

**PENANG SANGAM HIGH SCHOOL
P.O.BOX 44, RAKIRAKI**

LESSON NOTES 10

Year/Level: 13 Subjects: Computer Studies

<u>Strand:</u>	CE 2 Computers and Application
<u>Sub-strand:</u>	CE13.2.1 Hardware, Software Installation and Basic Networking
<u>Content Learning Outcome:</u>	<ul style="list-style-type: none">❖ Fundamentals of Network Communication<ul style="list-style-type: none">• Hardware components• Software components• Common network devices

Lesson Notes

Hardware components

Network interface card - A NIC is an add-on card that's plugged into a motherboard expansion slot and provides a connection between the computer and the network.

Network medium - A cable that plugs into the NIC and makes the connection between a computer and the rest of the network. Network media can also be the air waves, as in wireless networks.

Interconnecting - Interconnecting devices allow two or more computers to communicate on the network without having to be connected directly to one another.



Software Components





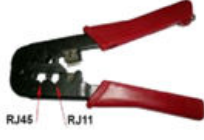

Network clients and servers requests information that's stored on another network computer or device. **Network server software** allows a computer to share its resources by fielding resource requests generated by network clients.

Protocols define the rules and formats a computer must use when sending information across the network. Think of it as a language that all devices on a network understand.

NIC drivers receive data from protocols and then forward this data to the physical NIC, which transmits data onto the medium.

Common Network Devices

Device	Description
	Network switch is a device that connects individual devices on an Ethernet network so that they can communicate with one another.
	Router is devices whose primary purpose is to connect two or more networks and to filter network signals so that only desired information travels between them.

	Modem short for modulator/demodulator, is a device that converts the digital signals generated by a computer into analog signals that can travel over telephone lines.
	Wireless Access points (APs) are a transmitter and receiver (transceiver). Device used to create a wireless LAN (WLAN).
	Ethernet cable is one of the most popular forms of network cable used on wired networks. Ethernet cables connect devices on local area networks such as PCs, routers and switches. Two common standards are straight through cable and cross over cable.
	RJ45 Plug is a type of connector commonly used for Ethernet networking.
	Network crimping tool is a tool designed to crimp or connect a connector to the end of a cable. For example, network cables and phone cables are created using a crimping tool to connect the <u>RJ-45</u> and <u>RJ-11</u> connectors to the end of the cable.
	Network Interface Cards are devices that enable computers to connect to the network.

Questions

- 1) Differentiate between network client and network server?
- 2) Which device is used to transmit data from common network devices
- 3) There are 2 connectors being used. Name and explain where it is used?
- 4) Kajol wants to add more ports in her computer lab whereby more computers can be installed. Name the device that is needed to be installed in order to connect cables that goes into rack?