Assignment - 2

1 Different type of Network.

1 Personal Area of Network (PAN)

The smallest and most basic type of network, a pan is made up of a wireless modem, a computer or two, Phones, printers tablets, etc.

2 Local Area Network (LAN)

LANS connect groups of computers and low-voltage devices together across short distances to share information and resources

3 Wireless Local Area Network (WLAN)

WLANs make use of wireless network technologies such as WI-Fi. Typically seen in the same types of applications as LANS. these types of networks dont require that devices relys on physical cables to connect to the network

4. Campus Area Network (CAN)

Larger than LANs but smaller than metropolitan area networks (MANS; explained below) these types of networks are typicall seen in universities large K-12 school districts or small business.

5 Wide Area Network (WAN)

Slightly more complex than a LAN a WAN connects computers together across longer physical distances

6 Virtual private Network (VPN)

By extending a private network across the internet a VPN lets its users send and receive data as if their devices were connected to the private network even if they are not.

II Shilded Twisted Pair, un-shielded twisted pair (difference)

	STP	UTP
*	STP is a twisted Pair cable enclosed in foil or mesh shield	UTP is a cable with wires that are twisted together
*	Less susceptible to noise and crosstalk	High comparatively
*	Grounding cable Necessarily required	Grounding Cable Not required
*	Moderately expensive	cheaper and does not require much maintan
*	Data rates: Provides high data rates	Slow comparatively

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	UTP
	UTP is a cable with wires that are twisted together
	High Comparatively
	Grounding Cable Not required
	Cheaper and does not require much maintana
	Slow comparatively

	Baseband transmission	Boardband transmission
*	To boost signal strength use repeaters	To boost strength, use amplifiers
*	Can transmit only a single data stream at a time	Can transmit multiple signal waves at a time.
*	support bidirectional Communication Semultaneously	support unidirectional Communication only.
*	Support TDM based multiplexing	Support FDM based multiplexing.
*	Use coaxial twisted pair, and fiber optic cables.	Use radio waves coaxial cables, and fiber optic cables

III Difference between ① HUb ② MODEM ③ ROUTER ④ SWITCH

1 HUb MODEM

Modems are hardware devices that allow a computer or another device such as a router or switch to connect to the internet. They convert or modulate an along signal from a telephone or cable wire to digital that a computer can recognize

2 Routers:

Are responsible for sending data from one network to another

Work at layer 3 of the OSI model which deals with IP address

TYPically routers today will Perform the functionally of both a routes and a switch that is the router will have multiple ethernet ports that devices can plug into.

3 Switchs:

They use the MAC address of a device to send data only to the part the destenation device is plugged into

4 Hubs

Unlike switches hubs broadcast data to all ports which is ineffi cient so hubs are basically a multiport repeaters

IV When you ~~see~~ move the NIC cards from one PC to another PC does the MAC address gets transferred as well?

Yes, thats because MAC address when another are hard wired in to the NIC circuitry not the PC, This also

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means that a PC can have a different MAC address when another one replaced the NIC card.

V When troubleshooting computer network problems can occur?

A large percentage of a network is made up of hardware. problems in these areas can range from malfunctioning hard dow drives broken NICs and even hardware startups

VI In a network that contains two servers and twenty workstations. where is the best place to install an Anti virus program?

The best solution is to install anti-virus on all the computers in the net work. This will protect each device from the other in case some malicious user tries to insert a virus in to the servers or legitimate users.