CPS108 Assignment 1

Monsuru Muadh Adekunle
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1. Define the meaning of Computer Network
   A computer network is a group of computers that are linked together so that they can share resources, such as files, printers, and software. Computer networks can be small, such as a network of computers in a home or office, or they can be large, such as the Internet.
2. What 2 categories can networks be divided up into?
   - Peer-to-Peer Networks
   - Client/server network
3. Define the term peer-to-peer network.
   A peer-to-peer (P2P) network is a type of network where all computers are equal and share resources with each other. In a P2P network, there are no dedicated servers. Instead, all computers on the network can act as both clients and servers. This makes P2P networks very efficient for file sharing, as any computer on the network can be used to store and share files.
4. Describe the problem with peer-to-peer networks.
   - Security: They are often less secure than traditional client-networks
   - Performance: P2P networks can be sloe, especially when there are a lot of users on the network.
5. Define the term network cable.
   A network cable is a physical cable that connects two or more devices on a computer network.
   The most common type of network cable is an Ethernet cable. Ethernet cables are used to connect computers, routers, switches, and other network devices. They are available in different lengths and speeds.
6. Define the term hub.
   A hub is a network device that connects multiple computers or other network devices together. It works by repeating all data frames received on one port to all other ports. Hubs are simple and inexpensive, but they are also inefficient and can cause network congestion. They are no longer commonly used, having been replaced by switches.
7. Define the term client/server network.
   A client–server network is a type of network in which client computers request resources and services from server computers. The server computers are responsible for providing these resources and services to the client computers.
8. Define the term server and give an example of something that would be saved on it
   A server is a computer or device on a network that provides resources to other computers, such as files, printers, and software. An example of something that would be saved on a server is a company's database of customer information.
   - Website data
   - Email
   - Files
   - Software
   - Databases
9. Define the term Local Area Network (LAN). Make sure you describe how large of an area it covers.
   A local area network (LAN) is a computer network that interconnects computers within a limited area such as a residence, school, laboratory, university campus or office building. A LAN can be a home network or a business

network. The size of a LAN can vary, but it typically covers a small geographic area, such as a single building or a group of buildings.

10. Define the term Wide Area Network (WAN). Again, make sure you how large of an area it covers.
    A wide area network (WAN) is a computer network that covers a large geographic area such as a city, state, or country. WANs are typically made up of smaller networks, such as LANs, that are connected together using a variety of technologies, such as leased lines, fiber optic cables, and microwaves. WANs are used to connect different locations of an organization, such as branch offices, factories, and warehouses. They are also used to connect organizations to the Internet.
11. Define the term Router.
    A router is a networking device that forwards data packets between computer networks. Routers perform the traffic directing functions between networks and on the global Internet. Data sent through a network, such as a web page or email, is in the form of data packets. A packet is typically forwarded from one router to another router through the networks that constitute an internetwork (e.g. the Internet) until it reaches its destination node.