Module#2 Accessible Learning

Name_____ Class number: _____
Section: _____ Schedule: _____ Date: _____

Lesson title: Basic of Computing Platform: <u>What is Networking?</u>
Learning Targets:

1. Types of Networking.
2. Components of Networking.

A. Introduction

What is Networking?

Networking, usually referred to as computer networking, is the process of moving data between nodes in an information system through a common media. Networking includes managing, maintaining, and running the network infrastructure, software, and rules in addition to designing, building, and using the network.

Computer networking allows for the connection of endpoints and devices to one another on LANs as well as to larger networks like the internet or private WANs. For service providers, enterprises, and customers all across the world, this function is crucial for resource sharing, using or providing services, and communicating. Everything is made possible via networking, including phone conversations, text messages, streaming videos, and the internet of things (IoT).

The complexity of a particular network directly relates to the level of expertise needed to operate it. A major organization, for instance, can have thousands of nodes and strict security specifications, such as end-to-end encryption, necessitating the use of expert network administrators to manage the network.

On the other hand, with a brief instruction booklet, a layperson may set up and carry out basic troubleshooting for a home Wi-Fi network. Both instances are examples of computer networking.

B. Main Lesson

1. Types of Networking?

-LAN (Local Area Networking)

- A group of devices connected to one another in a single physical location, such as a building, office, or home, is known as a local area network (LAN). A LAN can be tiny or big, with one user's home network or hundreds of users and devices in an office or school as examples.
- The fact that a LAN connects devices that are located in a single, constrained region is its sole distinguishing feature, regardless of size. A wide area network (WAN) or metropolitan area network (MAN), in contrast, spans a wider geographic area. A few WANs and MANs link numerous LANs collectively.

-PAN (Personal Area Networks)

- A personal area network is a network that focuses on information sharing near an individual. These systems typically incorporate wireless data transmission between gadgets like cellphones, laptops, tablets, and other portable computing devices. Typically, the goal of such a network is to either enable data or information transmission between such devices or to function as the network that enables higher-up links to the Internet. The IEEE 802.15 working group is responsible for most of the management of developments in the field of Personal Area Networks (PANs).

-MAN (Metropolitan Area Network)

- A metropolitan area network (MAN) is a type of computer network that links computers in an area with many buildings, such as a single large metropolis, several smaller cities, or any other sizeable area. The size of a MAN is more than that of a LAN but less than that of a WAN. The name "metropolitan" emphasizes the scale of the network, not the demographics of the area it covers, hence MANs are not need to be in urban areas.

-WAN (Wide-Area Network)

- A wide-area network (WAN) is, in its most basic form, a group of connected local-area networks (LANs) or other networks. The Internet is the biggest WAN in the world, and a WAN is essentially a network of networks.

C. Conclusion:

- Networking has provided a comprehensive overview of the subject. We've explored different types of networking, including local area networks (LANs) and wide area networks (WANs), highlighting their respective functionalities and applications. Additionally, we've delved into the essential components of networking, such as routers, switches, and modems, which form the backbone of communication infrastructures. Understanding these concepts is crucial as they underpin the interconnected digital world we live in. As technology continues to advance, a solid grasp of networking principles will undoubtedly become increasingly valuable in various industries and aspects of our lives.

Author:

TechTarget: https://www.techtarget.com/searchnetworking/definition/networking

Cisco: https://www.cisco.com/c/en/us/products/switches/what-is-a-lan-local-area-network.html

ScienceDirect: https://www.sciencedirect.com/topics/engineering/personal-area-network