Information & Communication Technology –1 (ICT-1)

Computer Fundamentals and Office Tools

Common for all Degree Programmes

II Semester

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Reference Books:

1. Fundamentals of Computers by Reema Thareja, Publishers : Oxford University Press, India
2.Fundamentals of Computers by V.Raja Raman, Publishers : PHI
3. Microsoft Office 2010 Bible by John Walkenbach, Herb Tyson, Michael R. Groh and Faithe Wempen, Publishers : Wiley

UNIT – I
BASICS OF COMPUTERS

1.1 Definition of a Computer:
Computer is an electronic device which is capable of receiving data and produce a result in the form of information. This is achieved by performing a sequence of operations in accordance with a set of procedural instructions called program.
Data : Data is a collection of raw facts.
Information : Information is the processed data in an orderly form.
Unlike a calculator, computers can store a program and retrieve information from its memory.

1.2 Characteristics of Computers:
Computers have the following characteristics:

a) **Speed**: The speed of operation of the computers are very high. Processing speed increases day by day with new inventions of Technology. In general, no human being can compete to solve the complex computations, faster than computer.
b) **Accuracy**: Since Computer is a machine, it gives the results with high accurately.
c) **Storage**: Computer can store a large amount of data, Pictures, Movies with appropriate format. The data can be retrieved whenever required using proper programs.
d) **Diligence**: Computer can work for hours without any break and creating error.
e) **Versatility** : We can use computers to perform completely different type of work at the same time.
f) **No IQ :** Computer does not work without instructions. Whatever the way we programme the same way it will function. It doesn't have its own intelligence. However, the present day computers are programmed to have artificial intelligence.
g) **No feeling** : Computer does not have emotions, knowledge, experience, feeling. It is just a machine.

1.2.2 Principle of a Computer
The Computer works on the principle of ON and OFF states. These states are represented by different physical parameters as shown below.

ON STATE	OFF STATE
Flow of current in some part of the computer may be represented as ON state	No flow of current
High Voltage at some part of the circuit	Low Voltage
Magnetic Field at a point in floppy disk	No magnetic field
Reflection of light in compact disk	No reflection of light

ON state is represented by 1 and OFF state is represented by 0. All that happens inside the computer is based on these two states only. We use binary number system to represent the states in the Computer. 0,1 are called as **Bi**nary digi**ts** (BITS)

8 bits = 1 byte
1024 byte = 1 Kilo Byte (KB)
1024 KB = 1 Mege Byte (MB)
1024 MB = 1 Giga Byte (GB)

1024 GB = 1 Tera Byte (TB)

Digitisation : It is possible to convert basic entities like voice, text, Pictures, motion pictures etc. into electronic form (say Zeros and Ones). This is called digitization. Once basic data is converted into digital form it can be processed in the Computers.

1.3 Applications of Computers

Computers are used in each and every part of our daily life and made our life easier. Computers have taken industries and businesses to a whole new level. They are used at Home for work and entertainment purposes, at Office, in hospitals, in government organizations. The following are some of the uses of computers in various fields.

1.3.1 Uses of Computers in home

a. Working from Home : People can manage the office work at home. The owner of a company can check the work of the employees from home and control his office while sitting at home.
b. Entertainment: People can find entertainment on the internet. They can play games, watch movies, listen to songs, and watch videos download different stuff. They can also watch live matches on the internet.
c. Information: People can find any type of information on the internet. Educational and informative websites are available to download books, tutorials etc. to improve their knowledge and learn new things.
d. Chatting & Social Media: People can chat with friends and family on the internet using different software like Skype etc. One can interact with friends over social media websites like Facebook, Twitter & Google Plus.

1.3.2 Uses of Computers in Education :

Computer-based training (CBT) is any course of instruction whose primary means of delivery is a computer. CBT are different programs that are supplied on CD-ROM. These programs include text, graphics and sound. Audio and Video lectures are recorded on the CDs. CBT is a low cost solution for educating people. You can train a large number of people easily. The following are some of the benefits of CBT:

a. The students can learn new skills at their own pace. They can easily acquire knowledge in any available time of their own choice. For example The courses offered by AP State Skill Development Corporation (APSSDC) can be accessed through YouTube through the search word 'ESC APSSDC'
b. It is very cost effective way to train a large number of students.
c. Training materials are interactive and easy to learn. It encourages students to learn the topic.
d. Training videos and audios are available at affordable prices.
e. Computer Aided Learning (CAL) **:** Computer aided learning is the process of using information technology to help teaching and enhance the learning process.
f. Distance Learning: Distance learning is a new learning methodology and Computer plays the key role in this kind of learning. The student does not need to come to the institute. The institute provides the reading material and the student attends virtual classroom. In virtual classroom, the teacher delivers lecture at his own workplace. The student can attend the lecture at home by connecting to a network. The student can also ask questions to the teacher.

g. Online Examination: Different examination like GRE, GMAT and SAT are conducted online all over the world. The questions are marked by computer. It minimizes the chance of mistakes. It also enables to announce the result in time.

1.3.3 Uses of Computers in Business

Businessmen are using computers to interact with their customers anywhere in the world. Many business tasks are performed more quickly and efficiently. Computers also help them to reduce the overall cost of their business.

1.3.4 Uses of computers in Medical Field

a. Specialized hospital management softwares are used to automate the day to day procedures and operations at hospitals.

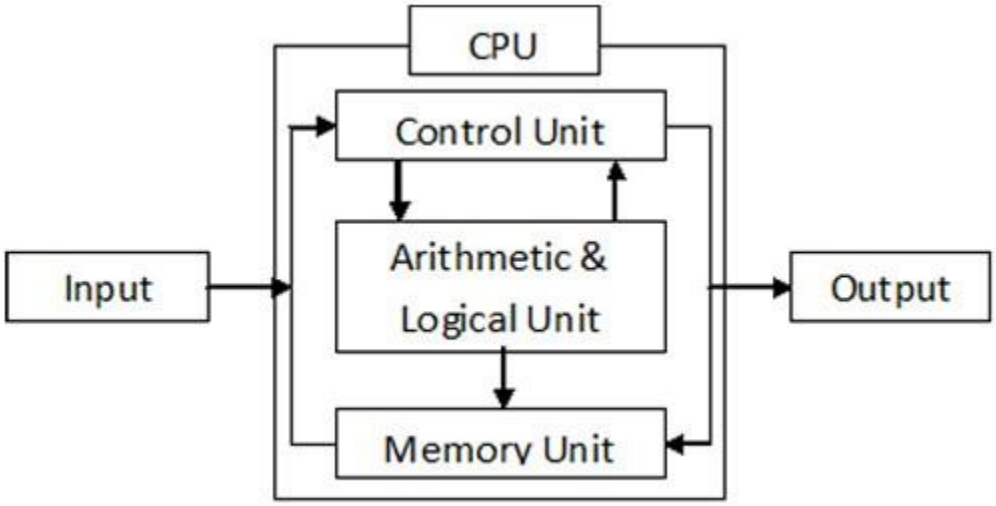
b. Monitoring systems are installed in medical wards and Intensive care units to monitoring patients continuously. These systems can monitor pulse, blood pressure and body temperature and can alert medical staff about any serious situations.

c. Specialised devices are used to help impaired patients like hearing aids.

d. A variety of software are used to investigate symptoms and prescribed medication accordingly. Sophisticated systems are used for tests like CT Scan, ECG, and other medical tests.

1.4. Block Diagram of a Digital Computer

A computer system consists of mainly three basic units; namely input unit, central processing unit and output unit. Central Processing unit further includes Arithmetic logic unit, Memory Unit and control unit, as shown in the block diagram



Block diagram of a computer

a. **Input Unit:** This unit is used for entering data and programs into the computer system by the user .

b. **Output Unit:** The output unit is used for storing the result as output produced by the computer after processing.

c. **Central Processing Unit (CPU)** : The task of performing arithmetic and logical operations is done by CPU. The major parts of CPU are : Arithmetic Logic Unit (ALU), Memory Unit (MU) and Control Unit (CU)

Arithmetic Logic Unit (ALU) : All calculations and comparisons, based on the instructions provided, are carried out within the ALU. It performs arithmetic functions like addition, subtraction, multiplication, division and also logical operations like greater than, less than and equal to.

Control Unit: Controlling of all operations like input, processing and output are performed by control unit. It takes care of step by step processing of all operations inside the computer.

Memory Unit : Computer's memory can be classified into two types; primary memory and secondary memory. Primary Memory can be further classified as RAM and ROM.

Random Access Memory (RAM) is the place in a computer where the programs and data are kept temporarily so that they can be accessed by the computer's processor. It is said to be 'volatile' since its contents are accessible only as long as the computer is on.

Read Only Memory (ROM) is a special type of memory which can only be read and contents of which are not lost even when the computer is switched off. It typically contains manufacturer's instructions. ROM also stores an initial program called the 'bootstrap loader' whose function is to start the operation of computer system once the power is turned on.

1.5. Secondary Memory

Secondary/auxiliary memory is storage other than the RAM. These include devices that are peripheral and are connected and controlled by the computer to enable permanent storage of programs and data. Some of the secondary storage devices are hard disks, CDs, DVDs, Pen drive, Zip drive etc.

Hard Disk : Hard disks are made up of a stack of metal disks sealed in a box. The hard disk and the hard disk drive exist together as a unit and is a permanent part of the computer where data and programs are saved. Hard disks are rewritable.

Compact Disk : Compact Disk (CD) is portable disk having data storage capacity between 650-700 MB. It can hold large amount of information such as music, full-motion videos, and text etc. CDs can be either read only or read write type.

Digital Video Disk : Digital Video Disk (DVD) is similar to a CD but has larger storage capacity. DVDs are primarily used to store music or movies and can be played back on your television or the computer too.

1.6 Input / Output Devices:

These devices are used to enter information and instructions into a computer for storage or processing and to deliver the processed data to a user. Input/Output devices are required for users to communicate with the computer. These devices are also known as peripherals since they surround the CPU and memory of a computer system.

1.6.1 Input Devices

An input device is any device that provides input to a computer. There are many input devices, but the two most common ones are a keyboard and mouse. Every key you press on the keyboard and every movement or click you make with the mouse sends a specific input signal to the computer.

Keyboard: The keyboard is very much like a standard typewriter keyboard with a few additional keys. The basic QWERTY layout of characters is maintained to make it easy to use the system. There are also Functional Keys, used to perform certain special functions.

Mouse: A device that controls the movement of the cursor or pointer on a display screen. A mouse is a small object you can roll along a hard and flat surface. Its name is derived from its shape, which looks a bit like a mouse. As you move the mouse, the pointer on the display screen moves in the same direction.

Trackball: A trackball is an input device used to enter motion data into computers or other electronic devices. It serves the same purpose as a mouse, but is designed with a moveable ball on the top, which can be rolled in any direction.

Touchpad: A touch pad is a device for pointing (controlling input positioning) on a computer display screen. It is an alternative to the mouse. Originally incorporated in laptop computers, touch pads are also being made for use with desktop computers. A touch pad works by sensing the user's finger movement and downward pressure.

Touch Screen: It allows the user to operate/make selections by simply touching the display screen. A display screen that is sensitive to the touch of a finger or stylus. Widely used on ATM machines, retail point-of-sale terminals, car navigation systems, medical monitors and industrial control panels.

Light Pen: Light pen is an input device that utilizes a light-sensitive detector to select objects on a display screen.

Magnetic ink character recognition (MICR): MICR can identify character printed with a special ink that contains particles of magnetic material. This device particularly finds applications in banking industry.

Optical mark recognition (OMR): Optical mark recognition, also called mark sense reader is a technology where an OMR device senses the presence or absence of a mark, such as pencil mark. OMR is widely used in tests such as aptitude test.

Bar code reader: Bar-code readers are photoelectric scanners that read the bar codes or vertical zebra strips marks, printed on product containers. These devices are generally used in super markets, bookshops etc.

Scanner : Scanner is an input device that can read text or illustration printed on paper and translates the information into a form that the computer can use. A scanner works by digitizing an image.

1.6.2 Output Devices

Output device receives information from the CPU and presents it to the user in the desired from. The processed data, stored in the memory of the computer is sent to the output unit, which then converts it into a form that can be understood by the user. The output is usually produced in one of the two ways – on the display device, or on paper (hard copy).

Monitor: is often used synonymously with "computer screen" or "display." Monitor is an output device that resembles the television screen. The monitor is associated with a keyboard for manual input of characters and displays the information as it is keyed in. It also displays the program or application output.

Printer: Printers are used to produce paper (commonly known as hard copy) output. They use chemical, heat or electrical signals to etch the symbols on paper. Inkjet, Deskjet, Laser, Thermal printers fall under this category of printers.

Sound cards and Speaker(s): An expansion board that enables a computer to manipulate and output sounds. Sound cards are necessary for nearly all CD-ROMs and have become commonplace on modern personal computers. Sound cards enable the computer to output sound through speakers connected to the board, to record sound input from a microphone connected to the computer, and manipulate sound stored on a disk.

1.6.3 Classification of Computers

Computers are available in different sizes and with different capabilities. On the basis of capacity of speed processing information computers are classified into: Super computer, Mainframe computer, Mini computer and Micro computer.

Super computer:

They are most powerful and expensive computers. They have externally large storage capacities and processing speed is at least 10 times faster than other computers. Some of the super computers are NEC , CRAY ,CYBER 205,CDC STAR 100 etc.

Mainframe computer:

They are medium or large machine, made of several units connected together. It's generally used in big organizations.

Mini computer:

They are like small mainframes. They consist of a few separate units connected together. They are not powerful as mainframe computers.

Micro computer:

Micro Computers are the smallest general purpose computers. They are used in different applications like business, engineering, schools, colleges, entertainment etc. Micro computers are further classified into Desk tops, Laptops, Palmtops and so on depending on their relative size.
In recent years the mobile phones too have computing facilities. The trend is that the communication features and computing features are integrated in such devices.

Review questions

1. The basic operations performed by a computer are
   A) Arithmetic operation B) Logical operation
   C) Storage and relative D) All the above

2. The brain of any computer system is
   A) ALU B) Memory
   C) CPU D) Control unit

3. Computer is free from tiresome and boredom. We call it
   A) Accuracy B) Reliability
   C) Diligence D) Versatility

4. CD-ROM is a
   A) Semiconductor memory B) Memory register
   C) Magnetic memory D) None of above

5. The ALU of a computer responds to the commands coming from
   A) Primary memory B) Control section
   C) External memory D) Cache memory

6. To produce high quality graphics (hardcopy) in color, you would want to use a/n
   A) RGB monitor B) Plotter
   C) Ink-jet printer D) Laser printer

7. The main electronic component used in first generation computers was
   A) Transistors B) Vacuum Tubes and Valves
   C) Integrated Circuits D) None of above

8. Which of the following storage devices can store maximum amount of data?
   A) Floppy Disk B) Hard Disk
   C) Compact Disk D) Magneto Optic Disk.

9. Which of the following is not an input device?
   A) OCR B) Optical scanners
   C) Voice recognition device D) COM (Computer Output to Microfilm)

10. Regarding a VDU, Which statement is more correct?
    A) It is an output device B) It is an input device
    C) It is a peripheral device D) It is hardware item

11. Software in computer
    A) Enhances the capabilities of the hardware machine
    B) Increase the speed of central processing unit
    C) Both of above
    D) None of above

12. The arranging of data in a logical sequence is called
    A) Sorting B) Classifying
    C) Reproducing D) Summarizing

13. What is the responsibility of the logical unit in the CPU of a computer?
    A) To produce result
    B) To compare numbers
    C) To control flow of information
    D) To do math's works

14. Abacus was the first
    A) Electronic computer
    B) Mechanical computer
    C) Electronic calculator
    D) Mechanical calculator

15. People often call _____ as the brain of computer system
    A) Control Unit B) Arithmetic Logic Unit
    C) Central Processing Unit D) Storage Unit

16. Which is used for manufacturing chips?
    A) Bus B) Control unit
    C) Semiconductors D) A and B only

17. Which is considered a direct entry input device?
    A) Optical scanner B) Mouse and digitizer
    C) Light pen D) All of the above

18. Properly arranged data is called
    A) Field B) Words
    C) Information D) File

19. A computer consists of
    A) A central processing unit B) A memory
    C) Input and output unit D) All of the above

20. An integrated circuit is
    A) A complicated circuit B) An integrating device
    C) Much costlier than a single transistor D) Fabricated on a tiny silicon chip

21. The word processing task associated with changing the appearance of a document is
    A) Editing B) Writing
    C) Formatting D) All of above

22. The term gigabyte refers to
    A) 1024 bytes B) 1024 kilobytes
    C) 1024 megabytes D) 1024 gigabyte

23. Once you load the suitable program and provide required data, computer does not need human intervention. This feature is known as
    A) Accuracy B) Reliability
    C) Versatility D) Automatic

24. A byte consists of
    A) One bit B) Four bits
    C) Eight bits D) Sixteen bits

25. Modern Computers are very reliable but they are not
    A) Fast B) Powerful
    C) Infallible D) Cheap

UNIT – II
MEMORY DEVICES & TYPES OF OPERATING SYSTEMS

2.1 Primary, Auxiliary and Cache Memory

2.1.1. Primary Memory: The memory unit that communicates directly within the CPU, Auxiliary memory and Cache memory, is called Primary memory or main memory. It is the central storage unit of the computer system. It is a large and fast memory used to store data during computer operations. Main memory is made up of RAM and ROM.

RAM: Random Access Memory is a temporary memory. It is classified into the following categories.

DRAM: Dynamic RAM, is made of capacitors and transistors, and must be refreshed every 10~100 ms. It is slower and cheaper than SRAM.

SRAM: Static RAM, has a six transistor circuit in each cell and retains data, until powered off.

NVRAM: Non-Volatile RAM, retains its data, even when turned off. Example: Flash memory.

ROM: Read Only Memory, is non-volatile and is more like a permanent storage for information. It also stores the bootstrap loader program, to load and start the operating system when computer is turned on. PROM(Programmable ROM), EPROM(Erasable PROM) and EEPROM(Electrically Erasable PROM) are some commonly used ROMs.

2.1.2. Auxiliary Memory

Devices that provide backup storage are called auxiliary memory. For example: Magnetic disks and tapes are commonly used auxiliary devices. Other devices used as auxiliary memory are magnetic drums, magnetic bubble memory and optical disks. It is not directly accessible to the CPU, and is accessed using the Input / Output channels.

2.1.3. Cache Memory

The data or contents of the main memory that are used again and again by CPU, are stored in the cache memory so that we can easily access that data in shorter time. Whenever the CPU needs to access memory, it first checks the cache memory. If the data is not found in cache memory then the CPU moves onto the main memory. It also transfers block of recent data into the cache and keeps on deleting the old data in cache to accommodate the new one.

2.2 Software, Hardware, Firmware and People ware

Machine part of the Computer and its accessories are called Hardware. Computer software refers to the set of programs that make the computer work. Hardware and software are complimentary to each other. Both have to work together to produce meaningful results. Computer software is classified into two broad categories; system software and application software

2.2.1. System Software:

System software consists of a group of programs that control the operations of a computer equipment including functions like managing memory, managing peripherals, loading, storing, and is an interface between the application programs and the computer. It is also called as operating system.

2.2.2. Functions of an Operating System :

Users and application programs access the services offered by the operating systems, by means of system calls and application programming interfaces. Users interact with a computer operating system through Command Line Interfaces (CLIs) or Graphical User Interfaces known as GUIs. In short, an operating system enables user interaction with computer systems by acting as an interface between users or application programs and the computer hardware. Some of the common operating systems are LINUX, Windows, etc.

2.2.2.1 DOS

Microsoft Disk Operating System, MS-DOS is a non-graphical command line operating system created for IBM compatible computers. MS-DOS was first introduced by Microsoft in August 1981 and was last updated in 1994 with MS-DOS 6.22. Although the MS-DOS operating system is rarely used today, the command shell commonly known as the Windows command line is still widely used. However, DOS does not support multiple users or multitasking.

2.2.3. Application software:

Software that can perform a specific task for the user, such as word processing, accounting, budgeting or payroll, fall under the category of application software. Word processors, spreadsheets, database management systems are all examples of general purpose application software.

Types of application software are:

- Word processing software: The main purpose of this software is to produce documents. MS-Word, Word Pad, Notepad and some other text editors are some of the examples of word processing software.

- Database software: Database is a collection of related data. The purpose of this software is to organize and manage data. The advantage of this software is that you can change way data is stored and displayed. MS access, dBase, FoxPro, Paradox, and Oracle are some of the examples of database software.

- Spread sheet software: The spread sheet software is used to maintain budget, financial statements, grade sheets, and sales records. The purpose of this software is organizing numbers. It also allows the users to perform simple or complex calculations on the numbers entered in rows and columns. MS-Excel is one of the examples of spreadsheet software.

- Presentation software: This software is used to display the information in the form of slide show. The three main functions of presentation software is editing that allows insertion and formatting of text, including graphics in the text and executing the slide shows. The best example for this type of application software is Microsoft PowerPoint.

- Multimedia software: Media players and real players are the examples of multimedia software. This software will allow the user to create audio and videos. The different forms of multimedia software are audio converters, players, burners, video encoders and decoders.

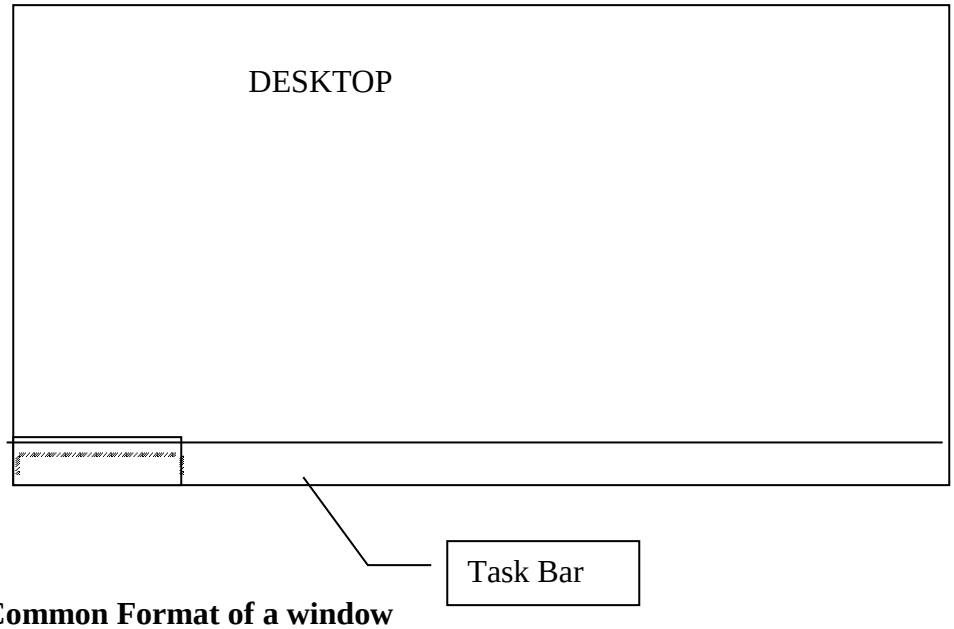
2.3 MS Windows

Windows is an operating system based on GUI (Graphical User Interface). It is developed by Microsoft Company (MS). The different version of MS- Windows are : Windows XP, Windows 8 and Windows 10. The following sections explain the basic operations of a windows operating system.

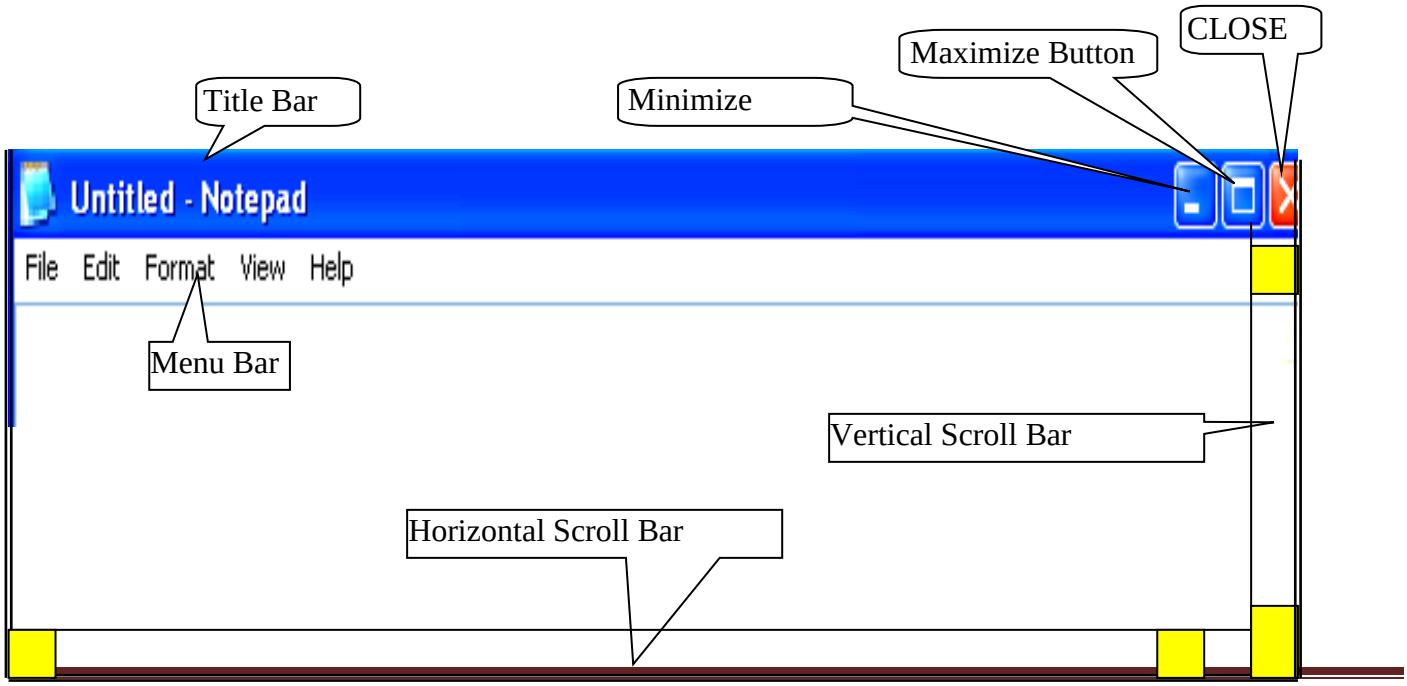
Note: The students need to practice these sessions to acquire basic skills of operating a computer.

2.3.1. Basic Operations

Once we switch on the Computer the Booting Process goes on for a few seconds. After the Booting is over the **Desktop** of the Windows is displayed.



Common Format of a window



2.3.1.1 To open any window:

An application window may be opened using the following steps.

Start | **Programs** | **Accessories** | **Notepad**

Now the Notepad window is opened.

2.3.1.2 To maximise a window:

Click at maximise Button. Now the window is maximised. Click again at maximise button to bring back to the original size

2.3.1.3. To minimise a window:

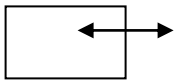
Click at the minimize button. Now the window will appear at the Task bar. Click again at the task bar in order to restore the window

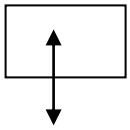
2.3.1.4. To close a window

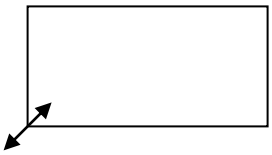
The window may be closed by clicking at Close button (X)

2.3.1. 5. To Change the size of the window

Take the cursor to the border of the window. Now, a double-headed arrow will appear. Click and drag the double-headed arrow to change the size of the window.

Width of the window 

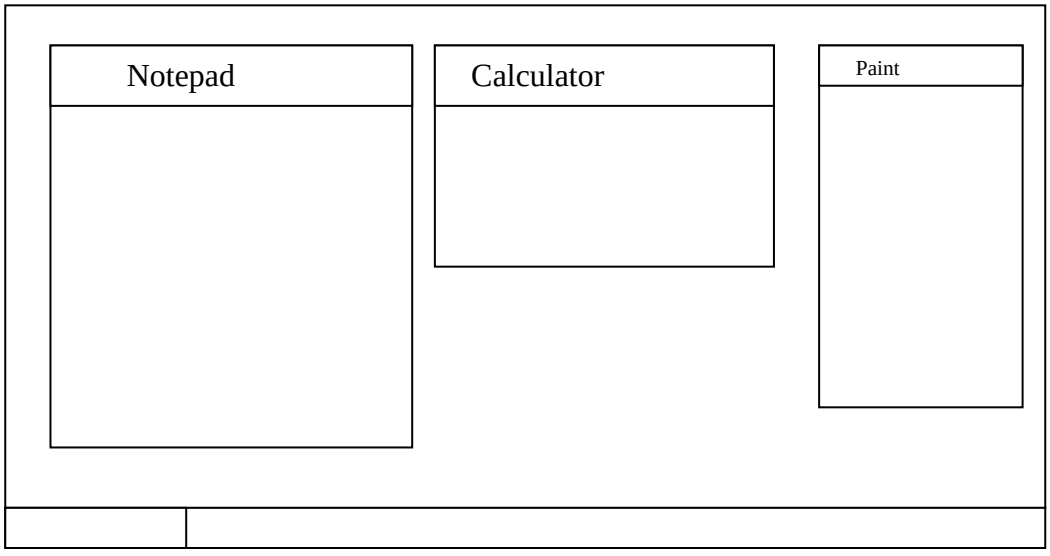
Height of the window 

Diagonal arrow is used to change both width and height 

2.3.1. 6. To move a window

Click at the Title bar and drag the mouse in order to move a window. (Keep the mouse presses and move the mouse)

Exercise : Open 3 windows (Notepad , Calculator and Paint brush) and arrange them as shown below so that all the three windows are visible.



Steps :

1. Open Notepad and move the window to the leftmost corner.
2. Change the size.
3. Repeat the previous two steps for the remaining 2 windows also

Hint: It is advisable to open ***Paint*** and draw some pictures. This would help the novice user to handle the mouse properly.

2.3.2. Cut – Copy - Paste using notepad

1. Open Notepad and type your address line by line.

2. **Selection:** Take the cursor to the beginning of the address - Click and drag the mouse till the end of the address. Now the selected portion will appear on reverse video (Black background and white letters)

3. Edit → Copy — Now the selected portion is copied on to the memory

   Take the cursor to the end of the text (or) to any portion of the document

   Edit → Paste

   Now the selected text is pasted on to the new area.

   Edit → Cut is used to replace the original text.

Shortcuts using key board:

Ctrl + C — EDIT - COPY

Ctrl + V — EDIT - PASTE

Ctrl + X — EDIT - CUT

2.3.3. Using two windows simultaneously

1. Open Notepad and Calculator. Keep their sizes in such a way that both are visible.
2. Type an equation in Notepad (12 x 60 x 60 =)
3. Use Calculator to get the answer.

Edit Copy Now the answer is copied on to the memory (Clip board)

4. Click at the Notepad

   Edit Paste

Now the answer from memory is pasted into the Notepad.

5. Repeat the previous steps for other equations also.

2.3.4. Understanding the keyboard

Type 3 paragraphs that will include numbers, Capital letters, Underscores, Special symbols etc.

Hints :

1. Press Enter key to go to next line / Paragraph
2. Press Shift key and type a letter to get Capital letters; (or)

   Press Caps Lock key to get Capital letters.

   Press the same key again to release the Caps Lock
3. Tab Key is used leave a Tab space at the beginning of the paragraph.
4. Backspace Key is used delete the letter just before the Cursor's position
5. Delete Key is used delete the letter at the Cursor's position
6. Num Lock Key is used get numbers from the Numeric Key pad
7. Home Key is used bring the cursor to the beginning of a line
8. End Key is used move the cursor to the end of a line

2.3.5. My Computer and My Documents

File : A file refers to a group of related items. It may be a letter written to your friend, a research paper, a song, a film or anything of that sort.

Folder : All the files are stored on different folders. It is also called as a Sub-Directory.

Drive : A computer may have different portions wherein you may store folders / files, that are called as Drives. The following letters are normally used to represent drives

C drive → Hard disk (the same hard disk may have partitions that are sometimes referred as D drive , E drive etc.)

F drive / G drive → Normally CD drives

2.3.5.1. Creating a file :

Open Notepad and type some good words about your city

File | Save

Type the File name as CITY1 and click at Save

Now the file is saved in the MY DOCUMENTS folder.

2.3.5.2. Opening a folder

Open MY COMPUTER by double clicking on it (it is on the Desk Top)

Choose a drive (D Drive) by double clicking on the letter D

Now the D drive is opened and the Folders on the drive are displayed.

To open a folder you may double click on the folder.

2.3.5.3. Creating a new folder

Using the step-2 open D drive.

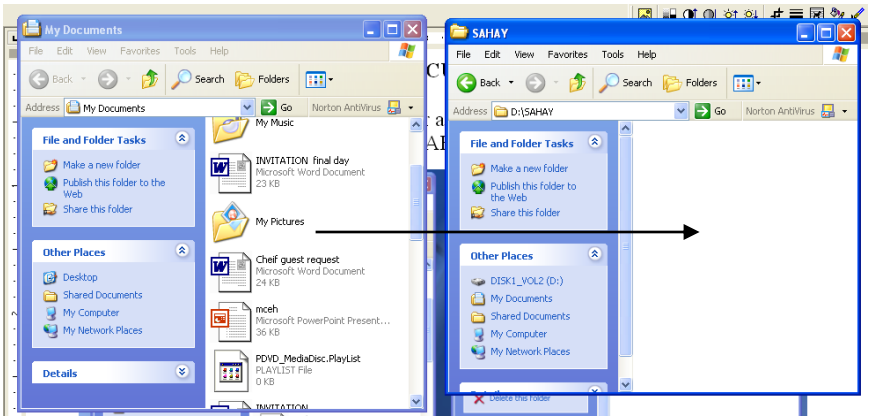
File | New | Folder

Type the name of the folder and press ENTER key.

It is advisable to use your own name as the folder name

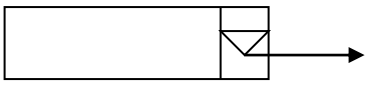
2.3.5.4. moving city1.txt file from my documents to sahay folder

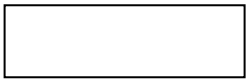
Open both MY DOCUMENTS folder and SAHAY folder side by side. Click at the file(CITY1.txt) and drag to the SAHAY folder (Keep the mouse pressed and move)



Exercise: Create a folder on your own name. Create one .txt file using notepad and .bmp file using paint and store them in the Folder created by you.

Tip : To save a file in a chosen folder directly use the following steps. While saving select the following

Save in  *Click here and select the drive and folder*

File Name  Type the name of the file and press **save**

2.3.5.5. Copy a file from one folder to another

Select the file by clicking on it and RIGHT CLICK* again on it. Choose COPY and go to new folder. RIGHT CLICK* again and then press PASTE.

*RIGHT CLICK: Click the right button of the mouse. This is used to display the Shortcuts-menu.

2.3.5. 6. Change the name of a file

RIGHT CLICK on the file. Choose RENAME and type the new name for that file – press ENTER key to leave

2.3.5. 7. To know the details of the file history

RIGHT CLICK on the file. Click at PROPERTIES. Different tabs on this menu will display the details about the file.

2.3.5. 8. Delete a file / Folder :

Click at the file / folder – Press DELETE key from the keyboard. Now the deleted file is kept at Recycle Bin.

To get back the file : Double Click at Recycle bin – Click at the file - RESTORE

To delete the File permanently : Click REMOVE PERMANENTLY.

2.3.5. 9. Printing a file

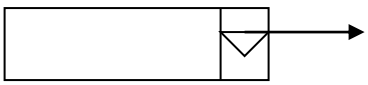
Type the file using Notepad or MS word. FILE Print

Using the Print DIALOG BOX specify the number of copies to be printed and other details and press PRINT. (Keep the print-device ON…..)

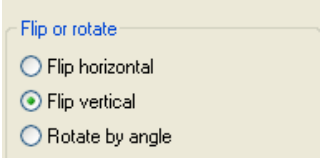
2.3.5. 10. Handling CDs

Keep the CD on the drive and using MY COMPUTER click at the G: drive to open the folders on the CD. Normally INSTALL is used to install the programs on the hard disk. Double clicking on them may directly open some of the files on the CD

2.3.5. 11. Common buttons of windows:

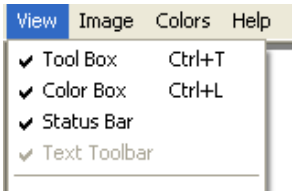
List Box :  Click here and select an item

Option Buttons : These are used to select any one of the given options.



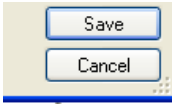
Clicking on them does the selection.

Check Box : Check boxes are used to select multiple items.



Command Buttons :

These are used to execute a command. Click on the command button will execute the command.

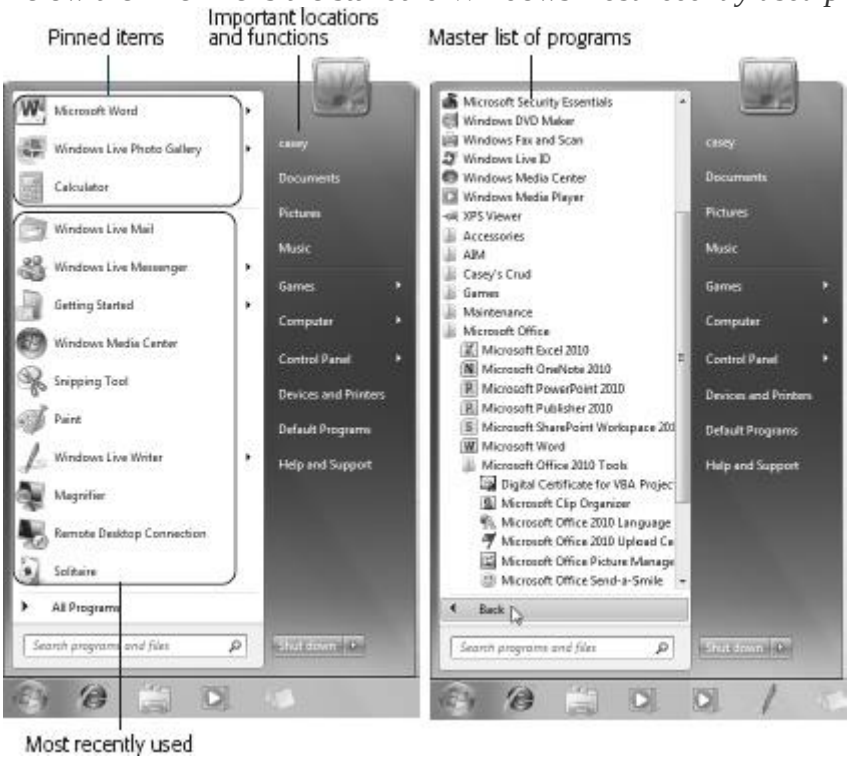


2.4. Windows 7 additional features

The Start menu is split down the middle into two columns:

Left side (white). At the top, above the thin divider line, is the *pinned items list*, which is yours to modify; it lists programs, folders, documents, and anything else you want to open quickly.

Below the fine line is the standard Windows *most recently used programs list*.



The Start menu's top-left section is yours to play with. You can "pin" whatever programs you want here. The lower-left section lists programs you use most often. (You can delete items here but you can't add things or rearrange them.) The right column links to important Windows features and folders. Right: The All Programs menu replaces the left column of the Start menu, listing all your software. You can rearrange, add to, or delete items from this list.

Review questions

1. Microsoft Windows is an
   a. Operating system b. Graphic program
   c. Word Processing d. Database program **(Ans : a)**

2. Which of the following is in program group?
   a. Accessories b. Paint
   c. Word d. All of above **(Ans : d)**

3. What program runs first after computer is booted and loading GUI?
   a. Desktop Manager b. File Manager
   c. Windows Explorer d. Authentication **(Ans : a)**

4. Which of the following is not an operating system?
   a. DOS b.Oracle
   c. Windows d. Linux **(Ans : b)**

5. The category of software most appropriate for controlling the design and layout of complex document like newsletters and brochure is:
   a. Word processing b. Computer aided design
   c. Desktop publishing d. Web page authoring **(Ans : c)**

6. Which menu bar selection would you access to open file?
   a. Edit b. Help
   c. View d. None of above **(Ans : d)**

7. A .... is a named location on a disk where files are stored
   a. Folder b. Pod
   c. Version d. None of the above **(Ans : a)**

8. Which of the following is system software?
   a. Operating system b. Compiler
   c. Utilities d. All of the above **(Ans : d)**

9. A user-interface that is easy to use is considered to be
   a. User-happy b. User-simple
   c. User-friendly d. None of the above **(Ans : d)**

10. The ....is the drive containing the files to be copied
    a. Source drive b. Destination drive
    c. USB drive d. None of the above **(Ans : b)**

11. In Windows, start button is used to
    a. Run applications b. Device setting
    c. Turn off the system d. All of above **`(Ans : d)**

12. Once text has been cut to the clipboard, you can .....that text into another document
    a. Paste b. Copy
    c. Transfer d. None of the above **(Ans : a)**

13. What is the function of radio button?
    a. To select multiple option b. To select single option
    c. To select all option d. All of above **(Ans : b)**

14. The primary purpose of an operating system is:
    a. To make the most efficient use of the computer hardware
    b. To allow people to use the computer,
    c. To keep systems programmers employed
    d. To make computers easier to use **(Ans : b)**

15. The essential difference between an operating system like Linux and one like Windows is that
    a. Windows can run with an Intel processor, whereas Linux cannot
    b. Linux is a proprietary whereas Windows is not
    c. There are multiple versions of Linux, but only one version of Windows
    d. Any programmer can modify Linux code which is not permitted with Windows
    `(Ans : d)

16. The Basic Input Output System (BIOS) resides in
    a. RAM b. ROM
    c. The CPU d. Memory Cache
    `(Ans : b)

17. Which of the following is drop down list?
    a. List b. Combo box
    c. Text area d. None **`(Ans : a)**

18. Recently deleted files are stored in
    a. Recycle bin b. Desktop
    c. Taskbar d. My computer (A**ns : a)**

19. The date and time displays on
    a. Taskbar b. Status bar
    c. System tray d. Launch pad (A**ns : a)**

20. Which runs on computer hardware and serve as platform for other software to run on?
    a. Operating System b. Application Software
    c. System Software d. All (A**ns : a)**

UNIT - III

MS-WORD 2007

Microsoft Word or MS-WORD is a graphical word processing program that users can type with. Its purpose is to allow users to type and save documents. Similar to other word processors, it has helpful tools to make documents.

This notes is useful for a beginner to learn the operations of MS word (version 2007) through practice.

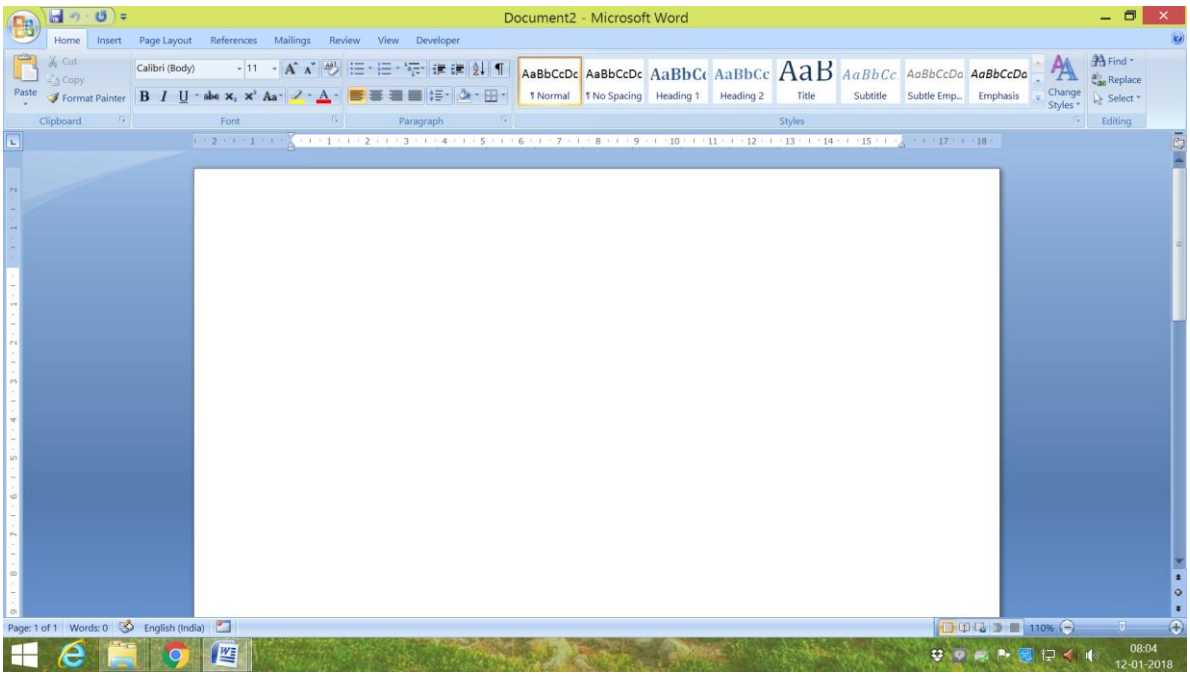
Exercise : 1. Typing a document.

Any printed matter is referred to as a document. Ex. A research paper, Leave letter etc. The following points are useful to prepare a document

To Open MS- WORD : Click at the menu items as shown below

Start	Programs	MS- Office	Word

Now a document is opened.



Points to remember :

1. Start typing a paragraph after leaving a tab space by pressing the key TAB
2. Type Continuously till the end of the paragraph. Press ENTER key to go to the next para.

3. **Selection of a text:** Take the Cursor to the beginning of the line- Click the mouse and drag till the end of line. The selected portion will appear in the reverse video (Black background and white letters). Now apply the following for special appearance

B	**Bold space**
I	*Italic*
U	Underline the text

4. **Font**: Selecting different Fonts may change the style of the text. To apply a font, select the portion of the text and then do the following

Times New Roman ▼ → Click here and select a font

Example : **Arial Black** Tahoma Comic Sans MS

Similarly the size of the text may also be selected : 12 18 24

5. **Text alignment:** A line or a paragraph may be aligned in the following manner.

Left justified	Center justified	Right justified

Take the cursor to the line or para by clicking on it, and press any one of the justification buttons

Normally paragraphs are left justified and the Headings are Center justified.

6. Line Space :

The line space is adjusted by pressing the following keys together

Ctrl + 1 Ctrl + 5

7. **Spell Check :**

Press F7 key to begin the spell check. Once the checking is going on the computer would suggest some corrections. You may accept by pressing Change or Press Ignore

(Or) Right Click at the wrong word – The suggestions are displayed – Click at the chosen word.

8. **To Save :**  Save

Give the file name and press Save

9. **To Print** :  Print

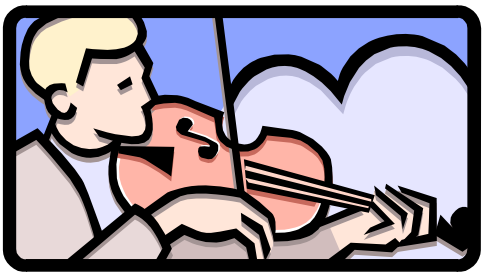
Specify the page numbers to be printed and press OK

10. **To open a Previously Created document**  Open

Exercise : Re type the following text with all the effects displayed in this Text, including font, font size, font effects like Bold, italic and underline (though the text is not a professional presentation)

Exercise : 2. Preparing a Greeting Card using Word

Prepare a card as shown below



Wishes for a
Happy e Learning

Sahaya Baskaran

Steps :

1. **Open a new Document**  New Blank Document OK

2. **Insert a Picture** : Insert Clip Art Organise Clips

Select a picture from the Clip art gallery. Right Click the mouse Copy

Minimize the clip art menu – Go to document: Paste

Now the clip art is inserted. Right click the mouse, on the clip and press

Text Wrapping	Behind Text

Now the size of the picture may be modified and moved to any position by click and drag method.

3. **To get a border :** | Page Layout | Page Borders |

Page border	BOX

Select the desired border style and size and press | OK |

Note : Page Colour, Water mark options are also available in this menu

4. **Word Art :** Word art is used to get attractive style of letters. It is under INSERT menu

Exercise : 3 . Typing a document –Additional features

1. **Page Set up :** This is used to set the size of the paper to be used for printing, as well as margins for the page.

Open a New Document.  | New | Blank Document | OK |

Now a new document is created

Page Layout	Size	More Paper Sizes

Set the width and height of the paper (in inches) and press | OK |

To Set the Page Margins:

Page Layout	Margins

Select a predefined style. (OR) click at | Custom Margins |

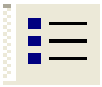
Set the **Top, Bottom, Left** and **Right margins** (in inches)

and press | OK | -- *The margins selected are left blank while printing.*

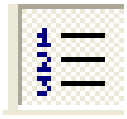
NB : The menu is used to change the orientation of the paper for printing. (Landscape / Portrait)

2. **Bullets :** Bullets are used to fix bullet symbols to each line of the text.

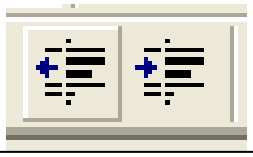
Example:
- Solids
- Liquids
- Gases

Go to Home menu; press  button and then type the text.

The bullets are given automatically to every line. Press ENTER key to go to next line. To stop the bullets : Press BACKSPACE key in a new line.

NB : Automatic Numbering may also be given to the document in a similar way. To get automatic numbering Press 

This type of Auto Numbering is very useful for typing references to the Research paper/ Thesis. When we add / delete some references from the text, the line numbers are automatically adjusted.

3. **Indent** : Indentation is used to type some quotations.
There are two buttons to Decrease / Increase indent 

Example: The following lines are indented from left margin. All the lines start after leaving some space from left margin.

The use of indentation is get the text pushed inside. The indented text is automatically pushed till we press ENTER key. After pressing ENTER key press Decrease indent key once.

4. **To Get Subscripts and Superscripts :** Type the text as it is in one line.

H2 SO4 -Select 2 by Click and drag. Home Font Dialog Box OK
Click at **subscript** check box and press
Now 2 becomes a subscript as H_2. Repeat the previous step to get SO_4. Home
(Subscript / Superscript command buttons are also available in menu)

NB : By selecting ***Superscript*** we get superscripted text . (i.e. : After selecting the text click at

Home Font Dialog Box **Superscript.** OK

Example $(A+B)^2 = A^2 + B^2 + 2AB$

Shortcut keys

CTRL+EQUAL SIGN	Apply subscript formatting for the selected text
CTRL+SHIFT+EQUAL SIGN	Apply superscript formatting for the selected text

5. Mathematical Equations :

To type matheematical symbols and equations **Microsoft Equation 3.0** can be used. (it should have been loaded in your system)

Click at Insert → Object → Select Microsoft Equation 3.0

Most of the mathematical symbols are found here. Click at the item to select a symbol and type the variables.

Examples : $\int \frac{x^2}{y^2} \le \int \sin(\alpha) d\alpha$ $(1+x)^n = 1 + \frac{nx}{1!} + \frac{n(n-1)x^2}{2!} + \cdots$

Note :

- This object does not permit blank spaces to be entered in between symbols.
- To make corrections, we may have to **DOUBLE CLICK** at the object and make correction. After the correcions, clik at an empty area to save the changes and close the object.
- To change the size of the equation : **CLICK** at the object and enlarge the borders.
- This object is used only for typing equations. It can't get the answers !. You may have to use MATLAB or other software for solving equations.

6. Header / Footer :

This is used to keep some text as header / footer for all the pages printed. Normally printed books will have the name of the book as the header.

Insert → Header

Now select the type the header and enter the text and press Close Header and Footer

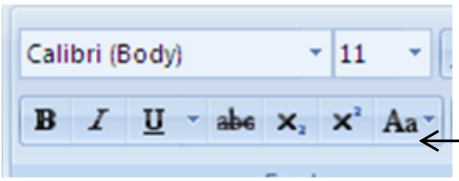
Use Date, Time etc for Header / footers by selecting corresponding buttons. The same step is used for modification of header / footer also.

Note :

- If PAGE NUMBER option is used it will superseed HEADER / FOOTER options. Hence select PAGE NUMBER option and type the header text nearer to the page number.
- To change the order of the page number :
  PAGE NUMBER – FORMAT PAGE NUMBER - Start at : (***enter new value***) OK.

7. ***Change Case*** : After typing a line you may convert the letters into UPPERCASE or lowercase using the following steps. Select the line by click and drag method –

Home



Click at change case button

Click at the suitable Case and press. Now the change is effected.

8. Printing a project report/ Thesis

While preparing a project report or book the following tips may be useful:

1. **Keeping Continuous Page numbers :**

a. Keep the introduction part such as titles, declarations, index etc., as one file (this part will not have page numbers)

b. Prepare the text matter chapter wise into different files (file names may be ***Chapter_1, Chapter_2, Chapter_3*** etc.,).

c. Give page numbers for the first chapter using INSERT- PAGENUMBER option. Go to end of the first chapter and note down the page number (say 16).

d. Open the second chapter (file : ***Chapter_2***) and change the starting page number as 17 using : PAGE NUMBER – FORMAT PAGE NUMBER - Start at :***17,*** OK

e. Repeat the step '***d'*** for the rest of the chapters.

2. **Margins and Page Size :**

a. Keep uniform margin and paper size for all chapters (files) . Use PAGE SETUP option to do that. It is advisable to use A4 as paper size.
Left margin : 1.2 , Right Margin : 1, Top Margin : 1 Bottom : 1.

b. Keep the line space as 1.5 **(CRTL+ 5).**

c. ***To set line space*** : Open the file - Select all paragraphs **(^ A)** and set the line space as 1.5 **(^5).**

3. **It** is **advisable** to use the following fonts for the whole document:

Text matter	:	Font : Times new roman	Front size :13
Chapters heading	:	Font size : 15	Bold

4. **Avoiding hyper links :** If the text is copied from internet then the Hyper links will also appear in the document. It should be removed.

Method-1: Right click at hyper link- Remove hyper link

Method-2 : Select the full text by click and drag method where there are more than one links present. CUT by using CRTL+ X

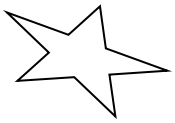
Use **Paste special** from **HOME** menu, and paste the text as **Unformatted text.**

5. **To remove extra spaces between lines** : Select the lines – Right click- Paragraph- Spacing- select 0 and press OK

6. **To get Greek alphabets:** Type a letter in say ‘a’ - Select it - Go to Font - Select the symbol front. It becomes as ‘α'

abcdefghijklmnopqrstuvwxyz becomes as
αβχδεφγηιφκλμνοπθρστυϖωξψζ

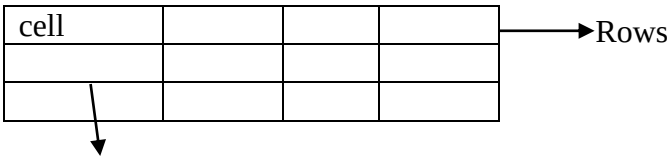
7. **Shapes:** Go-to **insert** menu – Select **Shapes** – Click and drag the shapes such as arrows, squares, flow chat symbol, callouts etc.
Click and drag the shape on to the document - Right click at the shape- Format auto shape-Behind text – OK.



Example : Click and drag a Star. Click at the green coloured bullet to Rotate the star.

8. To get help menu press F1

Exercise : 4. Table Handling



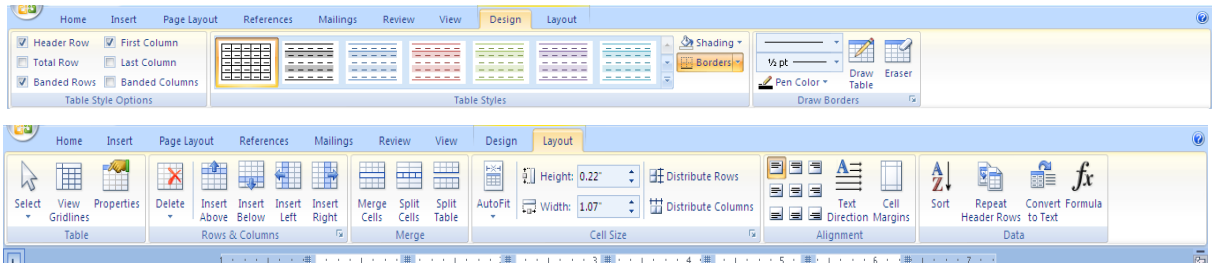
Exercise : Print your time table and the Dept. time table.

1. Insert a Table

INSERT | Table Select the number of Rows and Colums by Click and drag method.

Now the Table is inserted into the document.

The Table menu has two ribbons viz : **Design** and **Layout**



Most of the options are available here for handling the table.

2. Keys used (Key board)

Tab Key : To go to next Cell

Arrow Keys : To move to different cells (up, down, left, right)

Enter : To go to next line inside a cell

3. Deleting rows

Select the row to be deleted, by click and drag method- Right Click the mouse.

Delete Cells | Delete Entire Row | OK

Crtl + Z to undo

4. Deleting a Column

Select the column to be deleted by click and drag method

Delete Cells | Delete Entire Column | OK

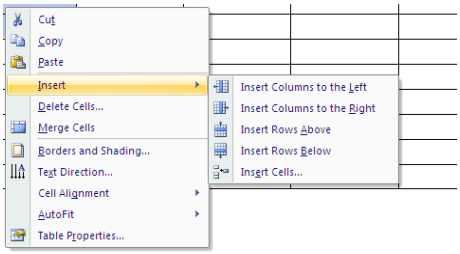
5. Insert a Row/ Column

Select the row/column where insertion is required by click and drag method- Right Click the mouse.

Insert | Insert Rows Above

Similarly the row may be inserted below the current position.
To insert a column also the same steps are to be followed

-after selecting the column where insertion is required.



6. Table Design :

- This is used to get a built-in design for the table.
- Click at the table – DESIGN MENU- Select a suitable design as required.
- The same menu has features for drawing new columns within a column as well as eraser.

7. Merge Cells:

Select the cells to be merged. Right Click the mouse. Merge cells

		← Merged cells →		

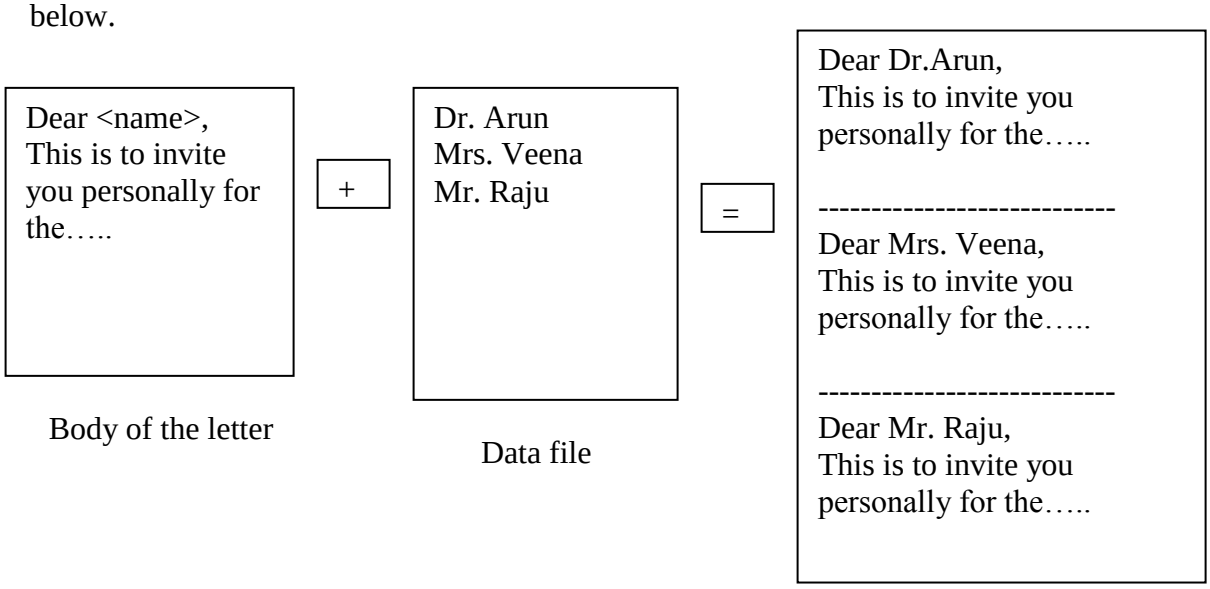
8. Layout Menu: This menu has the options for the following

- Cell alignment : Justification both horizontally and vertically
- Cell width and Height : (under CELL SIZE)
- Cell margin : used to adjust the space between the text and cell border.
- Split the table : To break into two parts
- Inserting formulae : To find column total

Exercise :
Prepare your time table and also practice with typing some of the tables from your subject.

Exercise . 5 Mail Merge

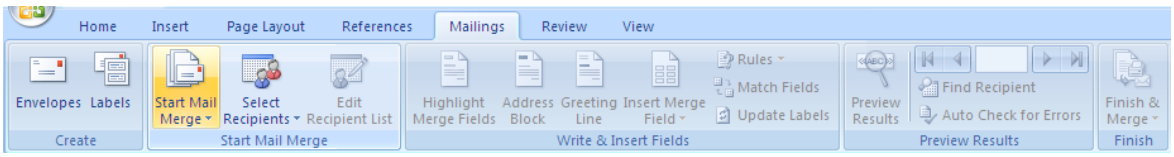
Mail merge is used to link the body of a letter to many addresses and prepare individual letters as shown below.



Mail merge involve the following 3 steps

1. Create a Data File
2. Create a body of letter
3. Merge both 1 & 2 .

Mailings menu:



1. To Initiate Mail merge

Open a new document

Mailing	Start Mail Merge

: Now the mail merge process in initiated.

2. Create a Data File

Select Recipients	Type a new List

Now NEW ADDRESS LIST dialogue box is displayed. Using this box, remove the unwanted columns and ADD new columns as per the requirement.

Click at | Customize Columns |

To remove a column : Click at the column | Delete |

To add a column : | Add | Enter the column name | OK |

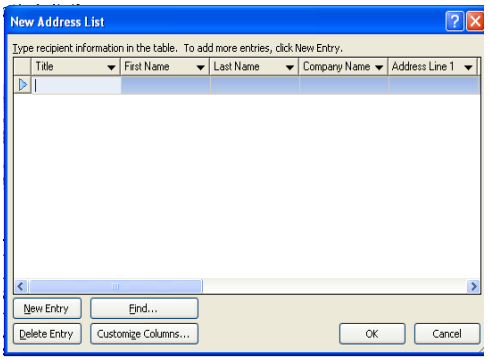
Remove all the existing fields and keep NAME, DOOR_NO, STREET, CITY, PINCODE as the new columns.

NB : The field name must be a word (No spaces are allowed in between; underscore may be used)

Press OK to close this menu and enter the data using

NEW ADDRESS LIST dialogue box.

To enter data: Type the text in the fields.



Click at NEW ENTRY to go to next record.

Enter 5 addresses. Press OK.

Save the data file as DATA1 on the desk top.

This file is saves as an Access file (.mdb)

2. Create a body of letter

Now prepare the body of the letter by inserting the field names. The following sequence would help inserting filed names in the body of the text.

Dear | Insert Merge Field | | Name | ,

Greeting and wishes to you!

This is to invite you personally for the College day that is to be held on 26-02-2014.

Please make it convenient to attend to the function without fail.

Fr. Principal

To

Insert Merge Field	NAME	Press Enter Key
Insert Merge Field	DOOR_NO	Press Enter Key
Insert Merge Field	CITY	

Pin : | Insert Merge Field | | PIN | Press Enter Key

3. Merge both Data and body of the letter

Mailing	Finish Merge	Edit individual Documents	All	OK

4. Now the merged letters are created as continuous pages on the same document. They may be printed (or) edited separately.

5. **Linking Data from Ms Excel :** The data from excel may also be linked using mail merge.

Select Recipients	Use existing List

Select the EXCEL file. Select the Sheet to be linked- OPEN.

The same step is useful for linking a TABLE from the MS word document also. The table to be linked must be saved in a word document and its file name is used as the source.

Exercise : Create a mail merge letter with the following fields
DNO NAME _STUDENT SUB1 SUB2 SUB3 RESULT NAME_FATHER
DOOR_NO STREET CITY PIN
Individual letters to the parents to inform the Results of their wards are to be prepared.

Exercise . 6 Some Common tips for effective use of MS- Word

Undo Button :

This button is available at quick access tool bar. (TOP row)
This button is used to cancel the last action / Actions. For example deleting a word may be cancelled (got back) by clicking at this button.
Key board Short cut : **Crtl + Z**

Add a button to Quick access Tool Bar :

Suppose a button from the **menu** is to be added to quick access toolbar then the following steps may be useful:
Move the mouse over the button – Right Click- | Add to Quick access tool bar |

To Remove from quick access tool bar :

Move the mouse over the button to be removed – Right Click- | Remove from Quick access tool bar |

Practice session
Exercise : Type the following text exactly as shown below (Format , Font type, Indent, Bullets, Alignment, **Bold**, *Italic*, Underline , Subscripts etc.).

Sample text for Practice

Rename or move the default working folder for Office

1. Save and close all Office files, and then close all Office programs.
2. In WINDOWS EXPLORER, move or copy any files you want to find quickly to the My Documents folder.
3. Sample text for Practice :

- $k(1+x)^n = 1 + \frac{nx}{1!} + \frac{n(n-1)x^2}{2!} + \cdots$ $\int \frac{x^2}{y^2} \le \int \sin(\alpha) d\alpha$
- H_2SO_4 is an acid
- $(A+B)^2 = A^2 + B^2 + 2AB$

- Use indentation to increase the left margin
- Give your name as the Page Footer

"If you could complete this exercise successfully then you may be called as "Master in MS Word (Jr.). How about throwing a Party for all of us! "

UNIT – IV
MS-POWERPOINT 2007

Power Point is used for creating presentations (Seminar presentation, Quiz, Animated Shows, Photo Shows, etc). It is a part of the package MS-Office. This presentation puts forward a simple and easy way to learn the package.

Open PowerPoint — START — Program — PowerPoint

The title layout of the PowerPoint will be displayed. Click and type the title of the presentation.

To Get a new slide : Home — New slide

- Select a layout from the available list. Layout refers to the outline of the slide.
- Select the title and Content layout : This layout has Table, Chart, Smart art graph, Picture, Clip art and Movie clip.
- Select a suitable layout and fill the required items. *Example* : Select a picture lay out- by clicking at the picture icon, insert a new picture.

By using the previous steps, create more number of slides (say 7 slides).

To View the Slide Show :

View — Slide Show (or) Press F5 key

- Now the slides are displayed one after another by pressing **Enter** key/ Mouse click.
- Use **arrow keys** to go to previous / next slide.
- Press **ESC** key to stop the slide show.

To Change the background :

This option is used to get beautiful backgrounds for the presentation. Design

Choose a design and select it by clicking on it. We may change the slide orientation, colours, effects, fonts and background graphics at this level.

Animation :

The display can be made more impressive by introducing special effects like displaying the text with some visual effects. Animation can be done at two levels

1. Slide level transition
2. Object level Effects

1. **Slide level transition :** This will effect the slides being displayed

Animations — Select a transition style for the slide. Apply to all

Now all the slides will appear according to the chosen transition.

We can give sound effect also by selecting a proper sound clip from the **TRANSITION SOUND** list box. The speed of transition can be controlled by selecting an option from the **TRANSITION SPEED** list box.

2. Object Level : This is used to produce special effects to various objects in the slide (Text, Picture, Chart .. etc) Animations | Custom animation

Select an object in the slide by clicking at it, and then click at

Add Effect | **Entrance**

Select the animation style from the list box by clicking on it.
It also has **speed control, direction control** and options for changing / removing animation.

Slide View options

- Normal View : Used for designing the slides.
- Slide sorter View : All the slides are displayed. This view is used to change the order of the slide, delete a slide etc.
- Note Page view : To add some notes to the slide. This may be useful to the presenter and will not be displayed.

To save :  Save *type a file name* Save

To **Open** a previously saved presentation :  Select the file Open

Inserting a Header / Footer for all pages :

Open the slide in NORMAL view. Insert | Header and Footer | Slide

Select the FOOTER. Type the text to be added as footer. Apply to All

Some tips for effective presentations

There should be a good contrast between the foreground (letters) and the background. It is advisable to use default designs. (Example : black letters with white background has the maximum contrast. Black letters with a blue background is to be avoided)

1. Font size : 22- 40 . Smaller fonts will not be visible to the audience.
2. The line space for text may be 1.5 / 2 for better visibility.
3. To break the overcrowded text in to two slides: Click at the slide (ctrl+D). Now you get a duplicate slide. Remove the second part from the first slide. Remove the first part from the second slide, and readjust the font size.
4. Avoid hyperlinks from the text copied from internet. (Right click, REMOVE HYPERLINK).

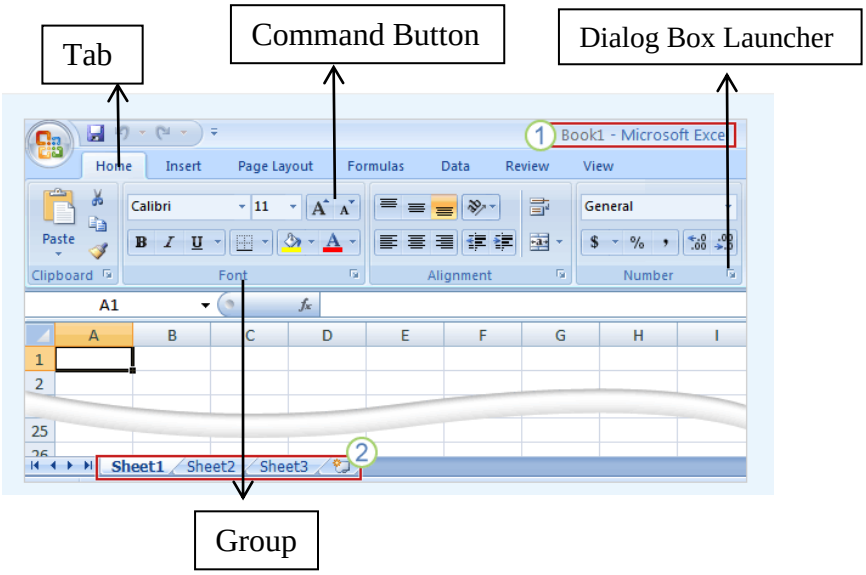
UNIT – V
MS-EXCEL

MS- Excel is a package meant for three important applications viz., Calculations, Graph drawing and Data base management. The excel file is treated as a work book in which we have many work sheets. An excel work sheet has cells arranged in rows and columns.

	A	B	C	D	E	F	G	H	I	J
1					**Column-E**					
2		**Cell -B2**								
3	← Row 3→									
4										

There are 16,384 columns named as : A , B, C.. Z, AA, AB, AC… XFD and 1048576 rows in a work sheet. A cell is identified by its cell address. The cell address has the Column name followed by its row number. Example: A1, A2, B1, B2.

Ribbon Concept in MS Office:



Tabs : Main groups / Core task (Home, Insert, Page Layout, Formula , Data, Review, View)
Command buttons : Click to perform a task
Groups : Group of related commands within a tab
Dialog Box launcher : Click to open the dialog box related to a group.
Operations : CTRL + F1 : To display / hide the ribbon.

1. Opening a Work book:

Start | **Programs** | **Ms Office** | **Ms Excel**

Now the work book is opened and the **Sheet-1** is displayed.

2. Keys used:

Arrow keys (Up, Down, Left, Right) : to go to different cells.
Ctrl + Up arrow : to go to previous data item in a column /First row
Ctrl + Down arrow : to go to next data item in a column / last row
Ctrl + Left arrow (or) HOME : to go to the data item to the left / first Column
Ctrl + Right arrow : to go to the data item to the right / last Column
Tab : Next column
Enter : Next row

3. Entering data:

Go to the cell where the data are to be entered and type the data. Press arrow keys to go to next cell. The text will be automatically left justified. The numbers are right justified. Use the justifying tools to change the justification.(Home tab)

To enter Date : Use the format 7/16/2011 or 16-July-2011
To enter current date : CTRL and the semicolon (;)
To enter a time : Type the numbers, a space, and then "a" or "p" (Ex 9:00 p)
To enter time : CTRL and SHIFT and the semicolon

Auto Fill : Enter 5 at A1 10 at A2.
Select Both A1 and A2; Click and drag the fill handle to other cells to get the sequence

4. Editing Data

Click at the cell where the correction is needed. The data on the cell would appear on the formula bar. Click at the formula bar and correct the data and then press Enter key.
(or) Double click at the cell and edit.

5. Using formulae:

A formula must start with a = symbol followed by cell addresses.
Example:

a. To find the total of cells B2 & C2 → =B2+C2
b. To find 40 % of the cell C2 → = 40/100*C2

Note:

The keys **+ - * /** represent addition, subtraction, multiplication and division respectively.

6. Using functions:

a. To find the sum of cells B2,C2,D2 → =SUM(B2:D2)
b. To find the Result based on marks at B2 & C2 →
=IF (AND(B2>=35,C2>=35), "Pass", "Fail")

7. Copying a formula

Click at the formula (D2)

	A	B	C	D
1	Name	Physics	Chemistry	Total
2	S. Srinivas	87	67	154
3	Ch. Ravi	45	25	70
4	R. Govind	32	56	88
5	K. Rami Reddy	78	83	161
6	S. Christopher	98	78	176
7				

Fill handle

Click and drag the fill handle downwards to copy the formulae to other cells.

8. Increase/ Decrease the width of a column:

Take the Cursor to the gap between the columns. A double headed arrow will appear. Click and drag the double headed arrow ↔ to increase or decrease the width of the column.

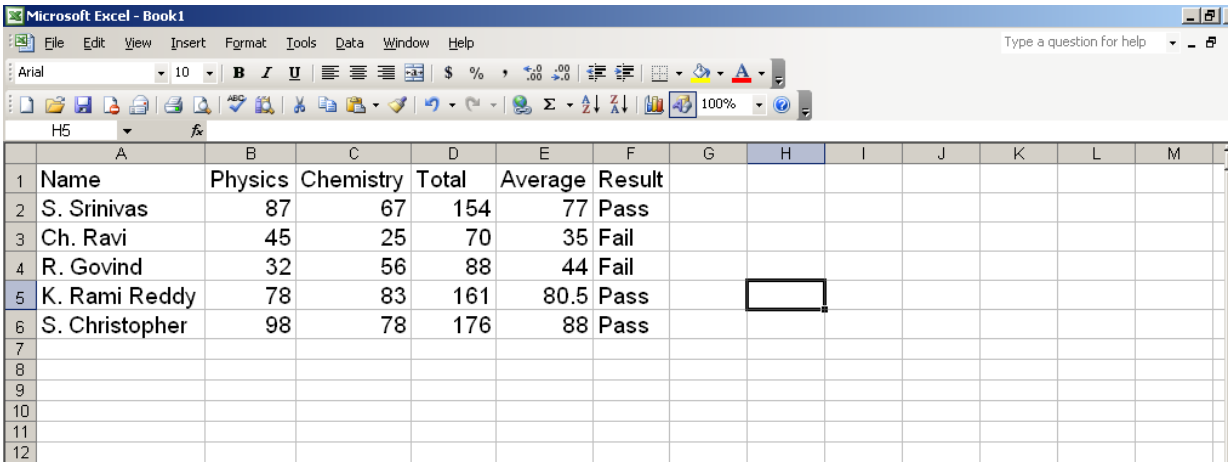
	A ↔ B	
1	Name	Physics
2	S. Srinivas	87
3	Ch. Ravi	45
4	R. Govind	32
5	K. Rami Reddy	78
6	S. Christopher	98
7		

9. Insert Column :

Click at cell where you want a column- ***Right Click***- Insert – Entire Column - OK

Exercise 1 :

Create a work sheet with 2 subjects and find total, average and result.



	A	B	C	D	E	F
1	Name	Physics	Chemistry	Total	Average	Result
2	S. Srinivas	87	67	154	77	Pass
3	Ch. Ravi	45	25	70	35	Fail
4	R. Govind	32	56	88	44	Fail
5	K. Rami Reddy	78	83	161	80.5	Pass
6	S. Christopher	98	78	176	88	Pass

Formula for Total (D2) : =B2+C2
Formula for Average (E2) : = D2/2
Formula for Result (F2) : =IF(AND(B2 >= 35,C2 >= 35),"Pass", "Fail")

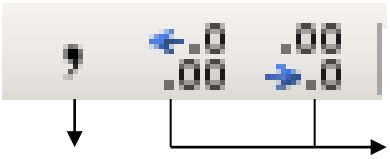
Exercise 2 :

Create a worksheet with columns → Name, BASIC, DA, HRA, CCA, GROSS_SAL, IT, NET_SAL to prepare a salary bill.

	A	B	C	D	E	F	G	H
1	Name	BASIC	DA	HRA	CCA	GROSS_SAL	IT	NET_SAL
2	S. Srinivas	25,000	2,500	1,250	500	29,250	5,000	24,250
3	Ch. Ravi	22,000	2,200	1,100	500	25,800	6,000	19,800
4	R. Govind	35,000	3,500	1,750	-	40,250	3,000	37,250
5	K. Rami Reddy	42,000	4,200	2,100	-	48,300	5,000	43,300
6	S. Christopher	35,000	3,500	1,750	300	40,550	6,000	34,550
7								

Cell Address	Item	Rule for Calculation	Excel formula
C2	DA	10 % of Basic	=10/100*B2
D2	HRA	5 % of Basic	=5/100*B2
E2	CCA	Any amount	
F2	GROSS_SAL	Total of BASIC, DA, HRA, CCA	=SUM(B2:E2)
G2	IT	Any amount	
H2	NET_SAL	GROSS_SAL - IT	=F2-G2

Other buttons used:

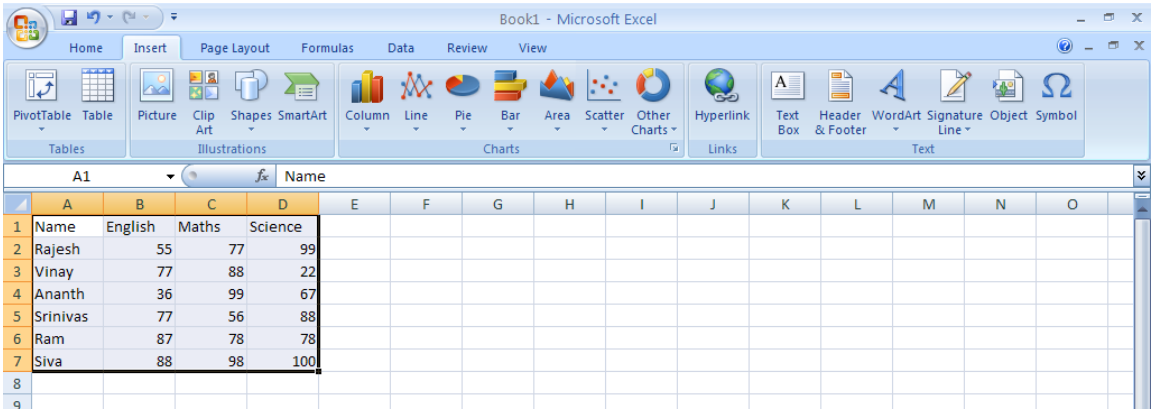


To increase / decrease decimal positions (zeros)

To get Comma symbols in between numbers

Charts:

1. Enter the data- Select the data- by click and drag method

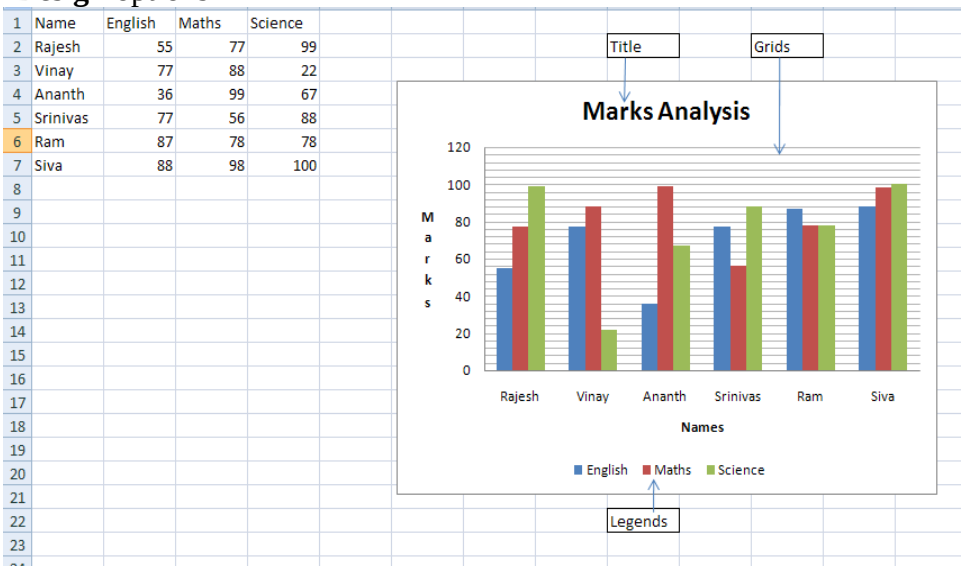


2. Go to **INSERT;** Select the type of chart by clicking on it. The chart will appear on the sheet.

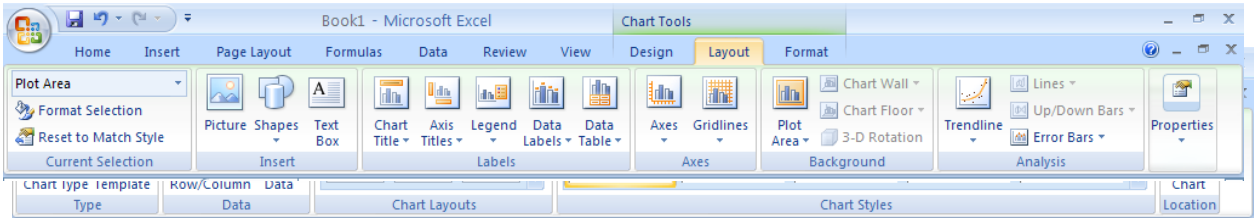
3. Chart options :

a) There are three tabs under **CHART TOOLS** . They are **Design, Layout** and **Format**

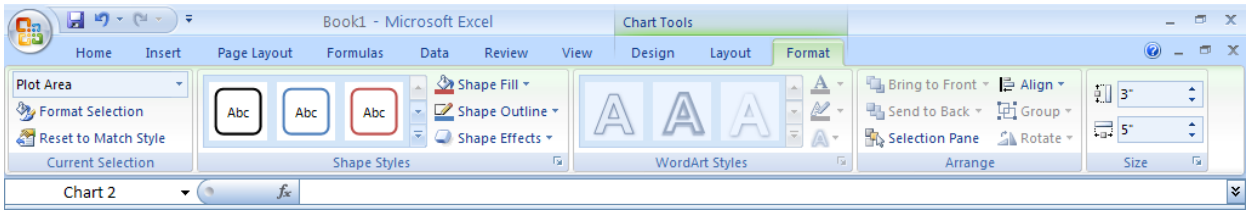
Design options



Layout Options



Format Options



Exercise # 3

a) Create a bar graph for the student data with four columns Name, Mark_1, Mark_2 and Mark_3. Give proper X and Y titles.

b) Create a XY graph for the Pressure *vs* Volume.

c) Create a Pie Chart for your Monthly Expenses.

Exercise # 4

Prepare the mess bill for 6 students

Rules :

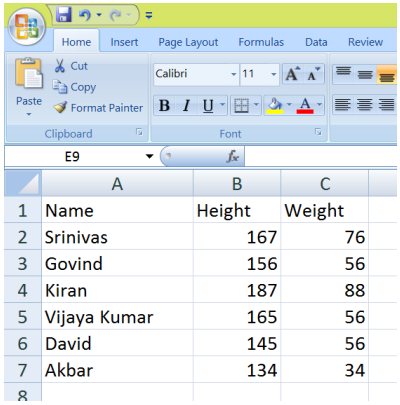
1. The food expense for 'Veg' Catogory= Rs 1000/- and for 'NV' it is Rs. 1500.
2. **Specials** and **EB** change from student to student
3. **Balance/ Dues** is calculated from **Paid-Total**

	A	B	C	D	E	F	G	H
1	Name	Veg/NV	Food	Specials	EB	Total	Paid	Balance/ Dues
2	Rajesh	Veg	1500	50	200	1750	1750	0
3	Vinay	NV	1500	100	200	1800	1800	0
4	Ananth	veg	1000	45	100	1145	1000	-145
5	Srinivas	NV	1500	77	100	1677	5000	3323
6	Ram	NV	1500	60	50	1610	3000	1390
7	Siva	NV	1500	66	200	1766	1000	-766
8								

Key : Formula for **C2 :** **=IF(B2="veg",1000,1500)**

Exercise 5: Sorting

Create a worksheet with NAME, HEIGHT, WEIGHT. Enter 10 records



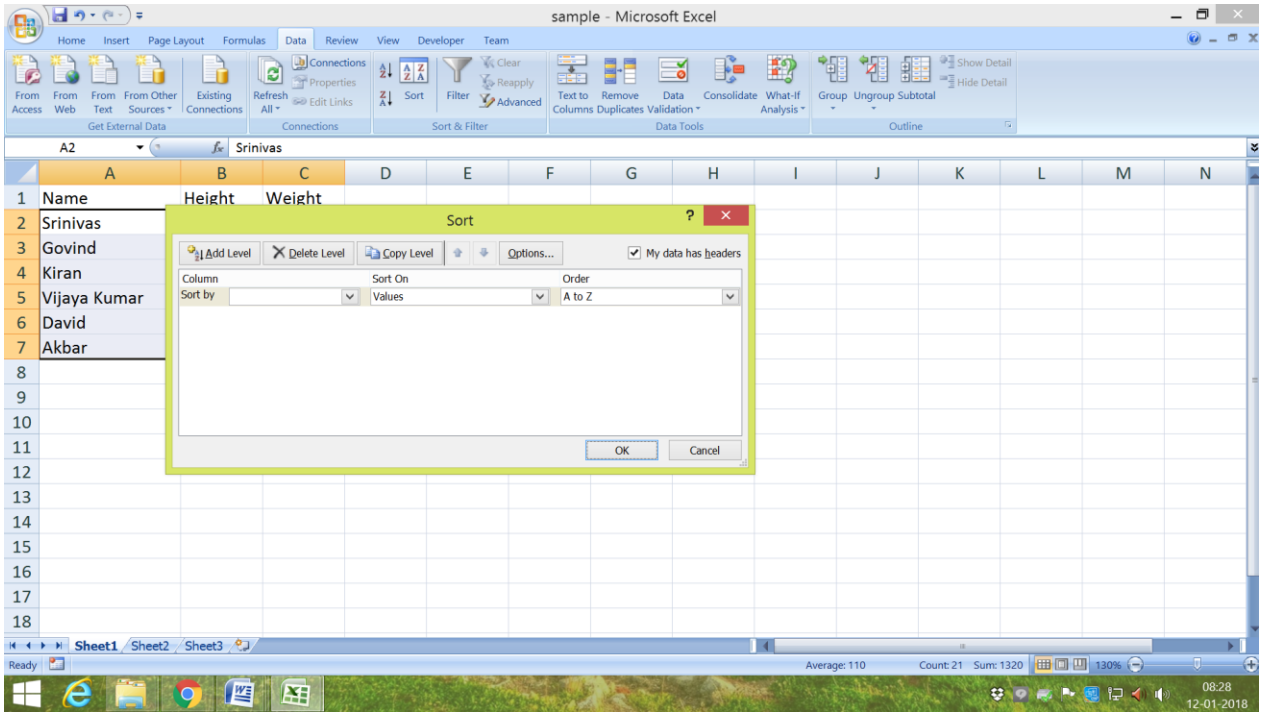
	A	B	C
1	Name	Height	Weight
2	Srinivas	167	76
3	Govind	156	56
4	Kiran	187	88
5	Vijaya Kumar	165	56
6	David	145	56
7	Akbar	134	34
8			

a) Sort the students according to Height (Descending) order.
b) Sort the students according to Weight (Ascending) order
c) Filter those students whose weight is above 75 kg.
d) Filter those students whose Height >160 cm
e) Filter those who have Height>75 kg and Weight >160 cm.

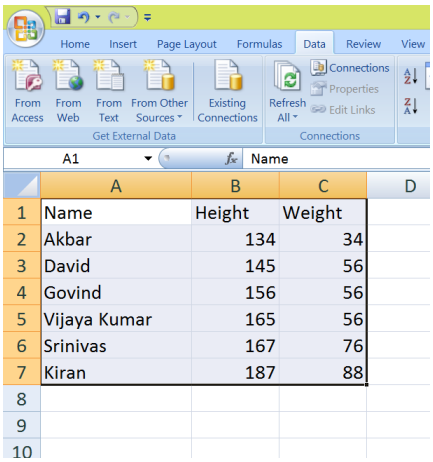
Steps for Sorting

i. Select the cell range you want to sort. (A1 to C 7)
ii. Select the **DATA** tab on the Ribbon, then click the **SORT** command.
iii. The Sort dialog box will appear. ...
iv. Select the sorting order (either ascending or descending). ...

v. Click OK.
vi. The cell range will be sorted by the selected column.



Sorted according to HEIGHT in ascending order is here →



	A	B	C	D
1	Name	Height	Weight	
2	Akbar	134	34	
3	David	145	56	
4	Govind	156	56	
5	Vijaya Kumar	165	56	
6	Srinivas	167	76	
7	Kiran	187	88	
8				
9				
10				

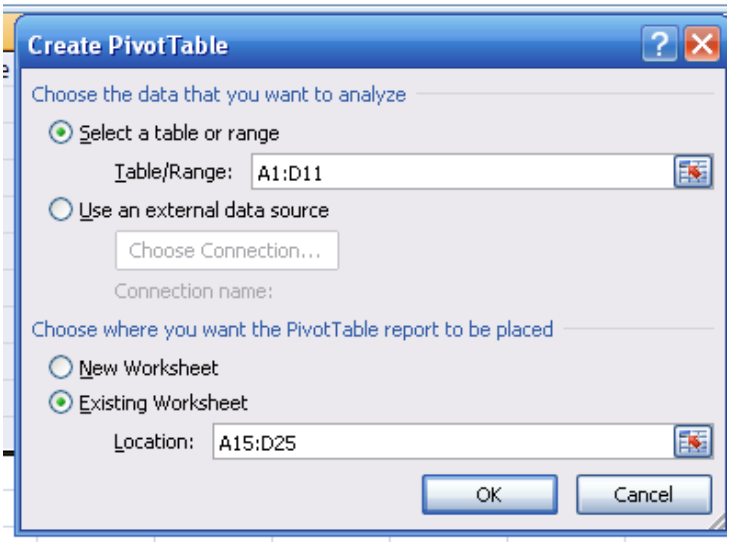
Exercise # 6 - Pivot Table:

Pivot table is used to prepare summary of data.

1. Create a worksheet with DNO,AGE, GENDER & CASTE

	A	B	C	D
1	DNO	AGE	Gender	Caste
2	1	21	BOY	OC
3	2	22	GIRL	OC
4	3	23	BOY	BC
5	4	17	BOY	BC
6	5	21	GIRL	SC
7	6	24	GIRL	SC
8	7	21	BOY	OC
9	8	21	BOY	BC
10	9	22	BOY	FC
11	10	22	BOY	OC

2. INSERT- PIVOT TABLE-
   Enter the data range as A1: D11
   Location as A15:D25 OK

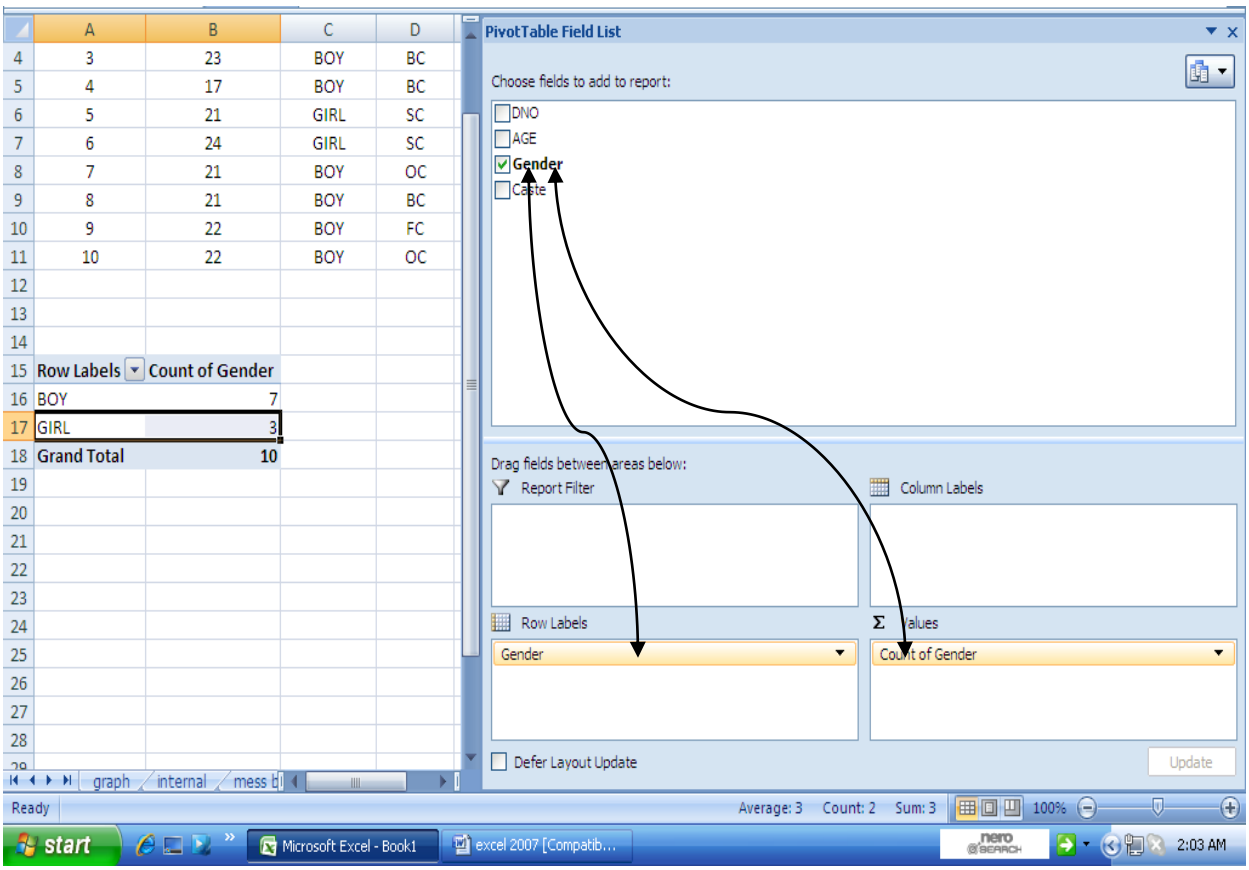


Click and drag GENDER from Pivot Table Field list to the bottom of the dialog box (twice) as shown in the next page.

Now the summary of Gender

BOYS	7
Girls	3
TOTAL	10

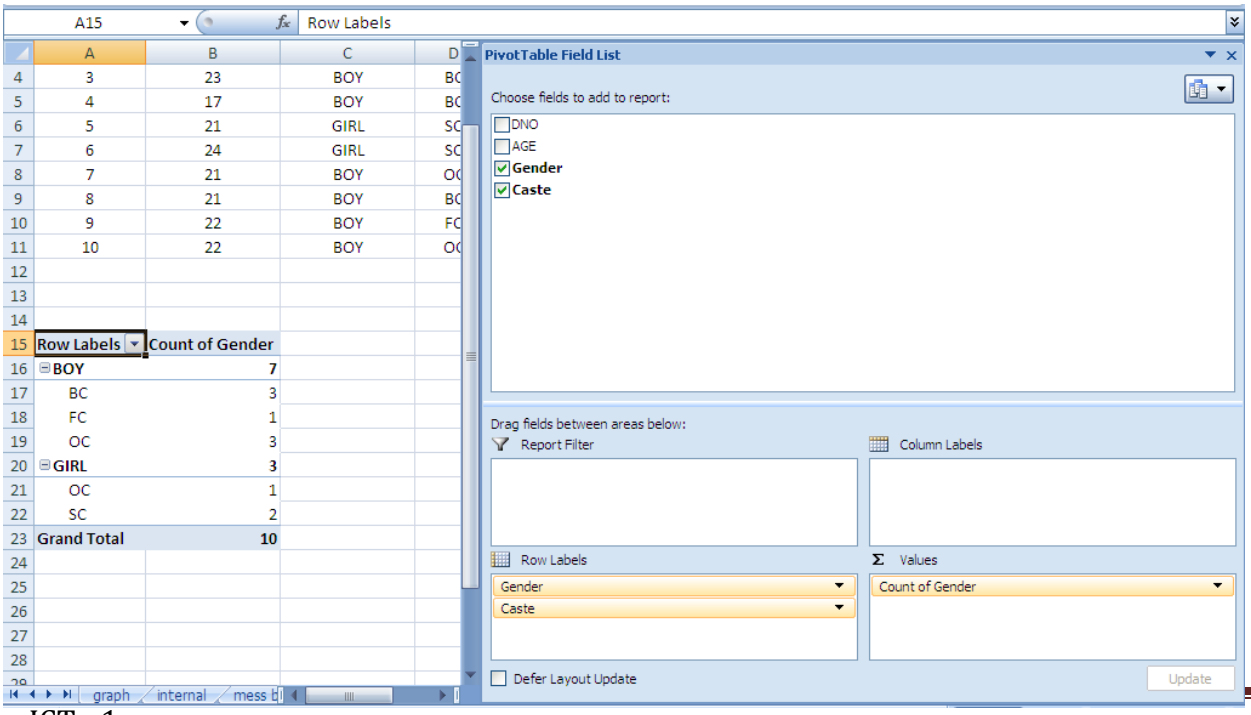
is displayed.



To get CASTE :

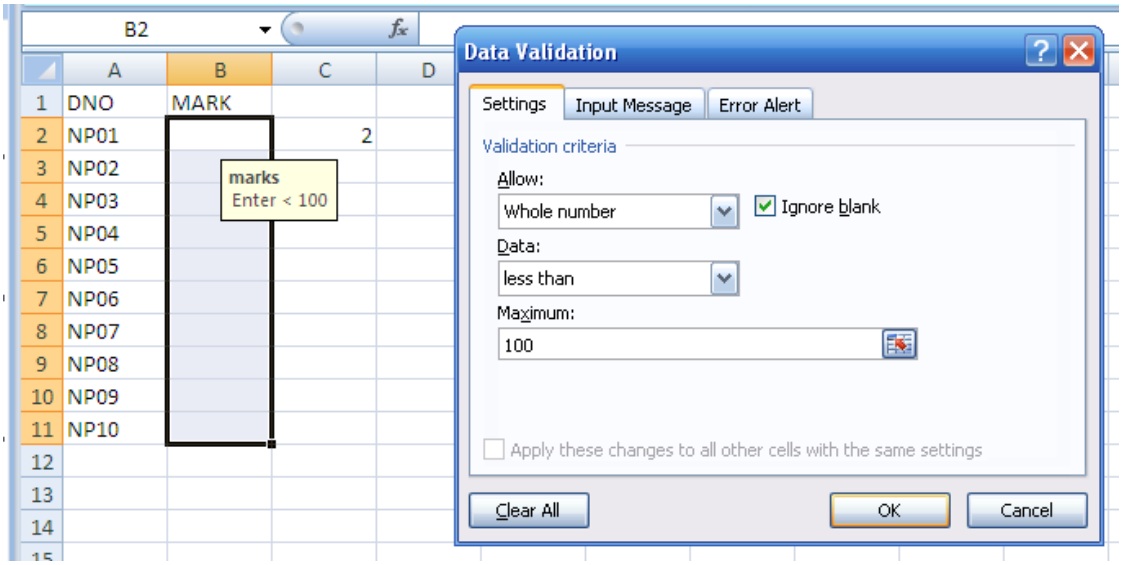
- Uncheck GENDER
- Check CASTE . Click and drag CASTE to the Bottom.

To get GENDER & CASTE : Click at Gender and Caste



To Validate Data : Validation is used to restrict the data entry. Suppose the marks entered are to be restricted to be <=100, then we may validate the cells this using the following steps. - Select the data range to which validation is necessary.(B2 : B11)

DATA – (DATA TOOLS)- Data Validation

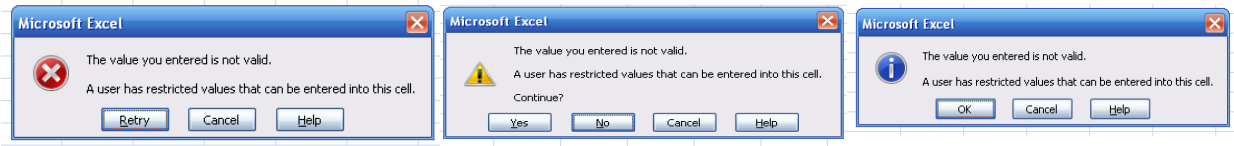


Setting: *Allow :* Whole number *Data :* less than M*ax :* 100 OK

Input Message: *Title* : Mark *Input Message* : Maximum marks is 100

Error Alerts : (When we enter a wrong data)

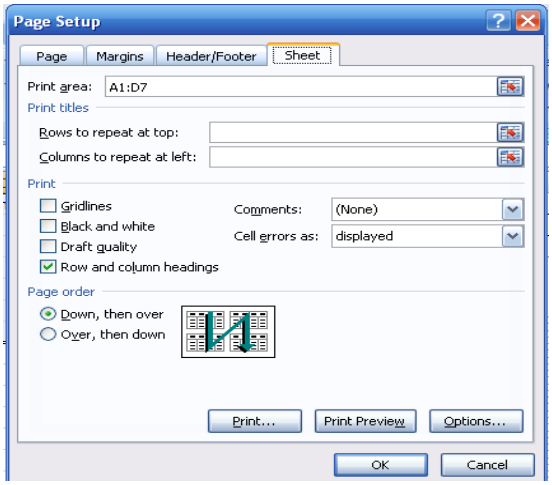
Stop ***Warning*** ***Information***



Data should be changed Data need not be changed (press yes) Only information given

Printing Excel Sheets :

1. Select the range of data to be printed – **Page layout – Print Area- Set Print area.**
2. Click at **Print Titles** . The dialogue box is used to set the **Paper size, Margins, Header / Footer** and **Sheet** options.
3. Select **Sheet** – Grid lines → to get the grid lines on printing
4. Click **Print preview** to see the model of printing page. Click at Print to get the printout.



***** All the best *****