

FUNDAMENTAL & MS - OFFICE

Computer: -

Computer is an electronic device. A computer automatically accepts and store input data and processes them under the direction of a set of instructions, stored in the computer itself, for producing the desired outputs.

- C :- Common O :- Operating
- M :- Machine
- P :- Particular
- U :- Used for
- T :- Technical and
- E :- Education
- R :- Research

Generations of Computer:-

First Generations (1940-52):-

In this generation vacuum tubes were used to store and process the data in the computer. These vacuum tubes were made up of breakable glass that could and amplify electronic signals. E.g. ENIAC, EDVAC.



Second Generations (1952-64):-

In this generation transistors were used in computer. With the advantage of being small in the size than of first generation. It was more reliable generate less heat, was less prone to hardware failure, faster than first generation and was able to be used in commercial area.

Third Generations (1964 -1972):-

'Integrated circuit' was used in this generation. This reduced the size of computer dramatically. It was used for general purpose and consumed less power.

Fourth Generations (1972 -1981):-

The major change in technology was using VLSI (Very Large-Scale integration) instead of ICs. In this period floppy disk and network were introduced.

The Future Computer:-

The future computer technology is beyond our imagination, possibly it is going to be biological computer, which can understand, able to reason and make logical decisions of its own – a computer with sense and feeling.

Characteristics of Computer:-

1. Speed:-

Computer is a fast device; it can perform millions of calculations in a fragment of second.

2. Accuracy:-

In computer the accuracy of calculation is very high. It can depict large fractional values very accurately.

3. Storage:-

Like human brain, computer has its own memory, which can retain very large amount of data until we desire to loose it.



4. Diligence:-

Computer, unlike human being, is free from exhaustion or lack of concentration.

5. Versatility:-

The computer is very much flexible in performing the jobs provided to it. It can do different kind of jobs provided to it in a logical sequence.

Classification of computer:-

Computer can be classification broadly on the basis of technology, size and capacity: -

(i)According to Technology:-

(a) Analog Computer:-

Analog computers operate by measuring physical quantities rather than by counting usually expressed as voltage or current. Analog computers mainly used by scientists and engineers. Analog computer is basically a device for solving differential equations.

(b) Digital Computer:-

Digital Computer operate & essentially by counting. All quantities are expressed as discrete digits or numbers. Digital Computers are useful for manipulation of data such as preparation of bills, ledgers.

(c) Hybrid Computer:-

Hybrid is a combination of an analog and a digital computer. In this computer, some calculations are performed in analog part and some are done in digital of the computer.

(ii) According to size & Capacity:-

(a) Micro computer (1970s) :-



A micro computer is the smallest general – purpose processing system. Micro computer are self contained units and usually designed to use by one person at a time. These computer found in office, classrooms and homes.

(b) Mini Computer:-

Mini computers are designed to support multi user at a time. These type of computers are found in organizations, laboratories etc.

(c) Main frame Computer:-

Computers with large storage capacities and very high speed of processing as compared to micro or mini computers are know as main frame computers. Main frame can support about 100 users.

(d) Super Computer:-

These computers have extremely large storage capacity and computing speed which is at least 10 times faster than other computers. A super computer is rated in terms of millions of operations per second (MOPS).

Advantages/Disadvantages of Computer:-Advantages:-

- It can perform any repetitive work and calculation rapidly and accurately.
- Computers can store large amount of data and information for subsequent manipulation.
- The memory of computer can hold a program which can be explored in different ways.
- Computer can make decision based on different conditions.
- It can provide information to the user.
- If any error occurs in the program file, computer can automatically detect these errors and allow the user to correct them.
- It can draw and print graphics.
- The computer can converse with users through Input/Output devices.



Disadvantages:-

- A computer has no brain or intelligence of its own.
- It cannot learn with experience.
- It can only perform operations as instructed by the user.
- It has no common sense, due to which it can carry out the instructions only as long as user needs.
- It can understand instructions no matter whether they are right or wrong.

Organization of Computer:-

Control Processing Unit (CPU) :-

system. CPU is the brain of computer and it controls all the device of computer.





Control Unit (CU):-

The CU is the manager of CPU. It Control the input devices of the computer. It receives information then interprets it and sends signals to the specified devices.

Arithmetical & Logical Unit (ALU :-

ALU of CPU perform real, processing it can perform mathematical and logical function.

Memory Unit (MU):-

When data and instructions are entered, it is required to be stored in the computer for processing. Like we need desk & filling cabinet to work, similarly computer also needs some space. This space keeps the data and instructions retained in the computer. This space is known as memory- stores data and instructions temporarily and permanently. There are two types of memory or storage:-

(a) Primary / Main Memory:-

Similarly computer also needs some temporary space to keep input intermediary results and output. Similarly primary memory work as desk or table for computer where it can keep or retain data and instructions and retrieve it or access it as and when required by the processor. There are two types of primary memory:-

(i) RAM (Random Access Memory):-

RAM is used to hold the program or any work like typing in MS Word document temporarily. The Capacity of RAM depends on the number of memory chips installed. RAM is called read/ Write memory because you can read / write on it.

(ii) ROM (Read only Memory):-

ROM is used to hold the program stores permanently. Holds system software's such as operating systems.

ROM i.e. information can only be read and can't be written on to it. Information is not lost even if power supply is switched off.

(B)Secondary Memory:-



Secondary memory is permanently memory. This kind of memory stored data permanent. In primary memory data can't be written permanently and also in large amount, that is why secondary storage is required so that information can be stored for future use. These devices are attached to CPU for huge storage purpose. Following are four important secondary storage devices:-

(i) Magnetic Tape:-

Magnetic Tape is like audio or video tape. It is a thin ribbon coated with magnetic ferric oxide, usually ¹/₂ inch wide. The data stored on this tape sequentially in blocks. It is the cheapest stored on this tape sequentially in blocks. It is the cheapest storage device available in the market and is used for taking large backup.

(ii) Magnetic Disk/ Hard Disk:-

Magnetic Disk is a circular platter made up of Mylar plastic or very smooth metal coated with magnetic ferric oxide on both the sides. These disks are attached With a shaft which rotates these disks and the head moves to fro for reading and writing. This makes reading and writing very fast. The whole assembly with all the required electronic parts is called disk pack. This disk pack is also known as HARD DISK. The field will be the capacity of the disk in bytes:-

Unit of Memory:-

8 bits	:	1Byte) जानम परम बल
1024bytes	x -	1 Kilobyte (KB)
1024 KB	: -	1 Megabyte (MB)
1024 MB	:-	1 Gigabyte (GB)
1024 GB	: -	1 Terabyte

(iii) Floppy Disk:-

It is a small circular disk made of Mylar plastic coated with a fine layer of magnetic ferric oxide, protected with hard plastic cover, which guards the surface of the disk. These days' 3.5 inch floppies are in use. The capacity of which is 1.44 MB. To use these floppy disks attachable drives are used.

(iv)Compact Disk:-



Compact Disk is formed from resin such as polycarbonate and coated with highly reactive surface. The laser technology is used to write data on these disks. Data once written can't be erased. There is different kind of drive for writing on these disks.

Devices of Computers:-

A Computer must have a system to receive information from user and must be able to communicate result to user. For this purpose, a computer consists of an I/O system. There are two types of devices of computer.

(A) Input Devices:-

Input devices are used to feed data into the computer. There are different kinds of input devices. Few impotent devices are as follow. (i) Keyboard:-

This is the standard input device attached to all computers. The keyboard closely looks like a type writer. Keyboards are available with keys, number varying from 84 to 104. When you press a key on the keyboard, a character is displayed at the point where the cursor is blinking. (ii) Mouse:-

This is a device moving a cursor or other object, around on the display screen. It is similar to Track Ball except that the ball is rotated by rolling it over the table to P rather than by palm.

(iii)Scanner:-

The situation when some information is available on paper and is needed on the computer disk for further change scanners are optical input device which can scan the whole page such as document, drawing or any photograph. They have a proved a powerful tool for recording drawings and book publishing etc.

(iv) Joystick:-

Joystick is screen-pointing device mainly used for video games. It is similar to the joystick used to control the flight of an aircraft. It can be moved right or left, forward or backward.

(B) Output Devices:-

After data is being processed the information, which is in machine language is required to be presented in a form that user can understand. This is done by output devices. The commonly used output device.

(i) Visual Display Unit / Monitor:-



A monitor is a display device which can produce text and graphic as out put. It is the major man – machine interface in computer system. It is used to display data or information. It allows the used to view the result of processing.

(ii) Printer:-

Printer can print on paper any type of data text and graphics being displayed on the monitor. Various types of printers are as given below. (a)Dot Matrix Printer:-

This is the one of the most popular printers. This is called as dot matrix, because a character is formed not by continuous line, but by means dots placed side by side.

(b) Ink Jet Printer:-

Ink Jet printers use a miniature spray gun to give a jet of ink and there fore called as Ink Jet printer. In this printer multi color printing can be easily done using different inks.

(c)Laser Printers:-

A laser beam is used in such printers; hence they are called as laser printers. It is the latest printer available in the market. This printer gibes noiseless operation and also the speed of this type of printer is very high. (iii) Plotters:-

The plotters are used to high quality graphics output on paper. A printer can not do this type of jobs. A plotter is used as printer to create charts, graphs, and diagrams.

Hardware and Software:-

- > All wires, transistors, Condensers and all mechanical parts of which the computer is made are termed as hardware.
- All the instructions or programmed either stored inside the computer or supplied externally which activate the hardware are termed as software.
- It is the software that gives life to the hardware. Without the software, the hardware does nothing.
- Hardware is developed by improving the technology, where as the software is develop by improving human thinking.



Software:-

Software is a set of instructions that are needed to exploit the hardware in a useful manner for given set of task. This is something that can not be touched or seen but is essential for working. Without software a computer is like a car without petrol or pen without refill.

Software can be of following two basic types:-

- 1) System Software.
- 2) Application Software.

System Software:-

System software is used to control, manager and work with the hardware of the computer or to convert instructions written in a high level language to machine language.

It is classified as following:

- 1) Operating System.
- 2) Programming Languages.
- 3) Translator.

Programming Languages:-

The communication between two parties whether they are machines or human being always needs a common language. The language used in the communication of computer instructions is known as the programming language. There are mainly three types of language.

1. Machine Language:-

Instructions stored in binary form, which a computer can process machine code. A set of machine language instructions forms a machine language programmed each type of computer has its own machine language suited to the hardware of its CPU.

2. Assembly Language:-

This led to the extensive use of MNEMONICS (memory aids) which could be easily understood by the human beings. For example, division or subtraction can be written as DIV or SUB respectively rather than being written in as continuous string of binary digits. These mnemonics have to be translated into the binary pattern cost and 1st before the machine can understand the operation code. The ASSEMBLER. Performs this process translating mnemonic codes into binary codes into binary codes by a per written stored program) and this language is called assembly languages.



3. High Level Languages:-

A program in a high-level language consists of a number of statements. A statement may contain several instructions, and is usually equivalent to more than one machine language instructions. A statement may contain several instructions, and is usually equivalent to more than one machine language instructions. Most high-level languages use English words are based on ten numbers. Calculation statements usually resemble ordinary algebraic expression most HLL, can be used on many different types of computers. Most popular HLL are FORTRAN, COBOL, ALGOL-60, BASIC, C, C++, and JAVA.

Translator:-

Translators are used to translate any program into machine languages. It can be of three types.

1. Assembler:-

Assembler translator is used to translate assembly language into machine language.

2. Interpreter:-

Interpreter is a set of programs that converts HLL into Machine Language. It translates the program step by step. It executes the program after translating every line.

3. Compiler:-

Compiler is a set of programs for conversion of HLL to Machine Language. It is only used to translate the program. It translates the whole program at a time into machine language this can be executed directly.

Application Software:-

Application Software consists of the programs written by the user for specific purpose such as billing, accounting, payroll, etc. Most application programs can only work if used in conjunction with the appropriate system programs.

Virus:-

A virus is an actively infections computer program that places copies of itself into other application and programs. The reason why viruses cause so much fear is that they can destroy valuable data and programs, which could mean that you loose months of work. Typically or running the program to which a virus is attached the virus is attached, the virus infects all



portions of memory and then infects the files on your hard disk and floppy disk.

Anti Virus Programs:-

Cleaning a disk from file viruses involves deleting the virus code from the infected file. While cleaning a disk of boot sector/partition table viruses, respective sectors and copying the boot programs back to their original space.

Scanner:-

With the help of scanner one can protect the disk from the attack of virus. Scanner scans the hard disk, floppy diskette and detects if there are any viruses. These programs normally check for a known virus only.

Operating System:-

Operating system is a set of control programs which coordinates between user and hardware and forms an interface between them. Operating System (OS) is a part of system software which communicates with the hardware of computer. It accepts command in simple English language and converts it to signals or machine language which computer hardware can understand. OS is like a manager of company who manages all the different functioning of the company. Likewise OS handles different jobs in computer viz. managing memory, process, storage, memory, mouse etc.

Types of Operating System:-

Operating System can be classified into

two major parts:

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- User Based
 Interface Based
- Interface Based

User Based:-

In this classification, Operating System is studied according to the capacity of service users. Computer can be designed to serve one or more than one user. In this context, Operating System can be classified into two parts:

- Single User System.
- Multi User System.

Single User Based:-

Single user operating system is designed for computer tends to serve single person at a time. This operating system user operating system



is widely used with personal computer installed in home, office etc. e.g. Windows XP, Dos, Mac OS etc.

Multi User Based:-

The Operating System that serves multiple users at a time is referred as Multi User System. To implement this design it uses some sort of technique. Example of Multiuser System is UNIX.

Interface Based:-

There are two types of interface:-

- Character User Interface (CUI)
- Graphical User Interface (GUI)

<u>CUI:-</u>

CUI stands for Character User Interface. The CUI based interacts with the users only through the commands typed from the keyboard. It does not support any other input device to communicate with it. The user is required to remember the exact syntax (complete way of usage) of commands to get its task executed by the system e.g. UNIX & DOS.

<u>GUI:-</u>

GUI stands for Graphical User Interface. The GUI is a picture based way of interacting with computer. Instead of typing commands, we select options from menus and pictures to all the computer what we want to do. The most popular example of GUI is Windows, LINUX, MacOS etc.

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DIFFERENT BETWEEN GUI & CUI:-

GUI CUI



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- 1) It stands for Graphical User Interface.
- 2) The screen comes in graphics.
- 3) Here one need not remember all the commands as they are available at the desktop.
- 4) Here keyboard & Mouse work as a input device.
- 5) E.g. Windows

- 1) Its stands for Character User Interface.
- 2) Dose not comes in graphics.
- 3) Here user needs to remember all the commands and each time they will have to type the command.
- 4) Only Keyboard can be used as a input device.
- 5) E.g. Dos

Paint

It is the application, used for drawing. It provides different tools for drawing. With the help of these tools very good drawing can be done. Paint is used to view or edit any picture acquired from scanner or any other source. The file name extension for paint picture is .BMP.

Using Paint to Create Picture:-

The various tools that can be used

to draw any figure are:-

- 1. <u>LINE TOOL:-</u> With the help of this tool we can draw a straight line in any direction.
- 2. <u>PENCIL TOOL:-</u> This work like a pencil by which , we can sketch freely anything with this tool.
- 3. <u>CURVE TOOL:-</u> This help us to draw line of different curvature.
- 4. <u>ELIPES TOOL:</u> With the help of this tool we can draw ellipse/circle of different line thickness & color.
- 5. <u>**RECTANGL TOOL:-**</u> With the help of this tool we can draw rectangle or square of different line thickness.
- 6. <u>POLYGON TOOL:-</u> With the help of this tool irregular shapes can be drawn line hexagon.
- 7. <u>**TEXT TOOL:-**</u> With the help of this tool we can insert text area in the image which can be transparent or solid.



- 8. <u>FILL TOOL:-</u> With the help of this tool we can fill any shape or area. The area should be bounded by all sides.
- 9. <u>BRUSH TOOL:-</u>with the help of this tool free hand drawing can be painted. Different shapes of brushes can be selected from the property box..
- 10.<u>AIRBUSH TOOL:-</u>With the help of this Airbrush tool, colors can be sprayed on the canvas.
- 11. ERASER TOOL:- This tool can be used to erase any drawing. Eraser will leave the color selected for background.
- 12.SELECT TOOL:- To select part of a picture or whole picture.
- 13.<u>MAGNIFIER TOOL:-</u> It can be used to enlarge selected area of image unto 8 times.

Notepad:-

Notepad is used to create or edit text files do no require formatting and are smaller than 64 KB. Notepad open and saves files in ASCII (text only) format. The default extension of Notepad is .TXT.

WordPad:-

The previously used Notepad had certain limitations like text cannot be formatted, page formatting cannot be done etc. but to overcome these limitations WordPad can be used. This is a text editor where formatting of the documents can be done by using various tools provided by it.

In WordPad document, images and other objects can also be inserted. WordPad files are saved automatically with .DOC.

MICROSOFT WORD

MS- WORD:-

It is window- based electronic word processing application software. Along with the features common to other word processors, it is equipped with other powerful features such as:-

- Font Style.
- Graphic Drawing.
- Document Wizard.
- Web Page Design.



• Hyper Linking.

View in Word:-

Word offers four ways to view the document. Each of these documents are designed to make certain editing task easier. They are as follows:-

1. Normal View:-

The normal view provides the easiest way to view the document and other elements on the screen. In this view, the fonts and other formatting can be seen as it is on the screen.

2. Print Layout View:-

Print layout view show the document exactly as it will be printed. Here we can view or change margins and other details of the print layout.

3. Web Layout View:-

Document for web can also be designed in word. This feature helps us to see how the document will look like when opened in Internet Explorer.

4. Outline View:-

The outline view creates outline and makes it easier to look at the features of a document. In this view, the document is collapsed to see the main headings, thus hiding all subordinate text.

Document Map:-

The document map is a separate pane along the left edge of the document window that displays a list of headings in the document.

Headers & Footers:-

Header and footer is used to put repetitive information in the top and bottom margins of the document. A Header consists of text or graphics and appears at the top of every page. A footer appears at the bottom of every page e.g. company name, date could appear at the top of each page and the page number appear at the bottom of each page. It can be viewed in print layout view.

Footnote & Endnote:-

Foot notes and Endnotes ate used in printed document to explain, comment on, or provide references for text in a document. You can include both footnotes and endnotes in the same



document. Footnotes appear at the end of each page in a document. Endnotes typically appear at the end of a document.

Clip Art:-

With the help of clip Art any picture, sound or motion clip can be inserted in to the document to make it more appealing. Following are the steps.

Auto Shapes :-

Auto shapes are geometrical objects like square, rectangle, arrow, callouts etc. Which are often required to be inserted into the document. These shapes can be formatted with different colors and fill effects.

Word art:-

Word art is used to give special text effects. The text is styled and then inserted as an object in the document. This style insert word art can be reformatted

Insert Object:-

It is used to insert objects such as any figures pictures, charts or any object from clip Art gallery or object of any other application. It makes the document more presentable.

Caption:-

It offers heading to figures, graphics, tables, slides, video clips, etc. and it also provides numbers to the document consistently and sequently. It also provides different type of label names for captioning.

Bookmark:-

It is used to bookmark the selection text, tables, graphics or any other tem in a document with the help of this we can jump to any location in the document by specifying the bookmark name. Bookmark is used to identify the place in the chapter, tables or the place in the document from where you left off.

Auto text:-

It is used to store frequently used text and graphics.



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Hyperlink is used to link both file and connect information

to information.

Bullets/ Numbered List:-

A Numbered list shows sequence of points, while bulleted list separates items in series to emphasize each point. **Border & Shading:-**

Border & Shading can be applied to a single paragraph, group of paragraphs or around graphics.

Columns:-

To quickly arrange your text into columns, click the columns tool button on the formatting toolbar and select number of columns.

Tab Setting:-

Tabs are used for creating quick, relatively simple lists. Tabs are also used to control the alignment of the text with in a document. By default tab stops are set at 0.5 inch interval from the left margin.

Word offers five types of tab stops, each of which aligns text differently.

- ➢ Left Tab : - The left edge of the text is aligned at the tab stop.
- > Right Tab : - The right edge of the text is aligned at the tab stop.
- > Center Tab : The text is canted at the tab stop.
- > Decimal Tab : - The decimal point is aligned at the tab stop.
- > Bar Tab : - Inserts a vertical line at the tab stop.

Drop Cap:-

Format a letter, word, or selected text with a large initial capital letter. Drop cap is traditionally used on the first letter in a paragraph

and it can appear either in the left. Margin or dropped from the firs line in the paragraph ranging to ten lines.

Change Case:-

Word allows changing the case of the selected text to any of the following options available in the change case.



a) <u>Sentence Case :-</u>

Converts selection to small letters except for the first letter of every sentence.

b) Lower Case: -

Converts selection to small letters.

c) Upper Case: -

Converts selection to Capital letters.

d) Title Case: -

Converts selection to small letters except for the first

letter of each word.

e) Toggle Case: -

Reverse Selection from capital to small and vice versa.

Spelling & Grammar:-

Word automatically checks the active document for spelling grammar and writing style errors as we type, using its main dictionary, which contains most of the common words. If word does not find the entered word in the main dictionary, it underlines that word with a red zig-zag line. On grammatical mistakes it underlines the sentence or words with green Zig- Zag line. To correct these errors, right click on the underlined word (s) a popup. Will appear with suggestions for correcting them any one of the suggested word (s) can be selected to replace the wrong word (s).

Auto Correct:-

It fixes common typographical errors and replaces specific keystrokes with special characters automatically.

Mail Merge:-

Sending circulars, information, letters etc. to more than one person or company at a time is a very tedious task and can consume a full day. To overcome this problem Mail merge utility can be used, where after drafting a single letter, copies of that letter can be created with different addresses supplied through stored data sources.

Tables:-

Tables can be used to arrange text or numbers in columns. Tables consists of horizontal rows and vertical columns. The intersection of row and columns is rectangular box called cell.



Text, Numbers or pictures can be inserted in a cell. It is easy to insert or delete rows and columns in a table.

(Short Cut Keys)

New	: Ctrl + N
Open	: Ctrl + O
Save Save	: Ctrl + S
Close a Document	: Ctrl + F4
Left or Right One word	: Ctrl+ ← or Ctrl+→
Up or down one screen	: Page up or Page Down
Undo	: Ctrl + Z
Redo	: Ctrl + Y
Сору	: Ctrl + C
Cut 🔶 ज्ञानम	: Ctrl + X
Past	: Ctrl + V
Delete Character	: DEL
Increase font Size	: Ctrl +Shift + >
Decrease font size	: Ctrl +Shift +<
Change Case	: Shift + F3
All Capitals	: Ctrl +Shift +A
Small Capitals	: Ctrl +Shift + K



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Bold	: Ctrl +B
Underline	: Ctrl + U
Underline (Word only)	: Ctrl +Shift + W
Underline (Double)	: Ctrl +Shift + D
Italic	: Ctrl +I
Subscript	: Ctrl + =
Superscript Left	: Ctrl + Shift + =0 : Ctrl +L
Right	: Ctrl +R
Centered	: Ctrl +E
Justified	: Ctrl +J
Heading1	: Alt+ctrl+1
Heading2 🔶 ज्ञानम	: Alt+ctrl+2
Heading3	: Alt+ctrl+3
List Bullet	: Ctrl+ shift+ L
Bookmark	: Ctrl + Shift+ F5
Cancel	: ESC
Find	: Ctrl + F
Footnote	: Alt + Ctrl + F
Go to	: Ctrl + G / F5
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Hidden	: Ctrl + Shift + H
Hyperlink	: Ctrl + K
Macro	: Alt + F8
Page	: Alt + shift + P
Page Break	: Ctrl + Enter
Print	: Ctrl + P/ Ctrl + Shift+F12
Print Preview	: Ctrl + F2
Replace	: Ctrl + H
Save As	: F12
Select All	: Ctrl + A
Show All Heading	: Alt + Shift + A
Show Heading1	: Ctrl + Alt + 1
Show Heading2	: Ctrl + Alt + 2
Show Heading3	: Ctrl + Alt + 3
Show Heading4	: Ctrl + Alt + 4
Show Heading5	: Ctrl + Alt + 5
Show Heading6	: Ctrl + Alt + 6



MICROSOFT-EXCEL

Introduction: -

Excel is a window- based spreadsheet, which is a product of Microsoft Corporation. It is used to track and calculate data and present it in an attractive manner. It has all the manipulation function like financial, statically and scientific functions. A file in excel is known as workbook, which maintains large amount of data.

A workbook is divided into 65,536 rows and 256 columns. The default file extension of workbook is .xls.

The Contents of Worksheet: -

A. Rows: -

In a single worksheet Rows are numbered from top to bottom (1 to 65,536).

B. Columns: -

Columns are labeled from left to right (A to IV) for a total

of 256 columns.

C. Cell: -

Cell is the intersection of row and columns. Therefore each worksheet contains 16,777,216 cells. Cell is referred by the column name and row number.(e.g. A5, denotes Column A Row 5).

D. Menus and Toolbars: -

Menus contain various options and Toolbars are usually shortcut buttons for menu bar.

E. Sheet: -

Excel has multiple worksheets labeled as sheet 1, sheet 2, where user can perform the work, by default three sheets are available in a workbook.

F. Formula Bar: -

Provides a space for typing or editing cell data and formula. G.Name Box: -

Displays the address operation name of the active cell.

H. Status Bar: -

It displays the valuable information like current mode or option, keyboard status and the result of Auto calculate function.



Function: -

Functions are built in special formulas that perform calculations, in a particular order or structure.

Classification of Functions: -

- I. Mathematical Functions: -
 - 1. Sum (number 1, number 2): -

This function calculates the total of

the given range of values.

2. Sqrt (number): -

To find the square root of the given number.

3. Mod (number, divisor): -

To find the remainder (modules) of the

number divided by the divisor. E.g. =mod (12,10) returns 2.

4. Abs (number): -

This returns the absolute value of the number, which is the number without its sign.

For example : _____ =abs (25) returns 25.

=abs (-25) returns 25.

5. Int (number): -

It removes decimal place rounding down the number to its nearest least integer.

For example : =int (5.56) returns 5. =int (-5.56) returns -6.

6. <u>Round (number, num_digit): -</u>

It round the number, specified by

num_digit.

For example : =round (3.15,1) returns 3.2. =round (3.249,1) returns 3.2.

7. <u>Power (number, power): -</u>

Raises number by power.



For example : =power (2,3) returns 8.

8. <u>Fact (number): -</u>

Returns the factorial of number, equal to

1*2*3___*number.

For example: =fact (5) returns 120.

9. <u>Odd (number): -</u>

Rounds a number up to the nearest odd integer. For example: =odd (4) returns 5.

10. <u>Product (number): -</u>

Multiplies all the numbers given as arguments and returns the product.

For example: =product (4,5) returns 20.

11. <u>Radians (number): -</u>

Convert degree to radians.

For example: =radians (45) returns 1.570796.

12. <u>Roman (number): -</u>

Convert an Arabic numeral to roman, as text. For example: =roman (5) returns V.

13. <u>Sign (number): -</u>

Returns the sign of a number: 1 if the positive, Zero if the number is zero, or -1 if the number is negative.

For example: =sign (5) returns 1.

=roman(-5) returns -1.

II. Statistical Functions: -

1. Average (number1,number2...): -

To calculate the average of the

given range.

2. Max (number1, number2...): -

To return the maximum value

from the range specified.

3. Min (number1, number2...): -

To return the minimum value

from the range specified.

4. <u>Count (value1, value2...): -</u>



It counts the number of values in the specified range. It does not count text entries, blank cells and errors. The COUNT () cannot take more than 30 arguments.

5. Count if (range, criteria): -

It returns the number of the value that matches the *criteria*. E.g. If cells c1:c8 contains the following values 20,2,2,15,20,2, the function =countif (a1:a8,"2") return 3.

III. Logical Functions: -

These function help in decision-making.

1. And (expr1, expr2...): -

It joins two or more conditions and returns TRUE, if all the conditions are TRUE and FALSE, if any one of the conditions is false. E.g.

=And (true, true) returns true.

=And (true, false) return false.

=And (3+3=6, 4+1=5) returns true.

2. Or (expr1, expr2...): -

This function evaluates the logical expressions and returns TRUE, if any of the conditions is TRUE and returns FALSE, only if all the conditions are false. E.g.

=Or (true, true) returns true.

=Or (true, false) return false.

=Or (3+3=6, 4+1=5) returns true.

=Or (3+3=5, 4+1=7) returns false.

3. Not (logical): -

It reverses the result of the logical expression

passed as parameter. E.g.

=Not (True) returns False.

=Not (False) returns True.

=Not (5+5=10 returns False.

4. <u>If (logical test, value_if_true, value_ if _false):</u>

It evaluates the

expression and returns the TRUE value, if expression is true and False value, if condition is false. E.g. =If (d4>100,"pass","fail").

IV. Text Functions: -

1. <u>Len (text): -</u>



Returns the number of characters in the string passed as arguments (including spaces). E.g.

=Len ("Educational Point") returns 17.

2. Exact (text1, text2): -

It compares both the text values and returns TRUE if they are exactly same (including spaces and case).

3. Concatenate (text1, text2...): -

Join several *text* strings,

maximum up to 30 text items into single text string. Example: =Concatenate ("R", "A", "M") returns RAM.

4. Proper (text): -

Capitalizes the first letter in each word of a text string and converts all other letters to lowercase letter. Example: =Proper ("JAI") returns Jai.

5. <u>Right (text, num_chars): -</u>

Returns right most num_chars number

of characters from text. Example: =Right ("Hello Jai", 3) returns Jai.

6. Left (text, num_chars): -

Returns left most num_chars number of

characters from text. Example:

=left ("Hello Jai", 5) returns Hello.

7. <u>Upper (text): -</u>

Converts *text* to upper case. Example: =Upper ("Software") returns SOFTWARE.

8. Lower (text): -

Converts *text* to lower case. Example: =Upper ("SOFTWARE") returns Software.

9. Char (value): -

Returns the character specified by the code number from the character set for your computer. Example: =Char (98) returns B.

10. <u>Code (text): -</u>

Returns a numeric code for the first character in a text string, in the character in a text string, in the character set used by your computer. Example: =Code ("B") returns 98.



11. <u>Value (text): -</u>

Converts a *text* string to a number, which represents a number. Example: =Value ("\$4,000") returns 4000.

12. Today (): -

Returns a number that represents today's date.

Auto sum Features: -

Auto sum button (\sum) is used to calculate the total of a range of cells without typing the formula in the destination cell. The button will total the values above or to the left of the destination cell automatically. This particular features is available at Standard toolbar.

Auto Calculate: -

You can view the sum, the average, maximum or minimum values by right clicking on the status bar. A shortcut menu is displayed, select the required function and result will be displayed automatically on the Status bar.

<u>Chart: -</u>

Charts are visual representation of data in a very appealing manner and make it easy for user to see comparisons, patterns, and trends in data. For instance, rather than making calculations for comparisons on several columns.

Alignment of Cells: -

To align the contents of selected cell, wrapping text within cells, adjusting width of columns and rows.

Auto format: -

Excel automatically applies a built-in combination of formats called Auto format. Excel provides variety of Auto format that apply formats for numbers, alignments, fonts, borders, patterns and shadings.

Goal Seek: -

It is used to adjust the value in a specified cell until a formula that is dependent on that cell reaches to a target value.

Scenario: -

What-if analysis is that most powerful feature of Excel. It helps in automatic recalculation of formulas when any of the source data changes. These are the sets of data that can be viewed to see result of what-if analysis.



Auditing: -

Worksheet auditing is a feature that checks a worksheet for errors. Auditing can be used to relate formulas in different cells and locate the source of a calculation error.

Sorting: -

By sorting user can arrange rows in list according to the contents of particular columns. That is arranging the contents of list/table in ascending or descending order.

Auto Filter: -

A drops down list of criteria appears, showing the options that you can choose from.

Advanced Filter: -

It is used to filter the required record and store it in some

other location.

Data Form: -

This feature of Excel allows you to display one record at a time form the list of records. Here we can view, add, modify, delete and search records stored in the current list.

Subtotal: -

The Subtotal ... from the Data menu is used to display the summary information and grand total in the form of list.

Data Validation: -

It is used to ensure that only correct data is entered in the worksheet. Data Table: -

Data table is used to generate a list of answers for same set of values. You can use it to do the things like convert meters to feet, calculating square root etc.

Pivot Table: -

It is used to create reports that summarize worksheet data in a meaningful format. We can rotate its rows and columns to see the summaries in different ways. We can also filter the data by pages. It is used when long list of data is to summarized and compared.



Shortcut Keys:-

*	Ctrl+1	Display th <mark>e F</mark> ormat Cell dialog box.
*	Ctrl+Shift + &	Apply the outline border.
*	Ctrl+shift+_	Remove outline borders.
*	Ctrl+B	Bold formatting.
*	Ctrl+I	Ttalic formatting.
*	Ctrl+U	Underline formatting.
*	Ctrl+5	Strikethrough formatting.
*	Ctrl+9	Hide rows.
*	Ctrl+Shift+(Unhide rows.
*	Ctrl+0	Hide column.
*	Ctrl+Shift+)	Unhide column
*	F2	Edit the selected cell.



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*	F7	Display the Spelling dialog box.
*	Ctrl+C	Сору.
*	Ctrl+X	Cut.
*	Ctrl+V	Paste.
*	Delete	Clear the contents.
*	Ctrl+Z	Undo.
*	Ctrl+Y	Redo.
*	Ctrl+Shift+(+)	Insert blank cells.
*	Ctrl+Spacebar	Select the entire column.
*	Shift+Spac <mark>e</mark> bar	Select the entire column.
*	Ctrl+A	Select the entire worksheet.
*	Ctrl+7	Standard Toolbar.
*	Shift+F11	Insert a new worksheet.
*	Alt+F8	Macro
*	Ctrl+Page Down	Move next sheet. 5
*	Ctrl+Page Up	Move previous sheet.

MICROSOFT- POWERPOINT Introduction:-

Microsoft Power Point is powerful presentation software used to create interactive, self-running or speaker- controlled visual displays. These can be reproduced on transparency sheets, 35mm slides, photo prints or on



screen presentations. These presentations can also be used to accompany lectures or as the basis for web sites. The default file extension of PowerPoint is (ppt.)

Slides: -

The term slides; in the context of Power Point are images that make up a presentation. Each slide can contain text, graphics, charts, sounds, videos and organization charts.

Media Clip: -

The term media clips include sounds, animation and video clips, you may want to insert into your presentation. The media clips make the presentation more presentable and easy to understand.

Clip Art: -

Clip Art contains images & audio-video clips that can be imported into applications to add visual impact on slides. Inserting a Clip Art drawing is the best way to enhance slide show. This feature offers you designed artwork and text effects that can make slide stand out.

Design Template: -

If you want to create a new presentation using one of the several presentation templates included with PowerPoint.

The PowerPoint Views: -

PowerPoint can display a presentation in different views that make it easier to perform certain tasks: -

1) Slide View/Normal View:- 디근거 여러

It is used to create and edit slides and immediately show the impact of the change. This is the default view and all of the menus and toolbars are available here for use.

2) <u>Slide Sorter View:-</u>

It gives a miniature picture of each slide. You can move slides around and add Transition and Animation Effect. Here you also get a preview of the effect as you choose them.

3) Slide Show View:-

It shows how each slide will look on full-screen mode. Use this view to actually show or simply preview your slide presentation.

4) <u>Notes Page View:-</u>



It is used to create and see notes for the slides within

a presentation.

Slide Master:-

Slides Master defines the content of the temple. It controls the background in a slide show and defines the style of text and title that appears in your presentation. It can also contain object that you want in every slide of the presentation, such as a company logo.

Handout Master:-

The handout master control the appearance of handout you choose to print and then distribute to your audience or presentation staff. You can include a header, footer, dates, and number in your handout master.

Action Button:-

Action button are another you can easily add to your Presentation Slides are use to add a Per-Programmed button so that you can easily from one slid to another slid.

Action Setting:-

Action settings effect how an object will react when you click on it or pass the mouse over it during a Slide Show.

Custom Animation:-

You can change the order in which each object will appear on the slide. You can also attribute sound to individual object on a slide.

Slide Transition:-

Slide Transition control the way each slide will appear as it opens on the Slide Show Screen. You have a long list of effects to choose from, and see how using this option will affect the slide's appearance in the show.

Interne

Introduction:-

Internet is a network can be any system carrying interactive information. Internet connected to sharing information and resources. It is a huge a Wide Area Network used for communication and extractive information.



Benefits of Internet:-

You can do a number of things in the Internet like communication with other around the world, operating Bank Account etc. On an average, on one given day, the Internet connects more than 30 million users over 100 countries.

Communication on the Internet:-

a) <u>Electronic Mail(E-Mail):-</u>

Electronic mail is one of the most popular service available on the net. Using e-mail, any user on Internet can send text- messages, pictures, sounds or even audio-video to other users on Internet. To identify any user on Internet, there is a unique address for every user this service.

b) <u>Conferencing / Chatting:-</u>

IRC (Internet Relay Chat) is yet another way of communication on the Internet. It is different from e-mail as while speaking with other users you virtually feel as if you in the same room.

c) Internet Newsgroups: -

News groups are another mode of

communications on the Internet. It is an again a different concept than e-mail and conferencing. There are many newsgroups available on the Internet.

WWW (World Wide Web):-

The World Wide Web (WWW) is the most popular service on the Internet for getting desired information. World Wide Web should not be confused with the collection of networks, but infect is the information that is connected or linked / together formatting a web.

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