Glossary Lesson 1

Android operating system
An operating system designed for mobile and wireless devices such as smartphones and tablet PCs. Under the hood, Android is based on the Linux operating system.

backbone
A high-capacity communications medium that joins networks on the same floor in a building, on different floors, and across long distances.

bus topology
A network design built by running cable from one PC or file server to the next, like links in a chain.

cable plant
The total amount of communications cable that makes up a network.

campus area network (CAN)
Multiple LANs in a specific area or region, such as in buildings on a college campus, that are managed or owned by one organization.

client
A computer that accesses another computer, such as a workstation that accesses a shared file on another workstation, server, or mainframe. The client may use the accessed computer (host) to process data or may process accessed data using its own CPU.

communications media
The cabling or radio waves used to connect one network computer to another or one network to another and transport data between them.

computer network
A system of computers, print devices, network devices, and computer software linked by communications cabling or radio waves.

enterprise network
A combination of LANs, MANs, CANs, or WANs that provides computer users with an array of computer and network resources to complete different tasks.

fault tolerance
Techniques that employ hardware and software to provide assurance against equipment failures, computer service interruptions, and data loss.

host
(1) A computer (mainframe, server, or workstation) that has an operating system enabling multiple computers to access it at the same time for files, data, and services. Programs and information may be processed at the host, or they may be downloaded to the accessing computer (client) for processing. (2) A computer that is connected to a network.

Institute of Electrical and Electronics Engineers (IEEE)
An international organization of scientists, engineers, technicians, and educators that plays a leading role in developing standards for network cabling and data transmissions.

Internet
A worldwide network of interconnected LANs, MANs, CANs, and WANs that uses the TCP/IP protocol to enable people to share e-mail messages and computer files and to access a vast array of information.

Internet Connection Sharing (ICS)
An option offered on Windows computers that enables one computer connected to the Internet to share its Internet connection with other computers on the same network. This can be a good Internet access solution in a home or small office.

iOS
An operating system developed by Apple for mobile devices such as the iPhone and iPad. Like Apple's Mac OS X for desktop and laptop computers, iOS is based on Darwin UNIX and incorporates concepts from Mac OS X. See Android operating system.

local area network (LAN)
A series of interconnected computers, printing devices, and other computer equipment that share hardware and software resources. The service area usually is limited to a given office area, floor, or building.

mesh topology
A network design in which every node is connected to every other node, achieving fault tolerance.

metropolitan area network (MAN)
A network that links multiple LANs in a large city or metropolitan region.

network interface card (NIC)
An adapter board or USB device designed to connect a workstation, server, or other network device to a network medium.

node
Any device connected to a network, such as a personal computer, tablet PC, mainframe, server, network equipment, or printer. Also called a station.

Open Handset Alliance (OHA)
An alliance of vendors such as Google, Motorola, Intel, Dell, and T-Mobile that has provided backing for the Android operating system. See Android operating system.

peer-to-peer network
A network on which any computer can communicate with other networked computers on an equal (peer) basis without going through an intermediary, such as a server. Peer-to-peer networking enables each computer to offer and access shared resources, such as files and printers.

personal area network (PAN)
A network that typically reaches a few meters, such as up to 10 meters (33 feet; although some PANs can reach farther), and consists of personal devices such as mobile computers, smartphones, and handheld devices. A PAN can be cabled or wireless.

private network
A network owned and maintained by an rganization, such as a campus network operated by a college.

protocol
Similar to a language, a protocol enables network devices to communicate and exchange information or data. A protocol is an established guideline that specifies how networked data is formatted into a packet or frame, how it is transmitted, and how it is interpreted at the receiving end.

public network
A network that offers services to members of the public, such as network services offered by a telecommunications company or a cable TV company.

ring topology
A network design consisting of a continuous path for data with no logical beginning or ending point, and thus no terminators.

server
A computer that provides extensive multiuser access to network resources, such as shared files, shared disks, and shared printers.

star topology
The oldest type of network design, this topology consists of multiple nodes attached to a central hub or switch.

star-bus hybrid topology
Also called the star-wired bus topology, a network design that combines the logical communications of a bus with the physical layout of a star.

star-ring hybrid topology
Also called the star-wired ring topology, a network design in which the logical communications are in a ring, but the physical layout of the network is a star.

star-wired bus topology
See star-bus hybrid topology.

star-wired ring topology
See star-ring hybrid topology.

station
See node.

terminator
A resistor that is connected to the end of a segment on a bus network, so that data-carrying signals are absorbed at the point where the segment stops. Absorbing the signals ensures that they are not reflected back onto the cable after they reach the end!thus preventing communication errors.

topology
The physical layout of cable and wireless network devices and the logical path followed by network frames or packets sent on the cable or by wireless transmissions.

tree topology
Also called the expanded star, it offers features of the basic bus topology combined with features of the star topology. This topology resembles a tree with a trunk and limbs or represents a root node at the base in a hierarchy of nodes built on levels off of the root node.

Universal Serial Bus (USB)
A serial bus, such as in a computer, designed to support up to 127 discrete devices with data transfer speeds up to 5 Gbits/s (gigabits per second).

virtual private network (VPN)
A private network that functions like a tunnel through a larger network–such as the Internet or an enterprise network–that is restricted to designated member clients only.

wide area network (WAN)
A far-reaching system of networks that usually extends over more than about 48 kilometers (about 30 miles) and often reaches across states and continents.

workstation
A computer that has its own CPU and may be used as a stand-alone computer for word processing, spreadsheet creation, or other software applications. It also may be used to access another computer such as another workstation or server via a network.