

AIM: Study of different types of network cables

Cable type	Category	Maximum Data transmission	Advantage / Disadvantage	Application / use	Image
UTP	Category 3	10 Mbps	<ul style="list-style-type: none"> • cheaper cost • Easy to install as they have small diameter 	10Base T Ethernet	Fast Ethernet
	Category 5	upto 100 Mbps	<ul style="list-style-type: none"> • they have small diameter 	Giga bit	coaxial
	Category 5e	1 Gbps	<ul style="list-style-type: none"> • More prone to EMI <p>Electromagnetic Interference and noise</p>	Ethernet	
STP	Category 6, 6a	10 Gbps	<ul style="list-style-type: none"> • shielded • faster than UTP • less susceptible to noise and interference 		fiber optic cable

anti cables

Image

SSTP

Category 7

10Gbps

Disadvantage

- Expensive
- Longer installation
- High cost

Gigabit Ethernet

Copper

RG-6

RG-59

RG-11

10-100 Mbps

Advantage

- High bandwidth
- Immune to Interference
- Low loss
- Versatile

speed of

signal

is

500m

Television

network

Fibre
optic
cable

single mode 100Mbps

multimode

Disadvantage

- Limited distance
- Cost
- Size is bulky

Advantage

- High speed
- High bandwidth
- High security
- Long distance
- Expensive
- Requires skilled installers

max

distance

vis

100m

b) Make your own ethernet cross cable

TOOLS:-

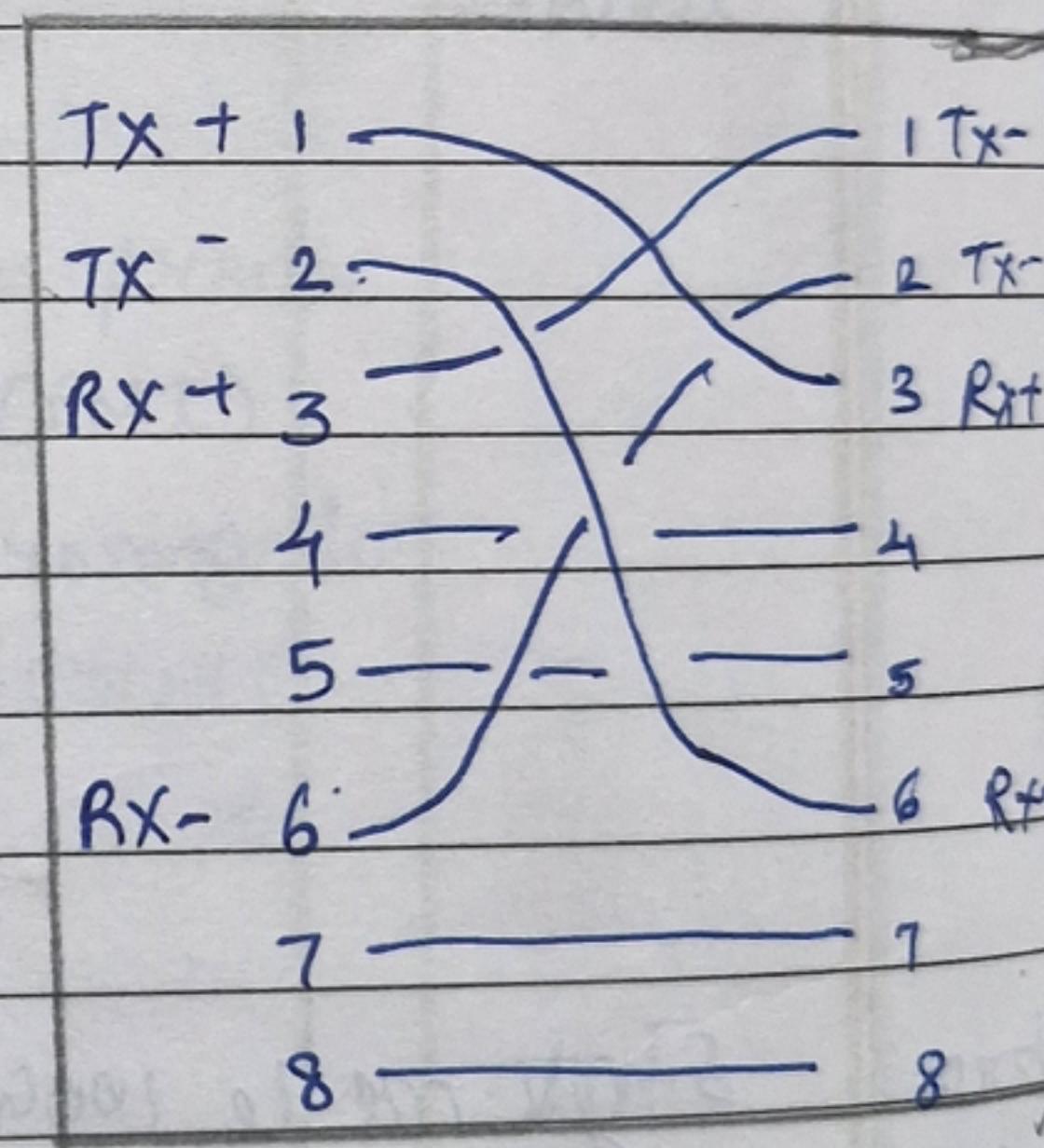
- Ethernet cabling. CAT5c is certified gigabit support. but cat5 works well
- A crimping tool to push down plugs pins and strip and cut shielding.

optional two shields.

Straight thru Cable

White Green	Tx+ 1	—	W/Gn	—	1 Rx+
Green	Tx- 2	—	G	—	2 Rx-
White Orange	Rx+ 3	—	W/O	—	3 Tx+
Blue	4	—	B	—	4
White Blue	5	—	W/B	—	5
Orange	Rx- 6	—	O	—	6 Tx-
White Brown	7	—	W/Bt	—	7
Brown	8	—	Br	—	8

Xover cable,



1.

2.

3.

4.

5.

STUDENT OBSERVATION:-

CLASSMATE
Date _____
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1. Cross:- Cross cable is used when two systems are connected directly. One end acts as transmitter and other end acts as receiver.
2. Straight:- When two systems are connected to a HUB or a switch and then to a PC it is used as straight connection.
3. A CAT5e or CAT5 cable is used to connect two PCs in cross config.
4. The cable is a unshielded twisted pair cable.
5. The challenges faced are correctly cutting the cables to length and crimping.

RESULT:-

The study of different types of network cables have been performed

V31/2/21