Lab 2 [Making Ethernet cable using twisted-pair cables (crisscross way)]

Objective
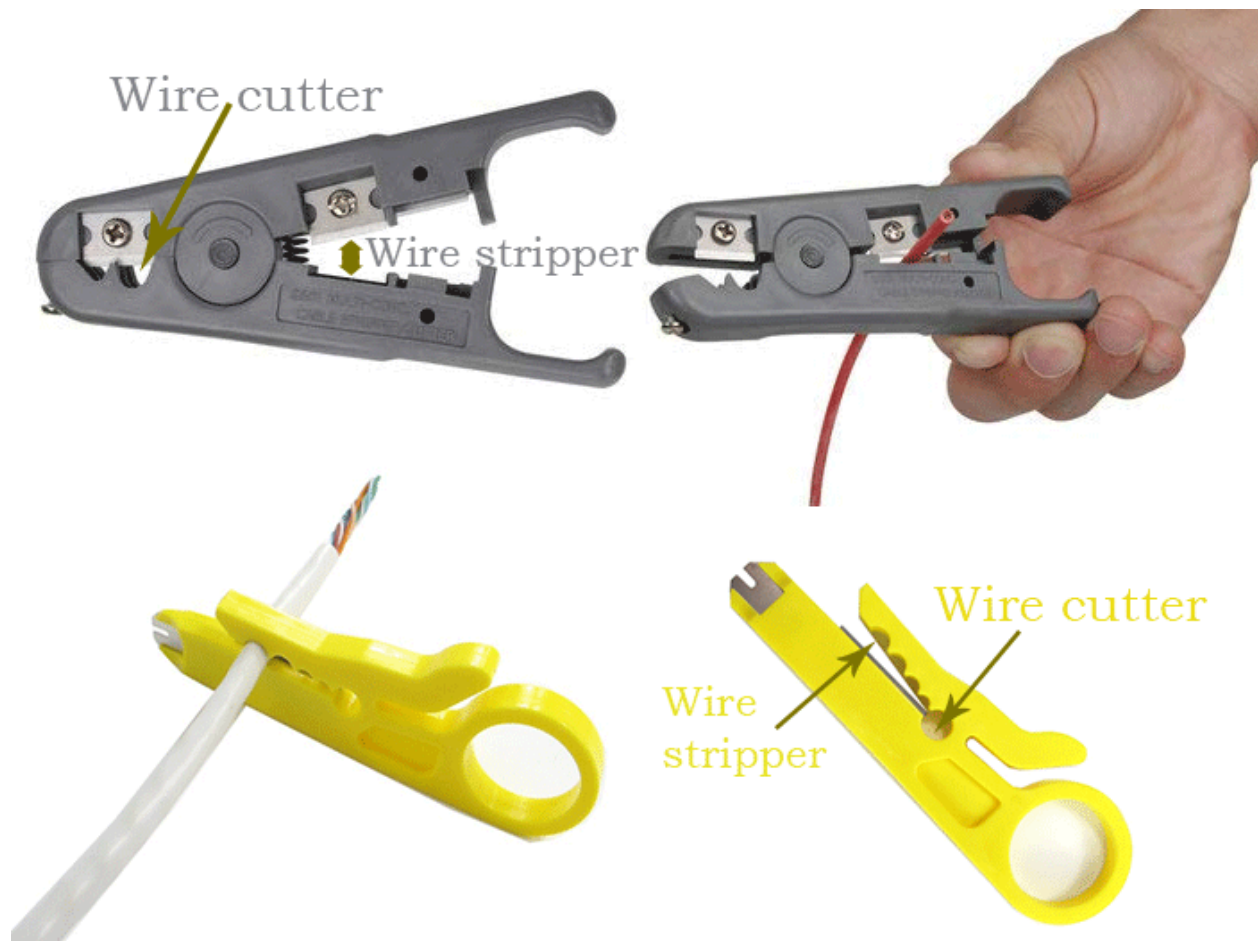
- Create an ethernet cable using twisted pair cables in crisscross way

Tools needed

- Unshielded Twisted pair cable (UTP)
- Modular connector (RJ45)
- Crimping tool

- LAN wire cutter

Wire cutter

Wire stripper

Wire cutter

Wire stripper

- Cable tester

Theory

- Ethernet cable is a widely used cabling technique in LAN networks that uses the Unshielded twisted pair cable as data transmitting wire and `RJ45` as a modular connector.
- It is relatively used to build within a few steps, and anyone can create it with the correct tools.
- It is cheap, easy to build, and highly reliable.

- In this lab, we used the standard color pin method to decide which colored wire goes in which pin in RJ45.

Steps

1. Take a long set of the twisted pair cable wire.
2. Use a `LAN wire cutter` to cut the outer shell of the wire.
3. Use the `Crimping tool` to straighten the twisted wires.
4. Insert the wires in the standard format in `RJ45 connector`

For Side 1

Pin	Wire Color
Pin 1	Brown
Pin 2	White/Brown
Pin 3	Green
Pin 4	White/Green
Pin 5	White/Orange
Pin 6	Blue
Pin 7	White/Bkue
Pin 8	Orange

For Side 2

Pin	Wire Color
Pin 1	White/Green
Pin 2	Green
Pin 3	White/Orange
Pin 4	Blue
Pin 5	White/Blue

Pin 6	Orange
Pin 7	White/Brown
Pin 8	Brown

5. Use the `Crimping tool` to press RJ45 in place
6. Repeat steps 2, 3, 4, and 5 for the other side
7. Use `Cable tester` to check if all the wires are connected successfully and free of error.