

Date: 19/06/2024

Lab Practical #02:

Study of different types of network cables & connectors and crimping a LAN.

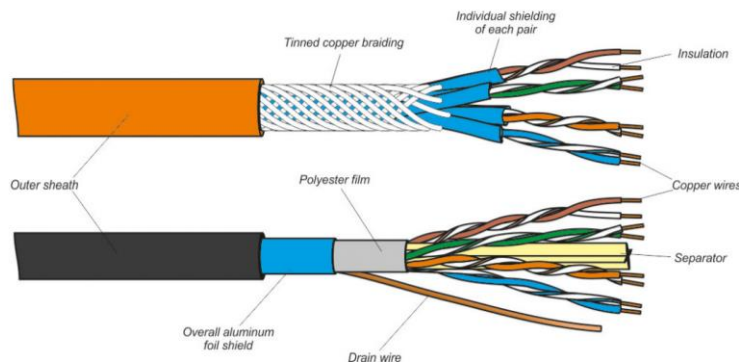
Practical Assignment #02:

1. List various networks cable. Also, write short description.
2. Difference between guided and unguided media.
3. Give cross-wired cable and straight through cable diagram (Color Code wise).

1. List various networks cable and connectors. Also, write short description.

a) Twisted Pair Cable:

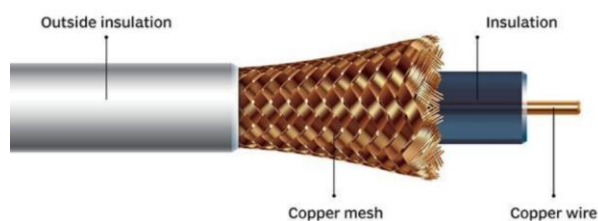
- **Description:** Twisted pair cables consist of pairs of wires twisted together to reduce electromagnetic interference. Common types are Unshielded Twisted Pair (UTP) and Shielded Twisted Pair (STP).
- **Diagram:**



b) Coaxial Cable:

- **Description:** Coaxial cables have a central conductor, an insulating layer, a metallic shield, and an outer insulating layer. They are commonly used for cable television and broadband internet.
- **Diagram:**

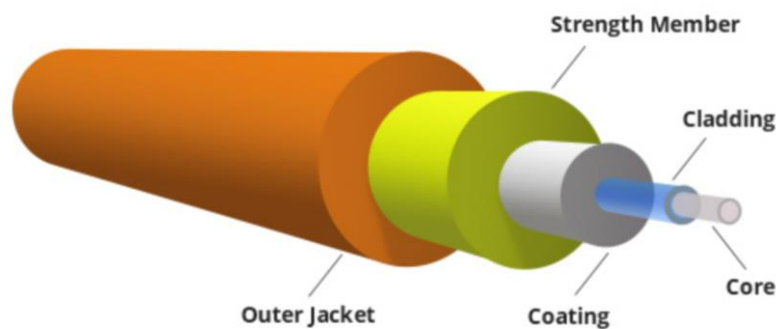
Coaxial cable



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c) Fiber Optic Cable:

- **Description:** Fiber optic cables use light to transmit data. They have a core made of glass or plastic fibres, surrounded by a cladding and protective layer. They provide high bandwidth and long-distance data transmission.
- **Diagram:**



2. Difference between guided and unguided media.

➤ **Guided Media:**

- **Description:** Guided media are transmission mediums that provide a physical path for signal transmission. Examples include twisted pair cables, coaxial cables, and fiber optic cables.
- **Examples:** Ethernet cables, telephone lines, fibre optic cables.

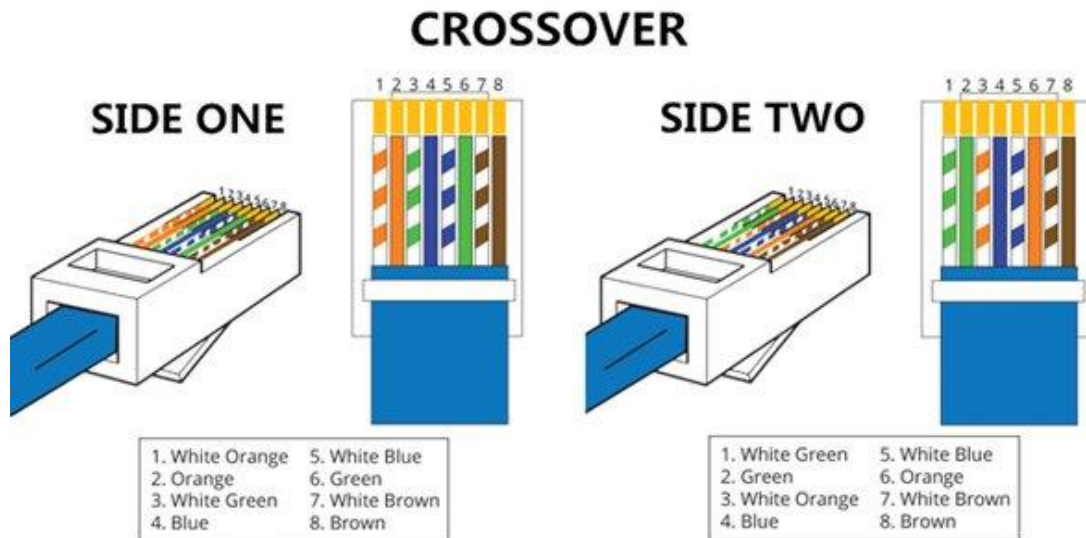
➤ **Unguided Media:**

- **Description:** Unguided media are transmission mediums that do not provide a physical path. They transmit data through the air or space. Examples include radio waves, microwaves, and infrared signals.
- **Examples:** Wi-Fi, satellite communication, Bluetooth.

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3. Give cross-wired cable and straight through cable diagram (Color Code wise).

a) Cross-wired Cable Diagram (Color Code)



b) Straight Through Cable Diagram (Color Code)

