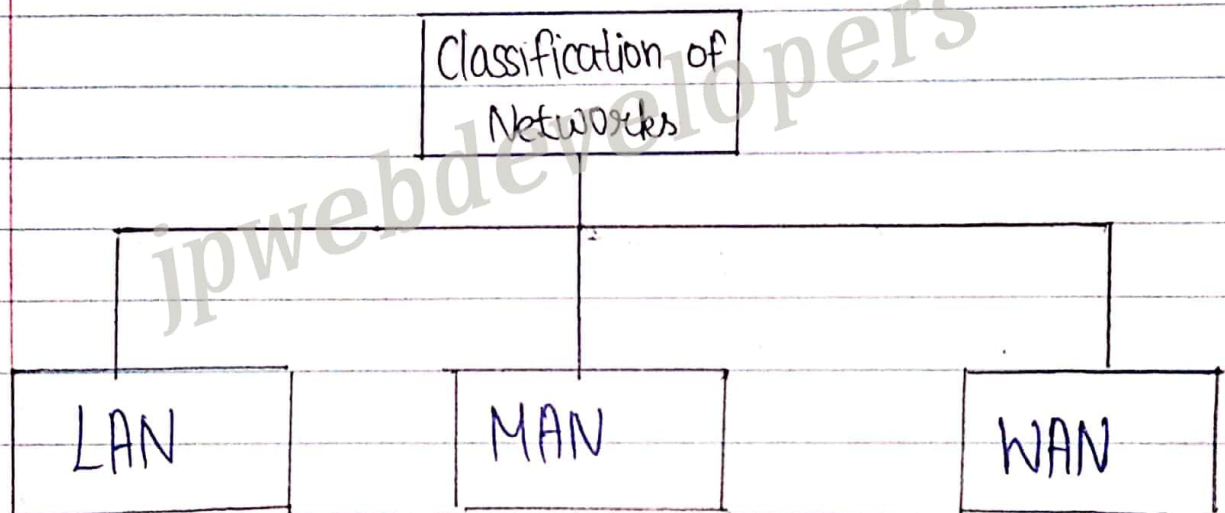


* Classification of Computer Networks:-

- There are three types of Network.

1. Local Area Network (LAN).
2. Metropolitan Area Network (MAN).
3. Wide Area Network (WAN).



1. Local Area Network (LAN):-

→ When two or more computers are connected in a small area 'i.e. within a diameter not more than a few kilometers such network is known as Local Area Network.

→ It works in a small geographic area such as office, building or campus.

- A LAN has following characteristics:-
- It covers an area of less than 5k.m.
 - It provides high speed data communication.
 - It is Privately Owned.
 - They have low error rates
 - They use simple data communication protocols.
 - It is easy to design and maintain.

→ The Hardware required for LAN, includes NIU (Network interface unit).

→ The NIU connects each device in the LAN network to shared transmission device.

2. Metropolitan Area Network (MAN).

→ MAN connects multiple LANs within a metropolitan area.

→ It can operate with large geographic area such as City or Metropolitan.

→ It resides between LAN and WAN.

→ It interconnects computer within a city.

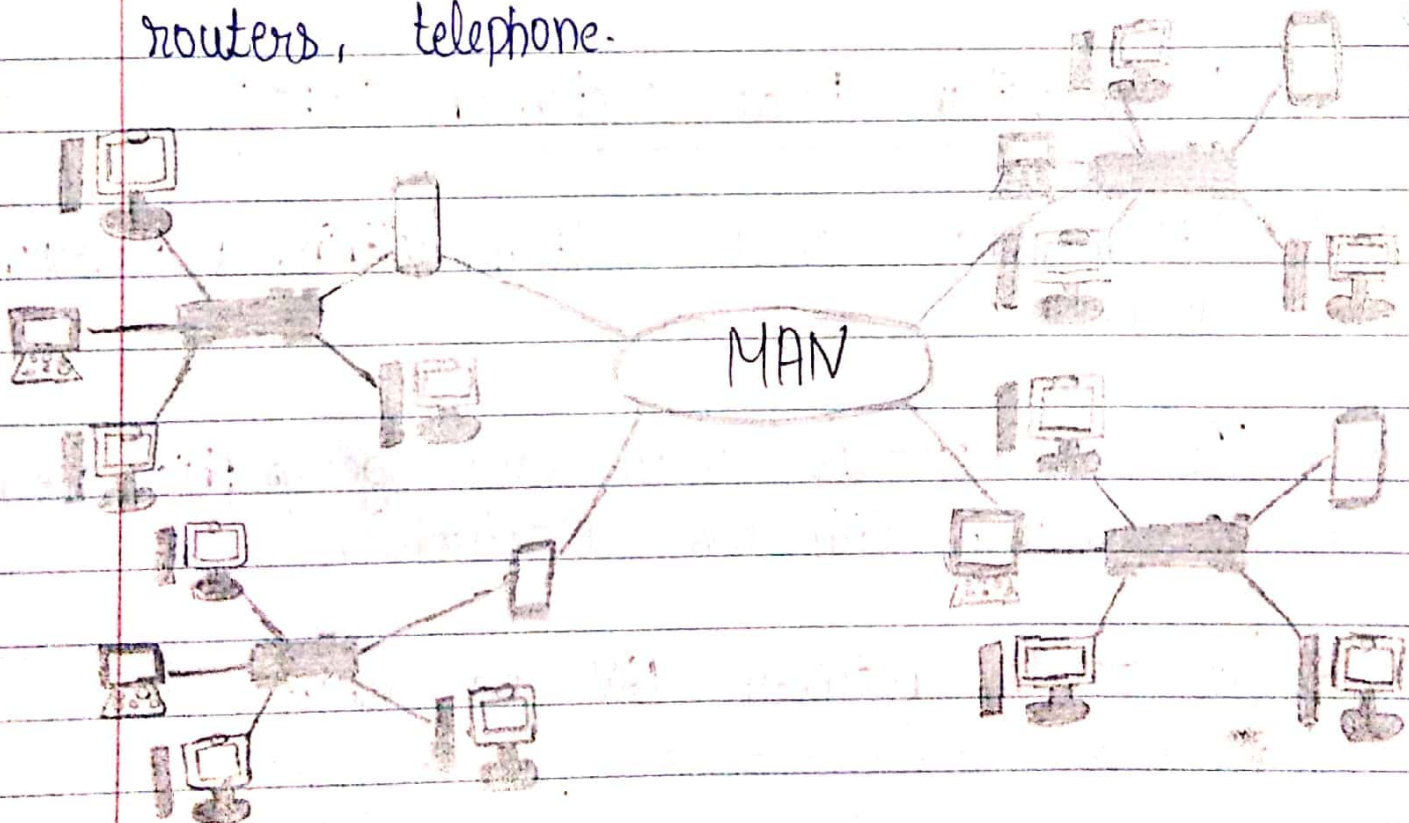
→ MAN Provides transfer rates from 34 Mbps to 150 mbps which is not very slow as compared to LAN.

→ Characteristics of a MAN :-

- MAN is slower than a LAN but faster than a WAN.
- Expensive Equipment.
- Moderate Error rates.

→ MAN is used to connect various LAN.

→ The various devices used in MAN are routers, telephone.



3. Wide Area Network (WAN):

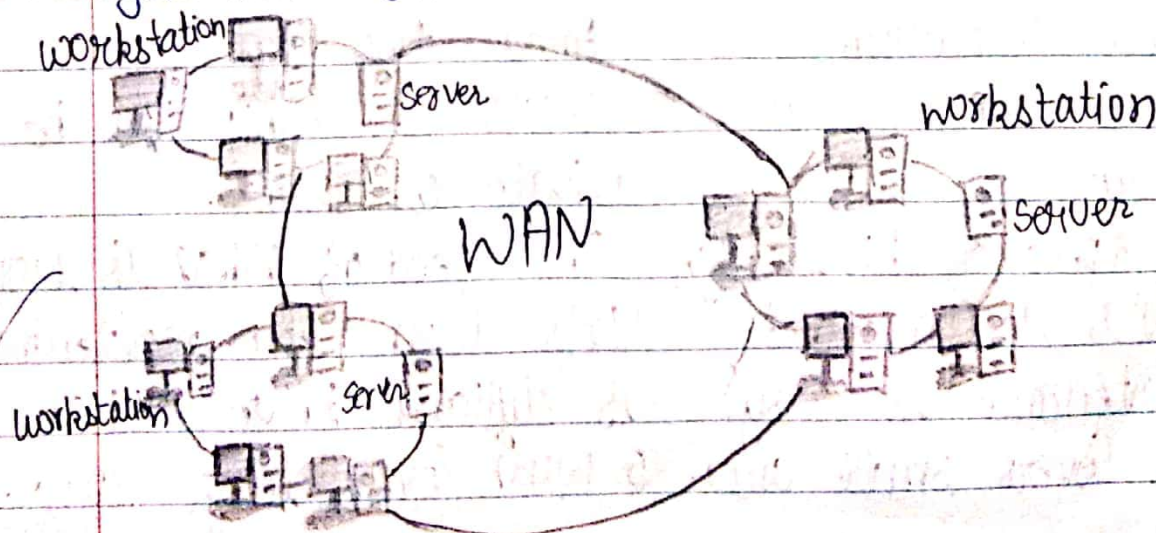
→ WAN works in a large geographic area such as country or even whole of world.

→ It has longer distance communications than LAN.

→ A Wide Area Network is not limited to a single location, but it spans over a large geographical area through a telephone line or satellite links.

→ The internet is one of the biggest WAN in the world.

→ WAN is widely used in the field of Business, government and education.



Characteristics of WAN :-

- It inter-connects computers at different sites
- It operates world wide.
- WAN have a large capacity, connecting a large number of computers over a large area.
- They generally have a higher bit error rate.

* Comparison between LAN and WAN :-

	LAN	WAN
1	LAN stands for Local Area Network.	1 WAN stands for Wide Area Network.
2	LAN's ownership is private.	2 WAN's ownership can be private or public.
3	The speed of LAN is High.	3 The speed of WAN is slow.
4	LAN's design and maintenance is easy.	4 IT's design and maintenance is difficult than LAN.
5	LAN covers small area.	5 WAN covers large area.

* Difference between LAN, WAN and MAN.

ITEM	LAN	MAN	WAN
1. Full form	Local Area Network.	Metropolitan Area Network	Wide Area Network.
2. Ownership	Privately Owned.	Private/public Owned	Public Owned.
3. Speed	LAN Speed is quite High.	MAN Speed is average.	WAN Speed is LOW.
4. Location	Computers are located within same building.	Computers are located within a city.	Computers are distributed all over the country.
5. Cost	Very cheap	Moderate	Costly.
6. Transmission Medium	The data is transferred through Wires.	Data is transferred through wires / Telelines.	Data is transferred through satellite.
7. Example	college school University	City Building	Broadband or internet throughout the country.