AL-IRAQIA UNIVERSITY
COLLEGE OF ENGINEERING
COMPUTER ENGINEERING DEPARTMENT

TECHNICAL REPORT

LOCAL AREA NETWORK EXPERIMENT

COMPUTER NETWORKS LAB, CR329
THIRD STAGE

STUDENT'S NAME
(MUQTADA ABDULRASOOL)

INSTRUCTOR'S NAME

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INTRODUCTION

- Background information about the experiment

  A Local Area Network (LAN) is a network of computers that are physically close to each other, typically within the same building or campus.

- Theoretical concepts related to the experiment

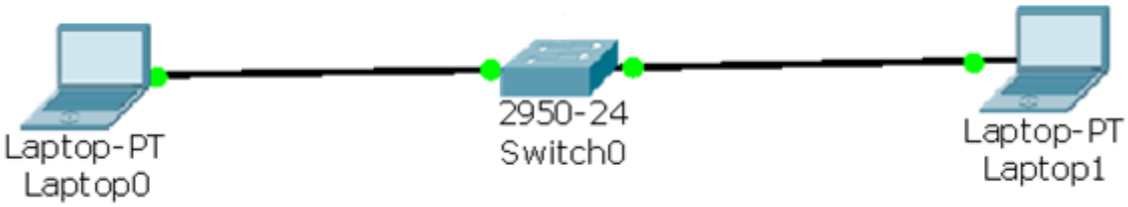
  LANs are based on a number of networking protocols, including the Internet Protocol (IP), Transmission Control Protocol (TCP), and User Datagram Protocol (UDP).

- Purpose and objectives of the experiment

  The purpose of this experiment is to gain practical experience in setting up and configuring a basic LAN

MATERIALS AND METHODS

- List of equipment and components used
  - Two Computers
  - Switch
  - Copper Cable (Straight-Through)



STEP-BY-STEP PROCEDURE FOLLOWED DURING THE EXPERIMENT

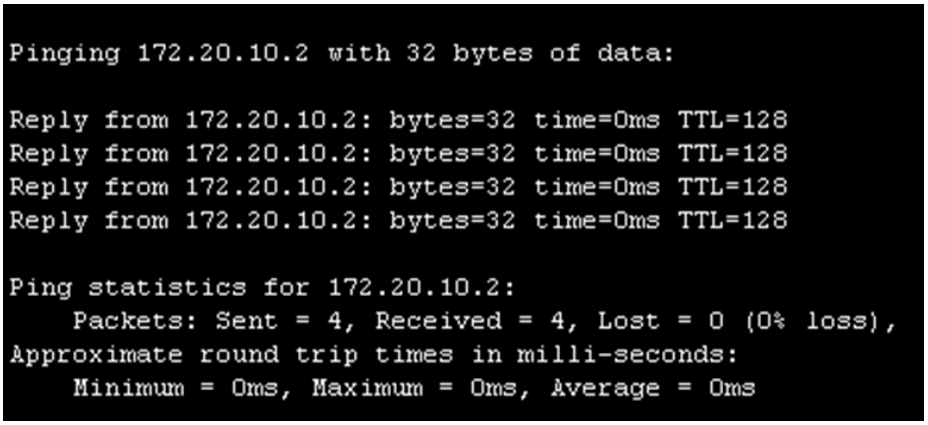
- Open Packet Tracer.
- Add Devices:
    - 2 PCs
    - 1 Switch (2950)
    - Connect: Use "Copper Straight-Through" cables to connect the PCs to the switch.
- Configure IPs:
    - PC0: IP: 192.168.1.1, Subnet: 255.255.255.0
    - PC1: IP: 192.168.1.2, Subnet: 255.255.255.0
- Test:
    - On PC0, open "Command Prompt" and type ping 192.168.1.2
    - On PC1, open "Command Prompt" and type ping 192.168.1.1

RESULTS

- Observations and collected data (tables, graphs, waveforms, or images if applicable)

  The ping test should be successful in both directions, indicating that PC0 and PC1 can communicate over the LAN.

- Screenshots of simulations (if any)



ANALYSIS AND DISCUSSION

- Explanation of results and possible deviations from expected outcomes

  A successful ping demonstrates that the basic LAN infrastructure is functioning correctly. The PCs are able to send and receive data packets.

- Error analysis (instrument limitations, environmental factors, human errors, etc.)

  Due to the fact that this is a simulation, errors are not accounted for.

CONCLUSION

- Summary of the findings

  This experiment successfully demonstrated the fundamental steps involved in setting up a simple LAN using Cisco Packet Tracer. A ping was successful.

- Key takeaways from the experiment

  Students (me) gained practical experience in configuring IP addresses, connecting devices, and verifying network connectivity.