

CHARACTER SET OF BASIC

A character set is a set of symbols which are used in programming language. Basic uses the following symbols as its character set.

Alphabets	A, B, C, D, EZ a, b, c, d, e,z
Numbers	1, 2, 3, 4, 5, 6, 7, 8, 9, 0
Special Characters	!, @, #, \$, %, ^, &, *, (,), _, , ", /, ?, >, <, ., ;, [,], {, }, etc.

CONSTANTS AND VARIABLES

Constants

The value which does not change during the execution of the program is called **Constant**. Constants are of two types :

Numeric Constants : Any numeric value, an integer or a real number, positive or negative is called a **Numeric constant**. For example : 224, +12, 0, -7.4 are valid numeric constants. Numeric constants should not include any special character and are used for calculations.

Alphanumeric or String Constants : A set of characters is called a **String**. An alphanumeric or string constant consists of a sequence of characters, A-Z, a-z, 0-9 and certain special symbols like % ? # ^ () ; : " / \ etc., enclosed in double quotes. String constants are used to represent non-numeric quantities such as names, addresses, etc. For example, "RAGHAV", "SUM = 84", "192" are a few valid string constants.

Variables

A variable is a location in memory to which any value can be assigned. It continues to hold the value until another value is assigned to it. There are two types of variables :

Numeric Variable : A numeric variable can hold only numeric constant. It is represented by an alphabet or an alphabet followed by another alphabet or a digit. It should not contain any space or symbols like ^, ?, \, /, @, ;, : etc. Underscore can be used instead of space. For example, A, C, A2, ABC, A_6, etc. represent numeric variables.

Alphanumeric or String Variable : A string variable is represented by an alphabet followed by the dollar (\$) sign. It can contain letters, digits, underscore symbol and the last character is always a dollar (\$) sign. For example, A1\$ RKL\$, COMPU1\$, etc. are valid string variables. A string variable can also store string constant.

Example



A1\$ = **Express**
 (String Variable) (String Constant)
 The length of a String variable can be maximum 40 characters.

Data in QBasic can be of one of the following types :

- **String**
String variable can hold textual data
For example, "abracadabra", "Delhi". This is a text string, etc.
- **Integer**
Integer variables can hold numeric integer data between -32768 and +32767
For example, 5, 10000, -34
- **Long**
Long variables can hold numeric integer data between -2, 147, 483, 648 and 2, 147, 483, 647.
For example, -1475, 1000
- **Single-precision**
Single-precision variables can hold floating-point numbers, i.e. numeric data with decimal points.
For example, 3.14, 26.5, -05.
- **Double precision**
Double-precision variables can be used to hold larger floating-point numbers.
For example, 12345678.12345678, $6.023 \times 10^{(-23)}$

Naming Variables

Variable names can have a combination of alphabets and numbers. However, the last character in a variable name can be used to specify its data type as shown in the table.

Data type	Suffix	Examples
String	\$	name \$, addr\$, str1\$
Integer	%	x%, age%, num 1%
Long	&	veryLargeNum&
Single-precision number	!	price, quantity!
Double-precision number	#	electronMass#

OPERATORS

There are three types of operators in QBasic.

Arithmetic Operators

A computer performs many arithmetic operations and calculations with the help of arithmetic operators. The basic arithmetic operators are given here :

Operator	Explanation	Example	Result [Suppose A = 8 and B=4]
+	To add two or more numbers	A + B	12
-	To subtract two or more numbers	A - B	4

*	To multiply two or more numbers	$A * B$	32
/	To divide two or more numbers	A / B	2
^	To calculate Exponentiation value	$A ^ 3$	512

Relational Operators

They are used to compare two values using any of the given relational operators from relational expression :

Operator	Explanation	Example	Result [Suppose A = 10 and B = 20]
=	This operator is used to check the equality between two operands.	$A = B$	False
\neq	This operator checks the non-equality between two operands.	$A \neq B$	True
>	This operator checks whether the first value is greater than the second value.	$A > B$	True
<	This operator checks whether the first value is less than the second value.	$A < B$	False
\geq	This operator checks whether the first value is greater than or equal to the second value.	$A \geq B$	True
\leq	This operator checks whether the first value is less than or equal to the second value.	$A \leq B$	False

Logical Operators

Logical operators are used to perform logical operations on numerical values. Logical operators are used to combine two or more relational expressions and return a single value TRUE or FALSE in a decision. The common logical operators are: AND, OR, NOT.

Operator	Explanation	Example [Suppose A = 10, B = 15 and C = 20]	Result
AND	This operator returns True only if both the relational expressions are True.	$C > A$ and $C > B$	True
OR	This operator returns True only if at least one of the relational expressions is True.	$A > C$ and $B < A$ $B > A$ or $B > C$ $A = C$ or $B = C$	False True True
NOT	This operator is used with single relational expression. It returns True if the relational expression returns False and vice versa.	$\text{NOT } A > C$ $\text{NOT } B < C$	False True False

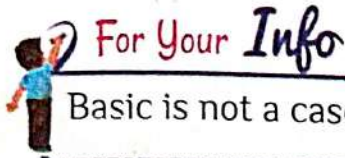
For Your Info

The operators are executed from left to right in any expression, as per the hierarchy.

Hierarchy of Operations

Hierarchy defines the order in which the operators are executed in any Basic expression. We use BEDMAS for the hierarchy of operation. The full form of BEDMAS is :

B	Brackets	()	M	Multiplication	*
E	Exponentiation	^	A	Addition	+
D	Division	/	S	Subtraction	-



For Your Info

Basic is not a case sensitive language. It means that 'a' and 'A' are same.

Solve the Expression :

$$12*4 + (14 + 4) + 2^2 - 12/6$$

$$12*4 + 18 + 2^2 - 12/6$$

$$12*4 + 18 + 4 - 12/6$$

$$12*4 + 18 + 4 - 2$$

$$48 + 18 + 4 - 2$$

$$70 - 2$$

$$68$$

(First, bracket will be solved)

(Then, exponentiation will be performed)

(Now, division will be performed)

(Then, multiplication will be performed)

(Then, addition will be performed)

(Now, subtraction will be performed)

This is the answer.

QBASIC STATEMENTS

REM

This statements is used to give remarks in a program. The computer does not execute this statement since whatever is written after REM is ignored by the computer. REM can be used anywhere and many times in a program. It is a good practice to use REM statement at the start of the program to explain what the program is all about.

Example



Write a QBasic program to display the Biodata of a student.

```
10 REM TO DISPLAY THE BIODATA OF A STUDENT
20 PRINT "ROLL NUMBER : 1"
30 PRINT "NAME : REHAN KHANNA"
40 PRINT "CLASS : VI-A"
50 END
```

Print Statement

It is used to display any message or result on the screen. Any text written in double quotes is printed as such. Anything written without quotes is treated as a program component and its value will be displayed.

Syntax : [Line Number] PRINT "Message"
[Line Number] PRINT < Variable Name > (Line numbers are optional)

Example



20 PRINT "Welcome to the World of Basic Programming."
 It will display the message Welcome to the World of Basic Programming.
 PRINT A
 It will display the value stored in the variable A.
 PRINT
 It will leave a blank line.

End Statement

It is used to indicate the end of a program. Any statement written after END will not be executed.



Boost Your Brain



A. Tick (✓) the right option.

- The extension of QBasic program file is :
 (a) QB (b) Qbas (c) .Bas (d) None of these
- sign is added at the end of a String variable.
 (a) \$ (b) & (c) % (d) ©
- Which is the correct numeric expression?
 (a) A = "5*5" (b) A1\$ = 52 (c) A2 = 21 (d) B2 = 56
- To hide the welcome dialog box, press key.
 (a) Ctrl (b) Esc (c) Alt (d) Alt + F
- key is used to switch from one mode to other in QBasic.
 (a) F5 (b) F6 (c) F8 (d) F9

B. Fill in the blanks with the correct word.

String variable Quick Beginners All Purpose Symbolic Instruction Code
 two BEDMAS Constant numeric value character set

- The full form of QBasic is
- The value which does not change during the execution of the program is called
- A is a set of symbols which are used in programming language.
- There are types of variables in QBasic.
- Numeric constants contain only
- String constants must be enclosed within
- The hierarchy in which the operators are executed in Basic expression is called

C. State whether the following statements are true or false.

1. QBasic is a very tough computer language.
2. A String variable is represented by an alphabet followed by dollar (\$) sign.
3. A variable name can be a maximum of 50 characters long.
4. Constants are memory locations to store data in it.
5. Numeric constants include all the positive and negative numbers.
6. The variable name must begin with a number.
7. Addition and subtraction operations come first in Basic hierarchy.

E. Answer the following questions.

1. What is QBasic? What are its features? Name the different components of the QBasic window.

.....

.....

2. Write the different ways to run a QBasic program.

.....

.....

3. Define variable. Name the types of variables.

.....

.....

4. What are the different types of constants. Differentiate Numeric and Alphanumeric constants.

.....

.....

5. What are the types of operators in QBasic?

.....

.....

6. Define the term Hierarchy of operations. Write the hierarchical order of the arithmetic operators in QBasic.

.....

.....

7. What is PRINT statement. Give the examples.

.....

.....

Activity Monitor

* Label the following picture.



LAB VISIT

1. Find out the options present in the File, Edit, View and Run menu. Make separate lists for all and write at least a line about each of them.
2. (a) To display a simple message "WISH YOU A GOOD DAY".
(b) To print the entrance form with the titles as : Name, Age, Father's name, Occupation Address and Contact number.
(c) To display thought for the day :
"Success is a MARATHON, it's not a SPRINT."

8

QBASIC Statements

Lesson Extract

- ❖ Assignment Statement—LET
- ❖ PRINT Command
- ❖ INPUT Statement
- ❖ CONTROL Statement
- ❖ GOTO Statement
- ❖ IF... THEN Statement
- ❖ Simple Programs
- ❖ IF...THEN...ELSE Statement
- ❖ Using ELSE...IF with IF...THEN Statement
- ❖ Repetition Construct

As with ordinary languages such as English, French, etc. programming languages also have their specific keywords and syntax. In fact, the application of these rules in a programming language is more strict. This is because a program has to be explicit, as it is a precise statement of the actions to be taken. QBasic also has its own keywords and syntax.

ASSIGNMENT STATEMENT—LET

The LET statement or Assignment statement is used to assign a value to a variable. In QBasic, it is optional to use LET statement and line numbers.

Syntax : [Line No] [Let] < Variable Name > = < Value or Expression >

Example



```
LET A = 5
```

It will assign the value 5 to A.

```
Sum = A + B
```

It will add the value of A and B assign the result to variable Sum.

```
Let A$ = "QBasic program"
```

This statement will assign the value "QBasic Program" to the string variable 'A\$'.

```
LET A = 5  
B = 15  
C = A * B  
PRINT C  
END
```

PRINT COMMAND

The PRINT command is used to display numbers, messages or values of variables on the output screen.

Syntax : [Line No] PRINT <Constant> or <"String Constant"> or <Variable> or <Expression>

Example



```
PRINT 20 + 10
```

It will display 30, the sum of 20 and 10.

```
PRINT "GOD BLESS YOU"
```

```
PRINT A
```

It will display the current value of variable A.

```
PRINT "The Value of A is :"; A
```

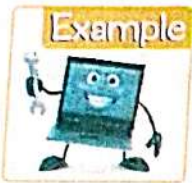
It will display the message "The Value of A is :" followed by the value of variable A.

The PRINT command can be used in different variations to print the output in different forms.

Print with Semi-colon (;)

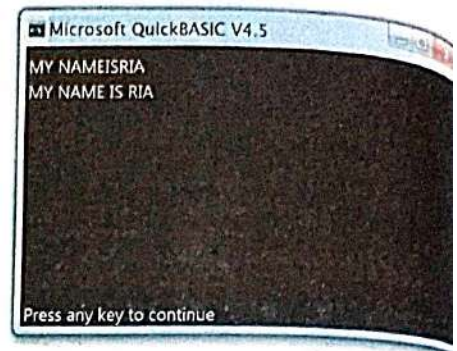
PRINT with semi-colon is used to display the values one after another, without any space between.

Syntax : [Line No] PRINT (Variable); (Variable); (Variable);...



Example

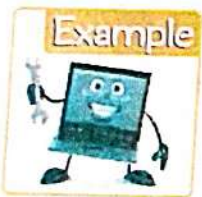
```
LET X$ = "MY NAME"  
LET Y$ = "IS"  
LET Z$ = "RIA"  
PRINT X$; "; Y$; "; Z$  
END
```



Print with Comma (,)

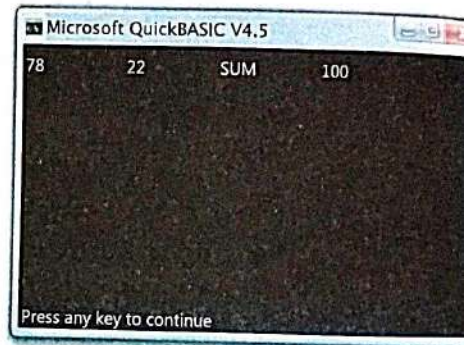
It is used to display the values one after another with plenty of spaces in between. Only five values can be printed in one line. In case of more than five values, the remaining values will be printed on the next line.

Syntax : [Line No] PRINT (Variable), (Variable),...



Example

```
LET X = 78  
LET Y = 22  
Z = X + Y  
PRINT X, Y, "SUM", Z  
END
```



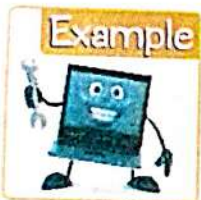
For Your Info

In QBasic, whenever any item enclosed in the square brackets [], means it is optional.

Print with Tab Function

The TAB function is used to move the print position to the column indicated in its argument. This statement is quite suitable for printing tabular type of results. PRINT TAB statement can be used in controlling column location.

Syntax : PRINT TAB (C); "Constant/Variable/Expression"



Example

```
Where C is the column number  
PRINT TAB (18); "GOODEVENING"
```

In the above example, the message "GOODEVENING" will be printed from the 18th column onwards on the screen.

For Your Info

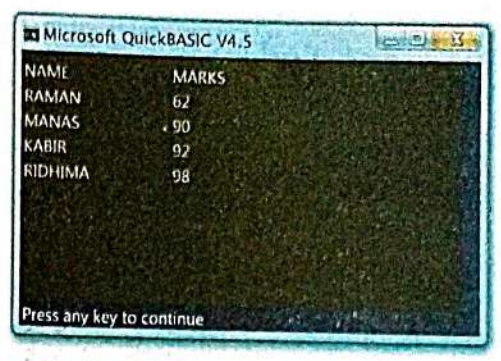
CLS command is used to clear the output screen. It is usually written before starting a program, so that the output of the previous program is not shown on the screen.



```

REM "TAB FUNCTION PROGRAM"
PRINT TAB (10); "NAME"; TAB (20);
"MARKS"
PRINT TAB (10); "RAMAN"; TAB (20); 62
PRINT TAB (10); "MANAS"; TAB (20); 90
PRINT TAB (10); "KABIR"; TAB (20); 92
PRINT TAB (10); "RIDHIMA"; TAB (20); 98
END

```



INPUT STATEMENT

The INPUT statement in QBasic is used to accept the data item from the user and store it in a variable. This statement asks the user to make data entry by displaying a question mark (?) during the execution of program. The program execution is suspended till the user enters the required values and presses the Enter key.

Syntax : [LINE NO] INPUT <Numeric or String Variable Name>



```

10 INPUT A

```

For Your Info

The values to variables are assigned according to their type—Numeric or String.

You can have a list of variables in an INPUT statement but they should be separated by commas.

Syntax : [LINE NO] INPUT <Variable1>, <Variable2>, <Variable3>

The corresponding values which you key in should also be separated by commas.



```

REM PROGRAM TO ACCEPT VALUES
INPUT NAMES$
INPUT CLASS
INPUT SCHOOLS$
PRINT NAMES$, CLASS, SCHOOLS$
END

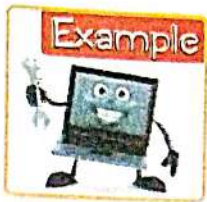
```

While using INPUT statement, the computer does the following things :

- It stops further processing of the program.
- It prints a question mark on the screen.
- It waits for the user to key in its response and press the Enter key.
- It stores or assigns the same data item into the corresponding variable mentioned in the INPUT statement.

We can further modify the INPUT statement by providing an optical message, separating it from the variable using semi-colon (;)

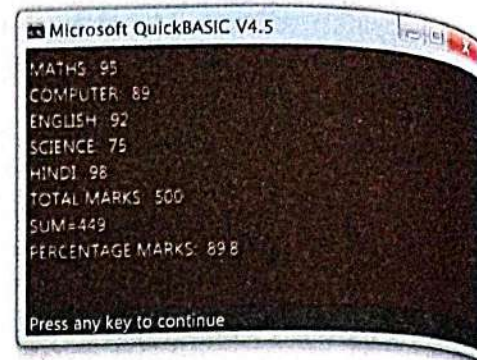
Syntax : INPUT "MESSAGE", <VARIABLE>



```

INPUT "MATHS"; M
INPUT "COMPUTER:"; C
INPUT "ENGLISH:"; E
INPUT "SCIENCE:"; S
INPUT "HINDI:"; H
INPUT "TOTAL MARKS:"; TM
SUM = M + C + E + S + H
PER = (SUM/TM)*100
PRINT "SUM ="; SUM
PRINT "PERCENTAGE"
MARKS=""; PER
END

```



Note that the punctuation between the message and the variable is a semi-colon. The message and the variable name together represent one data item. You can also give INPUT statement in the following way.

Syntax : [LINE NO] INPUT "MESSAGE", <VARIABLE1>, "MESSAGE"; <VARIABLE2>

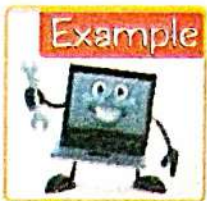
CONTROL STATEMENT

While executing programs, sometimes it becomes essential to change the order of execution of some statements or to repeat a particular set of statements subjected to a given condition. These kinds of conditions require logical decisions. The statements that help to control the flow of a program are known as Control Statements. There are various control statements in QBasic like IF-THEN, GOTO, IF-THEN-ELSE, etc. for performing conditional checks and repetitive actions.

GOTO STATEMENT

In a QBasic program, GOTO statement is used to transfer the program control from one statement to another.

Syntax : [Line No.] GOTO <Line No.>



```

10 A = 1
20 B = A*A
30 PRINT B
40 A = A + 1
50 GOTO 20
60 END

```

Output
1
4
9
16
25
36
49
⋮

While executing this program, control will shift back to Line no. 20 each time it executes Line no. 50. The program will never stop. It is called **Infinite Loop**.

In our daily life, we make decisions and take actions accordingly.

Example : Our plan to go to a movie will depend upon the availability of tickets :

Condition

1. If tickets are available
2. If tickets are not available

Plan of Action

1. See the movie.
2. Have food in a restaurant.

Similarly, the computer also decides about the actions depending upon the validity or non-validity of condition. Every decision involves a choice between the 'Yes' and 'No' result.

IF...THEN STATEMENT

This statement is used for making decisions based on comparisons.

Syntax : IF <CONDITION> THEN <STATEMENT>

If the condition is TRUE, then the instruction specified after 'THEN' is executed. If the condition is FALSE, the control shifts to the next statement.

Example



```
IF X > Y THEN C = C + 1
```

It means that if X is greater than Y, then 1 is added to the value of C.

```
IF A$ = "Class IX" THEN INPUT "NAME, AGE, MARKS"; N$, A, M
```

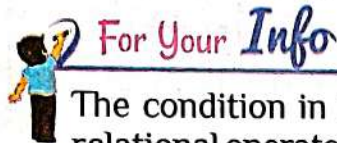
The value of variable N\$, A, M will be input, only if the value of variable A\$ is equal to "Class IX".

```
IF C > 10 THEN PRINT C
```

The value of C will be printed only if the value of C is greater than 10.

```
40 IF C = 10 THEN GOTO 80
```

If C is equal to 10, then control will be transferred to the line number 80, otherwise the next statement will be executed.



For Your Info

The condition in IF-THEN-ELSE statement is given by the relational operators: >, >=, <, <=, = and <>.

SIMPLE PROGRAMS

Write a program to compare two numbers.

Example



```
REM PROGRAM TO FIND THE GREATER NUMBER
```

```
CLS
```

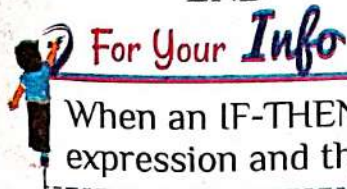
```
INPUT "ENTER TWO NUMBERS: "; N1, N2
```

```
IF N1 > N2 THEN PRINT "GREATER NUMBER IS: "; N1
```

```
IF N1 < N2 THEN PRINT "GREATER NUMBER IS: "; N2
```

```
IF N1 = N2 THEN PRINT "BOTH NUMBERS ARE EQUAL"
```

```
END
```



For Your Info

When an IF-THEN statement is encountered, the computer first evaluates relational expression and then determines whether it is TRUE or FALSE.

- Step 1 : Clear the screen.
- Step 2 : Input two numbers.
- Step 3 : Check whether the first number is greater than the second. If yes, then print first number as the greater number.
- Step 4 : Check whether the second number is a greater than the first. If yes, then print second number as the greater number.
- Step 5 : Check whether both the numbers are equal. If yes, then print both numbers are equal.
- Step 6 : End the program.

Write a program to find the sum of difference of two numbers, depending upon choice.



Example

```
10 CLS
20 INPUT "TWO NUMBERS"; A, B
30 INPUT "Enter 1 FOR ADDITION, 2 FOR SUBTRACTION:"; CH
40 IF CH = 1 THEN C = A + B
50 IF CH = 2 THEN C = A - B
60 PRINT C
70 INPUT "DO YOU WANT TO EXIT (Y/N):"; QS
80 IF QS = "N" THEN GOTO 20
90 END
```

Step 1 : Clear the screen.

Step 2 : Input two numbers: A and B.

Step 3 : Enter your choice, either 1 for Addition or 2 for Subtraction in the variable CH.

Step 4 : If CH = 1, numbers will be added and the result will be stored in C.

Step 5 : If CH = 2, second number will be subtracted from first and the result will be stored in C.

Step 6 : Print C.

Step 7 : Press 'Y' to exit and 'No' to repeat the process.

Step 8 : If user types 'N', then control moves back to line number 20 and the process repeated.

Step 9 : When a user enters "Y", the control moves forward and the program ends.

IF...THEN...ELSE STATEMENT

IF-THEN-ELSE is a conditional decision making statement. If the condition given after IF is True, statement(s) specified after THEN is executed. But if the condition is False, the ELSE statement will be processed.

Syntax : IF <condition> THEN <statement1> ELSE <statement2>

To print odd numbers between 1 and 100.



Example

```
10 N = 1
20 IF N < 100 THEN GOTO 30 ELSE GOTO 60
30 PRINT N
40 N = N + 2
50 GOTO 20
60 END
```

Program to display whether a person is adult or not.



Example

```
10 CLS
20 INPUT "ENTER YOUR NAME AND AGE"; NAM $, AGE
30 IF AGE < 18 THEN GOTO 40 ELSE GOTO 60
40 PRINT "HI"; NAM$ "YOU ARE NOT AN ADULT"
50 GOTO 70
60 PRINT "HI"; NAM$ "YOU ARE AN ADULT"
70 END
```

USING ELSE...IF WITH IF...THEN STATEMENT

ELSE statement is used when we want more choices in the IF... THEN statement.

Syntax :

```
IF <Condition 1> THEN
<Action 1>
ELSEIF <Condition 2> THEN
<Action 2>
ELSEIF <Condition 3> THEN
<Action 3>
ELSE
<Alternative Condition>
ENDIF
```

To Print the division of a student, based on the marks scored.

Example



```
INPUT "ENTER MARKS PERCENTAGE"; MP%
IF MP% >= 60 THEN
PRINT "FIRST DIVISION"
ELSEIF MP% >= 50 THEN
PRINT "SECOND DIVISION"
ELSEIF MP% >= 40 THEN
PRINT "THIRD DIVISION"
ELSE
PRINT "FAIL"
ENDIF
END
```

To calculate discount on the basis of Bill Amount.

Example



```
CLS
INPUT "Enter Bill Amount"; AMT
IF AMT <= 2500 THEN
DISCOUNT = 0
ELSEIF AMT > 2500 AND AMT <= 5000 THEN
DISCOUNT = 0.2 * AMT
ELSEIF AMT > 5000 AND AMT <= 10000 THEN
DISCOUNT = 0.3 * AMT
ELSE
DISCOUNT = 0.4 * AMT
END IF
NET = AMT - DISCOUNT
PRINT "The Bill Amount is:" NET
END
```

REPETITION CONSTRUCT

Repetitive constructs allow a specified group of statements to be executed a certain number of times. This repeated execution of a group of program statements is known as looping. Every repetition of a Loop is known as iteration. Iteration means to repeat something over and over again. QBasic offers two types of looping statements : FOR...NEXT and DO.

FOR... NEXT LOOP

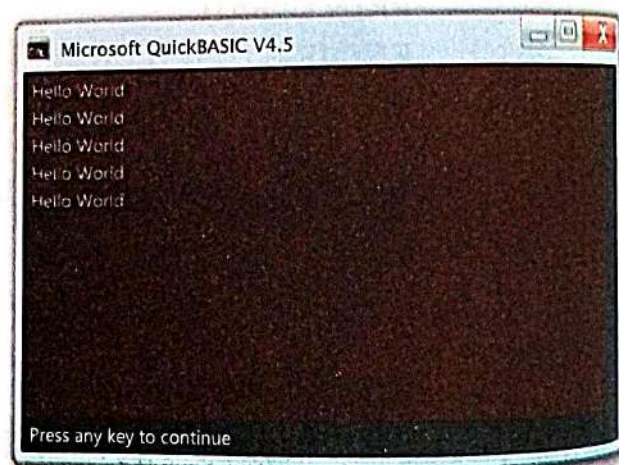
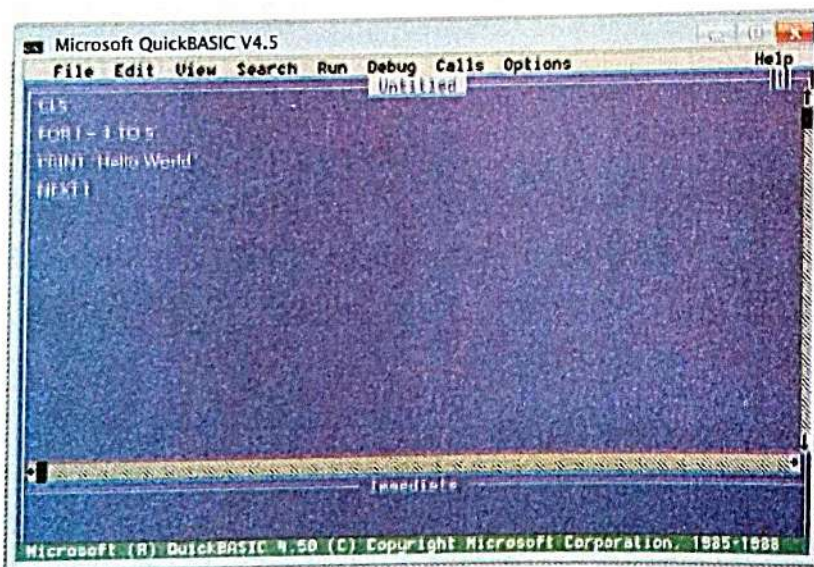
It is generally used as a counter loop when you know exactly how many times you need to execute the loop.

Syntax : FOR <variable> = <initial value> TO <final values>
<Statements to be executed>
NEXT <variable>

Example 1 : CLS
For I = 1 to 5
PRINT "Hello World"
Next I

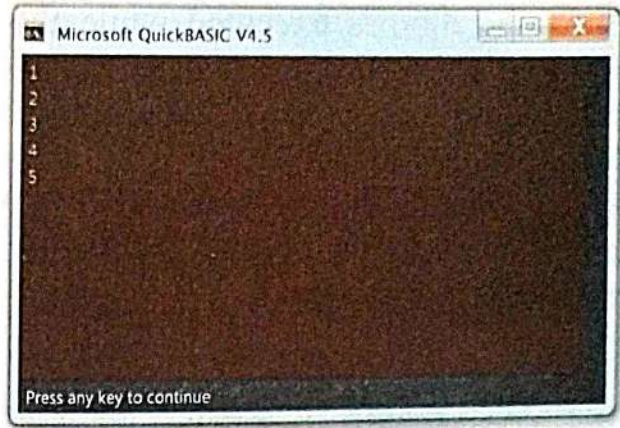
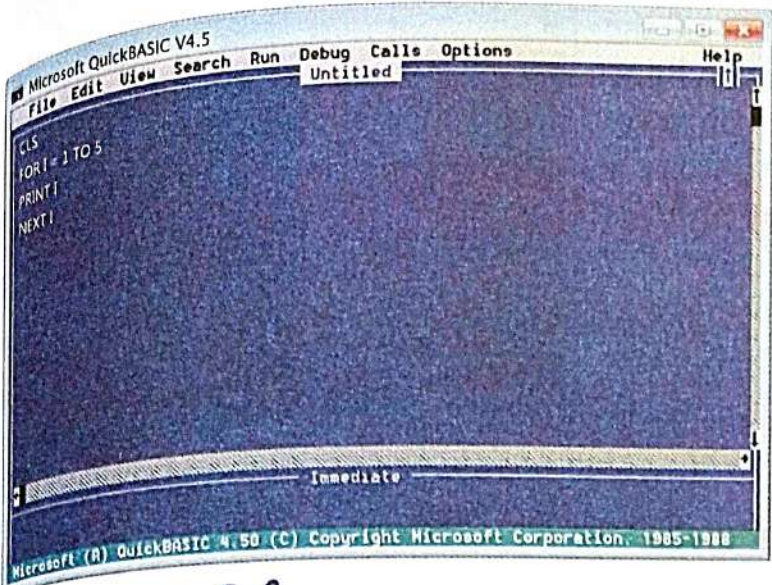
In the example, I is a variable which will store a value. The initial value is 1 and the final value is 5. To start with the variable I will hold a value of 1. The program prints Hello World and moves onto the NEXT I statement and checks if the variable I is 5.

If it is not 5 then the program will continue and jump back to the FOR command increasing the value of I by 1. It loops until the variable I is 5, printing the text Hello World five times.



Example 2 : CLS
FOR I = 1 to 5
PRINT I
NEXT I

The above program prints the numbers from 1 to 5.



For Your Info

The STEP command can be used with the FOR...NEXT loop to counter the increment by the desired number. For example, FOR I = 1 TO 5 STEP 2 will increment the value of I by 2 in each LOOP.

DO LOOP

It is a block of commands where the program does not have to loop a certain number of times like in FOR...NEXT loop. It can loop indefinitely.

The DO LOOP has two forms in QBasic. DO WHILE...LOOP and DO UNTIL...LOOP.

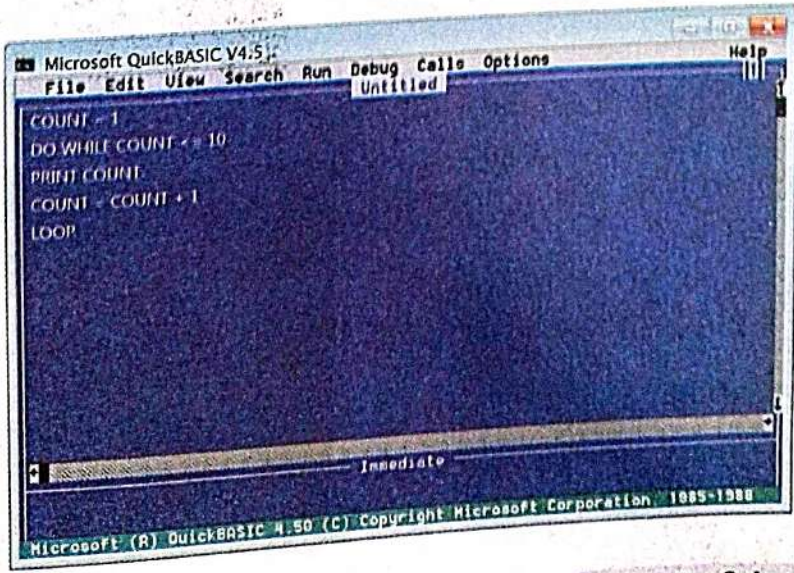
DO WHILE...LOOP

The loop executes until the condition becomes false.

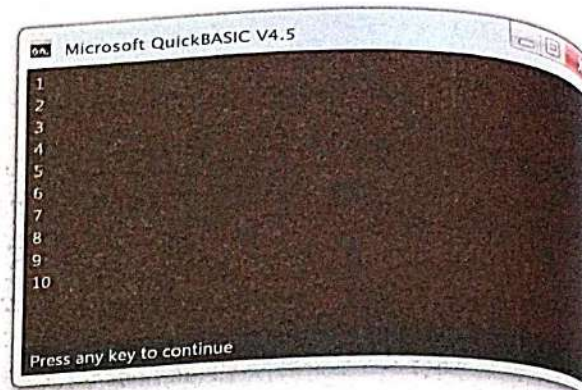
The syntax is : DO WHILE <conditions>
<statements>
LOOP

Through this loop, a condition is evaluated. If the condition is false, it jumps to the first statement after the loop. Otherwise it executes the statements inside the loop and then goes back to step one.

Example :



Here, the loop is executed while the value of the count is less than or equal to 10. Once the condition is met, the loop is terminated. The above program prints the numbers from 1 to 10. This is also known as a True loop. It works till the condition given does not become false.



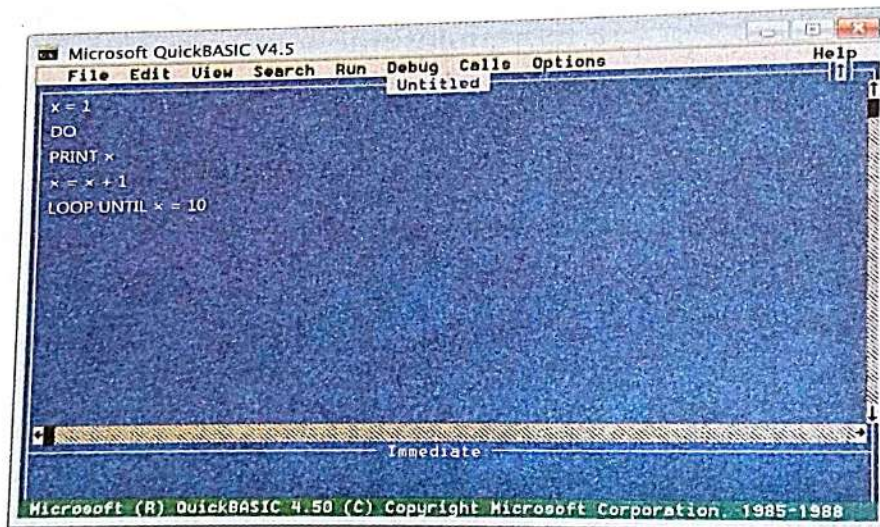
DO UNTIL...LOOP

The loop executes until the condition becomes true. The syntax is :

```
DO UNTIL <condition>
<statement>
LOOP
```

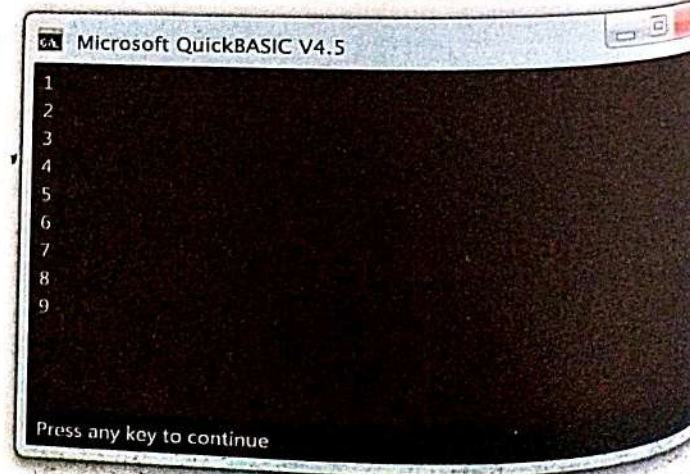
If the condition is false, QBasic executes the statement and continues to do so until condition is true. If the condition is true, QBasic jumps past the loop and executes remainder of the program.

Example :



Here, the loop is executed while the value of the count is not more than 10. Once the condition is met, the loop is terminated. The above program prints the numbers from 1 to 9.

This is also known as a False loop. It works till the condition given does not become false.





A. Tick (✓) the right option.

- The statement in QBasic is used to accept the data item from the user.
 (a) Output (b) Input (c) LET (d) CLS
- command helps to insert comments that enable us to understand what the program is all about.
 (a) LET (b) REM (c) CLS (d) IF
- statement can be used in controlling column location.
 (a) Print (b) Tab (c) Print Tab (d) Format
- In Basic, whenever any item is enclosed in the it means it is optional.
 (a) Curly brackets (b) Square brackets
 (c) Rounded brackets (d) Line brackets
- statement is used when we want more choices in the IF... THEN statement.
 (a) ELSEIF (b) GOTO
 (c) IF...THEN...ELSE (d) none of these
- statement is used to transfer the program control from one statement to another.
 (a) PRINT (b) IF THEN (c) GOTO (d) CLS

B. Fill in the blanks with the correct word.

THEN LET IF-THEN-ELSE FOR-NEXT comparisons Control decisions

- The statement or Assignment statement is used to assign a value to a variable.
- statements help to control the flow of program.
- IF-THEN statement is used for making based on
- is conditional decision making statement.
- If the condition specified after IF is true, then the instruction after is executed.
- A loop is generally used as a counter loop when you know exactly how many times you need to execute the loop.

C. State whether the following statements are true or false.

- TAB statement prints Tabular type of results.
- The PRINT statement provides variations to print the output on the screen.
- CLS command clears all the contents of the screen.
- When comma is used with PRINT statement, the items get closed to each other leaving no space.
- When INPUT statement is executed the "?" symbol is displayed?
- You can have only one INPUT statement in a program.

D. Name the statement/command.

1. The statement allows us to enter values into the computer's memory at runtime.
2. The statement is used to give values to a variable.
3. The statement is used to display the output on the screen.
4. The command is used to put a comment line in your program.
5. The command is used as counter loop.

E. Answer the following questions.

1. What is the use of INPUT statement? What does a computer do when we use INPUT statement?
.....
2. Differentiate the use of PRINT statement with comma and semi-colon by using examples.
.....
3. Define the conditional statement IF-THEN-ELSE.
.....
4. What is the use of GOTO statement? Explain with example.
.....
5. What is looping? Describe the types of looping with examples.
.....
6. What are the differences between a True loop and a False loop?
.....



*** Write the output for the following statements.**

- | | | |
|------------------------|---------------------------------|--------------------|
| (a) Print $9 * 3 + 3$ | (b) Print "Hello"; "India" | (c) Print "10 + 5" |
| (d) Print $12 * 3 + 4$ | (e) Print "I"; "Love"; "QBasic" | (F) Print "2 + 4" |



LAB VISIT

Write BASIC programs for the following :

1. To display a sample message "Have a good day".
2. To calculate the square and cube of any number.
3. To display the following result: Hello, (your name). How are you?
4. To display even numbers between 10 and 60.
5. To print smaller of the two numbers entered by the user.
6. To display odd numbers between 31 and 60.
7. To check a person is eligible to vote.
8. To print the multiplication table of a number.

Lesson Extract

- ❖ Starting Flash
- ❖ Components of a Flash Window
- ❖ Working in Flash
- ❖ Using the Tools Panel
- ❖ The Selection Tools

- ❖ The Coloring Tools
- ❖ Text Tool
- ❖ Creating a New Flash Document
- ❖ Using Frame by Frame Technique to Animate

Macromedia Flash is a software that enables the user to make interactive animations. It is a user-friendly software that does not require any special programming skills to work on. You can create movies and motion pictures with Flash. Flash files can also be embedded into a website to make it interactive.

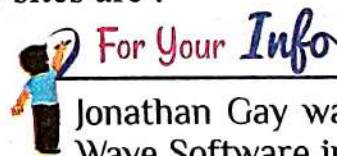
Flash originated with the application of SmartSketch, developed by Jonathan Gay. Flash was originally owned by Macromedia. Presently it is developed and distributed by Adobe and is popularly known as Adobe Flash.

Nowadays, Flash is used for making advertisements and games also. There are various Websites available where flash games are available free to play online and download. Some of these sites are :

- www.novelgames.com
- www.flash-game.net



Jonathan Gay



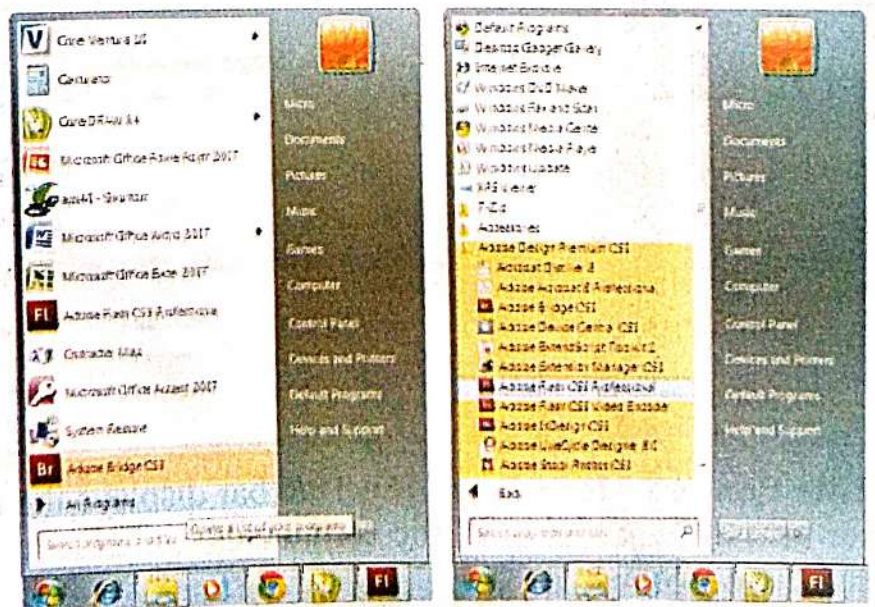
Jonathan Gay was the co-founder of Future Wave Software in 1993. For a decade, he was the main programmer and visionary of Flash.

STARTING FLASH

The various steps to start Macromedia Flash are :

- Click on **Start** button to select Programs.
- From the sub-menu, select **Macromedia**.
- Click on **Macromedia Flash 8** to open it.

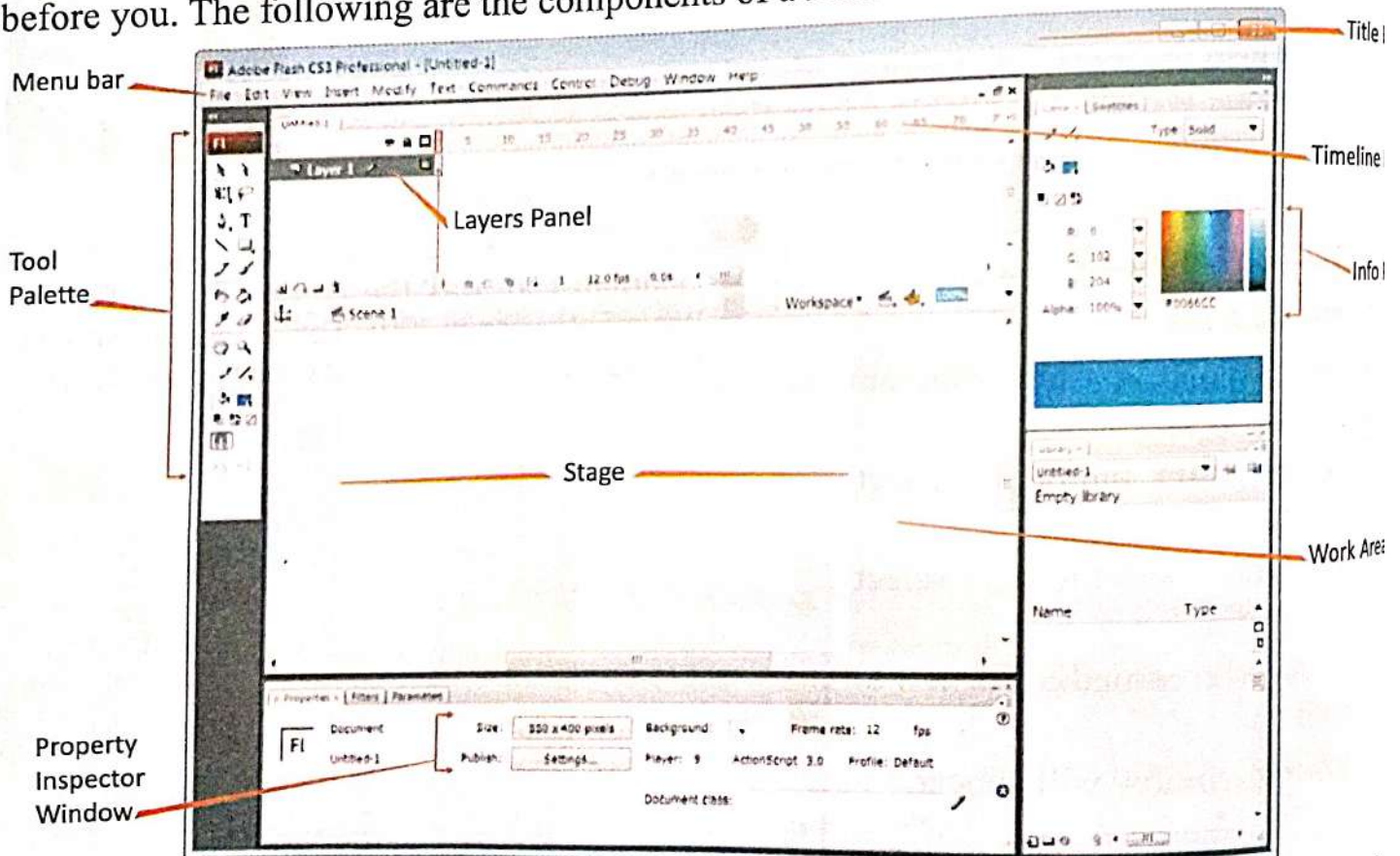
The following window will appear.





COMPONENTS OF A FLASH WINDOW

On clicking the File menu and selecting New option, a Macromedia Flash window opens before you. The following are the components of a Flash window.



Title Bar and Menu Bar : The Title bar displays the name of the open document and the Menu bar gives you access to all the commands available in Flash. Using these commands you can complete any task.

Tool Palette : You can choose different tools available in Tool Palette to create and modify text and graphics.

The Stage : This is the rectangular area where graphics, text and video clips are drawn or placed and animation is created.

Work Area : It refers to the light grey area around the Stage. You can place objects here until you want them to appear on the Stage.

Property Inspector Window : It helps in organizing and modifying the various properties of the selected objects.

Timeline Panel : It organizes and controls a document's content in layers and frames. Like films, Flash documents divide time-length into frames. The timing of an animation is adjusted in timeline panel. Thus, it helps in setting the sequence of a movie or animation.

Layers Panel : It helps to manage the layers. Layers are like multiple film strips stacked on top of the other, each containing a different image that appears on the Stage.

There are other palettes available. They provide the essential information and control over the animation process. They can be arranged in stacks and moved around the screen and collapsed to icon view.

WORKING IN FLASH

Flash environment is very easy to understand and use. Let's learn to work with the Flash environment.

Create a New Flash Document

The various steps to create a Flash document are :

- Click on the File menu to select **New** option. A New Document dialog box appears.
- Select **Flash Document** option in the Type list.
- Click the **OK** button to open a new document.

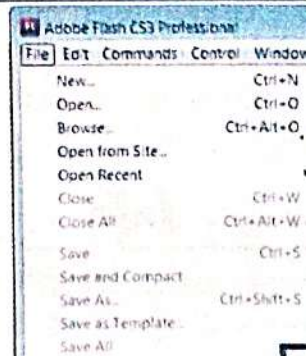
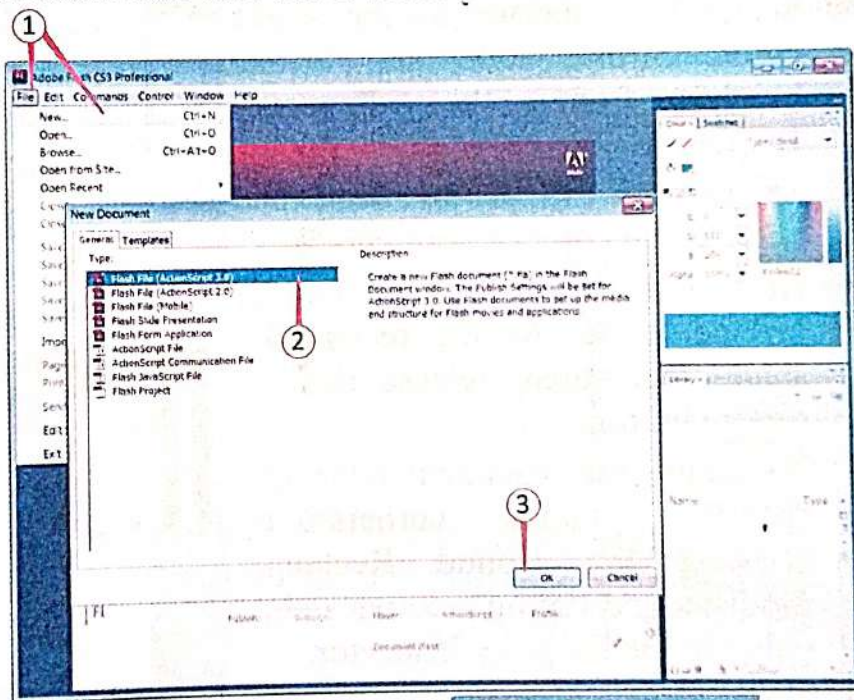
A black Flash Document is created. Now you can give it a name and save it.

Save a Flash Document

It's a good idea to save a new document when you start working with it so that you don't lose any of your document.

The various steps to save a Flash document are :

- Click on the **File** menu and select the **Save** option.
- In the Save As dialog box, specify the name of the file: flash 1 and click on **Save**. The Flash Document files have an extension of ".fla".





To make the content available on the Web the ".fla" file must be converted to Flash player files having an extension of ".swf".

To open an already saved Flash document, simply click on the File menu and select Open option. Choose the file from the Open dialog box and click Open.

USING THE TOOLS PANEL

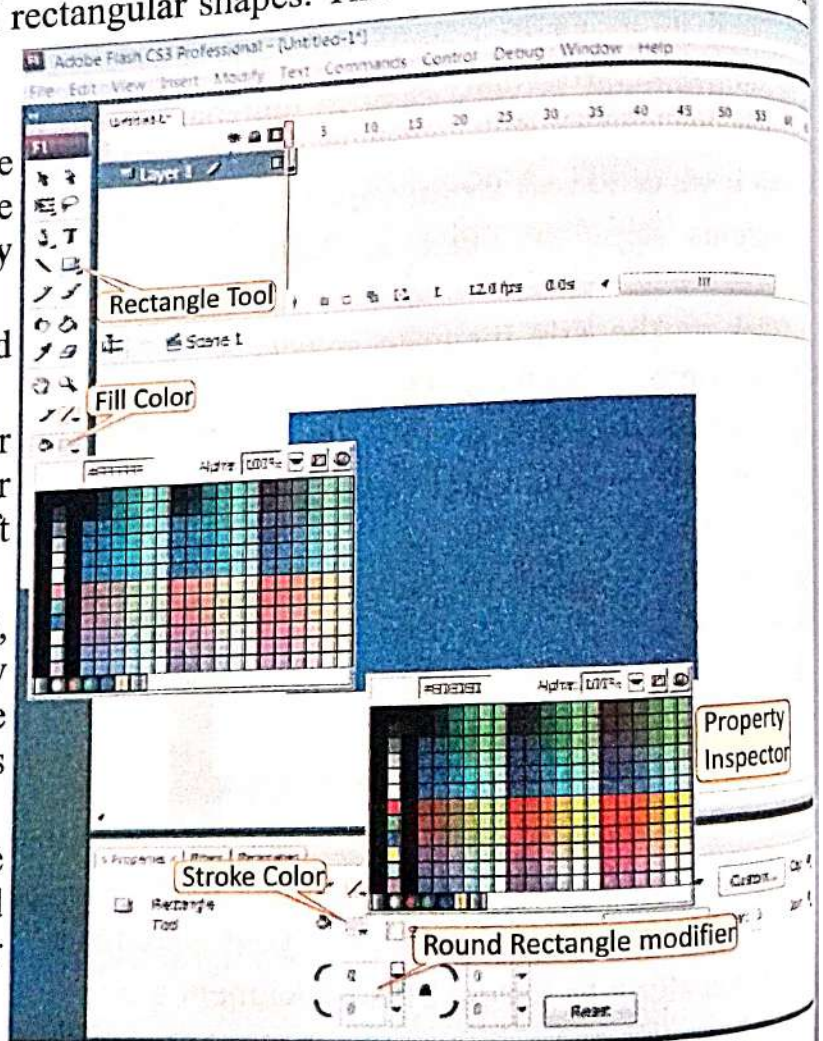
Now, that you have an idea of Flash interface and its basic methods of working, you can use the tools available in Flash to create a figure on which animation can be applied. But, first create a new flash document and use the different tools learnt.

There are various tools in the Tool panel of Flash that help in creating and modifying the objects of animations. These tools can be categorised as drawing tools which help you in drawing objects and Selection tools that help you in selecting the objects to be modified. Let's learn to use some drawing tools here.

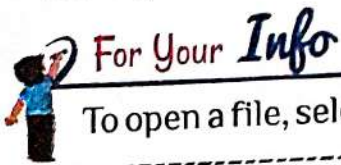
Rectangle Tool

This tool is used to create square and rectangular shapes. This tool has an option which can be set to drawing rounded rectangle.

- Select the **Rectangle Tool**.
- Select the properties for the Stroke color, Stroke style and Stroke height from the **Property Inspector**.
- Select the **Fill Color Tool** and choose a color of your choice.
- Hold and drag the mouse pointer on the Stage. As the rectangular shape is created, release the left mouse button.
- To draw the rounded rectangle, specify rounded corners by clicking the Round Rectangle modifier and typing a corner radius value in the Property Inspector.
- Now, draw a rectangle on the Stage. You will get a rounded rectangle with the specified corner settings.



Using the Rectangle Tool



To open a file, select File > Open option. Choose the required file and click on Open button.

Sticky Note

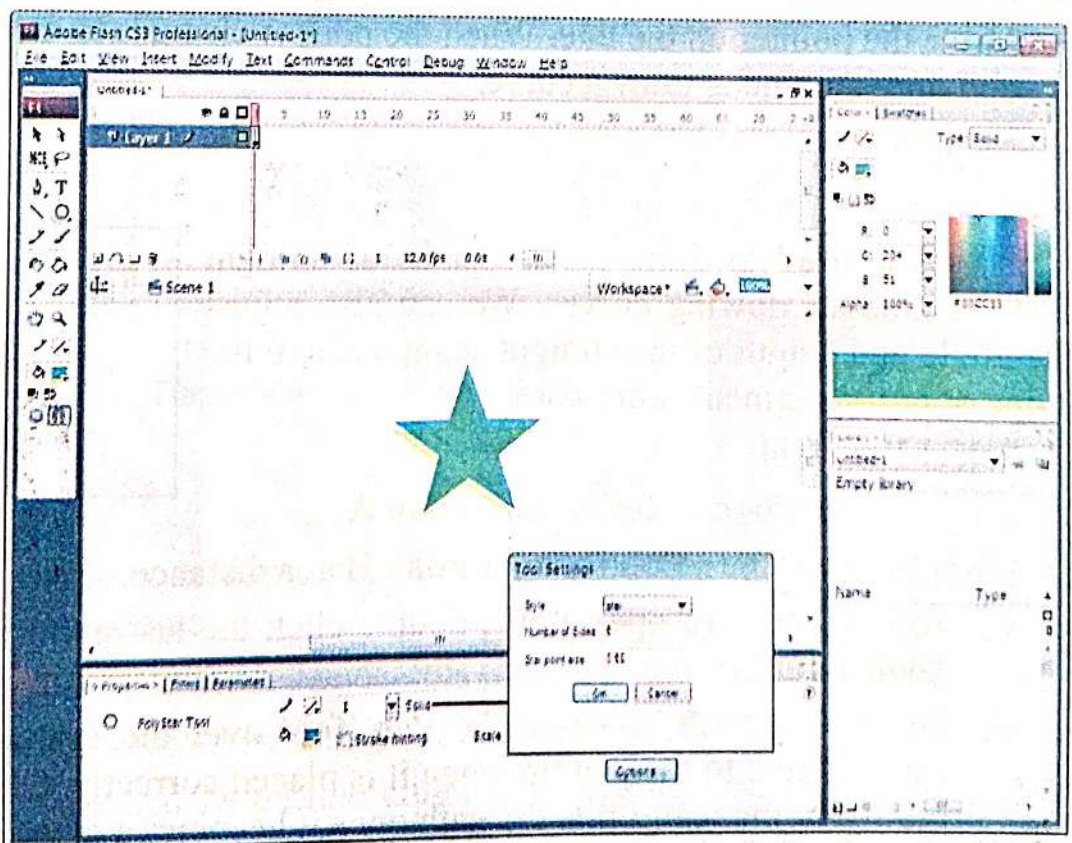
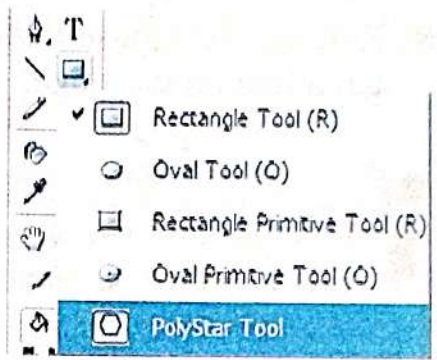
- ❖ Click on the small triangle at the lower right corner of the tool icons, to view the hidden tools.
- ❖ You can also draw other shapes like Oval, Polystar, etc. on the stage by clicking the small arrow on the **Rectangle Tool** and choosing the desired tool from the drop-down menu.

For Your Info

Point and hold the mouse pointer on any tool to know its name and keyboard shortcut.

PolyStar Tool

- This tool is used to draw polygon and star figures.
- Select the drop-down menu of the **Rectangle Tool**. It will display a fly out menu.
- Select the **PolyStar Tool**.
- In the **Properties Inspector**, click the **Options** button. You will get the **Tool Settings** dialog box. Click the drop-down list of **Style** option and select the **Star** style.
- Enter the number of sides. Enter the value from 3 to 32 for number of sides.
- For star point size, enter the number between 0 and 1 to specify the depth of the star points. A number closer to 0 creates deeper points.
- Click **OK** to close the **Tool Settings** dialog box.
- Click and drag the pointer on the Stage to draw a star.
- Similarly, you can draw a polygon by selecting **Polygon** option in the **Style** text box.



Drawing a Star Using PolyStar Tool

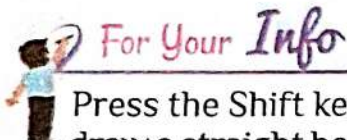
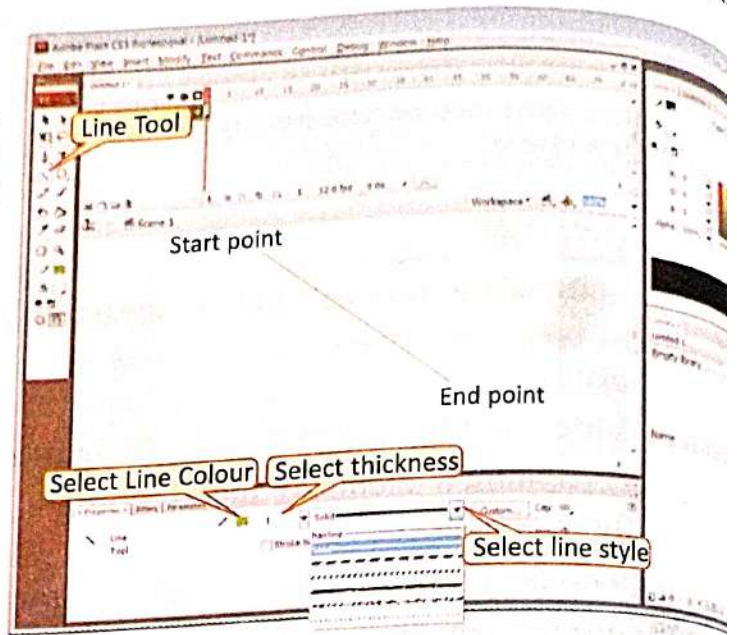
For Your Info

The shortcut of the Oval Tool is O.

Line Tool

The **Line Tool** works exactly the same way as the line tool in graphics software. We can use the Line tool to draw straight lines.

- Click the **Line Tool**.
- In the **Property Inspector** panel, select the colour, thickness or line style as needed from the order of events in sequence.
- Move the pointer on the Stage.
- Click and drag it in the direction where you want to draw a line.
- Release the mouse button. You will get a line on the stage.



For Your Info

Press the Shift key while dragging to draw a straight horizontal, vertical or diagonal line.

Curving

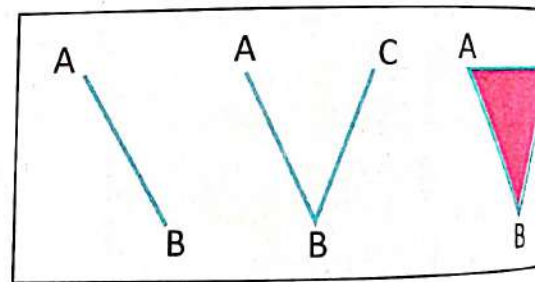
You can turn a straight line into a curve with the **Selection Tool**.

- After drawing a line, click the **Selection Tool**. (Make sure the line is not selected).
- Move the pointer on the line. When the pointer changes to arrow with curve symbol, and drag the line to draw a curve.
- Release the mouse button when the curve is made.

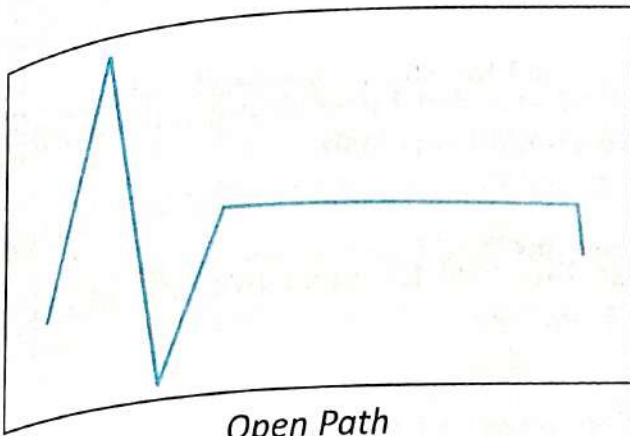
Pen Tool

This tool is used to draw precise paths as straight lines or smooth flowing curves. We can also adjust the angle and length of the straight segments and the slope of curve segments afterwards.

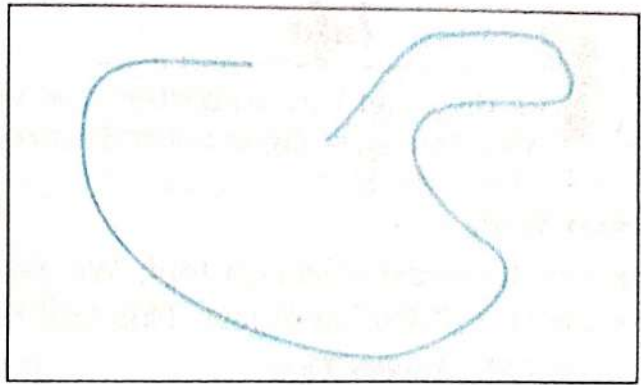
- Select **Pen Tool**.
- Click on the **Stage** to define the anchor A.
- Click to create the second anchor Point B at a distance.
 - ❖ To complete an open path, double-click the last point or click the **Pen Tool** in **Tools** panel.
 - ❖ To close a path, position the **Pen Tool** over the first anchor point. A small circle appears next to the pen tip when it is placed correctly. Click or drag to close the path. Flash automatically fills the path once it becomes a closed outline.



Using the Pen Tool



Open Path



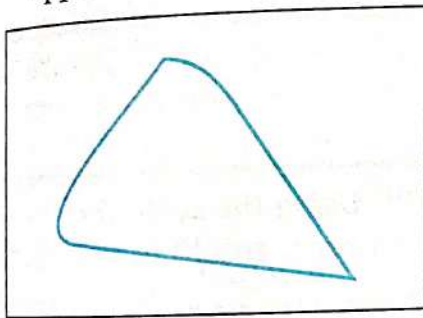
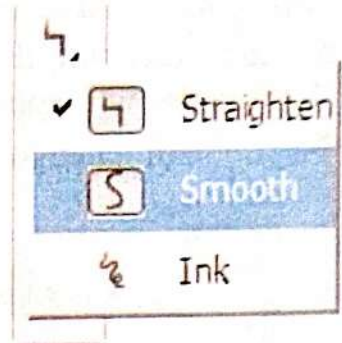
To Close a Path

Pencil Tool

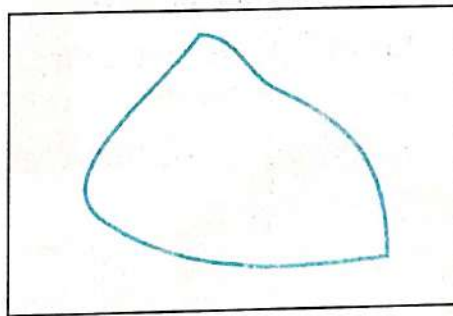
This is a freehand drawing tool. This tool helps to draw lines in three different modes : Straighten, Smooth and Ink.

Select the **Pencil Tool**.
Select a stroke color, line weight and style from the **Property Inspector Panel** and draw lines.

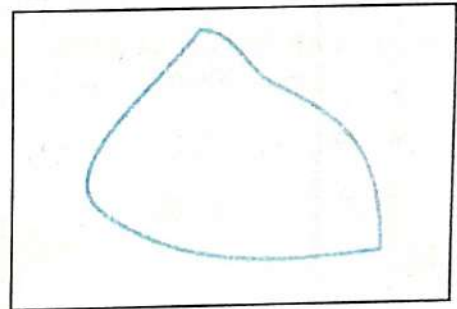
- (a) **Straighten** : The default option is Straighten. Straighten mode automatically straightens the line drawn by the **Pencil Tool**.
- (b) **Smooth** : Smooth mode smoothens the jerks on the edges.
- (c) **Ink** : Ink mode helps in freehand drawing with no modification applied.



Straighten



Smooth



Ink

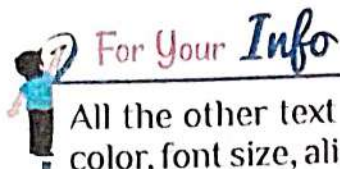
Three Modes of Pencil Tool

THE SELECTION TOOLS

Selection Tool

This tool is used to select a single or multiple objects on the stage. There are different ways to select different properties of an object.

- To select a Stroke fill, text block or group, select this tool and click on the object.
- To select a filled shape and its stroked outline, double-click the fill.
- We can select the filled shape and its outline either by dragging a square selection box around the object or by double-clicking the fill.



For Your Info
All the other text properties that you find in a Word processing software like font, color, font size, alignment and others are available in Flash.

Lasso Tool

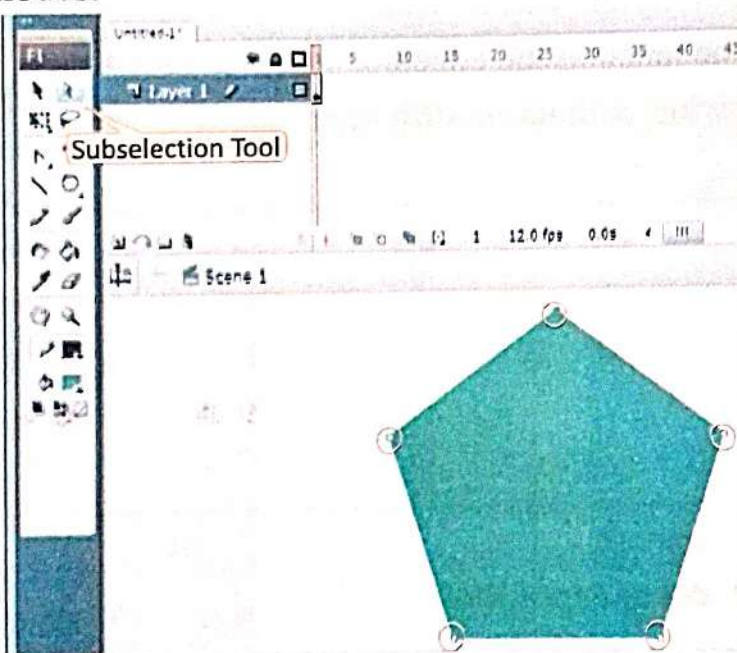
This is a freehand selection tool. We can use this tool to select irregular shaped areas drawing or a part of an object. This tool has 3 options.

- Click the **Lasso Tool**.
- Move the pointer over the Stage area. It changes to Lasso shape.
- Click and drag the **Lasso** around the object until we reach the point where we started.
- Release the mouse button.

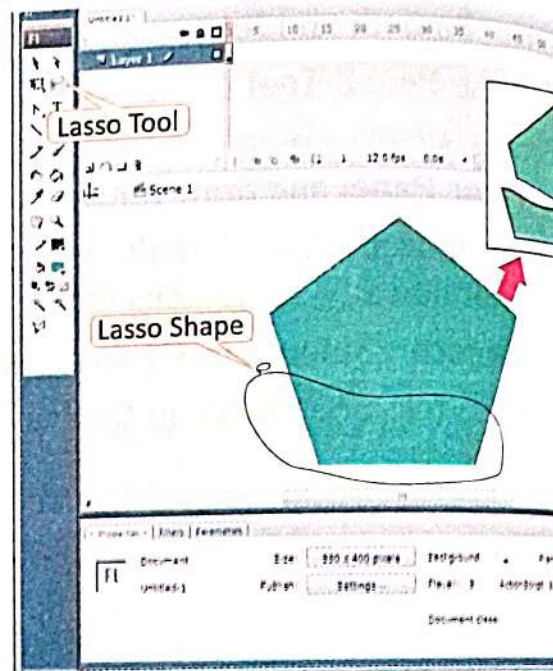
Subselection Tool

This tool is used to select the nodes of an object.

- After selecting this tool, click on an object and its nodes will appear.
- You can change an object's shape using the nodes.



Using the Subselection Tool

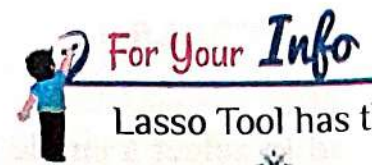


Using the Lasso Tool

THE COLORING TOOLS

Brush Tool

It can be used just like a brush on a canvas. You can paint a shape with the desired color using the **Brush Tool**. You can specify the brush mode, by selecting a brush size and shape using the brush tool modifiers. Some of the options that are available with **Brush Tool** are as follows:



For Your Info
Lasso Tool has three options:

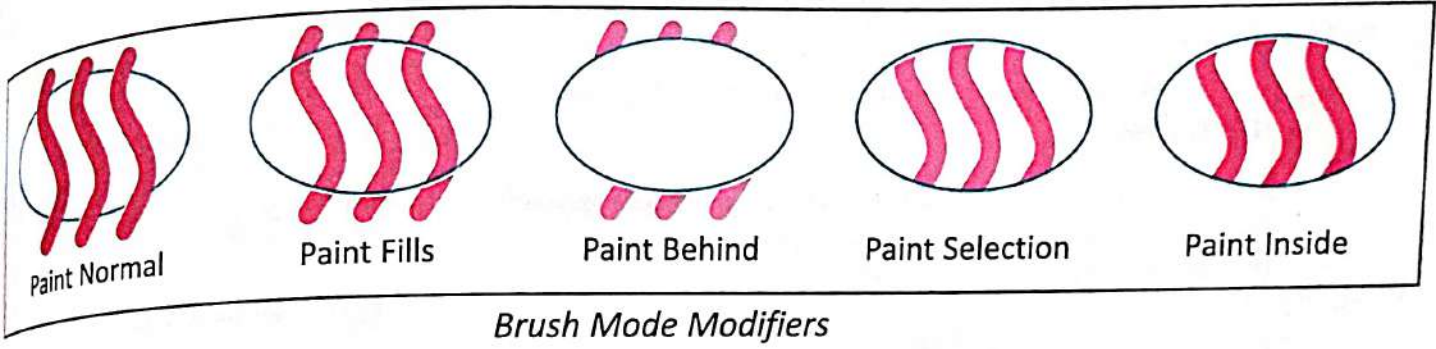
- Magic Wand
- Magic Wand Settings
- Polygon Mode

- Paint Normal
- Paint Fills
- Paint Behind
- Paint Selection
- Paint Inside

- ➔ Paint over lines and fills.
- ➔ Fills empty areas leaving lines unaffected.
- ➔ Paints blank areas of the Stage leaving lines and fills unaffected.
- ➔ Applies a new fill to the selection.
- ➔ Paints only the fills and doesn't allow you to paint outside the lines.

Quick Key

The shortcut of the Brush Tool	B
The shortcut of the Line Tool	N
The shortcut of the Rectangle Tool	R



Paint Bucket Tool

This tool is useful to fill enclosed areas of an object with colors in a single click. You can also use the **Paint Bucket** tool to fill the areas that are not completely closed. It also provides modifiers to close gaps in shape outline.

To fill color in an object, follow these steps :

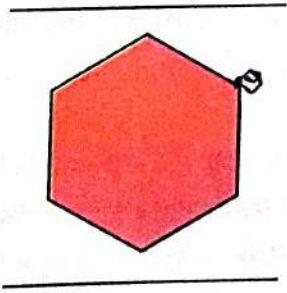
- Select the **Paint Bucket Tool**.
- Click the **Fill Color** drop-down arrow. The color palette appears.
- Select any color of your choice and click inside the object.

○ Don't Close Gaps

Close Small Gaps

○ Close Medium Gaps

○ Close Large Gaps



Brush size: A vertical column of circles of increasing size, with the largest one selected.

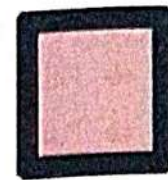
Brush shape: A vertical column of various shapes (circle, oval, square, rectangle, line, diagonal line), with the circle shape selected.

Using Paint Bucket Tool

Ink Bottle Tool

It is used to change the stroke color, width and style of lines or shape outlines.

- Select the **Ink Bottle Tool**.
- Choose the Stroke color, style and thickness of lines or shape outline from the **Property Inspector**.
- Click on the line of the drawn object using the **Ink Bottle Tool** to apply a different property to the stroke.



Using Ink Bottle Tool

Eraser Tool

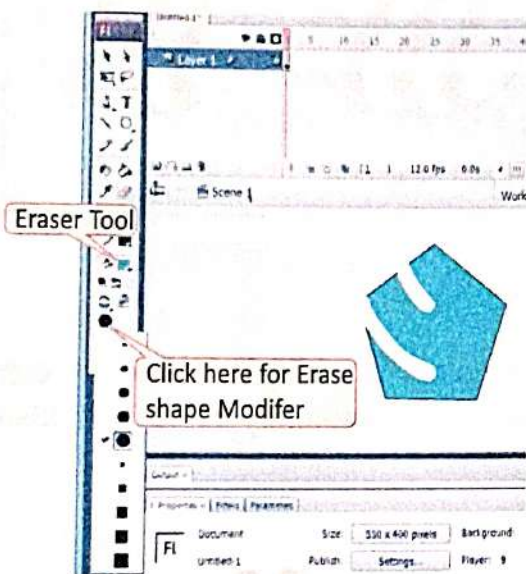
This tool helps you to erase lines and fills of an object from the Stage.

- Select the **Eraser Tool**.
- Click on the **Eraser Mode Modifier** and select the required eraser.

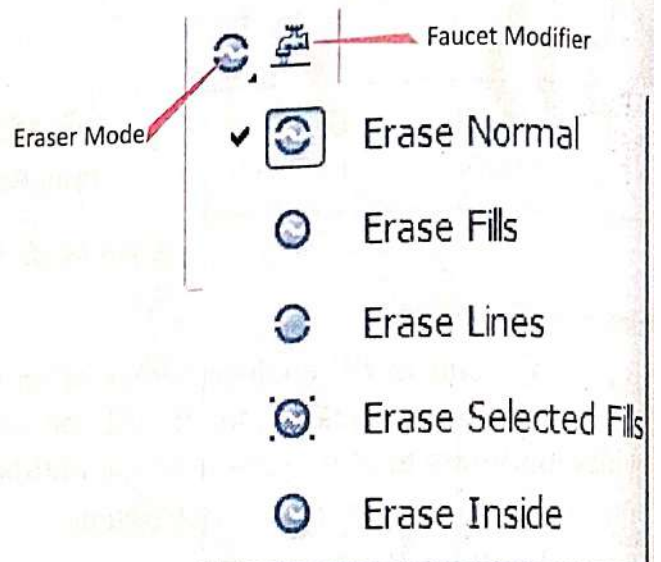
Quick Key

The shortcut key for Ink Bottle tool is **S**

The shortcut key for Paint Bucket tool is **K**



Using Eraser Tool



Eraser Mode Modifiers

- Click on the **Eraser Shape Modifier** and select the eraser shape and size.
- Click and drag it on the object to erase.

The different eraser mode modifiers are as follows :

Erase Normal : Eraser all lines and fills wherever the eraser is moved.

Erase Fills : Erases only the fill colors while lines are unaffected.

Erase Lines : It is used to erase the strokes only.

Erase Selected Fills : Helps in erasing a selected part of an object.

Erase Inside : Erasers the inner part of an object.

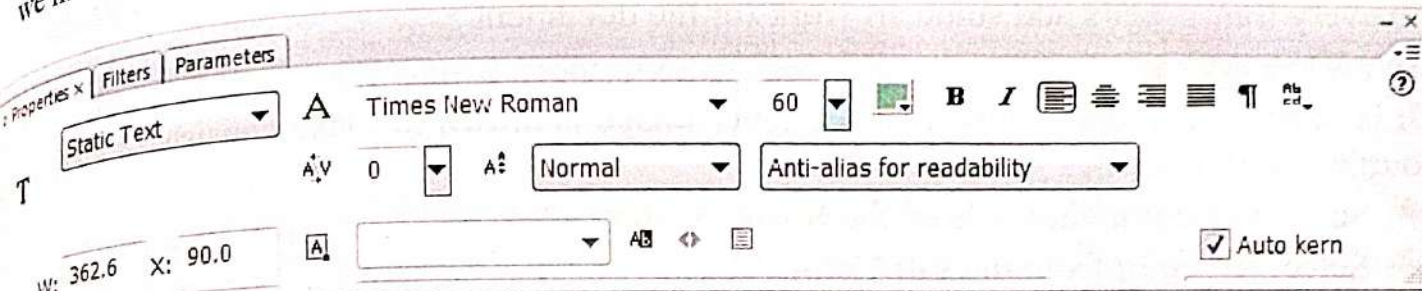
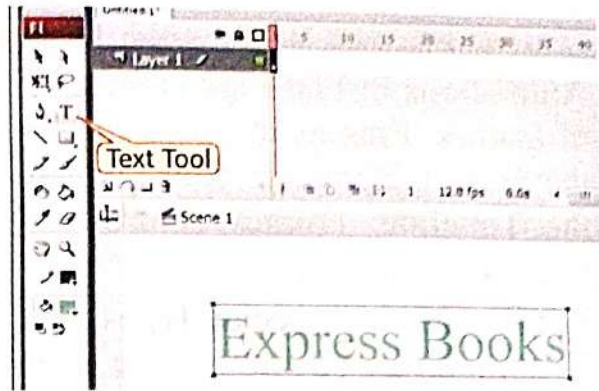
Quick Key

The shortcut of Selection Tool is **V**

TEXT TOOL

This tool is used to type on the screen. It allows you to add text in your drawing and animations.

- Select the **Text Tool**.
- Change the color, font, font size, etc. from the **Property Inspector**.
- Click on any area of the Stage to get the cursor and type the text.
- Move and adjust the text box in the same way as we move the objects.



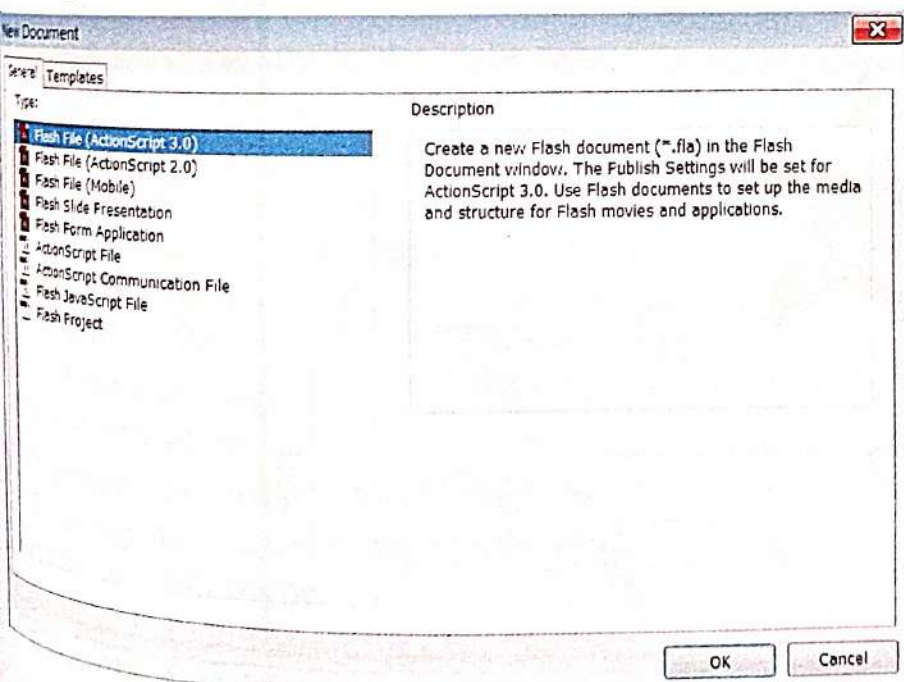
Using Text Tool

For Your Info

To select the part of an object with Lasso Tool, select the object and press Ctrl+B (to break apart the stroke and fill) and then drag the Lasso Tool around the part of the object you want to select.

CREATING A NEW FLASH DOCUMENT

- Select **File > New**. The **New Document** dialog box appears.
- Select the **Flash File (Action Script 3.0)** option in the **Type** list.
- Click **OK**. A new Flash document will open.
- Select **Modify > Document**. The **Document Properties** dialog box appears. Change the background color, frame rate or stage size as per your choice.



Creating a New Document

Quick Key
 You can double-click the **Eraser Tool** to delete everything on the Stage.

USING FRAME BY FRAME TECHNIQUE TO ANIMATE

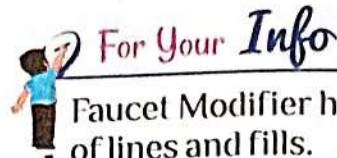
Animations in Flash are created with the help of frames. Frames in Flash can be defined as the little rectangular cells, which appear on the Timeline. Frames control the period of time of the movie.

Keyframes are special types of frames where we define change in the object for animation like position, color shape etc. In Frame by Frame animation, we create the in every frame. Let's add some art work for the document :

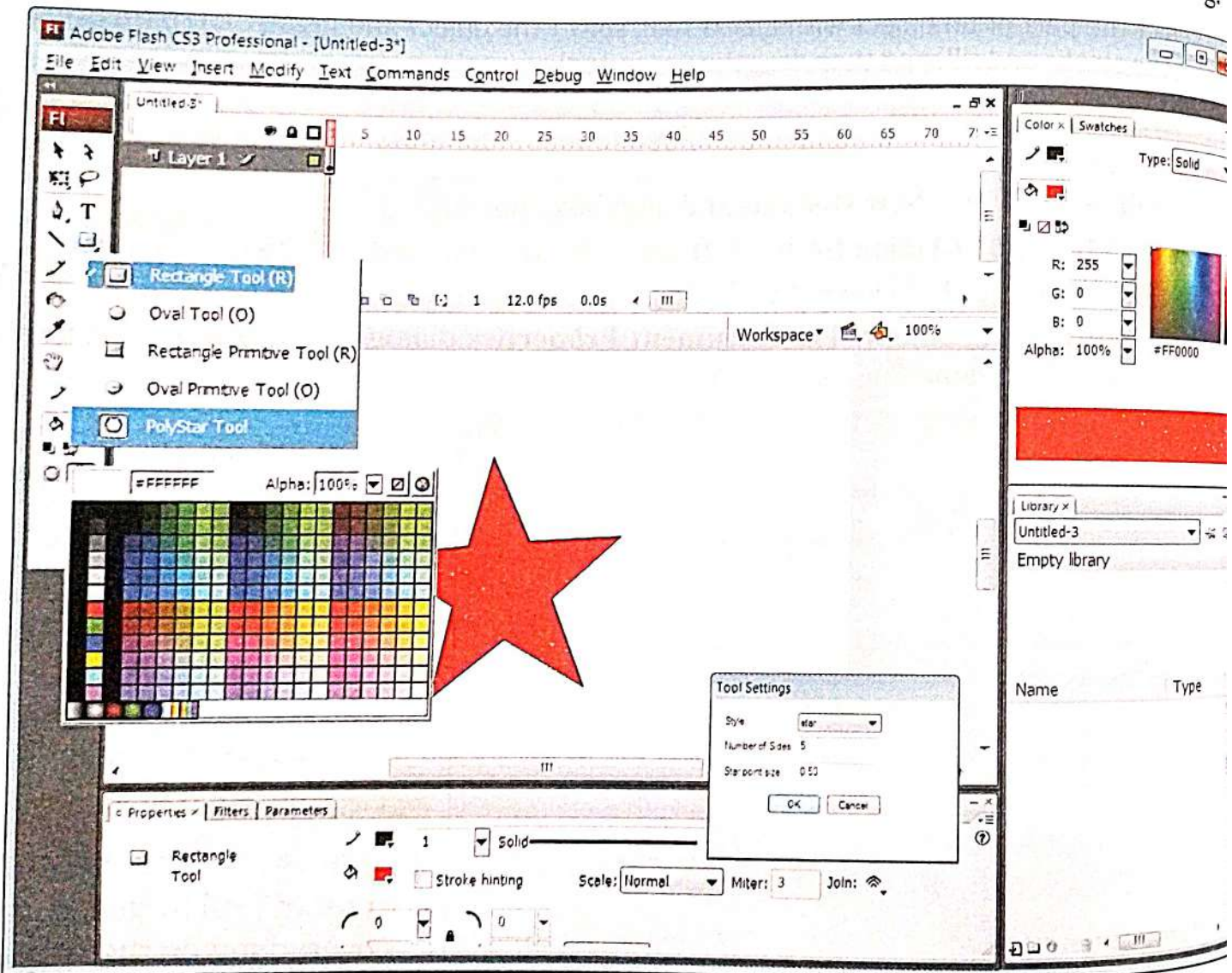
Drawing a Star

It is important to understand that whatever image is drawn in Flash consists of a stroke (outline) and/or a fill.

- Select any color choice from the **Stroke Color**.
- Select red color from the **Fill Color Picker**.
- Click the drop-down arrow on the **Rectangle Tool**. A fly out menu will appear.
- Select the **PolyStar Tool** and draw a star as explained in **PolyStar Tool** sub-heading.



Faucet Modifier helps to speed up erasing of lines and fills.

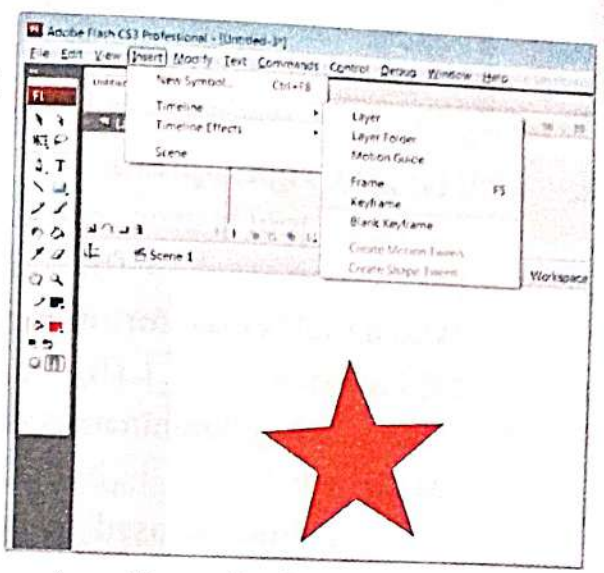


Drawing a Star

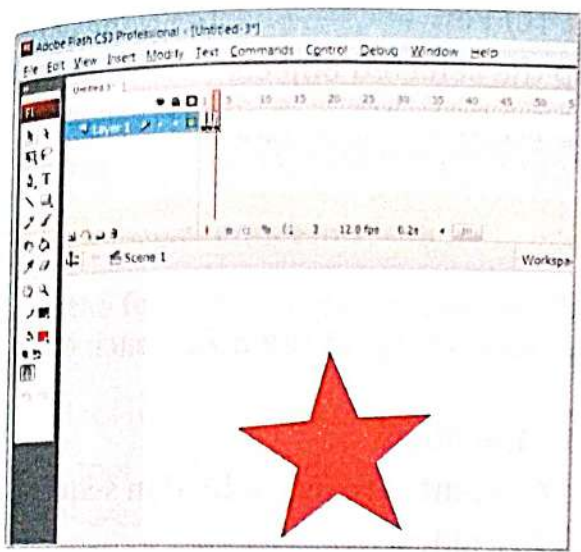
Animating an Object

Let us make a quick animation for the star that you have drawn across the stage.

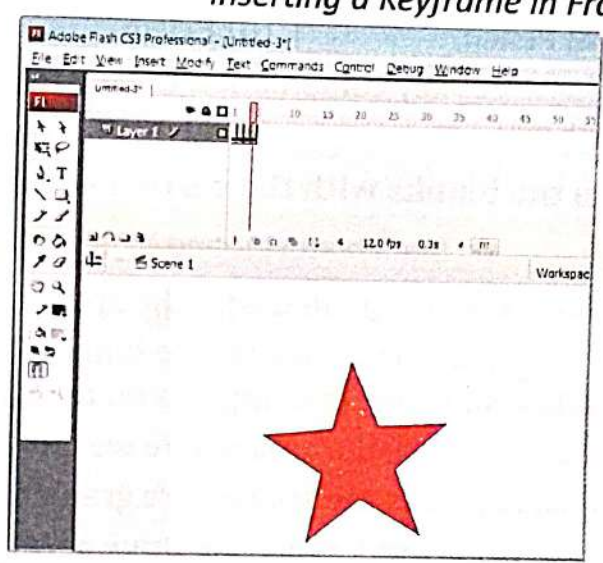
- Click to the right of the keyframe dot in **Layer 1**. The animation will begin from this particular frame.
- Now, click on the second frame in the Timeline.
- Click on **Insert > Timeline > Keyframe**. This will insert a keyframe in Frame 2 with a copy of the star
- Using the Selection Tool, make a slight change in the position of the star towards right side of the stage.



Inserting a Keyframe in Frame 2



Changing the color of Star in Frame 3



Inserting a Keyframe in Frame 4 Using F6

- Click on the third frame of the Timeline and press **F6**.

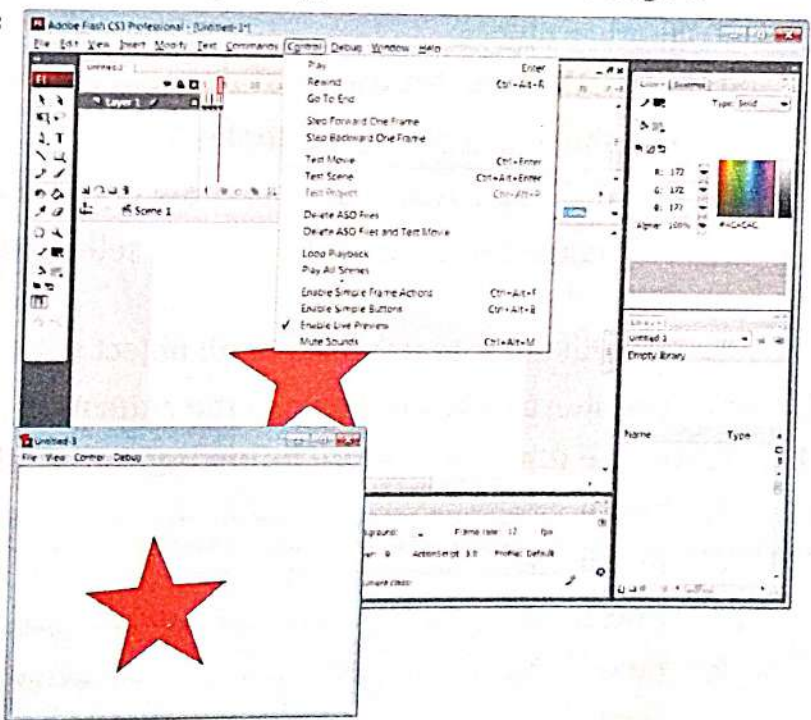
- Shift the star slightly to the right side of the stage. Change its color to sky blue by selecting it from the **Fill Color** picker.

- Click on the fourth frame of the Timeline and press **F6** to insert a keyframe in it.

- Shift the star towards right and change its color to yellow.

- Continue to insert keyframes by repeating the above steps till you reach the tenth frame.

- Preview the animation by clicking on **Control > Text Movie**.



Playing a Movie



Boost Your Brain



A. Tick (✓) the right option.

- tool is used to draw polygons or stars.
 (a) Polygon (b) Star (c) PolyStar (d) Line
- Which tool is used for creating straight lines?
 (a) Line tool (b) Eraser tool (c) Oval tool (d) Pen tool
- key combination is used to break apart the stroke and fill color.
 (a) Ctrl + B (b) Ctrl + V (c) Ctrl + G (d) Ctrl + S
- tool is used to draw precise paths as straight lines or smooth flowing curves.
 (a) Pencil (b) Brush (c) Pen (d) None of these
- key combination is used to group the selected object.
 (a) Ctrl + B (b) Ctrl + G (c) Ctrl + V (d) Ctrl + K

B. Fill in the blanks with the correct word.

Polystar Smart Sketch, developed by Jonathan Gay Brush Tool Panel Layers Line Tool

- Flash was originated with the application of
- are like multiple film strips stacked on top of the other, each containing different image that appears on the stage.
- is the area where we create our drawings.
- is the area where graphics and elements are assembled in sequence.
- tool is used to draw a star with five sides.
- tool is used to fill an object with an exact color that we have used for another object.

C. State whether the following statements are true or false.

- The shortcut key for Oval tool is 'O'.
- The Rectangle tool is used to draw polygon and star figures.
- To change the color style of lines, select stroke style option in the Property Inspector.
- The Fill Color tool is used to fill object with color.
- The shortcut key to preview the animation is Ctrl + del.

D. Write the functions of the following tools briefly.

- Pencil 
- Bursh 
- Eraser 
- Line 
- Oval 

.....

.....

.....

.....

.....

Answer the following questions.

1. What is Flash? What are the different components of Flash window?

.....

2. What is the use of Timeline Panel in Flash window?

.....

3. What is the difference between a Pencil tool and a Brush tool?

.....

4. What is the difference between Stroke and Fill Color?

.....

5. What are the three modes of Pencil tool? Explain any one?

.....

6. What are the options of the Eraser Modifier? Explain any two briefly.

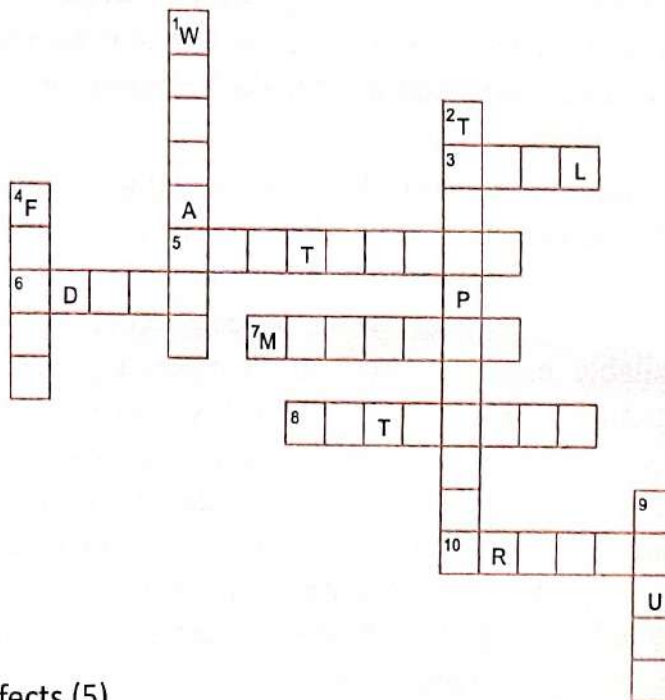
.....

Activity Monitor

Solve the following crossword using the hints given below :

CROSS

- 3. A tool used to draw an oval or a circle (4)
- 5. A tool used to draw rectangles and squares (9)
- 6. Developer of Flash (5)
- 7. Gives you access to all commands (4, 3)
- 8. Displays the name of open document (5, 3)
- 10. A tool that removes strokes and fills (6)



DOWN

- 1. Light grey area around the stage (4, 4)
- 2. Contains different tools (4, 7)
- 4. A multimedia program (5)
- 9. A tool that allows you to create special effects (5)

LAB VISIT

- 1. Use Line, Oval and Rectangle tools to draw a car.
- 2. Use the PolyStar tool to draw 7 pointed stars.
- 3. Use the Pencil tool to create the following figures.



Lesson Extract

- ❖ Computer Network
- ❖ What is Internet?
- ❖ Brief History of Internet
- ❖ Connecting to Internet
- ❖ Role of Computers in the Internet
- ❖ World Wide Web
- ❖ Hyperlinks
- ❖ Web Browser
- ❖ Search Engines
- ❖ Using Internet
- ❖ Searching Information
- ❖ E-mail
- ❖ Using E-mail

We are familiar by now with the working of a computer and how to instruct it to do various tasks. But we have been dealing with a single computer. What about a situation in which there are many computers? In the previous class, you have learnt something about network and Internet. Let's discuss these in detail.

COMPUTER NETWORK

A computer network is a group of computers that are linked either through physical wires or a wireless system. These computers can communicate with each other. From one computer, you can access the information on another, share files and folders with other computers.

A computer network helps in exchanging data and information and sharing software and hardware resources at a reduced cost in a reliable manner. There are various types of computer networks like the LAN (Local Area Network) which is usually used in companies, schools, universities, etc. It usually allows people who are within the premises to use it. Another type of network is the WAN (Wide Area Network) which covers a large area.

WHAT IS INTERNET?

The name 'Internet' itself suggests its meaning. It stands for International Network of computers.

A network is an interconnection between two or more computers. The internet is a "network to networks" that consists of millions of computers spread across the world. Internet allows us to share the information worldwide, with just a mouse click.



For Your Info

In a WAN, computers are connected without cables, while in a LAN there is a wired network.

With the advent of Internet, the old saying "World is too small" has been replaced by the new term "Global Village".

BRIEF HISTORY OF INTERNET

In 1969 when man walked on the moon, the U.S. defence department set an Advanced Research Project Agency (ARPA) for further research. They designed a network of four computers to exchange and share their data. This network was called ARPANET (Advanced Research Project Agency Network). Later, many Universities were allowed to join this network and share the information. This was the beginning of 'Networking of computers' which grew bigger day by day and gave birth to INTERNET—the technology which has radically changed our life. Earlier, Internet was used by engineers, scientists and computer experts for research purpose. Gradually, the network was made accessible to private agencies and general public. People started using it for sending messages and files between the computers. The most interesting thing about Internet is that no single agency controls or maintains the Internet.

In India, internet services started on 15th August, 1995 through government owned company VSNL. Private internet service providers like Airtel, Reliance, Sify, Tata, etc. have also been allowed to provide internet services.

CONNECTING TO INTERNET

Internet forms the world's largest network of networks by connecting local, regional, national and international networks. There are various ways of connecting to the Internet. The four main ways of connecting a computer to the Internet are :

1. A dial-up connection using a telephone line or an Integrated Service Digital Network (ISDN)
2. A Digital Subscriber Line (DSL)
3. A Cable TV Connection, and
4. A Satellite Connection.

The first thing in order to get access to the Internet is to register with an Internet Service Provider (ISP) and open an account with them. Depending on the type of service, you can dial-up using a service called modem and your telephone line or you can use a cable modem. Broadband services are now commonly available. They allow high speeds and do not require your telephone line to be engaged while you are using the Internet. The service provider will give you detailed instructions on how to get connected to the Internet.

Things We Need to Connect to the Internet

The first thing we need to connect to the Internet is a computer. Other than the computer, we also need a few more things.

Modem : A modem relays information between the computer and the Internet. It converts digital signals to analog and vice versa.



For Your Info

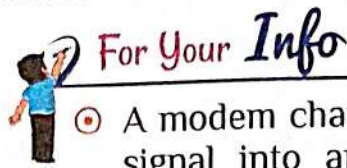
The concept of Internet was first proposed by the Advanced Research Projects Agency (ARPA) of the US government in 1969. In fact, the Internet began as a network called the ARPANET.

Telephone line : The information we send and receive over the Internet travels through telephone cables.

ISDN line : ISDN stands for Integrated Services Digital Network. Information that travels through the ISDN is two to four times faster than through any modem available. Many telephone companies offer ISDN lines to connect to the Internet.

Internet Service Provider (ISP) : The service provider can be any organization that gives us the facility for connecting to the Internet. The service provider usually allows the use of Internet for a charge.

Web Browser : A Web browser is a software used to access Internet. Microsoft Internet Explorer, Mozilla Firefox, Netscape Navigator are some commonly used Web browsers.



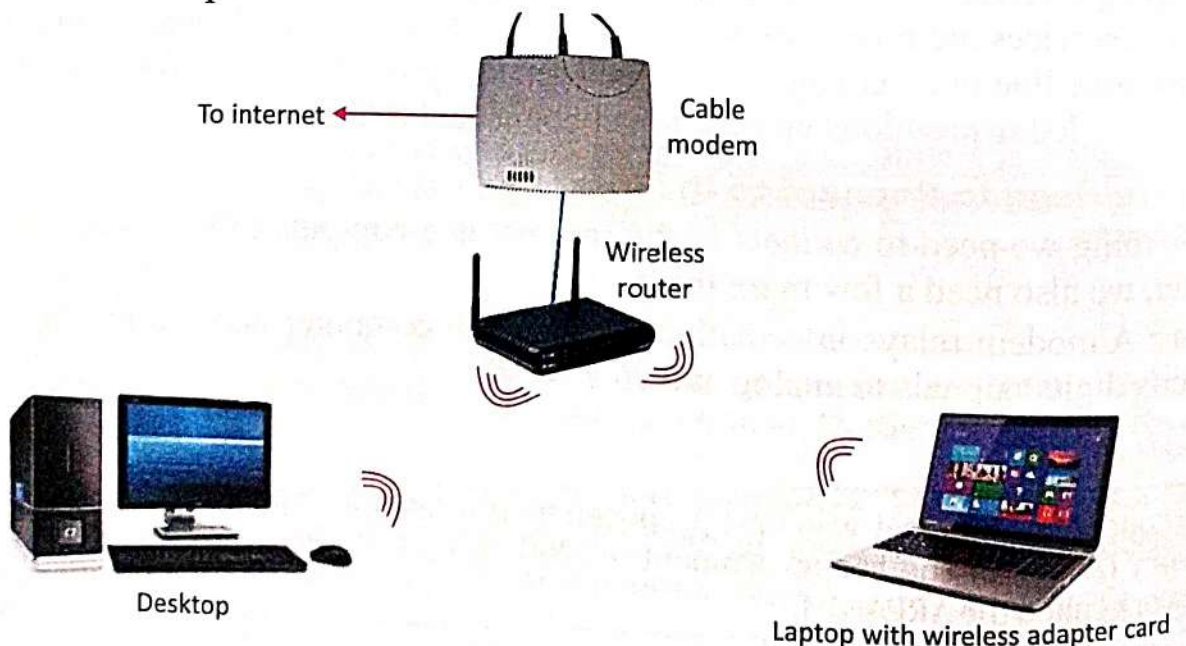
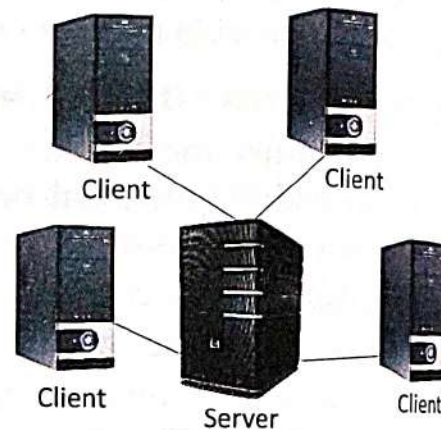
- A modem changes a computer's digital signal into an analog signal and an analog signal into a digital signal. Both the sending and receiving ends of a communication channel must have a modem for data transmission to occur.
- Companies like MTNL, BSNL, Airtel, Tata, Reliance, etc. are ISPs.

ROLE OF COMPUTERS IN THE INTERNET

We know that the Internet connects over millions of computers together. But, all the computers do not do the same kind of task. Some computers act as storage and filing shelves. These computers are called **servers**. Those computers that get information from a server are called **clients**.

In some cases, a single computer can act both as a client and as a server. For example, when we use a chat program to send instant messages, our computer acts as a server as we send messages and as a client as we receive them as is called peer-to-peer communication or P2P.

There is another device that sends packets of information between the client and the server. This is called a **router**. Routers are responsible for finding the best path to send information between the computers. A message we send using the Internet might pass several routers before it reaches the recipient.



WWW (WORLD WIDE WEB)

The World Wide Web is a large computer network where by using a browser such as Netscape, Internet Explorer, you can surf and get information. It consists of all the public web sites connected to the Internet worldwide, including the client devices (such as computers and cell phones) that access web contents. The websites are identified by short, unique, global identifiers called URLs (Uniform Resource Locator).



WWW contains millions of documents or 'bunch of pages' called we pages. Each page contains text, graphics, video, audio and link to other web pages via hyperlink.

HYPERLINKS

Hyperlinks are usually highlighted words. They are usually underlined or highlighted in a different color to indicate that they are special words. When you point your mouse on a hyperlink, it changes from an arrow to a hand.



When you click on a hyperlink, it magically transports you to another Web page which may belong to a different site altogether. Usually this Web page gives more detailed information on the world that was clicked.

These hyperlinks are the most interesting part of the Internet. They connect different Web pages and form the World Wide Web. The WWW is therefore nothing but an immense collection of Web pages that are interconnected in complex ways.

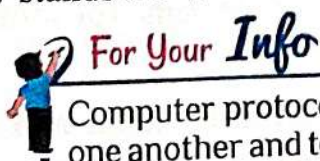
WEB BROWSER

A Web browser is a software application that allows you to access Websites and view Web pages, once you are connected to the net. Microsoft Internet Explorer and Mozilla Firefox are the two most commonly used Web browsers.



At the top of the Web browser is an address line. Here, you can type the address of the location on the Internet that you want to visit. For example, to access the National Geographic site, you can type <http://www.nationalgeographic.com>.

The first part of the address [http](http://www.nationalgeographic.com) specifies the protocol which the computer will use to get information from this site. This protocol is called the Hyper Text Transfer Protocol. The second part [www](http://www.nationalgeographic.com) stands for World Wide Web. This is followed by the name of the site.



For Your Info

Computer protocol is a set of rules that enable computers to connect with one another and to exchange and share resources.

The last part is the domain name extension '.com' is usually used for commercial sites. For country specific sites, the extension represents the country. For example, <http://india.gov.in> is the Website of the Government of India, where 'in' stands for India.

Bookmarking a Web Page

You can bookmark pages that interest you, just as you would do in a book. Bookmarking helps you to look up those pages easily without having to search for them all over again.

The various steps to bookmark a web page are :

1. Click on you favourite menu on the menu bar and select the **Add to Favorites** menu option.
2. In the dialog box that appears, give a name and location for the bookmark.



For Your Info

URL means Uniform Resource Locator
URL provides the location of the browser.

SEARCH ENGINES

What would you do if you wanted to visit a place whose exact address you don't know? You would probably look for its location on a map. Similarly, on the Internet, when you are looking for a site whose address you don't know, you can search for it using a search engine. A search engine is a software program that searches the World Wide Web for web pages that contain the keywords or phrases that you have specified in the search. It then lists all the web pages it has found containing the matching words. Some of the common search engines are Google, Yahoo and Rediff.



Google



Yahoo



Rediff

USING INTERNET

We usually see captions like "visit us on www.intel.com". Such type of text which starts from www and ends with .com, .in, or .org, etc. is called **Web address** or **URL**. To see any site on the Internet, you have to type its web-address in the address bar of the Internet Explorer. E.g., If we enter the address, www.intel.com in the address bar, we will see the official website of Intel. There we will see some coloured and underlined text. It is called **Link**. On clicking a link, we move to another web page of the same (or some other) website.

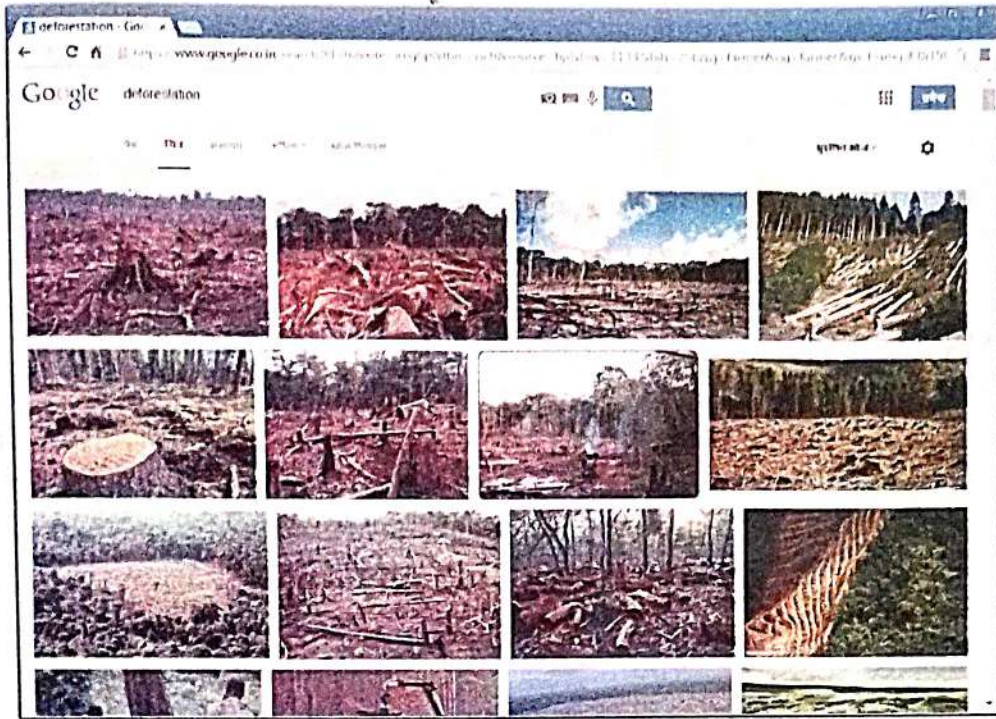
SEARCHING INFORMATION

Internet is basically a vast resource of information. We can search and find information about websites, images, news, questions and answers, videos, etc.

There are exclusive websites for searching information e.g. www.google.com or www.google.co.in from Google, www.bing.com from Microsoft, www.yahoo.com or www.yahoo.co.in from Yahoo.

Follow these steps to search any information. Let us say, we want to search the images of "Deforestation" on Internet.

1. Open any search engine, say www.google.co.in. Click on the **Images** tab. Type 'Deforestation' and click on **Search** button.



Google Search Engine—www.google.com/in

2. A list of images will be displayed. Select the image you like.

E-MAIL

E-Mail stands for Electronic Mail. It is a facility on Internet to compose, store, send and receive messages to any part of the world. The convenience, simplicity and affordability of sending mails on Internet has totally changed the correspondence system.

E-mail is the fastest way of sending mails where the postal address details like name, Address, City, State, Pin, Country, etc. have been replaced by the e-mail address. The E-mail address is given in the format—**infor@express.in**. We can also attach photos, videos or other important data along with our message.

The popular sites, which provide the facility to send or receive mails are : www.yahoo.co.in, www.gmail.com, www.rediffmail.com, etc.

USING E-MAIL

To use e-mail facility on the Internet, first we have to create our personal e-mail account. We have to select a username (e-mail address) and provide a secret code (password) along with our particulars like Name, Address, Date of Birth, Interest, Qualification, etc. You have already learnt about all this in the previous class.

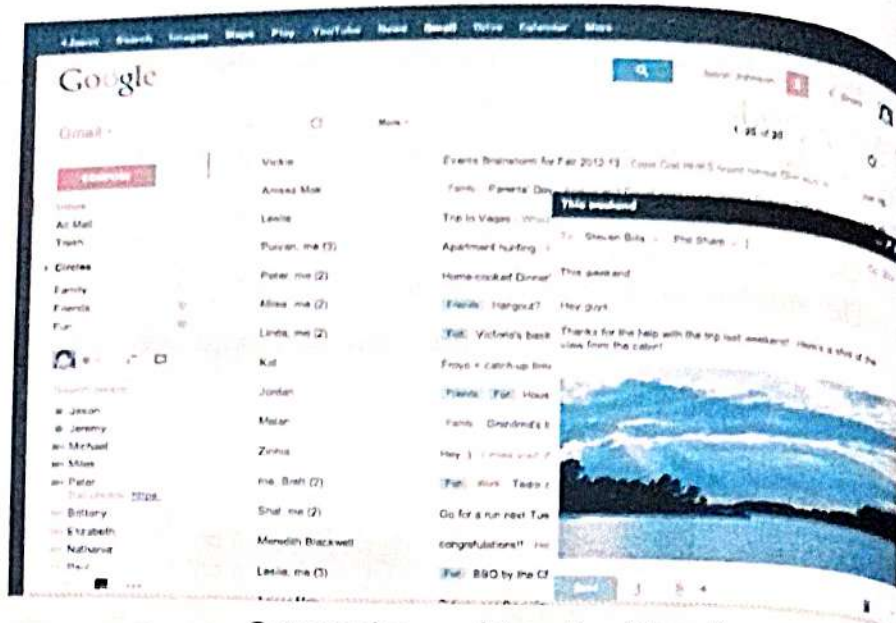
Some of the commonly used features are as follows :

Composing and Sending Mail

To write a mail to any one, we have to click on this option (or any other similar option). It will open a new window wherein we type the e-mail address of the receiver, subject of the mail and the text in the Body.

After composing an e-mail click the **Send** button on the toolbar.

We can send the same mail to many persons by typing their e-mail addresses separated by commas.



Composing and Sending E-mail

Attaching a File

E-mail provides the facility to attach files for high speed delivery anywhere in the world. Attaching a file to an e-mail is an easy way to send important documents or files which can be photographs, videos, music, letters, text, etc. To attach a file to an e-mail, follow these steps.

1. Click on **Attach a file** option under the 'Subject field'.
2. Browse through your files and click the name of the file you would like to attach.
3. Click on **Open**.



Always remember, you cannot send executable files, or messages larger than 25 MB.

Replying and Forwarding E-mail

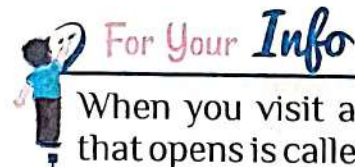
The **Reply** option is displayed when we open any mail. It is used to reply a received e-mail. We can simply type in our reply and click on **Send** button.

The **Forward** option is used when we want to send the same or any received mail to number of persons at the same time.

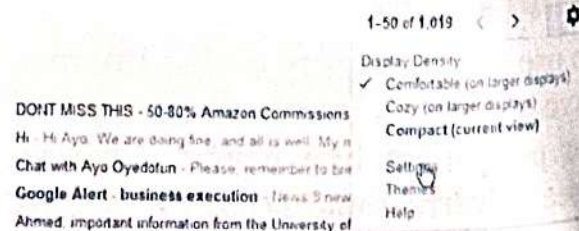
Adding a Signature to a Mail

A signature is a bit of personalized text (such as contact information or a favourite quote) that is automatically inserted at the bottom of every mail you send. To create a signature follow these steps:

1. Click the **gear** icon in the upper right, then select **Settings** option.
2. Enter your new signature text in the box at the bottom of the page next to the **Signature** option.
3. Click on **Save Changes** tab.



When you visit any site, the first page that opens is called the **Home Page**.



Adding Signature

Logout/Signout

Click this button, once you have finished reading or sending the e-mails. This option brings you out from your e-mail account.



sampleman2004@gmail.com ▾

Sample Man

sampleman2004@gmail.com

Account Privacy

Join Google+

video Me

of Gmail

Add account

Sign out

ur contacts and mail into Gmail

2:37 pm

Signing Out



Boost Your Brain



A. Tick (✓) the right option.

- is a software program that searches the World Wide Web for web pages that contain the keywords or phrases that you have specified in the search.
(a) Search Engine (b) Web Browser (c) Website (d) E-mail
- is a software application that allows you to access Websites and view Web pages, once you are connected to the net.
(a) Web Browser (b) Search Engine
(c) Hyperlink (d) Website
- is the most commonly used Web browser.
(a) Mozilla Firefox (b) Google (c) Yahoo (d) Rediff
- helps you to look up Web pages easily without having to search for them.
(a) Search Engine (b) Browser
(c) Book Marking (d) Hyperlink
- is inexpensive compared to phone calls and much faster than ordinary mail.
(a) E-mail (b) Internet (c) Weblink (d) Web Browser

Fill in the blanks with the correct word.

Modem E-mail Hyper Text Transfer Protocol
Home page ISP (Internet Service Provider)

1. The protocol which a Web browser uses to view information on Web pages is called
2. In order to get access to the Internet, you need to register with an
3. You can send and receive letters on the Internet using
4. A converts digital signals to analog and vice versa.
5. The main page of a Website is called its

3. State whether the following statements are true or false.

1. Bill Gates is the founder of World Wide Web.
2. Skype is one of the popular chat software.
3. Attachments can be sent through e-mails.
4. Reliance is not a private Internet Service Provider.
5. Modem is a device that connects a computer with telephone line.

D. Expand the following terms.

1. LAN
2. WAN
3. WWW
4. http
5. e-mail

E. Match with the most appropriate option.

Column A

1. E-mail
2. Homepage
3. Internet

Column B

- (a) Electronic mail sent from one computer to another on a network.
 - (b) Mail sent from one city to another through post office
 - (c) None of the above
- (a) Page where home of a Website is designed
 - (b) First page of the Website
 - (c) Last page of the Website
- (a) A network which connects two computers together
 - (b) The worldwide network of millions of computers
 - (c) None of the above

Differentiate between

1. LAN and WAN
2. Browser and Search Engine
3. Chat and E-mail

Answer the following questions.

1. What is a computer network?

.....
.....

2. Briefly explain the term Internet and name any four services which the Internet provides.

.....
.....

3. Name two search engines and two web browsers.

.....
.....

4. Name four Internet service providers.

.....
.....

5. Define the term www. Who is the founder of www?

.....
.....

6. What are the features of Electronic Mail? Name any two websites which provide the E-mail facility.

.....
.....



* Use your favourite search engine to find the following Websites :

- (a) An online dictionary.
- (b) A Website of a newspaper.
- (c) A Website of the History of India.
- (d) The Website of the Government of India.
- (e) A Website giving information about your city.

Circle ten Internet terms in the following grid.

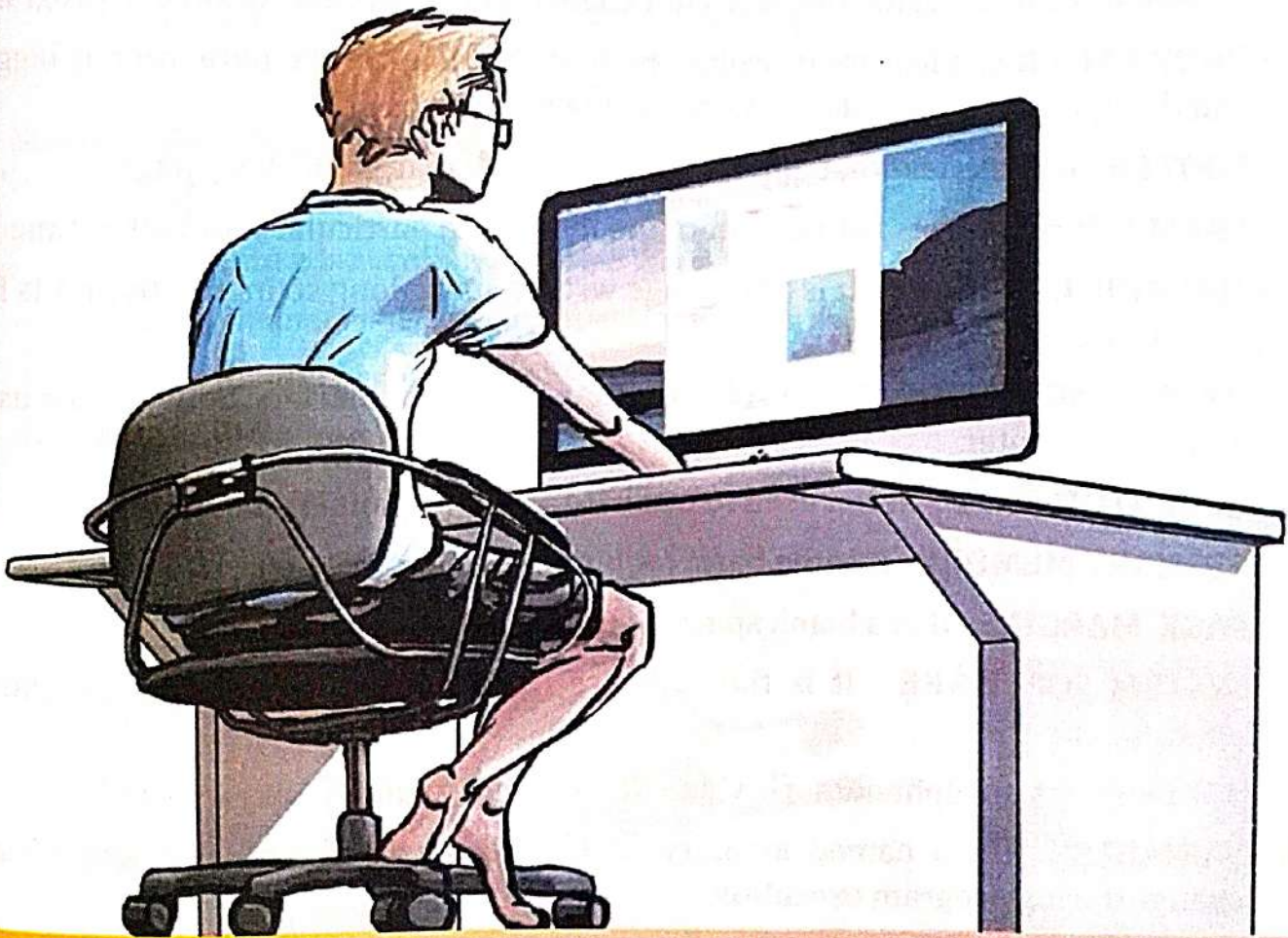
C	N	Z	O	W	W	W	B	Y	X	R	S
H	O	M	N	M	P	U	L	K	Q	H	C
A	P	I	N	T	E	R	N	E	T	Y	T
T	W	B	L	C	J	L	H	T	T	P	A
F	G	B	B	A	K	I	I	H	J	E	J
H	V	E	R	S	R	Q	D	F	I	R	E
I	A	M	O	D	E	M	I	D	G	L	H
S	U	A	W	T	A	H	G	F	E	I	J
P	Z	C	S	Z	N	M	K	L	D	N	K
Y	D	G	E	-	M	A	I	L	L	K	P
X	W	F	R	P	Y	X	O	W	Q	T	R
A	E	V	O	B	U	M	V	U	C	N	S

 LAB VISIT

1. Visit the site—www.bing.com. Search and download information and pictures on the topic—Global Warming. Create an informative presentation by collecting information from the net.
2. Write an e-mail to your friend describing your school and what you have learnt about computer till now.

PROJECT WORK

- A. Draw a flowchart to check if the current year is a leap year.
- B. Draw a flowchart to compute the area and perimeter of a square.
- C. Using mail-merge features of MS Word, create letters for inviting your friends on the marriage ceremony of your sister.
- D. Using MS Word create a poster on Traffic Satey Rules.
- E. Create a PowerPoint presentation on the causes and effects of an earthquake. Add speaker notes and animation effects in your presentation.
- F. Create a colorful presentation on the theme SAVE TIGER. Use your creativity and more slides in this project.
- G. Use various tools to draw a cartoon in FLASH and save the file.
- H. Using Internet, collect information on 'Art and Craft'. Download important information in MS World file and save it on your desktop. Name the file as 'Art and Craft'.



WORD INDEX

1. **APPLICATION SOFTWARE** : It is a set of programs necessary to carry out operations for a specific application.
2. **ARITHMETIC LOGIC UNIT (ALU)** : It performs all the arithmetic and logical operations within the computer.
3. **ANIMATION** : It refers to the special effects added to the objects and text in a presentation.
4. **ARITHMETIC OPERATORS** : It is a set of operators used to evaluate a mathematical expression.
5. **BOOTING** : It is a process that starts the operating system when the user turns on a computer system.
6. **COMPILER** : It is a language translator that translates high level language program into machine language.
7. **CONSTANT** : It is a value that does not change during the execution of a program.
8. **DROP CAP** : It is a feature in which the first character of the paragraph is bigger and dropped on the subsequent lines of the paragraph.
9. **FOOTER** : It is the text that appears at the bottom margin of every page.
10. **FRAME** : It represents the content of the movie at a particular moment of time.
11. **MACHINE LANGUAGE** : It is a language written using long strings of 0s and 1s for computing.
12. **OPERATING SYSTEM** : It is a software that acts as an interface between the user and the computer.
13. **OPERATOR**: It is a symbol used to evaluate an expression in a language.
14. **PRIMARY MEMORY** : It is the basic requirement of a computer.
15. **PAGE MARGINS** : It is a blank space near the edges of the page.
16. **SYSTEM SOFTWARE** : It is the software that controls the internal computer operations.
17. **STRING** : It is an alphanumeric value that is given within double quotes (" ").
18. **VARIABLE** : It is a named memory location that contains a value which may change during program execution.

PERIODIC TEST Term 1

(Based on chapters 1 to 3)

Time :

Marks :

Note : All questions are compulsory.

A. Tick (✓) the right option.

- Information on cheque is stored using
(a) MICR (b) OCR (c) OMR (d) LCD
- Linux is a based operating system.
(a) Unix (b) Windows (c) DOS (d) MAC OS
- Which of these is placed at the end of a document?
(a) Header (b) Footnote (c) Endnote (d) Column

B. Fill in the blanks with the correct words.

- represents the first line hanging over the rest of the lines.
- DOS stands for
- The storage device of a computer system is referred to
- The is for looking up synonyms for a particular word.

C. State whether the following statements are true or false.

- The program in a running state is called a file.
- Drop Cap feature is not of any use in MS Word 2007.
- Secondary memory is used to store data for long term use.
- CPU is the brain of a computer.

D. Answer the following questions.

- What is an Optical Mark Reader used for?
- Why do you use page numbers in a document?

E. Identify the following.



Time :

Note : All questions are compulsory.

A. Tick (✓) the right option.

- Intersection of a row and column is called
 (a) Table (b) Cell border (c) Cell (d) Table group
- Preview Results option is present in group.
 (a) Preview Result (b) Preview (c) Result (d) Messages
- Primary memory is also called memory.
 (a) internal (b) external (c) storage (d) auxiliary
- Mail merge is an important feature of
 (a) MS Access (b) MS Word (c) MS Excel (d) MS Window
- To preview the transition of current slide, we click on the
 (a) slide show button (b) play button (c) nothing (d) anything

B. Fill in the blanks with the correct words.

- The way one slide follows the other on the screen is called
- Data source is also called the
- By default, header is printed inches from the top of the page.
- Software relates to a set of

C. State whether the following statements are true or false.

- Data source contains the text that we wish to send to all the recipients.
- Shading can be applied using Borders and Shading dialog box.
- There is only one type of operating system.
- Data are stored in a computer in the form of words and letters.

D. Match the following.

- | | |
|---------------|--|
| 1. Alt+Ctrl+2 | (a) To insert endnote |
| 2. Ctrl+Alt+D | (b) To apply heading 2 |
| 3. Ctrl+D | (c) To run a slide show |
| 4. F5 | (d) To make a duplicate of the current slide |

PERIODIC TEST | Term 2





(Based on chapters 1 to 8)

Marks :

Time :

Note : All questions are compulsory.

A. Tick (✓) the right option.

- 1. statement can be used in controlling column location.
 - (a) Print
 - (b) Tab
 - (c) Print Tab
 - (d) Format
- 2. Symbol of input/ output box in a flowchart is
 - (a) 
 - (b) 
 - (c) 
 - (d) 
- 3. The default extension of MS PowerPoint file is
 - (a) .pptx
 - (b) .doc
 - (c) .xls
 - (d) none of these

B. Fill in the blanks with the correct words.

- 1. Numeric constants contain only
- 2. High level languages are translated into the machine language by
- 3. A Watermark is a image that appears behind the text of a document.
- 4. is conditional decision making statement.

C. State whether the following statements are true or false.

- 1. A variable name can be a maximum of 50 characters long.
- 2. There are three types of translators.
- 3. Another name for address book is Mail merge.
- 4. The Windows operating system was developed by Microsoft.

D. Answer the following questions.

- 1. What are compiler and interpreter?
- 2. Why do you use page numbers in a document?

E. Name the statement/command.

- 1. The command is used as counter loop.
- 2. The statement is used to give values to a variable.
- 3. The command is used to put a comment line in your program.
- 4. The statement is used to display the output on the screen.



ANNUAL Test Paper

Time :

Marks :

Note : All questions are compulsory.

A. Tick (✓) the right option.

- is a device used for creating high quality graphics.
(a) Plotter (b) Printer (c) MICR (d) OMR
- Mail merge is an important feature of
(a) MS Access (b) MS word (c) MS Excel (d) MS window
- To hide the welcome dialog box, press key.
(a) Ctrl (b) Esc (c) Alt (d) Alt+F
- is the most commonly used web browser.
(a) Mozilla Firefox (b) Google (c) Yahoo (d) Rediff

B. Fill in the blanks with the correct words.

- An operating system is a software.
- The way one slide follows the other on the screen is called
- The full form of QBASIC is
- The protocol which a web browser uses to view information on web pages is called

C. Match the following.

- | | |
|----------------|--|
| 1. CPU | (a) is an application software for creating presentation |
| 2. PowerPoint | (b) is used for decision making step |
| 3. A flowchart | (c) is the brain of the computer |
| 4. A diamond | (d) is a graphical representation of steps for solution to a problem |

D. State whether the following statements are true or false.

- A computer has two main parts : hardware and software.
- Only pages can be formatted with borders in MS word 2007.
- A program is a set of instructions.
- The shortcut key to preview the animation is Ctrl + del.

E. Answer the following questions.

- Which device is used for reading barcode?
- Why is it important to properly shut down your computer?

3. What is a Data Source?
4. What are compiler and interpreter?
5. What is the use of Timeline Panel in Flash window?
6. What is a computer network?

F. Write the full forms of the following abbreviations.

- | | |
|-----------------|----------------|
| 1. MICR : | 2. OCR : |
| 3. RAM : | 4. ALU : |
| 5. ROM : | 6. CRD : |

G. Circle ten Internet terms in the following grid.

C	N	Z	O	W	W	W	B	Y	X	R	S
H	O	M	N	M	P	U	L	K	Q	H	C
A	P	I	N	T	E	R	N	E	T	Y	T
T	W	B	L	C	J	L	H	T	T	P	A
F	G	B	B	A	K	I	I	H	J	E	J
H	V	E	R	S	R	Q	D	F	I	R	E
I	A	M	O	D	E	M	I	D	G	L	H
S	U	A	W	T	A	H	G	F	E	I	J
P	Z	C	S	Z	N	M	K	L	D	N	K
Y	D	G	E	-	M	A	I	L	L	K	P
X	W	F	R	P	Y	X	O	W	Q	T	R
A	E	V	O	B	U	M	V	U	C	N	S

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H. Label the following picture.



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Computer Concepts is a diligent effort to provide the best and comprehensive understanding of the subject.

- ◆ **Lesson Extract** outlines the objectives of the chapter.
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प्रवेश नं० 686 तारीख 03/07/99 कक्षा - 10^थ में प्रवेश

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विद्यालय में प्रवेश के लिए आवेदन पत्र

सेवा में,
प्रधानाचार्य,

यमजा पब्लिक विद्यालय
सानिया विहार दिल्ली / नई दिल्ली

महोदय / महोदया,

निवेदन है कि मेरे पुत्र / पुत्री श्रीमश कुमार
को विद्यालय की 10^थ कक्षा में प्रवेश देने की कृपा करें। अपेक्षित विवरण
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दिनांक माता / पिता / संरक्षक के हस्ताक्षर

नाम
पता 13 - एन/क सानिया विहार दिल्ली-94

कृ० पृ० 30

द्वितीय भाषा जो लेना चाहते हैं
विद्यार्थी का नाम (सोफ अक्षरों में)

शैलेशा कुमार
- अनुप

कक्षा
अंग्रेजी सन् के अनुसार जन्म तारीख
(अंकों व शब्दों में)

06-08-91
दः अगस्त 03-नीस सौ इस्लामा-ने
श्री सगवान राक्षस

पिता का नाम
माता/संरक्षक का नाम
शरणार्थी अनुसूचित जाति/पिछड़ी जाति
धर्म

हिन्दू

पिता/माता का व्यवसाय
पिता/संरक्षक की मासिक आय
घर का पता

A कक्षा सोनिया विहार विद्यालय
- 94

यह प्रमाणित किया जाता है के उपरोक्त जन्म की तारीख मेरे विश्वास के अनुसार सही है तथा जन्म पत्री और म्युनिसिपल चौकीदार द्वारा रखे गए जन्म के रजिस्टर के अनुसार हैं।

दिनांक

माता/पिता/संरक्षक के हस्ताक्षर

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नोट : उक्त वक्तव्य में दी गई जन्म की तारीख में बाद में कोई परिवर्तन नहीं किया जा सकेगा। आय सम्बन्धी घोषणा असत्य पाए जाने पर सम्बन्धित विद्यार्थी को 2 वर्ष के लिए निकला जा सकेगा। सरकारी विद्यालय के माध्यमिक विभाग या सहायता प्राप्त अंग्रेजी/हिन्दी विद्यालय के प्रत्येक विद्यार्थी के सम्बन्ध में नई घोषणा प्रति वर्ष अप्रैल मास में प्रस्तुत की जाएगी। विद्यार्थी के माता/पिता जीवित न होने पर विद्यार्थी का वैध या असली संरक्षक इस दस्तावेज पर हस्ताक्षर कर सकता है।

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प्राप्त की गई रकम :-
दाखिले की फीस
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स्काउट/गाइड फण्ड
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जाति खलीक	पिता का पत्रिका विजौली, झतरौली, कलकत्ता	डॉ. उगारस्त रान	उन्नीस सौ इकत्तानव
धर्म हिन्दू	अभिभावक नौकरी	जन्म पत्री से प्रमाणित अभिभावक पिता या पति द्वारा सम्पुष्टि	इस प्रान्त में रहने की अवधि जन्म से

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अमृता पांडेय
सोनिया विहार

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महोदय / महोदया,

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दिनांक

माता / पिता / संरक्षक के हस्ताक्षर

नाम

पता सी-24 अमनपुरा शाहदरा दिल्ली-110023

कृ० पृ० 30

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तेरिस मार्च 3-1-86 सी दियासी
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पिता का नाम

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शरणार्थी अनुसूचित जाति/पिछड़ी जाति
धर्म

हिन्दू

पिता/माता का व्यवसाय

पिता/संरक्षक की मासिक आय

घर का पता

सी-24 भजनपुरा शाहदरी दिल्ली-5

यह प्रमाणित किया जाता है के उपरोक्त जन्म की तारीख मेरे विश्वास के अनुसार सही है तथा जन्म पत्री और म्युनिसिपल चौकीदार द्वारा रखे गए जन्म के रजिस्टर के अनुसार हैं।

दिनांक

माता/पिता/संरक्षक के हस्ताक्षर

यह प्रमाणित किया जाता है कि उक्त प्रमाण -पत्र के विवरण प्रार्थी द्वारा पढे गए या बच्चे के साथ उसके माता/पिता या संरक्षक को जो कि शिक्षित/अशिक्षित थे पढकर सुनाए गए व समझाए गए।

नोट : उक्त वक्तव्य में दी गई जन्म की तारीख में बाद में कोई परिवर्तन नहीं किया जा सकेगा। आय सम्बन्धी घोषणा असत्य पाए जाने पर सम्बन्धित विद्यार्थी को 2 वर्ष के लिए निकला जा सकेगा। सरकारी विद्यालय के माध्यमिक विभाग या सहायता प्राप्त अंग्रेजी/हिन्दी विद्यालय के प्रत्येक विद्यार्थी के सम्बन्ध में नई घोषणा प्रति वर्ष अप्रैल मास में प्रस्तुत की जाएगी। विद्यार्थी के माता/पिता जीवित न होने पर विद्यार्थी का वैध या असली संरक्षक इस दस्तावेज पर हस्ताक्षर कर सकता है।

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दाखिले की फीस

पढाई की फीस

विज्ञान की फीस

स्काउट/गाइड फण्ड

कुल जोड

इन्चार्ज/अध्यापक

दिनांक



शपथ-पत्र
XXXXXXXXXXXXXXXX

मैं कि, अजय कुमार राठोर पुत्र श्री आर. एस. राठोर पता- सौ-24, भजनपुरा, शीहदरा, दिल्ली-53 पर रहता हूँ और निम्नलिखित घोषणा करता हूँ कि -



कि मेरा उपरोक्त नाम तथा पता सही है ।

2. कि मेरी पुत्री का नाम " चंचल " है इसकी वास्तविक जन्म तिथि : 23. 3. 1986 १ तेईस मार्च उन्नीस सौ छियासी है ।

कि मेरे पुत्री ने कक्षा 7 तक की शिक्षा किसी सरकारी या गैर सरकारी विद्यालय से प्राप्त नहीं की है प्राइवेट घर पर ही रहकर प्राप्त की अब यह कक्षा 8 में प्रवेश के योग्य है ।

शपथकर्ता

सत्यापन :

मैं दिनांक : 15. 7. 1999 को दिल्ली में सत्यापित करता हूँ कि मेरे उपरोक्त शपथ-पत्र के तथ्य सत्य हैं, इसमें कोई भी तथ्य असत्य नहीं है ।

शपथकर्ता

Arrested

Sub-Divisional Magistrate
15/7/99