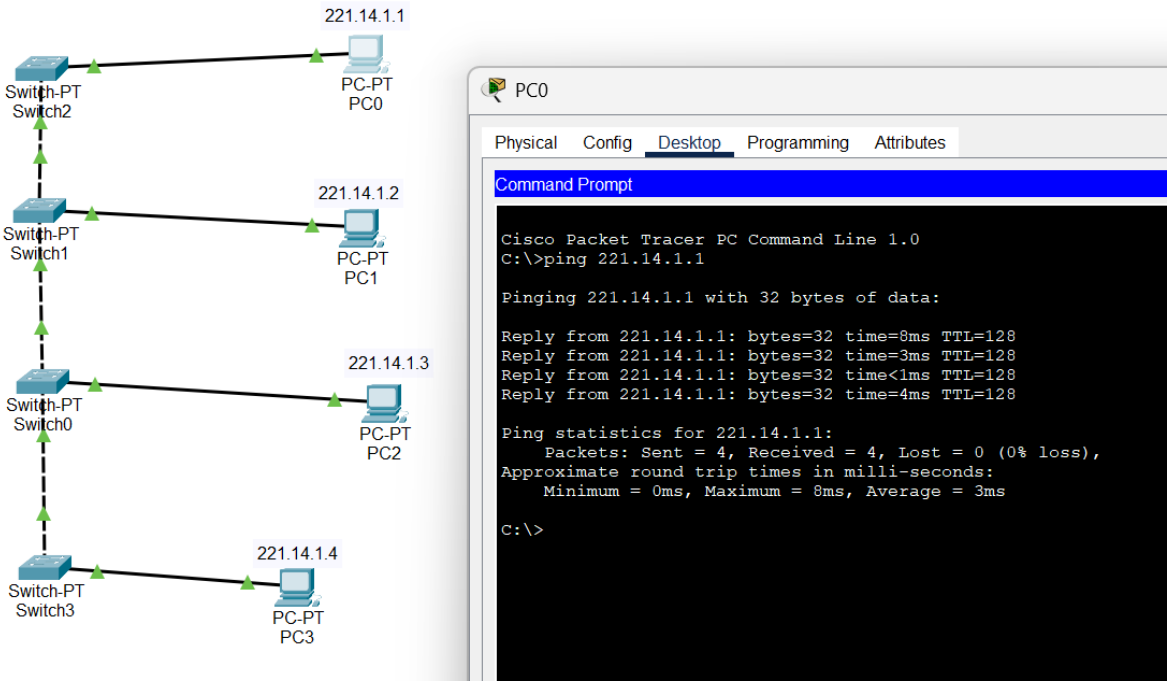
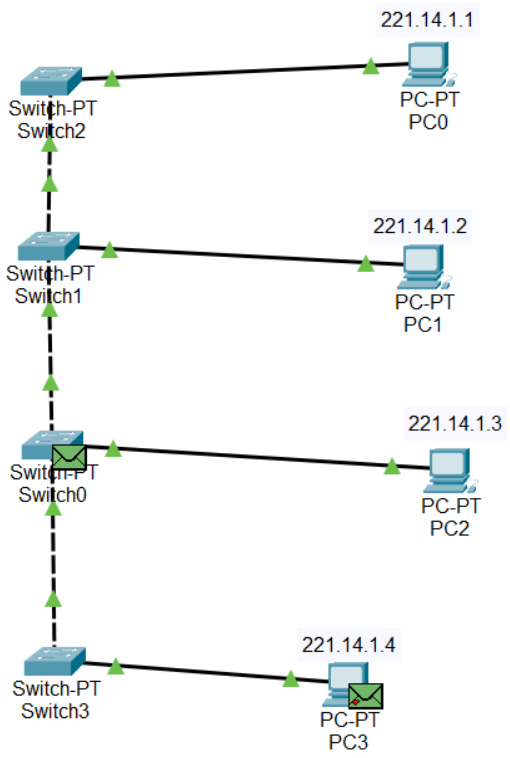
Assignment

Name: B.Pujith **Date:17/3/25**

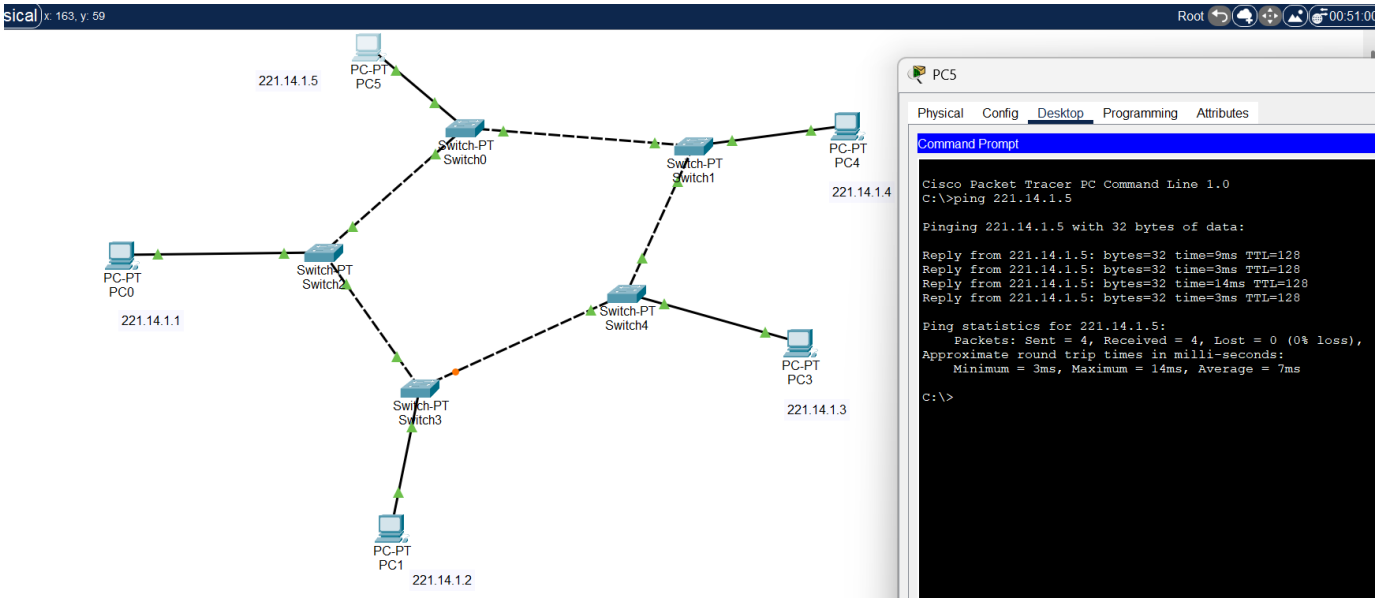
Roll no. : AM.EN.U4ECE22114

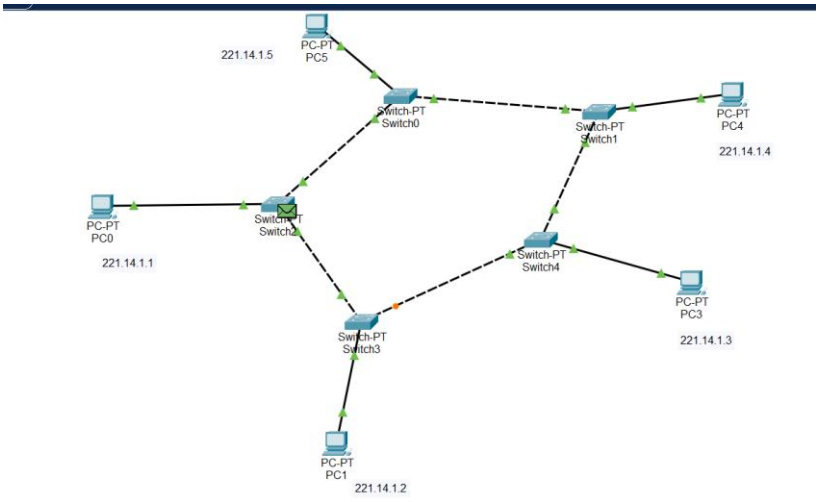
1.Bus topology: A single central cable connects all devices, and data travels along it.

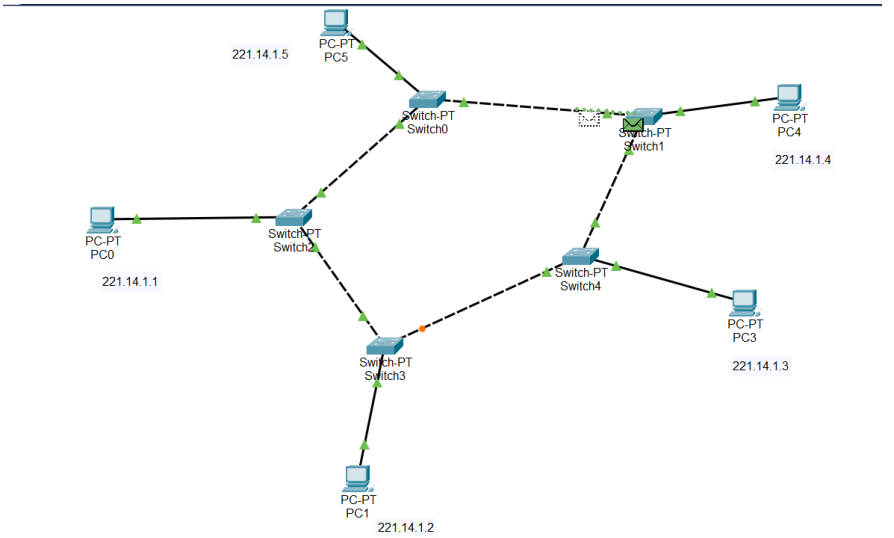




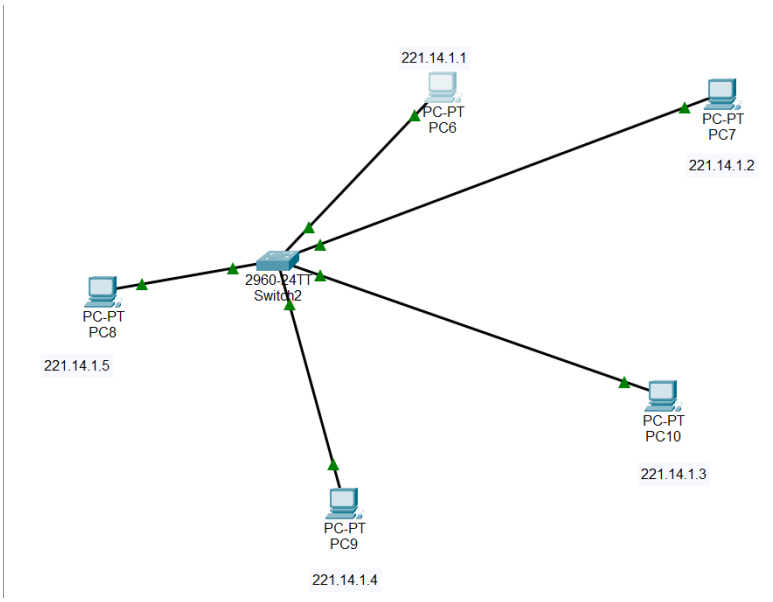
2.Ring topology: Devices form a closed loop where data moves in one or both directions.

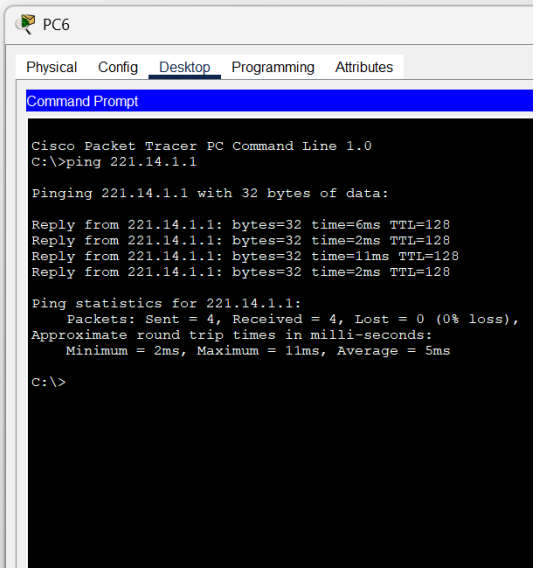


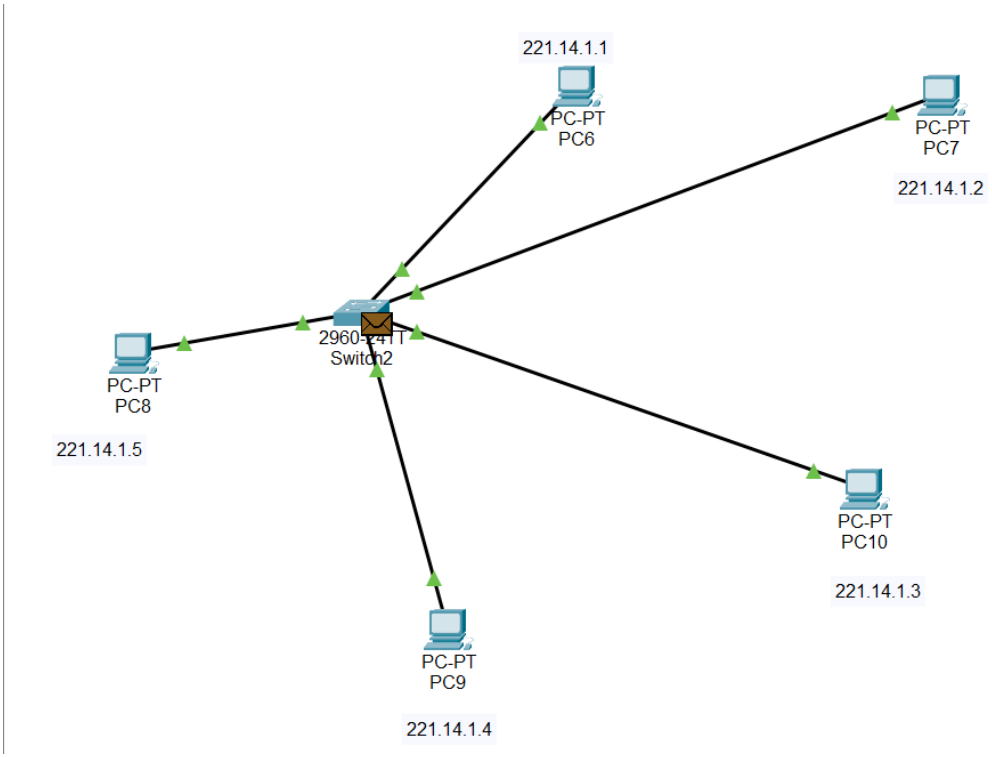




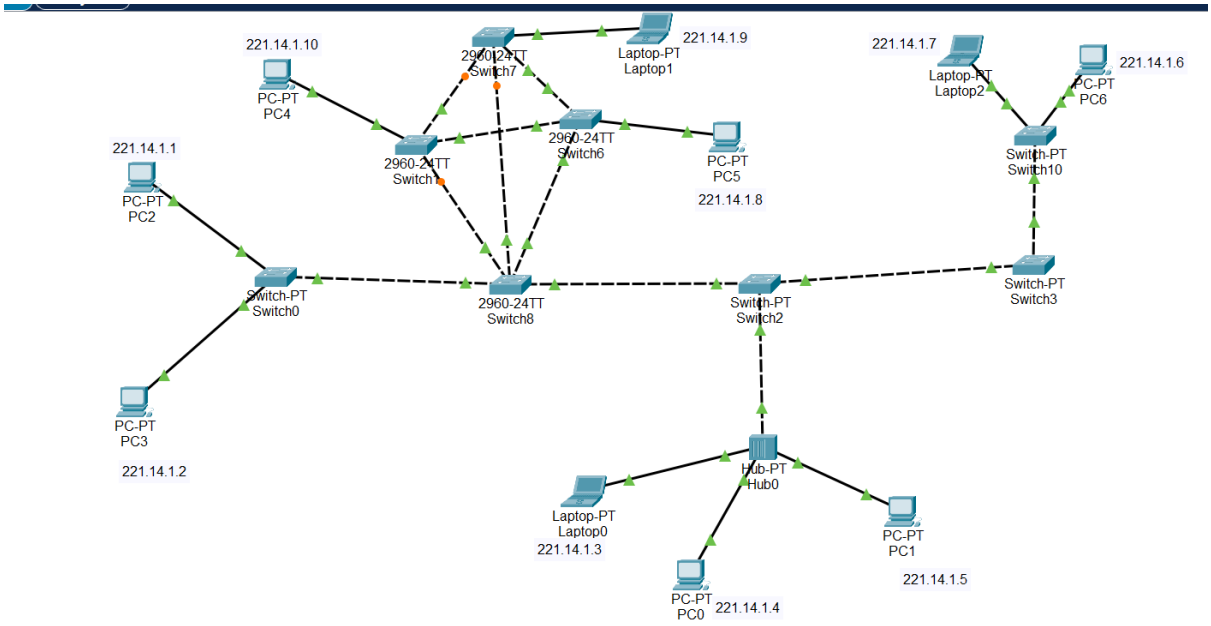
3.Star topology: All devices are connected to a central hub or switch.

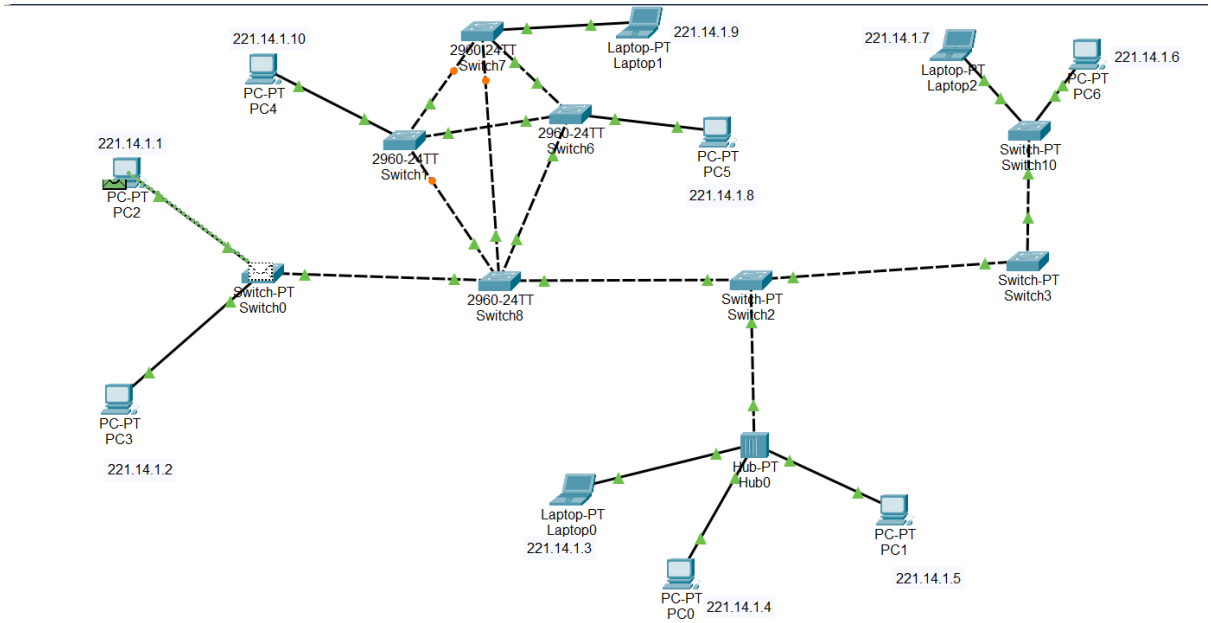


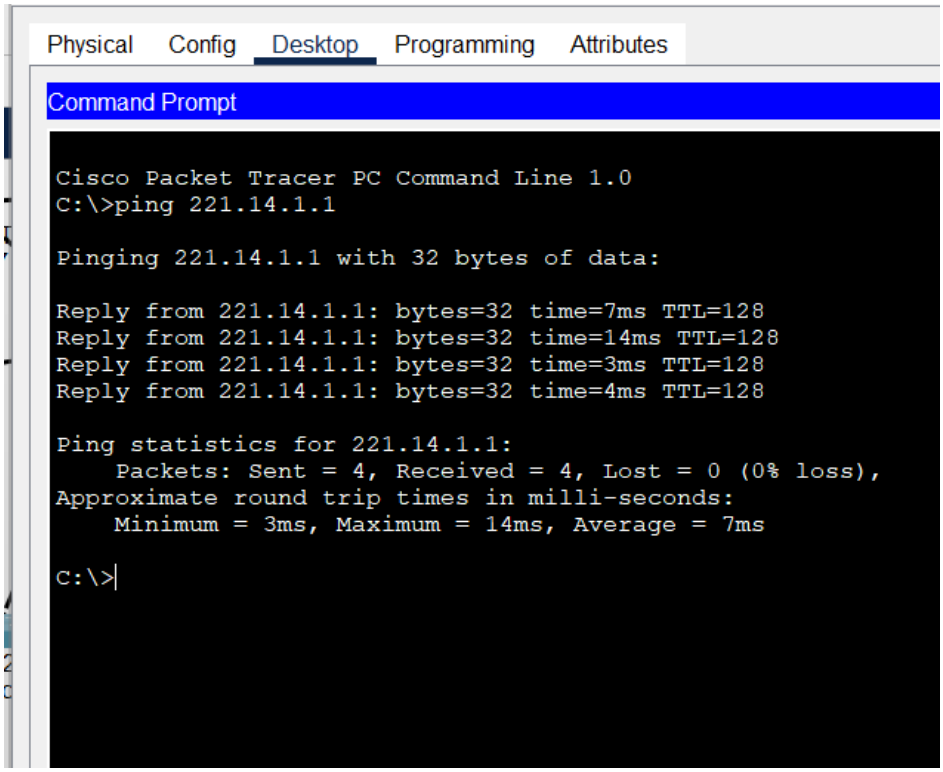




4.Tree topology: A hierarchical structure with multiple star networks connected to a central backbone.

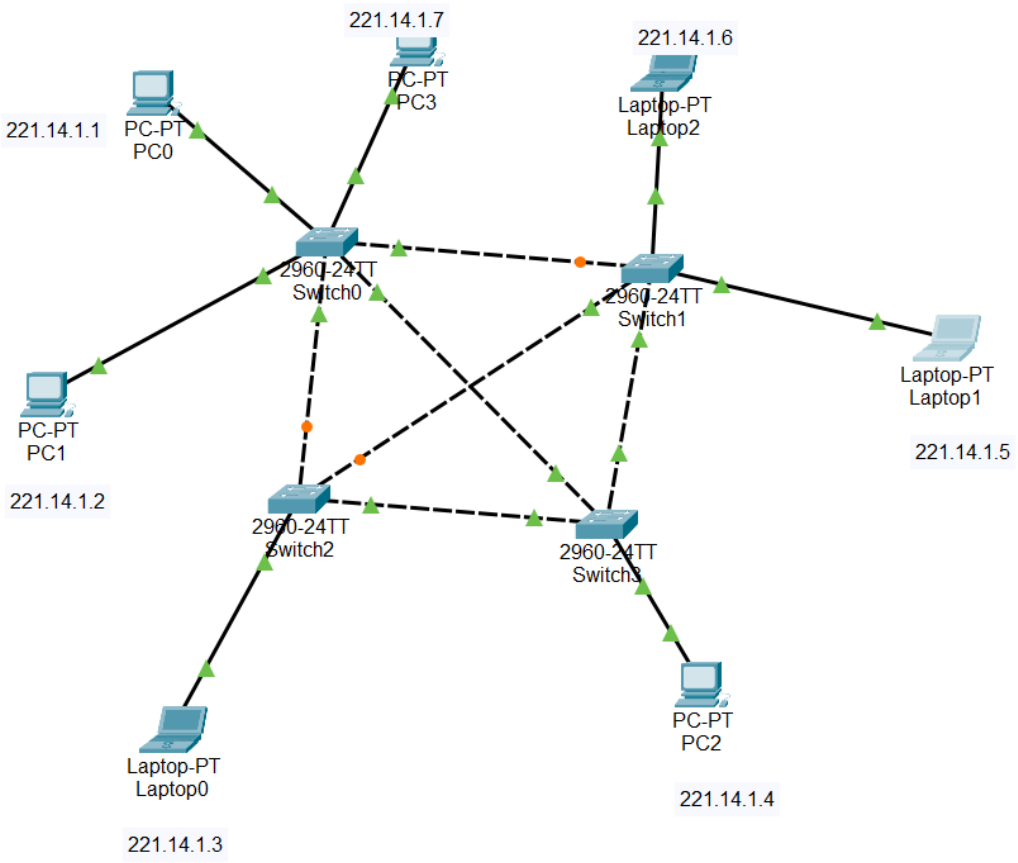


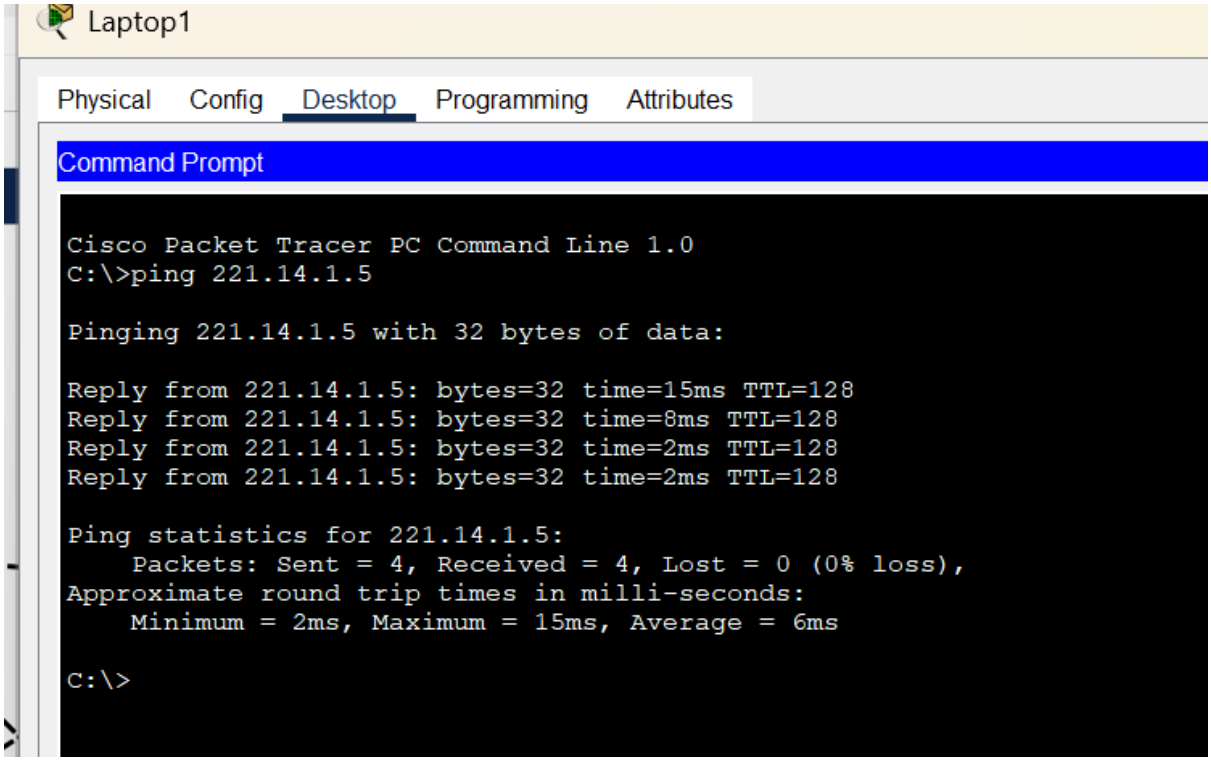


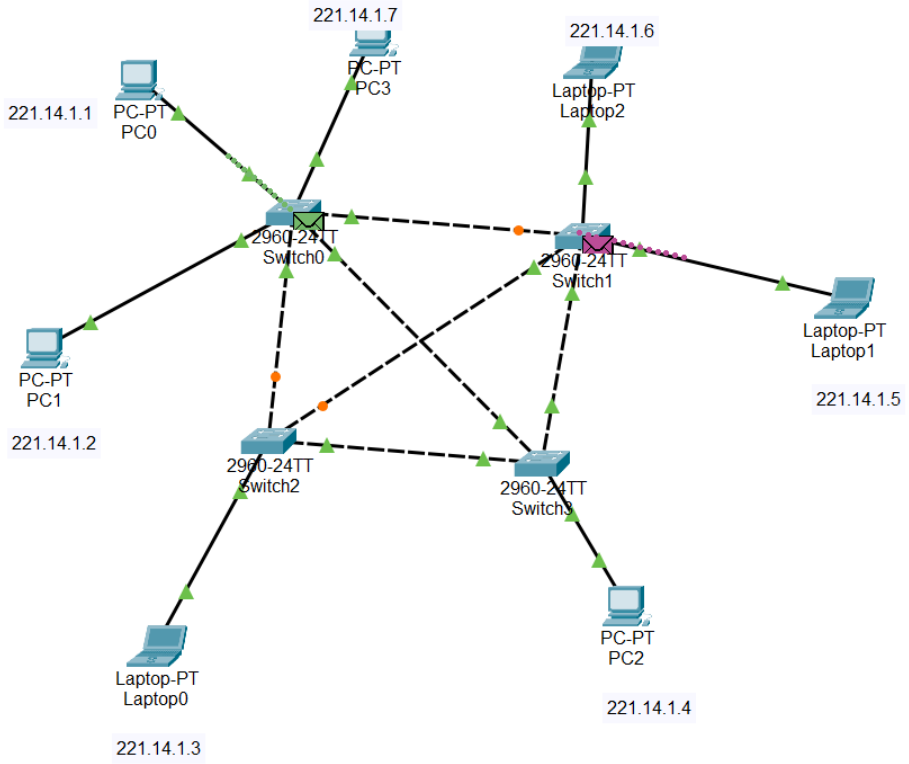


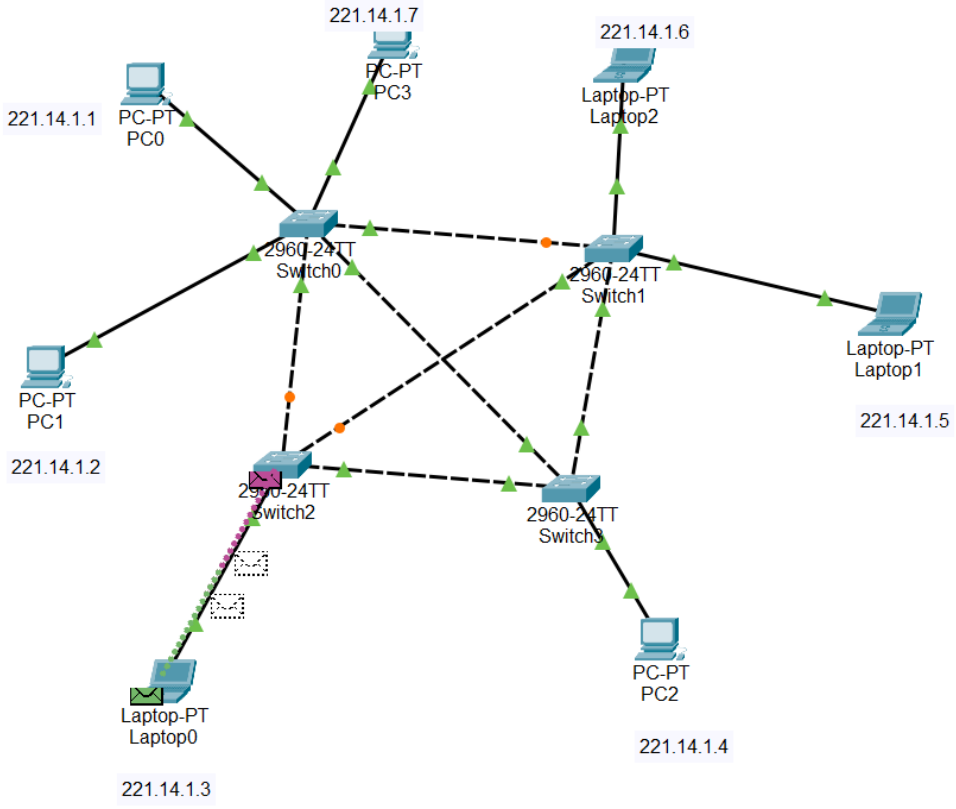
5.Mesh topology:

Every device is interconnected, ensuring multiple communication paths.


221.14.1.7
PC-PT
PC3
221.14.1.6
Laptop-PT
Laptop2
221.14.1.1
PC-PT
PC0
2960-24TT
Switch0
2960-24TT
Switch1
Laptop-PT
Laptop1
221.14.1.5
PC-PT
PC1
221.14.1.2
2960-24TT
Switch2
2960-24TT
Switch3
PC-PT
PC2
221.14.1.4
Laptop-PT
Laptop0
221.14.1.3


Laptop1
Physical
Config
Desktop
Programming
Attributes
Command Prompt
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 221.14.1.5
Pinging 221.14.1.5 with 32 bytes of data:
Reply from 221.14.1.5: bytes=32 time=15ms TTL=128
Reply from 221.14.1.5: bytes=32 time=8ms TTL=128
Reply from 221.14.1.5: bytes=32 time=2ms TTL=128
Reply from 221.14.1.5: bytes=32 time=2ms TTL=128
Ping statistics for 221.14.1.5:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 2ms, Maximum = 15ms, Average = 6ms
C:\>


221.14.1.7
PC-PT
PC3
221.14.1.6
Laptop-PT
Laptop2
221.14.1.1
PC-PT
PC0
2960-24TT
Switch0
2960-24TT
Switch1
Laptop-PT
Laptop1
PC-PT
PC1
221.14.1.5
221.14.1.2
2960-24TT
Switch2
2960-24TT
Switch3
PC-PT
PC2
Laptop-PT
Laptop0
221.14.1.4
221.14.1.3


221.14.1.7
PC-PT
PC3
221.14.1.6
Laptop-PT
Laptop2
221.14.1.1
PC-PT
PC0
2960-24TT
Switch0
2960-24TT
Switch1
Laptop-PT
Laptop1
PC-PT
PC1
221.14.1.5
221.14.1.2
2960-24TT
Switch2
2960-24TT
Switch3
PC-PT
PC2
Laptop-PT
Laptop0
221.14.1.4
221.14.1.3

INFERENCE:

Understanding of Network Structures – I have explored different network topologies, gaining insight into their architecture, advantages, and limitations.

Practical Application – Implementing these topologies in Cisco Packet Tracer suggests that you have hands-on experience in configuring and simulating networks.

Comparison & Analysis – I likely observed how data flows in each topology, their fault tolerance, scalability, and performance characteristics.

Troubleshooting Skills – While designing these networks, I may have encountered and resolved configuration issues, enhancing your problem-solving abilities.