Mount Abu Public School

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CLASS IX

COMPUTER

CHAPTER – 1

Useful links

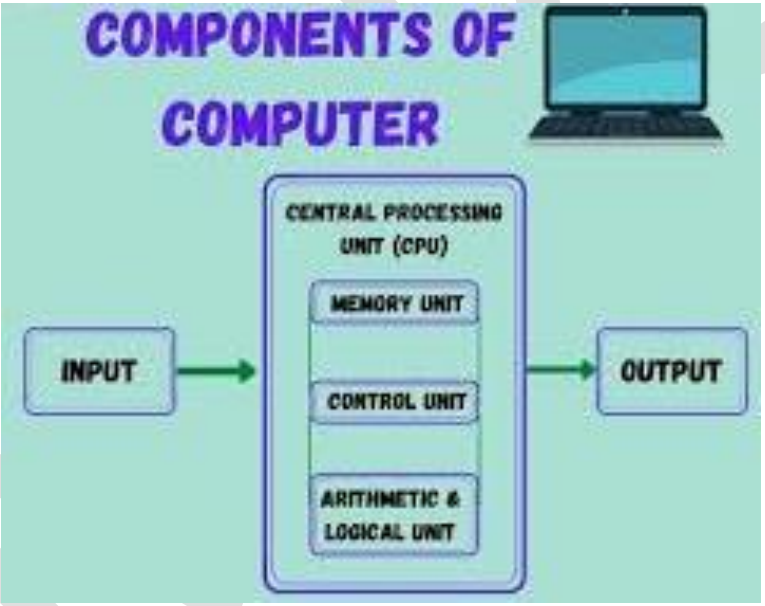
https://youtu.be/A1LwJRYiaho

Computers, in simple words, are machines that perform a set of functions according to their users' directions. Going by this definition, several electronic devices, from laptops to calculators, are computers.

A computer comprises of some basic elements. These include hardware, software, programmes, data and connectivity. No computer can function in the absence of these elements. Apart from these elements, a computer system comprises of three basic components. These components are responsible for making computers actually function. Let's take a look at them in detail.

Basic Components of Computer

Input Unit.
Output Unit.
Memory Unit.
Control Unit.
Arithmetical and Logical Unit.



Input Unit

These components help users enter data and commands into a computer system. Data can be in the form of numbers, words, actions, commands, etc. The main function of input devices is to direct commands and data into computers. Computers then use their CPU to process this data and produce output.

For example, a laptop's keyboard is an input unit that enters numbers and characters. Similarly, even a mouse can be an input unit for entering directions and commands. Other examples include barcode readers, Magnetic Ink Character Readers (MICR), Optical Character Readers (OCR), etc.

Another example of input devices is touch-screens. Users can simply touch these screens without using any other device to enter commands. From smartphones to ATM machines, these input devices are becoming very popular these days.

Central Processing Unit (CPU)

After receiving data and commands from users, a computer system now has to process it according to the instructions provided. Here, it has to rely on a component called the central processing unit. The CPU further uses these three elements:

a) Memory Unit

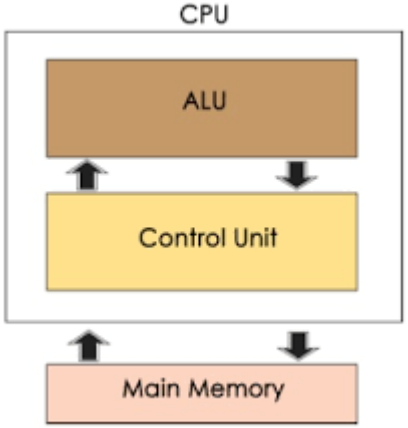
Once a user enters data using input devices, the computer system stores this data in its memory unit. This data will now remain here until other components of CPU process it. The memory unit uses a set of pre-programmed instructions to further transmit this data to other parts of the CPU.

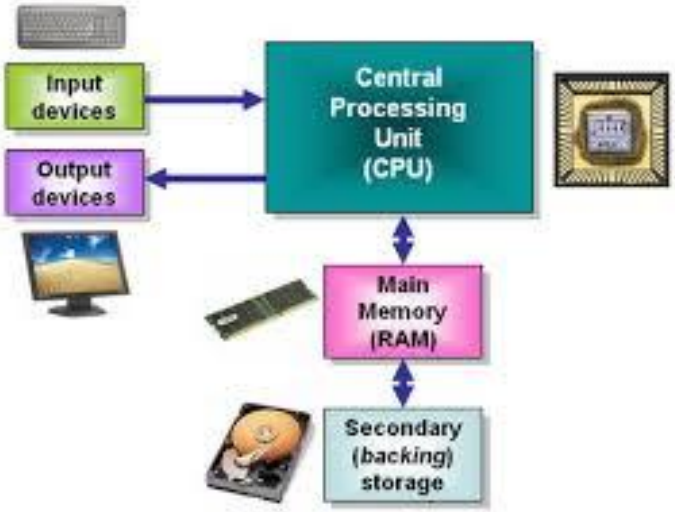
b) Arithmetic and Logic Unit

This part of the CPU performs arithmetic operations. It does basic mathematical calculations like addition, subtraction, division, multiplication, etc. Further, it can even perform logical functions like the comparison of data.

c) Control Unit

This unit is the backbone of computers. It is responsible for coordinating tasks between all components of a computer system. The control unit collects data from input units and sends it to processing units depending on its nature. Finally, it also further transmits processed data to output units for users.


CPU
ALU
Control Unit
Main Memory


Input devices
Output devices
Central Processing Unit (CPU)
Main Memory (RAM)
Secondary (backing) storage

Output Unit

The third and final component of a computer system is the output unit. After processing of data, it is converted into a format which humans can understand. After conversion, the output units displays this data to users. Examples of output devices include monitors, screens, printers and speakers. Thus, output units basically reproduce the data formatted by the computer for users' benefit.

ASSIGNMENT

1. What is a computer? How is it a useful device?
2. What are the strengths and weaknesses of a computer system?
3. What do you understand by IPO cycle?
4. How can computer be classified?
5. What are the four basic components of computer?
6. What is a computer program?
7. What is data?
8. What is computer program?

CHAPTER – 2

Useful links

https://youtu.be/SSnNY8GfZig

https://youtu.be/3vSnVvtv_PQ

Computer hardware refers to the physical parts of a computer and related devices. The internal hardware parts of a computer are often referred to as components and the external hardware devices are usually called peripherals.

In this unit, you will learn more about the types of hardware found in a computer. These are:

- Input
- Output
- Memory
- Storage
- Processing
- Communication.

INPUT DEVICES

An input device allows the user to interact directly with a computer. The devices give data and instructions to the computer, such as:

- keyboards
- pointing devices (mouse)

- touchscreens
- touchpads
- tablet/pen input devices
- game controllers
- cameras
- microphones
- video capture devices
- scanners
- optical readers
- biometric devices
- data collection devices

DEVICE	USES	PHOTO
Game controllers	Game controllers are input devices designed specifically for use in games. They have directional inputs as well as action buttons linked to specific actions inside a game.	
Cameras	Cameras allow you to capture images. They are used for making video calls, participating in video conferences and recording videos from your computer.	
Microphones	Microphones allow you to record sounds and interact with a computer using your voice.	
Video capture devices	Video capture devices allow you to record a live video stream using your computer.	
Scanners	Scanners allow you to scan pictures of pages (such as, photos or contracts) directly onto your computer. Scanners are often packaged with optical character recognition (OCR) software that converts the text on a picture to text that can be used in a word processing application.	
Optical readers	Optical readers are devices that can read data from a physical object (such as, a QR code, barcode or a magnetic strip) into a computer.	
Biometric devices	These devices read data presented to a computer and compare it with the saved data. Biometric devices include fingerprint, iris and retina scanners, but these are not commonly used with desktop computers.	
Data collection devices	Data collection devices obtain data directly from a location where an event or transaction takes place.	

OUTPUT DEVICES

An output device is any device that takes data stored on a computer and makes it available to the user in an easy to understand way. This data may be made available using pictures (such as on a monitor or printed to a page) or using sounds (such as with speakers and earphones). The output devices can be divided into the following:

- display devices – monitors (LCD, LED)
- printers (Inkjet, Ink tank, Laser, 3-D)
- data projectors (HDMI, VGA)
- speakers.

DISPLAY DEVICES

MONITORS

All computer software is built around a visual representation of data, therefore the monitor is one of the most important output devices for any computer.

PRINTERS

A printer allows a computer to use data and output it to paper. There are three main types of printers. These are:

- **Dot-matrix printers:** These printers use a series of small pins to strike a ribbon coated with ink, causing the ink to transfer to the paper at the point of impact. Dot-matrix printers are mostly outdated as a personal printer but are still used in banks and manufacturing businesses where it is necessary to use **carbon paper** to produce multiple copies of a document.

- **Ink-jet printers:** An inkjet printer operates by painting an image using a spray of ink. This is done by hundreds of tiny nozzles that spray drops of ink directly onto the paper while moving across it. There are two types of ink-jet printers: continuous printers that are usually used for commercial purposes; and on-demand printers. It is a good, all-round printer that is most commonly used for smaller jobs. They are however slightly less reliable.
- **Laser printers:** A laser printer is a popular printer for personal use. These printers use **electrostatic technology**. To start the process, the drum is given a positive electrical charge and while it rotates, the printer shines a narrow laser beam over its surface, drawing or projecting the letters and images to be printed as a pattern of electrical charges onto the surface of the drum. When the pattern is set, the drum is rolled in **toner**, which sticks to certain parts of the drum, that is, the image. When rolled over a piece of paper, this image is 'burned' into the paper with heat and pressure. When the printing is done, the electrical charge is removed from the drum and the excess toner is collected. Laser printers are used for mass production printing because they are generally faster and more reliable but with worse quality prints.
- **Ink-tank printer:** These printers have print heads built into the printer and u se an integrated bulk ink system. This means that ink is supplied continuously to the print head from an ink tank within the printer itself, no expensive cartridges are needed. When the ink is finished, it can be refilled from an ink bottle. Because of this, printing costs are much lower. They produce low-cost, high volume printing.

STORAGE DEVICES:

Storage devices all serve the same general purpose: to store data. Because of the differences in storage capacity, portability and speed, different storage devices are generally used for different reasons.

When evaluating any storage device, there are certain things that you must take into consideration. These are:

- function – that determines whether you need an SSD or an HDD.
- storage capacity – that determines how much information you can save on the device.
- portability – that determines how easily it can be carried around and moved from one computer to another.
- use – that determines what the storage device will most likely be used for. This includes transferring files and running applications.

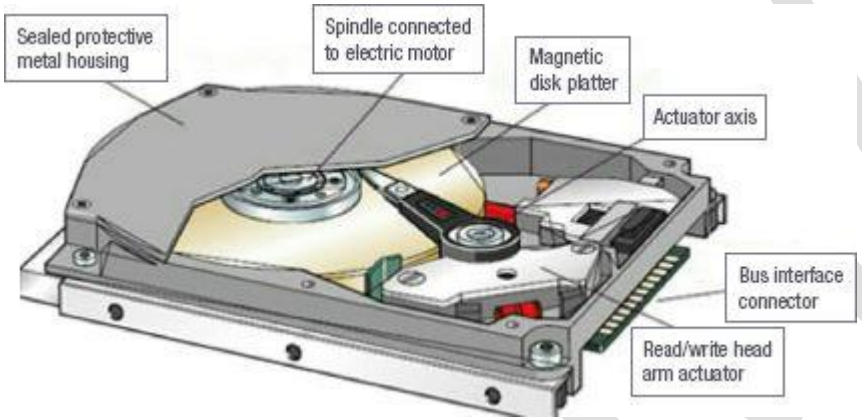
- **volatility** – that determines if the device will lose the data when turned off. You do not want a device that will lose all data in case of a power outage.
- **reliability and durability** – that determines how likely the device is to break down.

TYPES OF STORAGE DEVICES

HARD DISK DRIVE (HDD)

A computer hard disk drive is a secondary storage device consisting of magnetic disks or platters that rotate at high speed. Its main function is to store data permanently by controlling the positioning, reading and writing of data onto the hard disk.

Currently modern hard drives can have huge storage space and are either internal (fixed), or external (portable).



An example of an internal hard drive

EXTERNAL (PORTABLE) HARD DRIVES

Portable (or external) hard drives are used outside of the computer case.

Portable hard drives are a lot easier to move around than fixed hard drives. However, thanks to USB connectors, they can quickly be connected to different computers and are ideal for transferring large amounts of data or backing up data outside of your computer. They are sensitive to rough handling.

An example of an external hard drive

An example of an SSD

An example of a flash drive

An example of an SD/Memory card

An example of a CD/DVD writer

SOLID-STATE DRIVE

Solid-state drives (or SSDs) are a type of storage device that, unlike hard drives, do not have any moving parts. Instead, SSDs make use of special floating gate transistors to store data electronically. Solid state drives (SSDs) are generally many times faster than normal hard drives. Since SSDs have no moving parts, they are much quieter, more reliable and robust than HDDs. They also generate less heat, thus increasing their life span, and uses less power than an HDD, which means they are more suitable for mobile devices.

HYBRID STORAGE DEVICE

A hybrid storage device is a storage device that combines an HDD with an SSD. By doing this, the hybrid storage device can take advantage of the storage capacity of the HDD as well as the speed of the SSD.

Hybrid drives work by storing commonly used files that require high speeds (such as operating system files) on the faster SSD storage, while storing large, less commonly used files (such as media files) on the high capacity HDD.

FLASH DRIVES (DISKS)

Flash drives are very small, portable storage drives that store information using a similar method to SSD. Flash drives connect to a USB port, which makes it easy to transfer data quickly between devices.

SD/MEMORY CARDS

SD/Memory cards (especially MicroSD cards) are tiny electronic storage devices. Because of their small physical size, SD cards are often used in portable devices such as smartphones, tablets and cameras to provide storage capacity.

CD, DVD AND BLU-RAY DRIVES

CDs (compact discs), DVDs (digital versatile disc) and Blu-ray discs are popular portable forms of storage that can be read using a dedicated CD, DVD or Blu-ray drive. These discs store information optically, which means the information is stored using lights or electromagnetic waves.

The advantage of writing data to CDs or DVDs is that the discs are affordable. These optical drives are also backwards compatible. This means that a newer optical drive (like a Blu-ray drive), can read all older optical forms (like CDs and DVDs). However, an older optical drive (like a CD drive) can only read CDs.

Primary Memory (Main Memory)

Primary memory holds only those data and instructions on which the computer is currently working. It has a limited capacity and data is lost when power is switched off. It is generally made up of semiconductor device. These memories are not as fast as registers. The data and instruction required to be processed resides in the main memory. It is divided into two subcategories RAM and ROM.

Characteristics of Main Memory

- These are semiconductor memories.
- It is known as the main memory.
- Usually volatile memory.
- Data is lost in case power is switched off.
- It is the working memory of the computer.
- Faster than secondary memories.
- A computer cannot run without the primary memory.

Secondary Memory

This type of memory is also known as external memory or non-volatile. It is slower than the main memory. These are used for storing data/information permanently. CPU directly does not access these memories, instead they are accessed via input-output routines. The contents of secondary memories are first transferred to the main memory, and then the CPU can access it. For example, disk, CD-ROM, DVD, etc.

Characteristics of Secondary Memory

- These are magnetic and optical memories.
- It is known as the backup memory.
- It is a non-volatile memory.
- Data is permanently stored even if power is switched off.
- It is used for storage of data in a computer.

- Computer may run without the secondary memory.
- Slower than primary memories.

ASSIGNMENTS

1. What is a pointing device? Name a popular pointing device?
2. Why is auxiliary memory required?
3. Discuss the functions of DVDs.
4. Discuss various storage units.
5. Discuss the usage of hard disk.
6. When are magnetic tapes are used and how?
7. Describe the functions of CPU?
8. When is a scanner used for input? Discuss various types of scanners.
9. What role do input unit and output unit play in a computer system?
10. What is a processing unit?
11. What does OCR stands for?
12. What does RAM stand for?
13. How important is control unit in a computer system?

CHAPTER – 3

Useful links

https://youtu.be/BTB86HeZVwk

https://youtu.be/Q-uS8OBANEU

Software is a set of programs, which is designed to perform a well-defined function. A program is a sequence of instructions written to solve a particular problem.

There are two types of software −

- System Software
- Application Software

System Software

The system software is a collection of programs designed to operate, control, and extend the processing capabilities of the computer itself. System software is generally prepared by the computer manufacturers. These software products comprise of programs written in low-level languages, which interact with the hardware at a very basic level. System software serves as the interface between the hardware and the end users.

Some examples of system software are Operating System, Compilers, Interpreter, Assemblers, etc.

Here is a list of some of the most prominent features of a system software −

- Close to the system
- Fast in speed
- Difficult to design
- Difficult to understand
- Less interactive

- Smaller in size
- Difficult to manipulate
- Generally written in low-level language

Application Software

Application software products are designed to satisfy a particular need of a particular environment. All software applications prepared in the computer lab can come under the category of Application software.

Application software may consist of a single program, such as Microsoft's notepad for writing and editing a simple text. It may also consist of a collection of programs, often called a software package, which work together to accomplish a task, such as a spreadsheet package.

Examples of Application software are the following −

- Payroll Software
- Student Record Software
- Inventory Management Software
- Income Tax Software
- Railways Reservation Software
- Microsoft Office Suite Software
- Microsoft Word
- Microsoft Excel
- Microsoft PowerPoint

ASSIGNMENTS

1. What is encryption and decryption?
2. Define ciphertext.
3. How is file management software useful?
4. What is a computer virus? How can it affect your computer?
5. What is an operating system? What is its role?
6. How can a computer software be classified?
7. What are the two categories of system software?
8. What is application software? What are the three categories of application software?
9. What is the importance of application software?
10. What is Bespoke software?

CHAPTER – 4

https://youtu.be/aqR2icT3Agg

https://youtu.be/fU7TcGhVsRw

The Operating System is a program with the following features −

- An operating system is a program that acts as an interface between the software and the computer hardware.
- It is an integrated set of specialized programs used to manage overall resources and operations of the computer.
- It is a specialized software that controls and monitors the execution of all other programs that reside in the computer, including application programs and other system software.

Objectives of Operating System

The objectives of the operating system are −

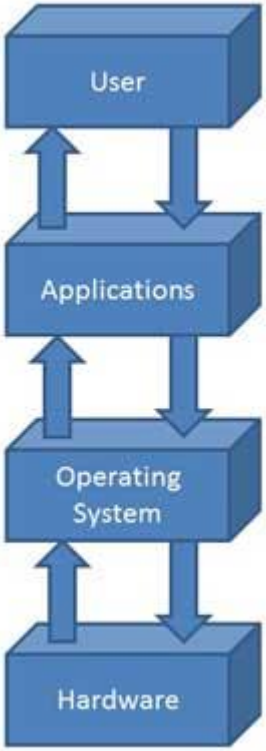
- To make the computer system convenient to use in an efficient manner.
- To hide the details of the hardware resources from the users.
- To provide users a convenient interface to use the computer system.
- To act as an intermediary between the hardware and its users, making it easier for the users to access and use other resources.
- To manage the resources of a computer system.

- To keep track of who is using which resource, granting resource requests, and mediating conflicting requests from different programs and users.
- To provide efficient and fair sharing of resources among users and programs.

Characteristics of Operating System

Here is a list of some of the most prominent characteristic features of Operating Systems −

- **Memory Management** − Keeps track of the primary memory, i.e. what part of it is in use by whom, what part is not in use, etc. and allocates the memory when a process or program requests it.
- **Processor Management** − Allocates the processor (CPU) to a process and deallocates the processor when it is no longer required.
- **Device Management** − Keeps track of all the devices. This is also called I/O controller that decides which process gets the device, when, and for how much time.
- **File Management** − Allocates and de-allocates the resources and decides who gets the resources.
- **Security** − Prevents unauthorized access to programs and data by means of passwords and other similar techniques.
- **Job Accounting** − Keeps track of time and resources used by various jobs and/or users.
- **Control Over System Performance** − Records delays between the request for a service and from the system.
- **Interaction with the Operators** − Interaction may take place via the console of the computer in the form of instructions. The Operating System acknowledges the same, does the corresponding action, and informs the operation by a display screen.
- **Error-detecting Aids** − Production of dumps, traces, error messages, and other debugging and error-detecting methods.
- **Coordination Between Other Software and Users** − Coordination and assignment of compilers, interpreters, assemblers, and other software to the various users of the computer systems.


User
Applications
Operating System
Hardware

ASSIGNMENTS

1. What is mobile application?
2. What is file system? How is it useful?
3. What does the term WIMP interface mean?
4. What is the difference between multi – programming and multi tasking.
5. Explain the term GUI.
6. What is multi tasking system and how it works.
7. What do you mean by communication?
8. Name the different types of computer network?
9. Differentiate :- data, information & multimedia.
10. What are the different uses of internet.
11. Give some examples of guided media.
12. What is social networking?
13. Why is networking needed?
14. What is internet?
15. Write the full form of LAN, MAN, WAN.

CHAPTER – 5

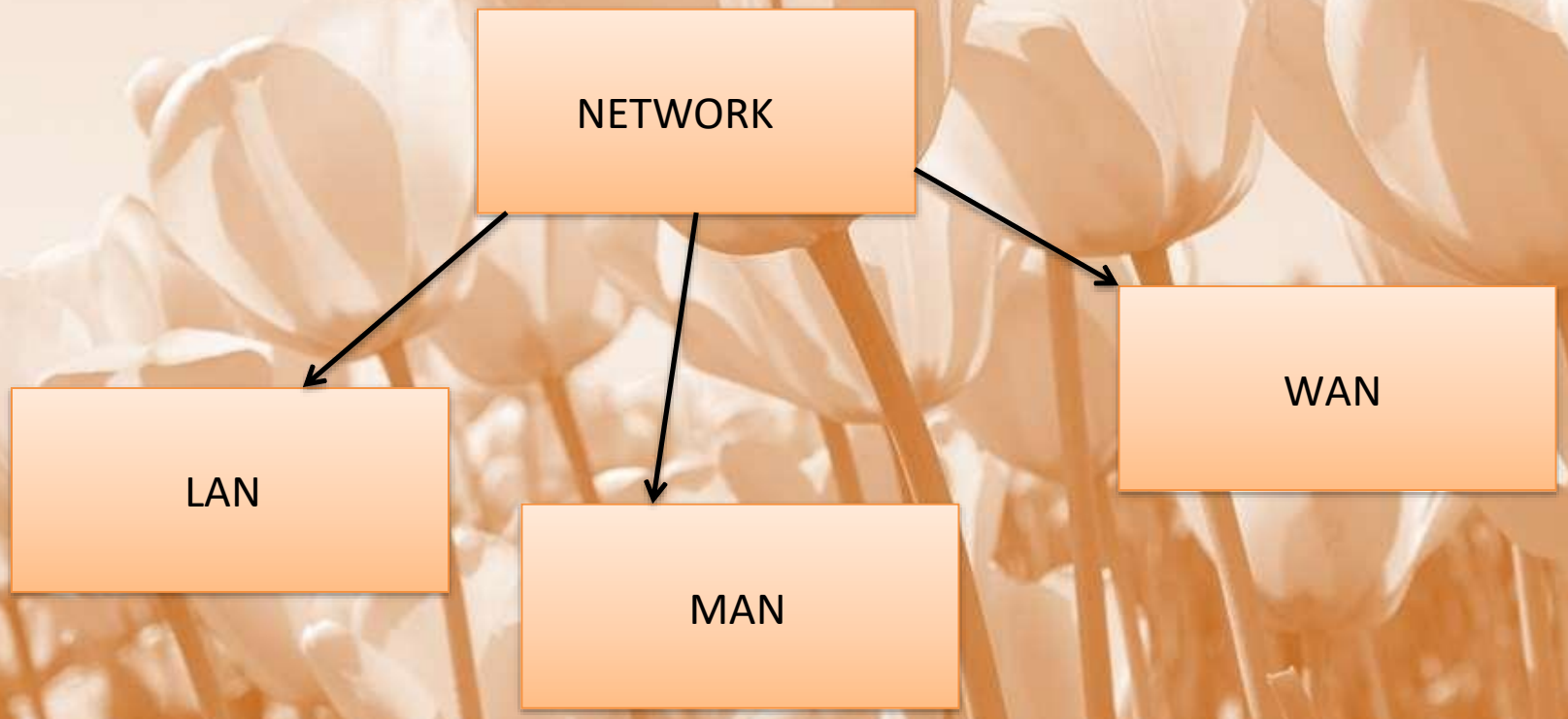
Useful links

https://youtu.be/L3ZzkOTDins
https://youtu.be/0AcpUwnc12E

NETWORKING

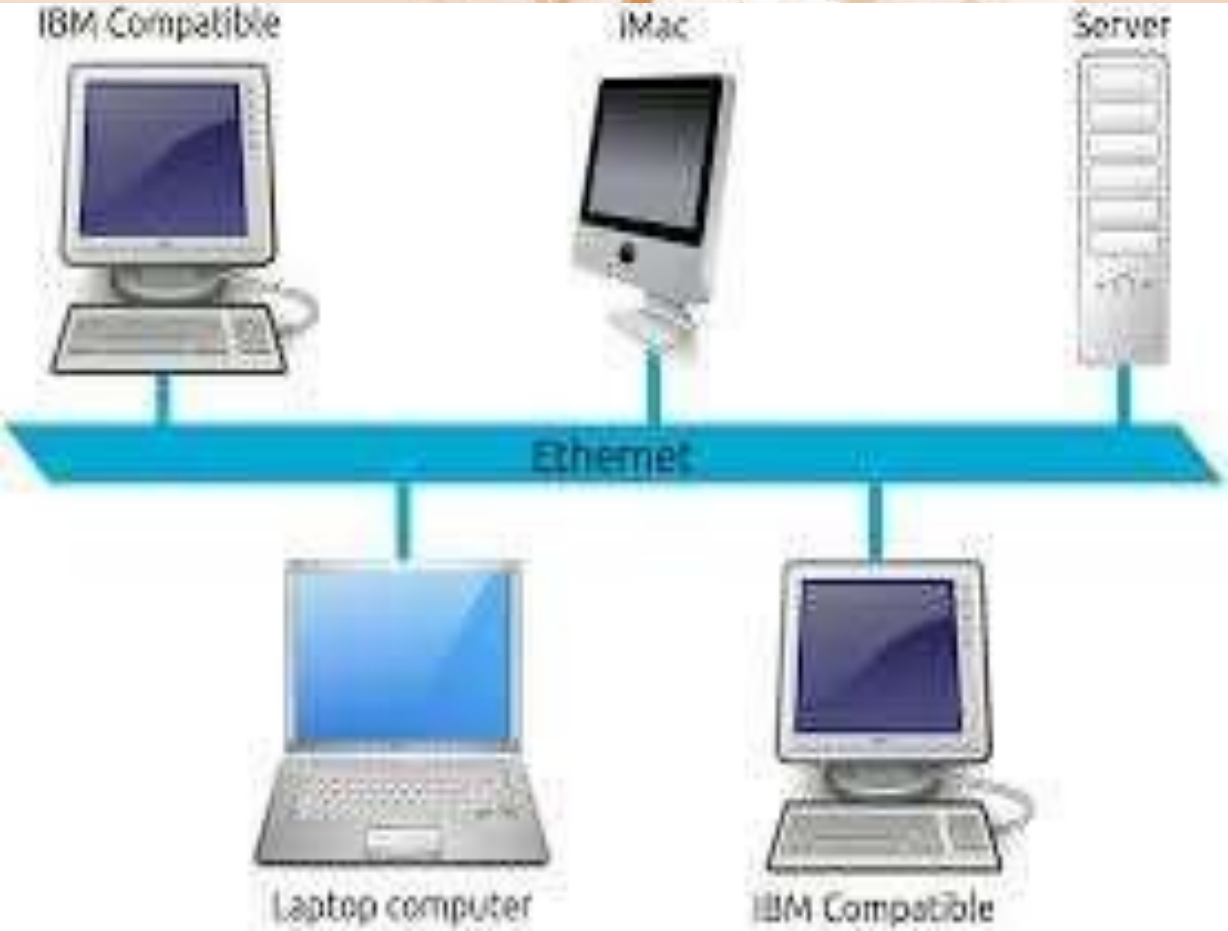
- AN INTERCONNECTION OF A GROUPOF COMPUTERS
- COMPUTER ARE LINKED TOGETHER FOR THE PURPOSE OF SHARING DATA

TYPES OF NETWORK



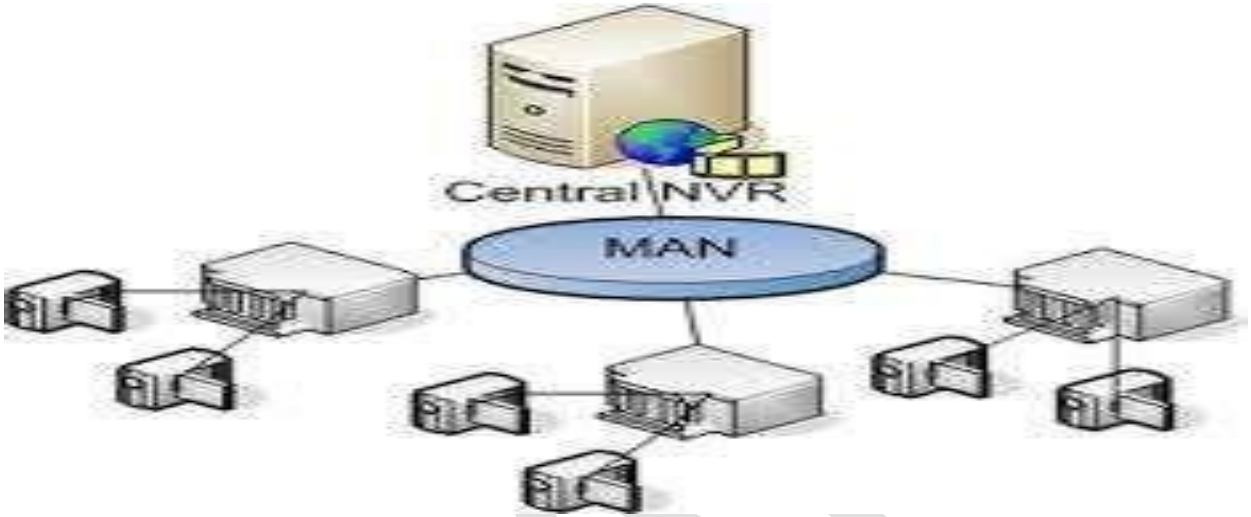
LAN

- FULL FORM IS LOCAL AREA NETWORK
- CONNECTS DEVICES WITHIN A SHORTAREA LIKE OFFICES, HOMES, INTERNET CAFÉ, ETC.
- USES TCP/IP NETWORK PROTOCOLFOR COMMUNICATION
- CAN BE CONTROLLED AND OPERATEDBY A SINGLE PERSON OR AN ORGANISATION.

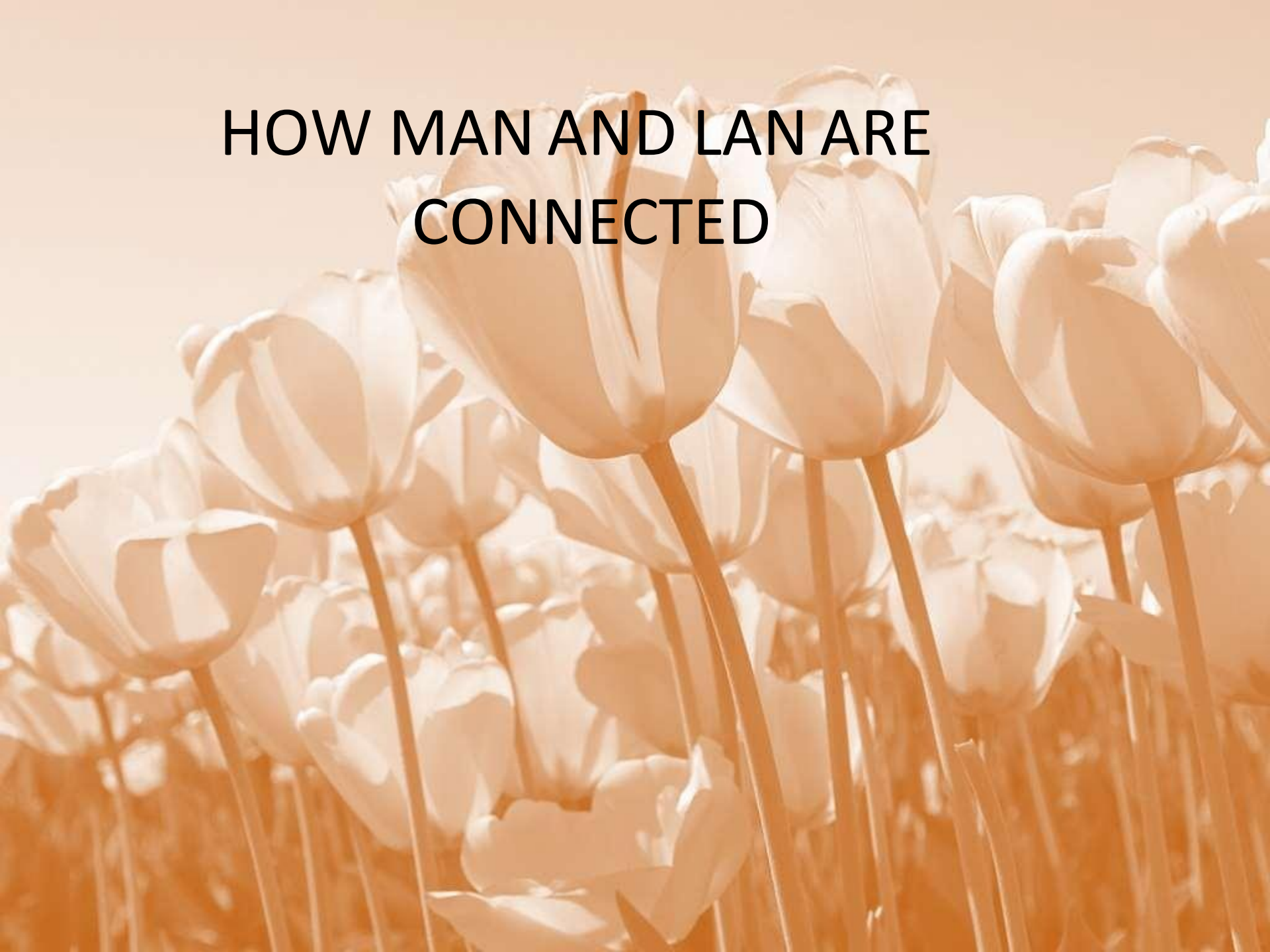

IBM Compatible
iMac
Server
Ethernet
Laptop computer
IBM Compatible

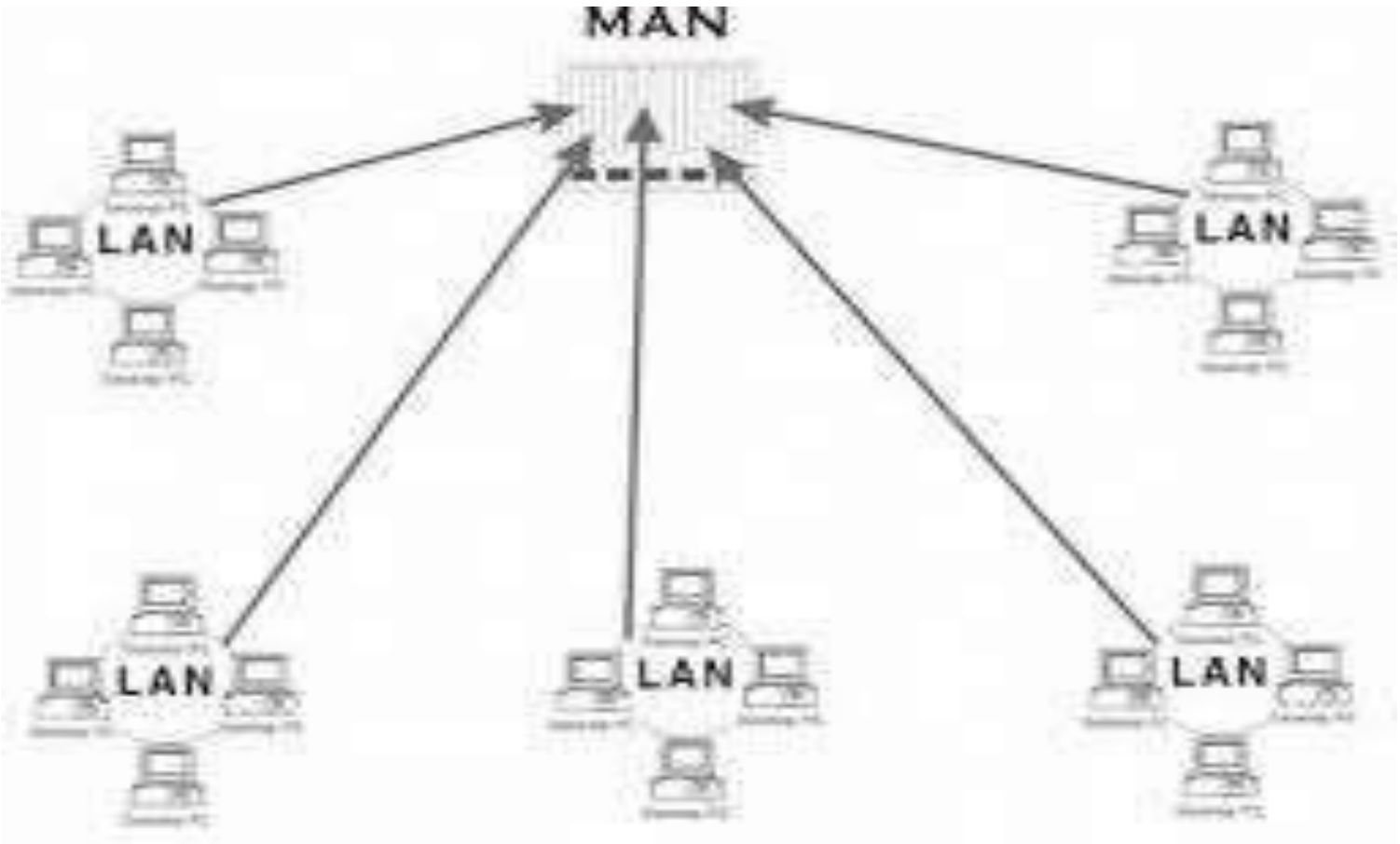
MAN

- MAN STANDS FOR METROPOLITANAREA NETWORK
- COVERS A LARGER SCALE LIKE A CITY


Central NVR
MAN

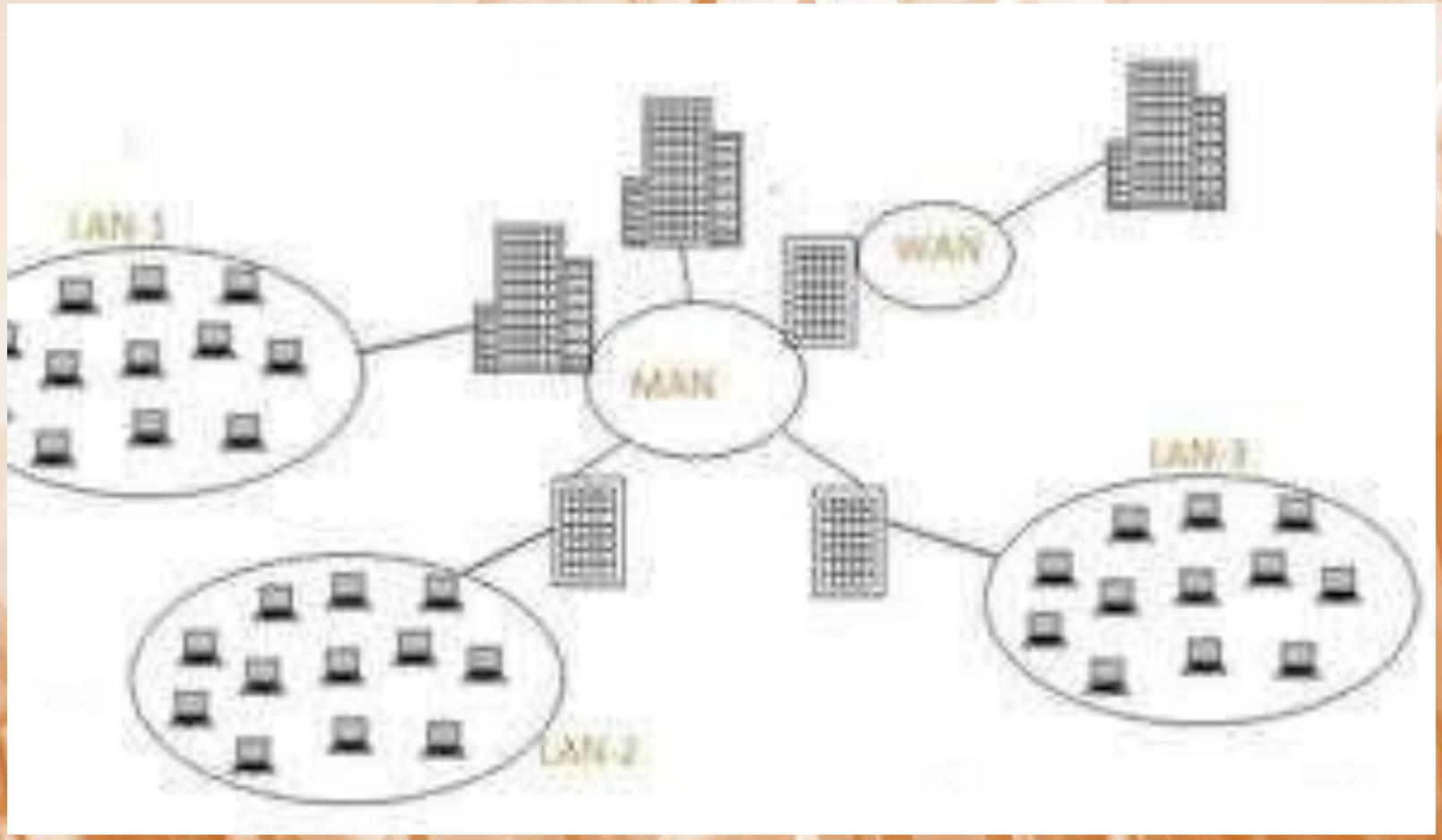
HOW MAN AND LAN ARE CONNECTED




MAN
LAN
LAN
LAN
LAN
LAN

WAN

- WAN STANDS FOR WIDE AREA NETWORK
- COVERS LARGE DISTANCE FOR COMMUNICATION BETWEEN COMPUTERS
- INTERNET IS THE BIGGEST EXAMPLEOF WIDE AREA NETWORK


LAN-1
WAN
MAN
LAN-3
LAN-2

NETWORKING COMPONENTS

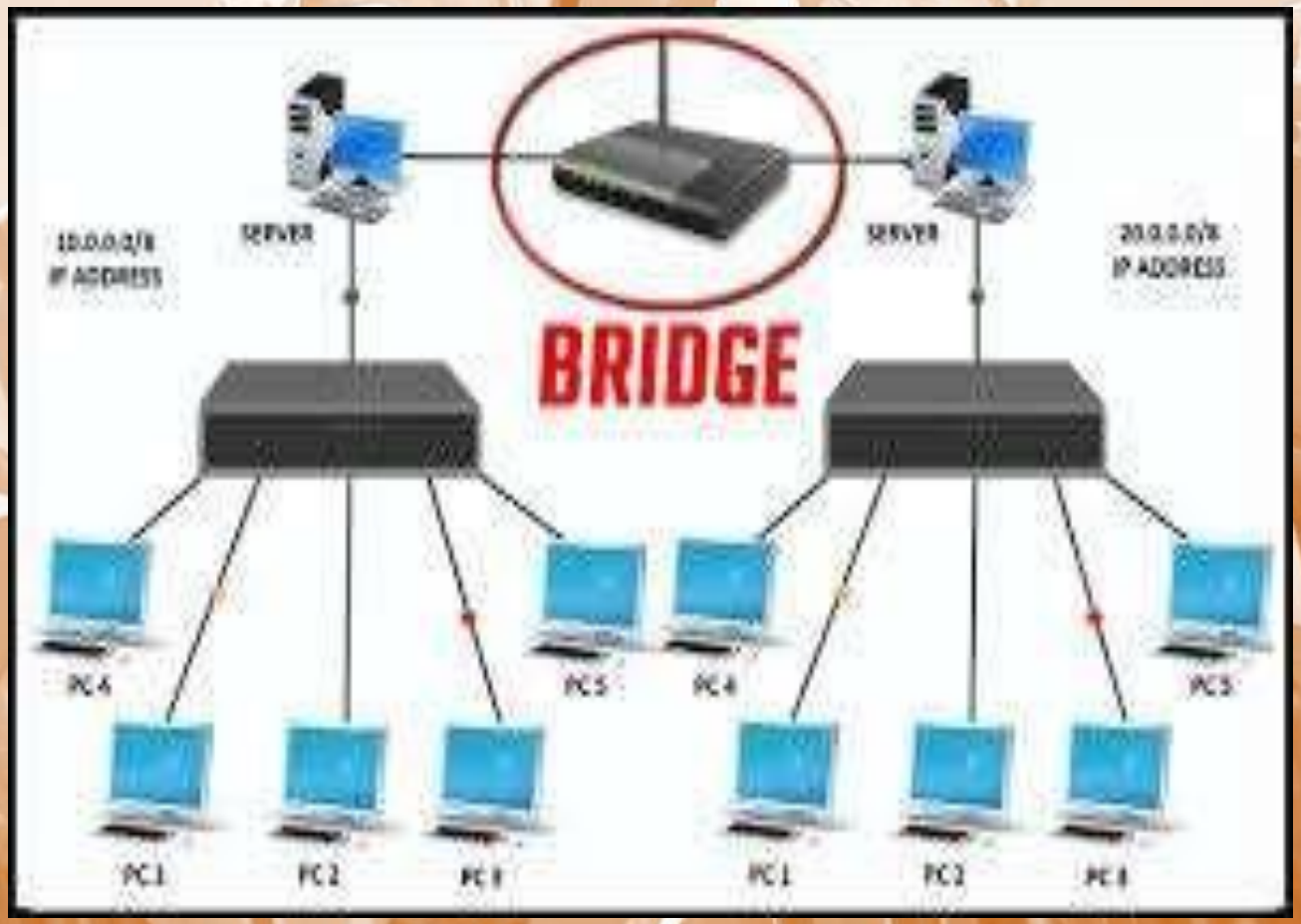
- ROUTER
- HUB
- BRIDGE
- GATEWAY

ROUTER

- IS SPECIALISED FOR DETERMININGTHE NEXT NETWORKING POINT WHERE THE DATA PACKET IS FORWARDED TOWARDS ITS DESTINATION.

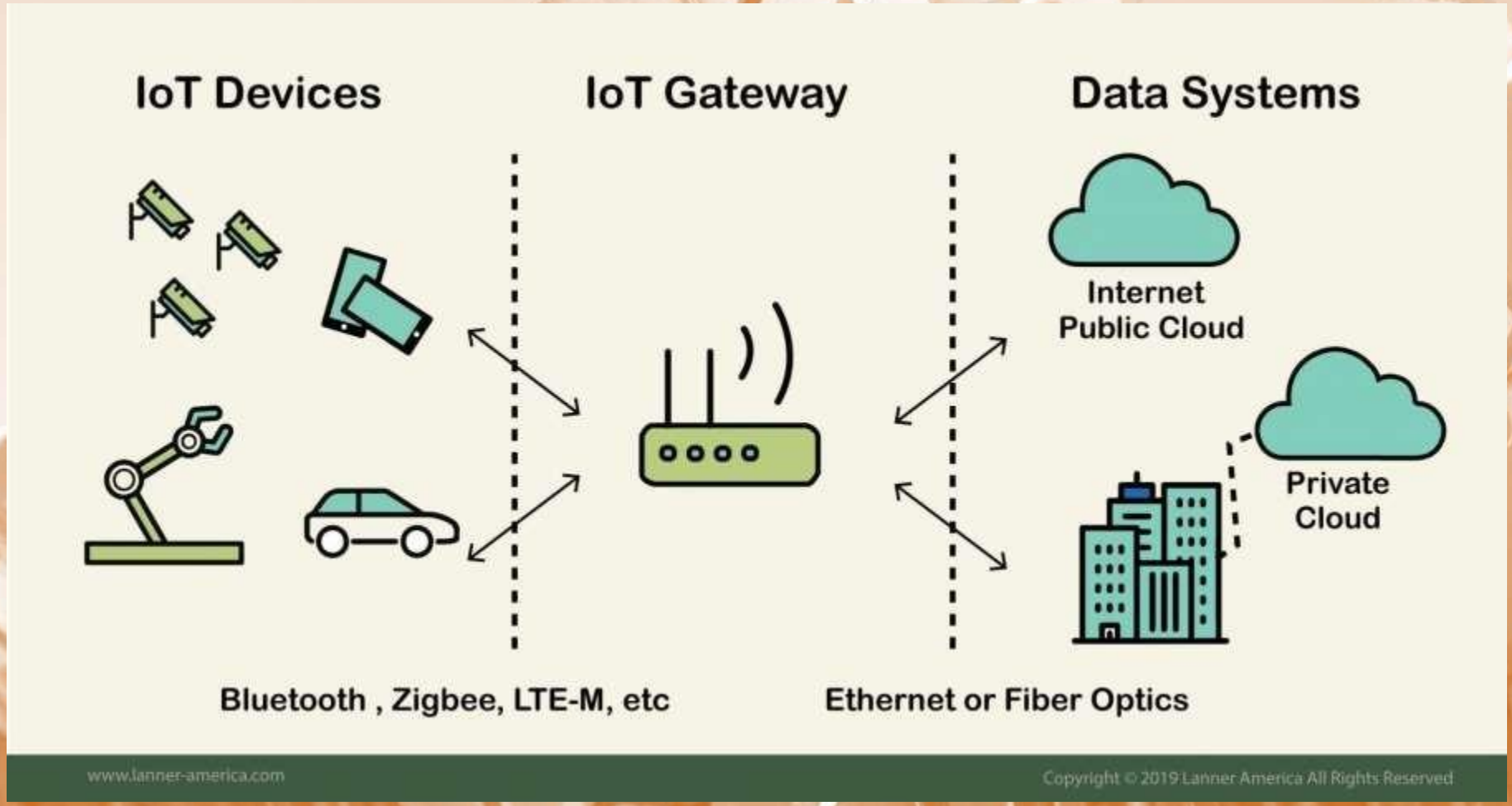
BRIDGE

- IT IS USED FOR CONNECTION OF DATALINK LAYER AND MULTIPLE NETWORKSEGMENTS.


SERVER
SERVER
IP ADDRESS
IP ADDRESS
BRIDGE
PC 4
PC 5
PC 4
PC 5
PC 1
PC 2
PC 1
PC 2

GATEWAY

- IT IS PLACED AT THE NETWORK NODE.
- IT ACTS AS AN INTERFACE WITYHOTHER NETWORK THAT USES PROTOCOLS.



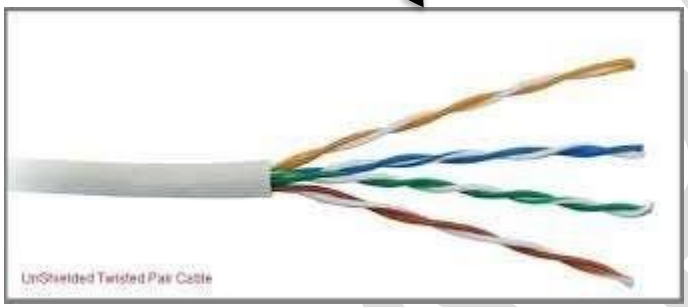
HUB

- IT IS A DEVICE FOR CONNECTING MULTIPLE TWISTED PAIR OF FIBRE OPTIC ETHERNET DEVICES TOGETHER AND MAAKING THEM ACTAS A SINGLE NETWORK SEGMENT.

COMMUNICATION CABLE

CONNECTION IN HUB

TWISTED PAIR CABLE



ASSIGNMENTS

1. What do you mean by communication?
2. What is networking?
3. What is communication channel?
4. What is internet? What are its uses?
5. What are guided and unguided media?
6. What is the difference between LAN and WAN?
7. What is cloud computing?
8. How is private clouds different from public clouds?
9. What do you understand by the terms WiFi and Bluetooth?
10. Discuss the following types of network (i) LAN, (ii)MAN, (iii)WAN.

CHAPTER – 6

Internet safety or **online safety** or **cyber safety** or **E-Safety** is trying to be safe on the internet and is the act of maximizing a user's awareness of personal safety and security risks to private information and property associated with using the internet, and the self-protection from computer crime.

As the number of internet users continues to grow worldwide, *"Statistics". ITU.*</ref> internets, governments and organizations have expressed concerns about the safety of children and teenagers using the Internet. Over 45% have announced they have endured some sort of cyber-harassment. Safer Internet Day is celebrated worldwide in February to raise awareness about internet safety.[1] In the UK the Get Safe Online campaign has received sponsorship from government agency Serious Organized Crime Agency (SOCA) and major Internet companies such as Microsoft and eBay.[2]

What is online tracking and how do websites track you?

- (1) IP address. When **you** use the internet, **your** computer **can** be identified by a unique number called an IP address - Internet Protocol address. ...
- (2) HTTP referrers. ...
- (3) Cookies. ...
- (4) Tracking Pixels. ...
- (5) Supercookies. ...
- (6) User agents. ...
- (7) Browser fingerprinting.

Choosing good password:

- No personal information
- Use longer passwords
- No dictionary words, proper nouns or foreign words
- Do not repeat passwords on different websites.

Forms of cybercrime

- phishing: using fake email messages to get personal information from internet users;
- misusing personal information (**identity theft**);
- **hacking**: shutting down or misusing websites or computer networks;
- spreading hate and inciting terrorism;
- distributing child pornography;
- grooming: making sexual advances to minors.

Personal safety[edit]

The growth of the internet gave rise to many important services accessible to anyone with a connection. One of these important services is digital communication. While this service allowed communication with others through the internet, this also allowed the communication with malicious users. While malicious users often use the internet for personal gain, this may not be limited to financial/material gain. This is especially a concern to parents and children, as children are often targets of these malicious users. Common threats to personal safety include: phishing, internet scams, malware, cyberstalking, cyberbullying, online predators and sextortion.

Cyberstalking[edit]

Cyberstalking is the use of the Internet or other electronic means to stalk or harass an individual, group, or organization.[4] It may include false accusations, defamation, slander and libel. It may also include monitoring, identity theft, threats, vandalism, solicitation for sex, or gathering information that may be used to threaten, embarrass or harass.

Cyberbullying[edit]

Cyberbullying is the use of electronic means such as instant messaging, social media, e-mail and other forms of online communication with the intent to abuse, intimidate, or overpower an individual or group. In a 2012 study of over 11,925 students in the United States, it was indicated that 23% of adolescents reported being a victim of cyberbullying, 30% of which reported experiencing suicidal behavior.[5][6] The Australian eSafety Commissioner's website reports that 20% of young Australians report being socially excluded, threatened or abused online[7]

Online predation[edit]

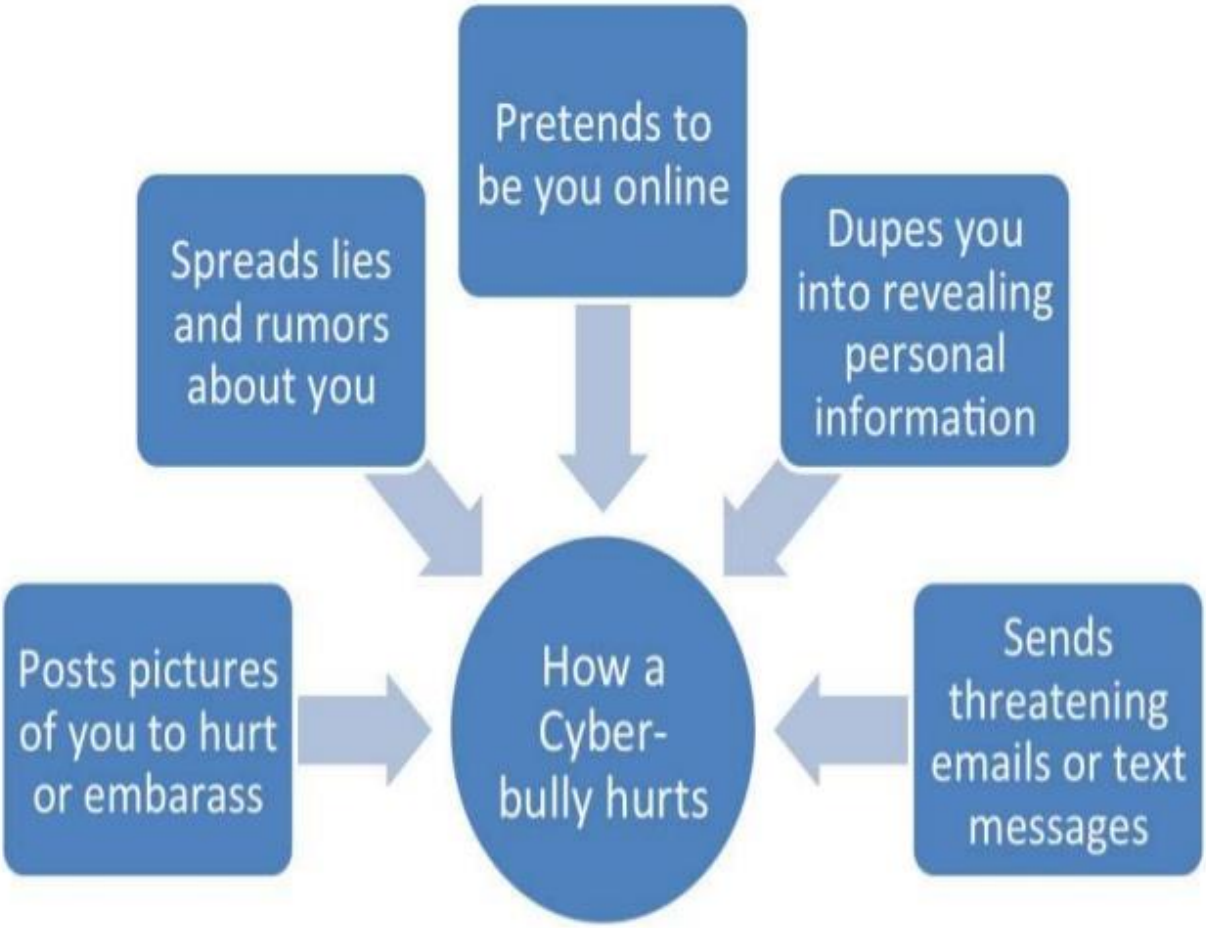
Online predation is the act of engaging an underage minor into inappropriate sexual relationships through the internet. Online predators may attempt to initiate and seduce minors into relationships through the use of chat rooms or internet forums. In a sample of 216 incarcerated sexual offenders, the behavior characteristics that emerged were categorized into three groups: A) manipulative - typically a child molester; B) Opportunist - typically a rapist and C) Coercive being a mixture of both rapists and child molesters. [8]

Obscene/offensive content[edit]

Various websites on the internet contain material that some deem offensive, distasteful or explicit, which may often be not of the user's liking. Such websites may include internet, shock sites, hate speech or otherwise inflammatory content. Such content may manifest in many ways, such as pop-up ads and unsuspecting links.[9]

What is cyber bullying?

- Sending mean messages or threats to a person's email account or cell phone.
- Spreading rumours online or through texts.
- Posting hurtful or threatening messages on social networking sites or web pages.
- Stealing a person's account information to break into their account and send damaging messages.
- Pretending to be someone else online to hurt another person.
- Taking unflattering pictures of a person and spreading them through cell phones or the Internet.


Pretends to be you online
Spreads lies and rumors about you
Dupes you into revealing personal information
Posts pictures of you to hurt or embarass
How a Cyber-bully hurts
Sends threatening emails or text messages

Safety measures to be taken-

- Avoid exchanging pictures or giving out e-mail addresses and personal information to people you meet online.

- Never post your personal information, such as a cell phone number, home number, home address, or your location on any social networking site or through mobile apps like Snapchat or Instagram.

- Don't always trust your newfound online friends. Remember, the predator waits patiently.

- Make passwords long and strong. Use a combination of lower and uppercase letters along with symbols.

- Links in email, tweets, posts, and online advertising are often the way cybercriminals compromise your computer. If it looks suspicious, even if you know the source, it's best to delete or if appropriate, mark as junk email.

ASSIGNMENTS

1. What is the purpose of the firewall?
2. What is cyber safety? Why is it important?
3. What are cookies?
4. What type of damages can caused can be caused by virus to your computer?
5. What is cyber bulling and cyber stalking?
6. What is cyber crime?
7. Why are antivirus software considered important?
8. What is confidentiality of information?
9. How do websites track you online?
10. What is private browsing?
11. What is the significance of a firewall in a computer's security scheme?
12. Why are passwords considered an important safety tool?
13. What should you keep in mind while choosing effective password?
14. How do you know if the website is secure?
15. What makes a secure password?

Useful links:

https://youtu.be/pI53WCpAJ3Y

https://youtu.be/Fd2e_oWTYhA

OpenOffice.org (**OOo**), commonly known as **OpenOffice**, is a discontinued open-source office suite. It was an open-sourced version of the earlier StarOffice, which Sun Microsystems acquired in 1999 for internal use.

OpenOffice included a word processor (Writer), a spreadsheet (Calc), a presentation application (Impress), a drawing application (Draw), a formula editor (Math), and a database management application (Base).[9] Its default file format was the OpenDocument Format (ODF), an ISO/IEC standard, which originated with OpenOffice.org. It could also read a wide variety of other file formats, with particular attention to those from Microsoft Office.

Sun open-sourced the OpenOffice suite in July 2000 as a competitor to Microsoft Office,[10][11] releasing version 1.0 on 1 May 2002.[1]

In 2011, Oracle Corporation, the then-owner of Sun, announced that it would no longer offer a commercial version of the suite[12] and donated the project to the Apache Foundation.[13][14]

Apache renamed the software Apache OpenOffice.[15] Other active successor projects include LibreOffice (the most actively developed[16][17][18]) and NeoOffice (commercial, and available only for macOS).

OpenOffice.org was primarily developed for Linux, Microsoft Windows and Solaris, and later for OS X, with ports to other operating systems. It was distributed under the GNU Lesser General Public License version 3 (LGPL); early versions were also available under the Sun Industry Standards Source License (SISSL).

ASSIGNMENTS

1. What is a word processor?
2. What do you mean by word wrapping?
3. What is meant by text alignment?
4. Define indentation.
5. Difference between copying and moving a text?
6. What is meant by formatting a text?
7. What do you understand by the term clipboard?
8. What are the advantages of word processor over typewriter?
9. What is header and footer in writer?
10. What are the advantages of find and replace feature in word processor?
11. What is paragraph formatting in writer.

12. Where does a text go when you cut it or copy it?
13. What are non-printing characters? What are the different marks for displaying the non-printing characters?
14. Which command is used to save a file in writer?

CHAPTER – 8

A **word processor** (**WP**)[1][2] is a device or computer program that provides for input, editing, formatting and output of text, often with some additional features.

Early word processors were stand-alone devices dedicated to the function, but current word processors are word processor programs running on general purpose computers.

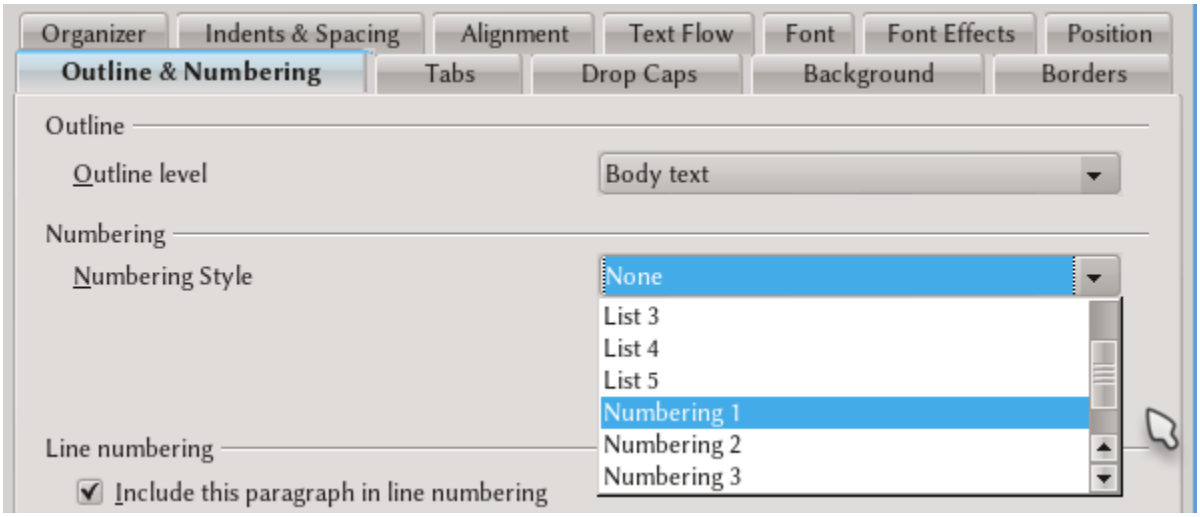
The functions of a word processor program fall somewhere between those of a simple text editor and a fully functioned desktop publishing program. However the distinctions between these three have changed over time, and were unclear after 2010.[3][

https://youtu.be/uZhcFO-a8jk
https://youtu.be/UfPRD9wHzfY

About the List Styles and How to Use Them

We already talked about numbered lists and bullets as manual formatting. This method, while quick to implement for a single list becomes a problem when we need several lists, all of them maintaining consistency in formatting: here is where the use of list styles is important. List styles are particular in Writer, because they are never applied *directly*: even when manually applying a list style, all we get is the paragraph *calling* the list style.

Indeed, the list styles are *always* called from a paragraph, either through direct formatting or with the use of styles. In fact, when editing a paragraph style (or the format for a particular paragraph) on the Outline & Numbering tab we have a "Numbering Style" drop down menu: selecting an existing list style the paragraph style (or the particular paragraph) we are modifying will be numbered with the list style.



With this, thanks to the use of a list style, it is possible to maintain consistency on all the list in a document without effort.

Creating or Editing a List Style

The fifth button on the styles and formatting editor shows all the predefined list styles. As always, it is possible to modify existing styles or to create new ones with a simple right click.

There are seven tabs to select the characteristics for the list style.

Organize Tab

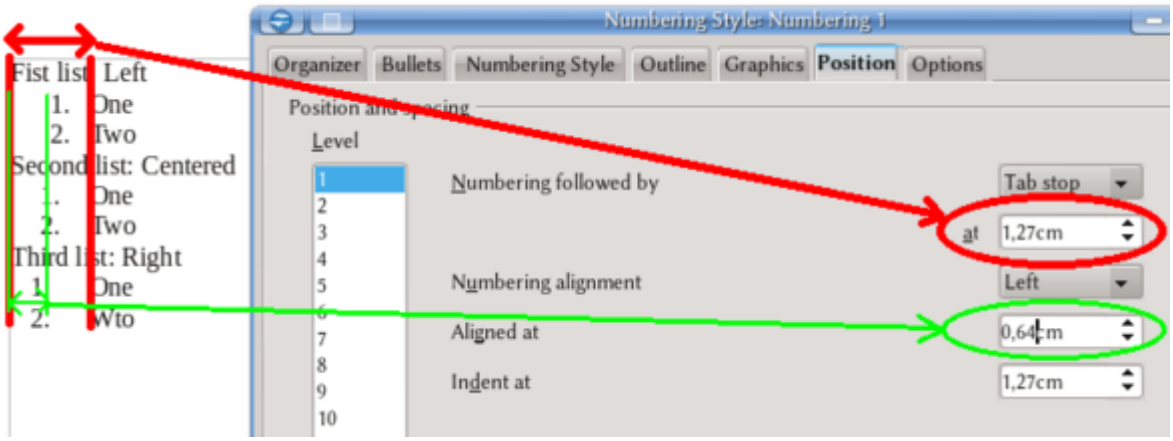
List styles cannot be linked. All other characteristics on this tab are the same for other kinds of styles.

Bullets, Numbering Style, Outline and Graphic Tabs

These tabs offers several predefined formats. Selecting what we need from here, all the style will be automatically configured. For a greater control we need to ignore these tabs and go to the last two.

Position Tab

Here it is possible to control the alignment of numbered lists and bullets



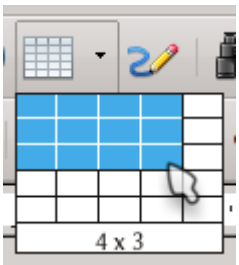
The first parameter controls the position of the paragraph margin, while the second controls the position for the number. We must distinguish between the different alignment options: left, center, and right. These options refer to the part of the number where the alignment is performed. For example, "Left" indicates that the selected position will be applied to the left of the number, so the number *will be completely to the right of the aligning point*.

Creating and Customizing Tables

At the beginning of a document or a section in order to introduce content before the table it is necessary to go to the first cell (top left) and press ↵ Enter

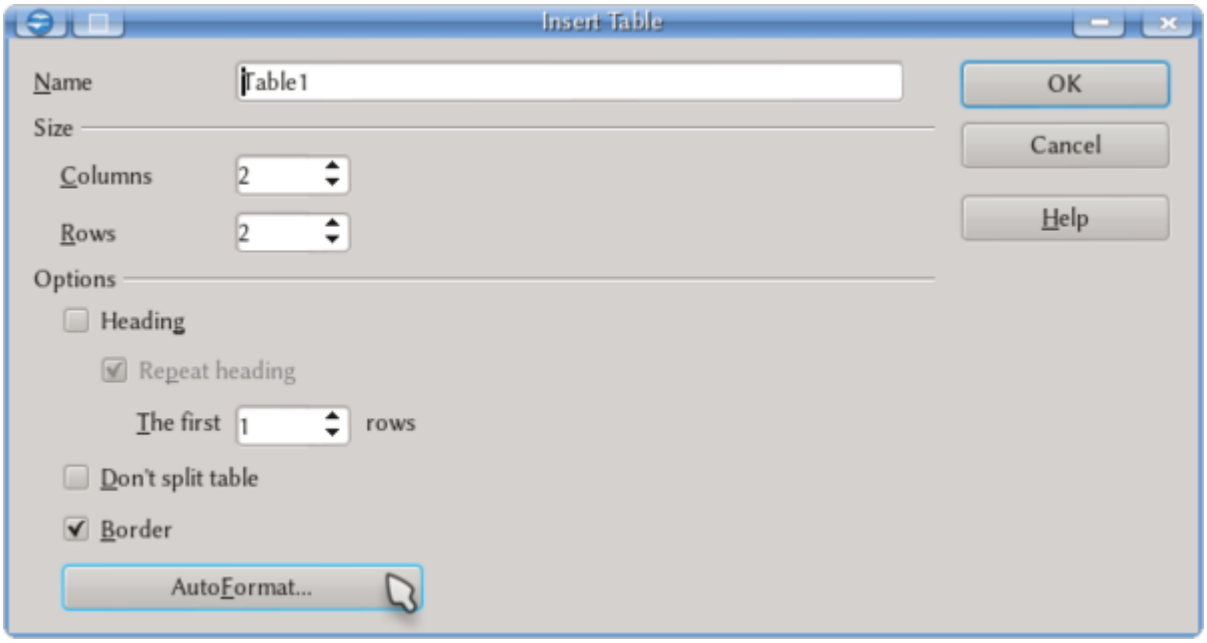
There are two ways to insert a table in a Writer document.

The first is to use the corresponding button on the "Standard" toolbar, as shown in the following screenshot:



On the grid it is possible to select the number of rows and columns needed.

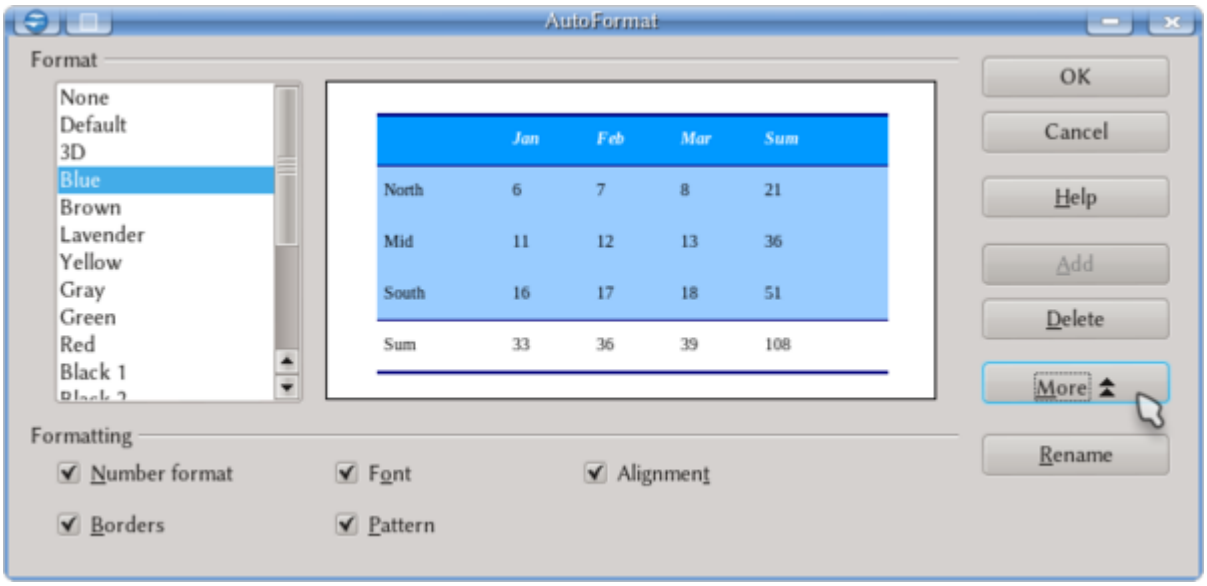
The other way to insert a table gives greater control: **Table** → **Insert** → **Table** or Ctrl + F12



In this dialogue it is possible to:

- select the number of rows and columns;
- give a name to the table to later distinguish it on the Navigator.

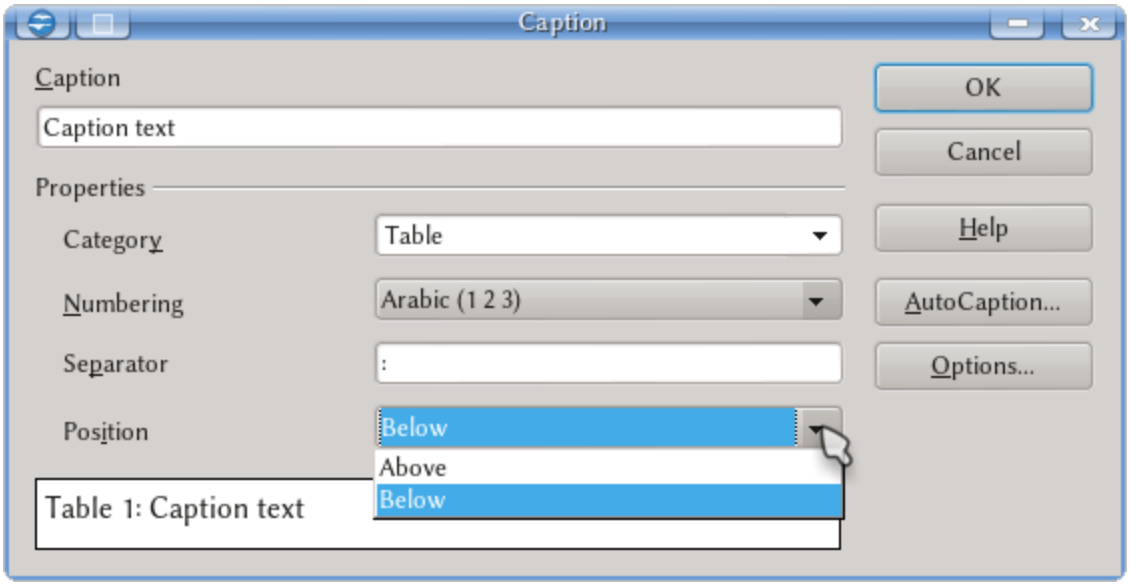
The AutoFormat offers the following dialogue:



Here it is possible to choose between different predefined formats (different line types, cell colors, text format...).

If none of the predefined autoformats have the desired characteristics, it is possible to tune the format of the table or of a particular cell. This is accomplished either with the contextual toolbar "Table" that it is presented when the cursor is inside a table cell or with **Table** → **Table Properties** or with a right click Table. After that, it is possible to create your own AutoFormat: with the cursor inside the table **Table** → **AutoFormat** and then press Add and provide a name to the new AutoFormat.

It is possible to assign a caption to a table, numbering it at the same time, with a right click → Caption.



As shown in the screenshot it is possible to choose the numbering, the separator between number and text, and if the caption will be shown above or below the table.

ASSIGNMENTS

1. How are tables in writer useful?
2. What do you mean by previewing a document?
3. What do you mean by spell check of a document in a word processor?
4. What are lists?
5. What are the advantages of spell check ?
6. What is the utility of find and replace in a word processor?
7. What are tables?
8. What do mean by grouping of graphic objects is useful?
9. How many different types of lists are there in writer?
10. How can we insert table in writer document?
11. Can we view multiple pages in page preview?
12. How many different ways can you create list?

CHAPTER – 9

Useful links:
https://youtu.be/XF34-Wu6qWU

In computing, a **presentation program** (also called **presentation software**) is a software package used to display information in the form of a slide show. It has three major functions:[1]

- an editor that allows text to be inserted and formatted
- a method for inserting and manipulating graphic images
- a slide-show system to display the content

Presentation software can be viewed[by whom?] as enabling a functionally-specific category of electronic media, with its own distinct culture and practices as compared to traditional presentation media (such as blackboards, whiteboards and flip charts).

Presentations in this mode of delivery have become pervasive in many aspects of business communication, especially in business planning, as well as in academic-conference and professional-conference settings, and in the knowledge economy generally, where ideas are a primary work output. Presentations may also feature prominently in political settings, especially in workplace politics, where persuasion is a central determinant of group outcomes.[citation needed]

Most modern meeting-rooms and conference halls are configured to include presentation electronics, such as overhead projectors suitable for displaying presentation slides, often driven by the presenter's own laptop, under direct control of the presentation program used to develop the presentation. Often a presenter will present a lecture using the slides as a visual aid both for the presenter (to track the lecture's coverage) and for the audience (especially when an audience member mishears or misunderstands the verbal component).

Generally in presentations, the visual material is considered[by whom?] supplemental to a strong aural presentation that accompanies the slide show, but in many cases, such as statistical graphics, it can be difficult to convey essential information other than by visual means; additionally, a well-designed infographic can be extremely effective in a way that words aren't. Endemic over-reliance on slides with low information density and with a poor accompanying lecture has given presentation software a negative reputation as sometimes functioning as a crutch for the poorly informed or the poorly prepared.

ASSIGNMENTS

1. what is presentation graphics?
2. Which menu and command let you insert animation in your slide?
3. What are the various components of slides?
4. What are transition effects?
5. What are design templates in impress?
6. Differentiate between slide and slide show.
7. What is outline?
8. What do you mean by multimedia software?
9. How are header and footer useful?
10. How can you use non continuous slides of your presentation?
11. What are the various views which you can open your presentation in?
12. When is slide sorter view useful for viewing a presentation?

CHAPTER – 10

A **spreadsheet** is a computer application for organization, analysis and storage of data in tabular form.[1][2][3] Spreadsheets were developed as computerized analogs of paper accounting worksheets.[4] The program operates on data entered in cells of a table. Each cell may contain either numeric or text data, or the results of formulas that automatically calculate and display a value based on the contents of other cells. A spreadsheet may also refer to one such electronic document.[5][6][7]

Spreadsheet users can adjust any stored value and observe the effects on calculated values. This makes the spreadsheet useful for "what-if" analysis since many cases can be rapidly investigated without manual recalculation. Modern spreadsheet software can have multiple interacting sheets and can display data either as text and numerals or in graphical form.

Besides performing basic arithmetic and mathematical functions, modern spreadsheets provide built in functions for common financial accountancy and statistical operations. Such calculations as net present value or standard deviation can be applied to tabular data with a pre-programmed function in a formula. Spreadsheet programs also provide conditional expressions, functions to convert between text and numbers, and functions that operate on strings of text.

Spreadsheets have replaced paper-based systems throughout the business world. Although they were first developed for accounting or bookkeeping tasks, they now are used extensively in any context where tabular lists are built, sorted, and shared.

LANPAR, available in 1969,[8] was the first electronic spreadsheet on mainframe and time sharing computers. LANPAR was an acronym: LANguage for Programming Arrays at Random.[8] VisiCalc (1979) was the first electronic spreadsheet on a microcomputer,[9] and it helped turn the Apple II computer into a popular and widely used system. Lotus 1-2-3 was the leading spreadsheet when DOS was the dominant operating system.[10] Microsoft Excel now has the largest market share on the Windows and Macintosh platforms.[11][12][13] A spreadsheet program is a standard feature of an office productivity suite; since the advent of web apps, office suites now also exist in web app form. Web-based spreadsheets are a relatively new category.

https://youtu.be/27dxBp0EgCc

https://youtu.be/Vl0H-qTclOg

You can **create** a new, blank **spreadsheet** from the Start Center (Welcome to **OpenOffice**.org) or from within Calc or any other component of **OOo**, for example from Writer or Draw. Click the **Spreadsheet** icon. Click File and then select New > **Spreadsheet**. a new document of the type that is currently open.

Some topics that will be covered:

- Adding data to a spreadsheet
- Widening Columns
- Adding a Date Function and a Range Name
- Adding formulas
- Changing data alignment in cells
- Number formatting - percent and currency
- Changing cell background color

- Changing the font color

Entering Data into Open Office Calc

Entering data into a spreadsheet is always a three-step process. These steps are:

1. Select on the cell where you want the data to go.
2. Type your data into the cell.
3. Press the **ENTER** key on the keyboard or click on another cell with the mouse.

Widening Columns

After entering the data you will probably find that several words, such as *Deduction*, are too wide for a cell. To correct this so that the entire word is visible in the column:

1. Place the mouse pointer on the line between columns **C** and **D** in the column header. (The pointer will change to a double-headed arrow.)

2. Select with the left mouse button and drag the double-headed arrow to the right to widen column C.

3. Widen other columns to show data as needed.

Adding the Date and a Range Name

It is normal to add the date to a spreadsheet. Built into Open Office Calc are a number of **DATE** functions that can be used to do this. In this tutorial, we will use the TODAY function.

1. Select cell C4.

2. Enter **= TODAY ( )**

3. Press the **ENTER** key on the keyboard.

4. The current date should appear in cell **C4**

Adding a Range Name in Open Office Calc

To add a range name in Open Office Calc, do the following:

1. Select cell **C6** in the spreadsheet.

2. Click on the Name Box.

3. Enter *rate* in the **Name Box**.

4. Cell **C6** now has the name of *rate*. We will use the name to simplify creating formulas in the next step.

Adding Formulas

1. Select cell C9.

2. Type in the formula = *B9 * rate*.

3. Press **Enter**

Calculating net salary

1. Select cell **D9**.

2. Enter the formula = *B9 - C9*.

3.Press **Enter.**

ASSIGNMENT

1. What is the significance of electronic spreadsheet?
2. What is a cell and how is it referred?
3. What do you mean by cell referencing?
4. What do you mean by range of cells?
5. Explain the different methods of cell referencing in OOo cal?
6. What is the difference between copying and moving a range?
7. What are the different types of data that are entered in OOo cal?
8. What do you mean by range of cells?
9. Define the terms- (i) embedded chart, (ii) chart sheet.
10. What are the different components of chart?

11. What is formatting?
12. How is formatting useful?
13. What are the advantages, disadvantages and purpose of using charts and graphs?
14. I cannot add tittles to a chart embedded in my worksheet. what could be the reason.