Bangladesh University of Business and Technology (BUBT)

Course Name: Computer Networks

Course Code: CSE 320

LAB 2

Experiment on: Configure Network Cable and RJ45 Connector.

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Objective

1. Recognise the many kinds of network cables.
2. Discover how to use an RJ45 connector to configure and terminate a wire.
3. Acquire hands-on experience creating a working Ethernet cable

Equipment:

1. UTP cable
2. RJ45 connectors
3. Crimping tool
4. Wire stripper/cutter

Introduction

Computer networks employ Ethernet cables with RJ45 connections to link devices. Reliable communication is ensured by proper crimping. Straight-through and crossover cables are the two most used varieties, and they are utilised for various connection applications.

Process:

Step 1: Prepare the Cable

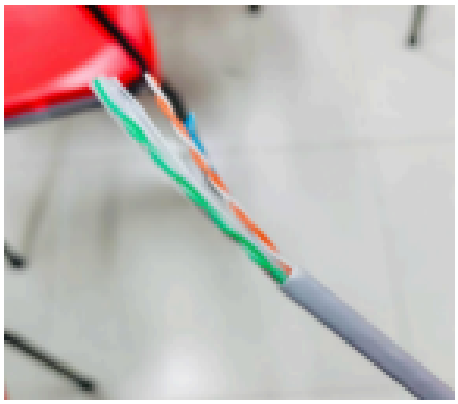
1. Use the wire cutter to cut the cable to the required length.
2. Using a wire stripper, remove two to three centimetres of the cable's outer wrapping from both ends, revealing the twisted pairs within.

Step 2: Arrange Wires

1. Straighten each wire by unwinding the pairs.
2. Set up the cables in accordance with the selected wiring standard:

Step 3: Cut Wires

- Align the wires flat and cut them evenly, about 1.5 cm from the sheath.



Step 4: Insert Wires into RJ45 Connector

1. Face down, hold the RJ45 connector clip.
2. Make sure each wire fits into its designated slot when you carefully slide the wires into the connector.
3. Until the wires reach the end, insert them completely into the connector.

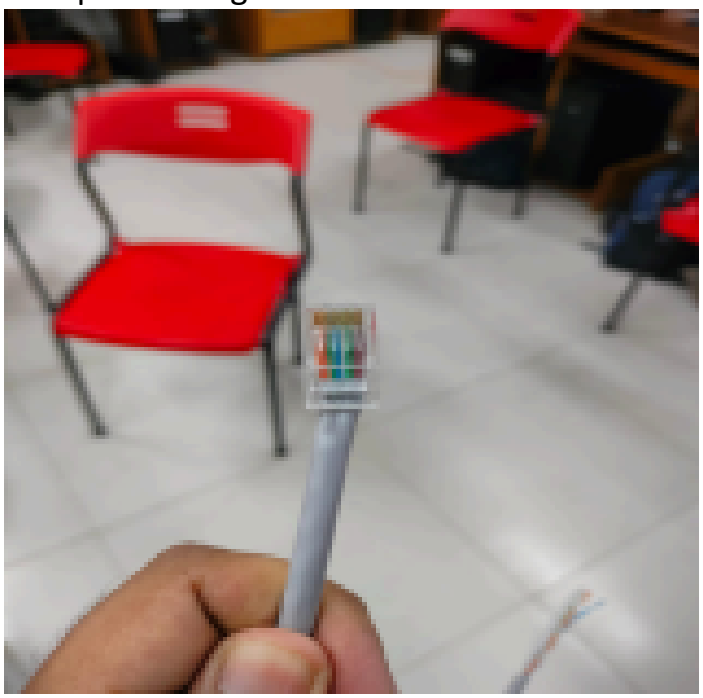
Step 5: Crimp the Connector

1. Put the cable and RJ45 connection into the crimping tool.
2. To fasten the connector to the cable, punch down the pins into the wires

with a forceful squeeze of the crimping tool.

Step 6: Repeat for the Other End

Using the same wiring standard for straight-through cables or a different one for crossover cables, repeat Steps 1 through 5 for the other end of the wire..



Step 7: Test Cable

Use a cable tester to verify continuity and proper wiring.
Confirm all wires are connected correctly, and the cable is functional.

Result

1. RJ45 connectors were successfully used to terminate the cable.
2. The tester revealed no short circuits or open circuits.
3. When connecting one gadget to another, the cable functioned as intended.