**Worksheet 1 - Nicholas Shari - Sec001**

1. What is the Internet?

In Internet, millions of \_\_hosts\_\_\_\_\_\_\_ are connected together by a network of \_\_\_communication links\_\_\_\_\_ and \_\_\_\_packet transfers.\_\_\_\_\_\_ .

2. What is a network protocol?

The manner in which messages are formatted, sent, and received on a network between devices.

Actions taken upon receiving transmissions.

3. List several access technologies. Classify each one as home access, enterprise access, or wireless access.

DSL/Cable - home

Network ethernet - enterprise

Company network - enterprise

Cellular 4G/5G - wireless

11AC.n or Wifi - wireless

4. Compare a circuit-switched network and a packet-switched network.

Circuit-switched: has a fixed route between two destinations that guarantees performance. End-end reserved. Dedicated resource. No sharing. Commonly used in traditional telephone network.

Packet-switched: breaks larger messages down in packets and queues them before sending.

5. Consider sending a packet from a source host to a destination host over a fixed route. List the delay components in the end-to-end delay. Which of these delays are constant and which are variable?

Constant: transmission, propagation, nodal processing

Variable: queuing