Computer Network Lab Exam Exercise Report

Objective:

Set up and configure a network topology using RIP and OSPF routing protocols in Cisco Packet Tracer. Customize the network by assigning each computer a name and an IP address using the last three digits of your roll number.

Procedure:

1. Network Topology Design:

○ Create a topology that includes:

■ 10-12 computers distributed across two LANs.

■ Use two or more switches.

■ At least two routers connected via a WAN link.

○ Each computer must be assigned a name with the format: PC_RollNumber (e.g., PC_123).

2. IP Address Configuration:

○ Assign IP addresses to the computers in each LAN.

○ The last three digits of each student's roll number must be used for the last octet of the computer's IP address (e.g., 192.168.1.RollNumber).

○ Use a different subnet for each LAN (e.g., 192.168.1.0/24 for LAN 1 and 192.168.2.0/24 for LAN 2).

3. Routing Protocols Configuration:

○ Configure one router with RIP v1.

○ Configure the other router with OSPF.

○ Ensure communication between LANs using these protocols.

4. Packet Tracer Configuration Steps:

○ Add devices and create connections between them.

○ Configure IP addresses on the computers, switches, and routers.

○ Set up static routes or enable RIP/OSPF on the routers.

○ Ensure correct routing between the two LANs and that data can be transmitted between networks.

5. Simulation:

○ Use Cisco Packet Tracer's simulation mode to test message transmission.

○ Ensure a message can be successfully transmitted from one network to another.
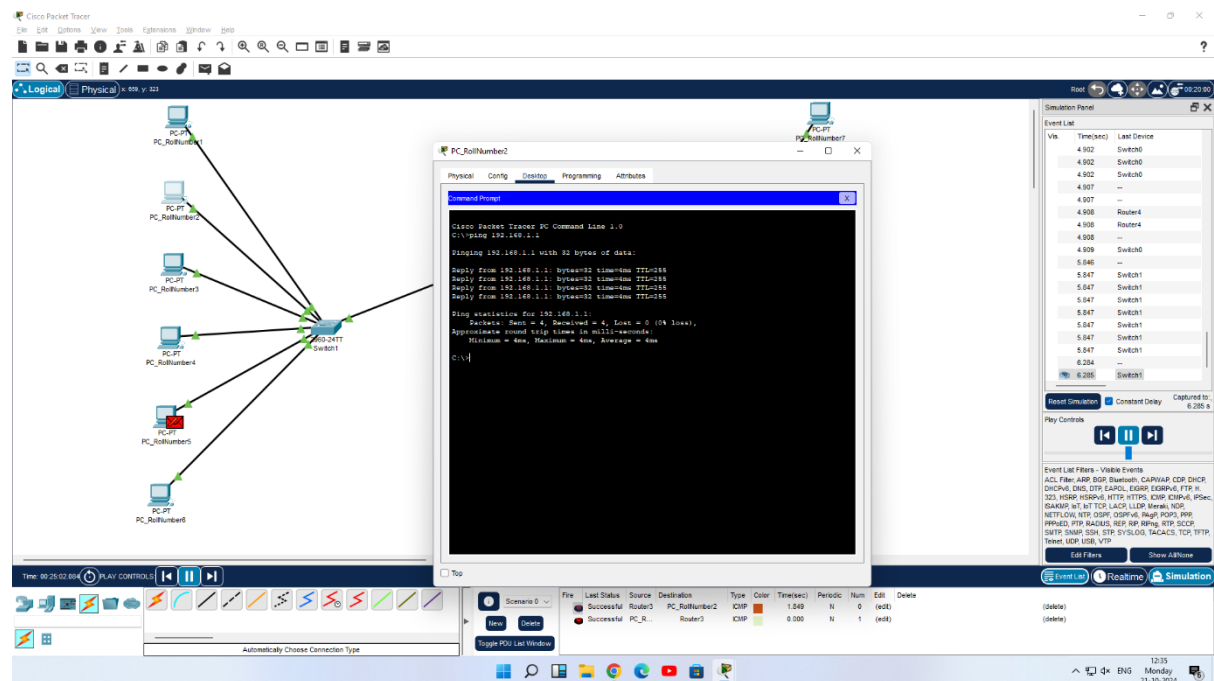
Network

Results:

Configured a network topology using RIP and OSPF routing protocols in Cisco Packet

Tracer. Customized the network by assigning each computer a name and an IP address using the

last three digits of Roll number and achieved Results.