Expno:2
24/1/2024

Aim: Study of different types of network cables

a) Understand different types of network cable.

different type of cables used in networking are:

i) Unshielded twisted Pair Cable

2) Shielded twisted Pair cable

3) Coaxial cable

4) fibre optic cable.

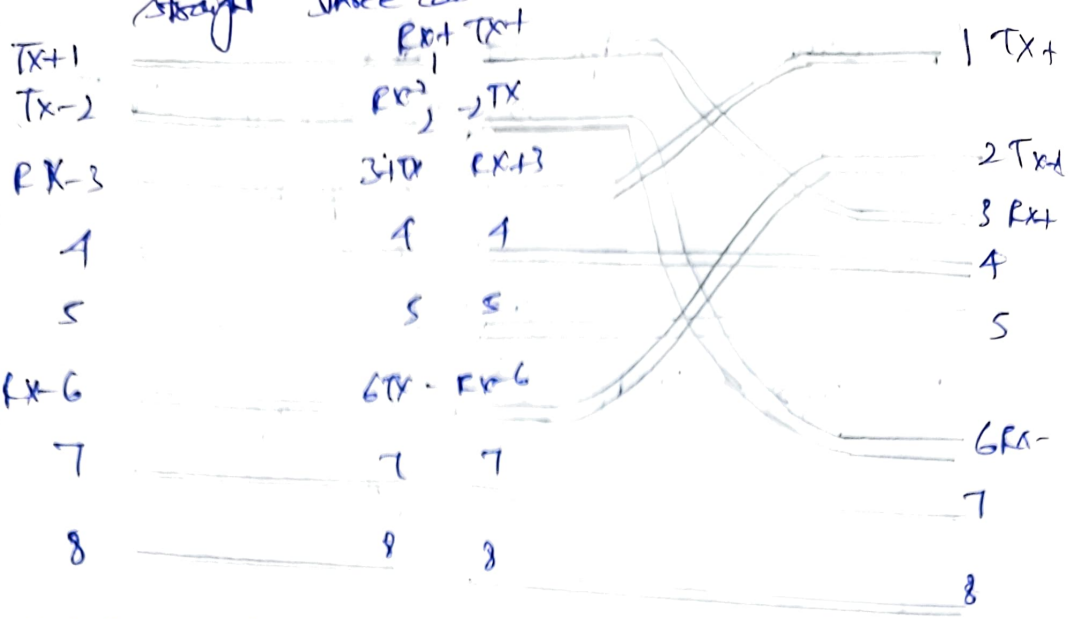
Cable Type	Category	Maximum data Transmission	Advantages/ disadvantages	Application/use
UTP	Category 3	10bps	Advantages: 1) Cheaper in Cost 2) Easy to install as they have a smaller overall diameter disadvantages:- 1) More prone to EMI or noise	10base-T ethernet fast ethernet, gigabit ethernet
	Category 5	upto 100Mbps		
	Category 5i.	1Gbps		fast ethernet, gigabit ethernet

STP	Category 6, 6a	10 Gbps	Advantages:- 1.) Shielded 2.) Faster than UTP 3.) less susceptible to noise Disadvantages:- 1.) Expensive 2.) Greater installation effort	Gigabit ethernet, 10G ethernet (35m)
SSTP	Category 7	10 Gbps		Gigabit ethernet, 1-G ethernet (100m)
Coaxial Cable	RG-6 RG-59 RG-11	10-100 Mbps	Advantages:- 1.) High bandwidth 2.) immune to interfer Disadvantages:- 1.) Limited distance 2.) Cost 3.) Size is bulky	Speed of signal is Soom television network High speed internet Connection
fibre optic Cable	single mode multimode	100 Gbps	Advantages:- 1.) High speed 2.) High security Disadvantages:- 1.) expensive 2.) Requires	Maximum distance of fibre optics cbt is around 100metres.

b) Make your own ethernet cross over cable:-

Tools & part needed:-

ethernet cabling, CAT5e is certified for gigabit support, but CAT5 cabling works as well just over.



Student Execution:-

1) cross cable: Connects diff types of device (PC to switch, router)

straight cable: Connects similar device (PC to PC, switch to S)

2) cross cable

3) Straight cable

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Result:-

Thus the program is executed & output is verified.