PRACTICAL - 1

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AIM 1(a) : Introduction to Computer Networking.

Computer Networking : A computer network is a system that connects many independent computers to share information (data) and resources.A computer network is a collection of two or more computer systems that are linked together. A network connection can be established using either cable or wireless media.

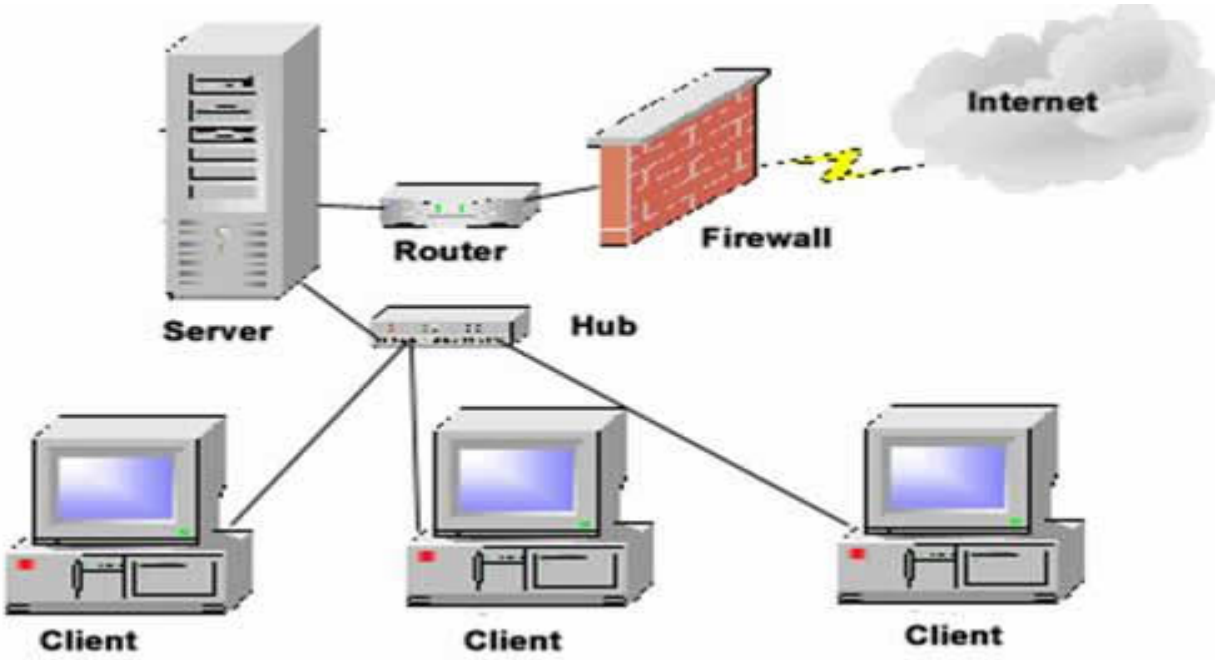

Fig1.1 Types of Computer Networking

Types of Computer Networking : There are five main types of Computer Networks.

1) LAN(Local Area Network) : Systems connected in a small network like in a building or a small office

2) PAN(Private Area Network) : Devices may be connected through Bluetooth or other infra-red enables devices.It has a connectivity range of upto 10 metres.

3) WAN(Wide Area Network) : A network which covers over a country or a larger range of people.

4) MAN(Metropolitan Area Network) : A network that can be connected within a city, for example, cable TV Connection.
5) VPN(Virtual Private Network) : A network which is constructed by using public wires to connect to a private network.

Data Flow : Transmission mode or Data Flow means transferring data between two devices. It is also known as a communication mode. Buses and networks are designed to allow communication to occur between individual devices that are interconnected. There are three types of transmission modes:

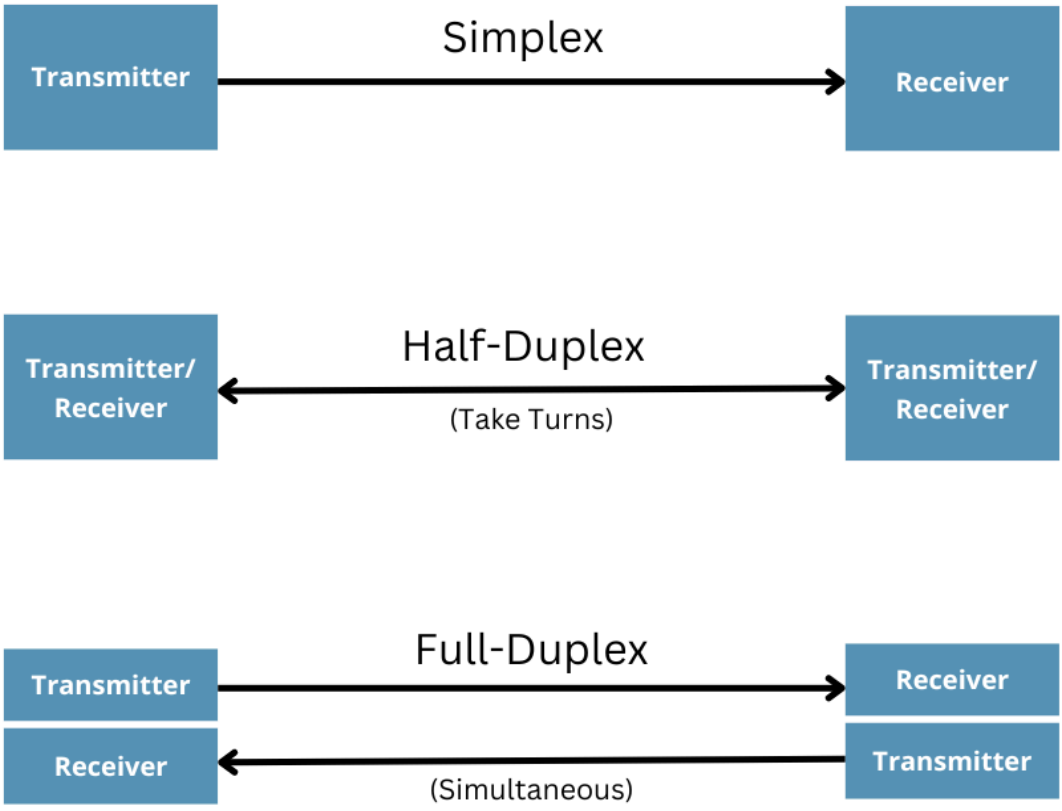

Fig1.2 Data Flow

Applications of Computer Networking :

- **Business applications:** Computer networks are often used by businesses to ensure impact communication, to share resources, and to allow their employees to access the whole system and applications from remote locations.
- **Educational applications:** Online networks are widely employed educational institutions allowing students to access educational possibilities, share knowledge, and collaborate with their professors.
- **Healthcare applications:** The healthcare sector has benefited a lot from the computer networks, which are used to store and share patient details thus allowing healthcare providers to provide more personalized treatment.
- **Entertainment applications:** Besides that with computer networks, you can entertain yourself with online games, streaming movies and music, or utilization of social media.
- **Military applications:** Military networks are often closed and not used for general communication, which ensures the safety of military information.
- **Scientific applications:** Scientific research heavily depends on computer networks because they will help establish collaboration among researchers and facilitate the sharing of data and information.
- **Transportation applications:** Computer networks are used to monitor a transit system in various ways, by managing the traffic, tracking vehicles as well as even improving efficiency in transportation.

Tab 2