ASSIGNMENT

COMPUTERS NETWORKING (CC-214)

Name:

Hamna Khalid

Topic:

Mesh topology

Mesh topology:

Mesh topology is a network configuration where devices are directly connected to each other, forming a meshlike structure. This decentralized design allows for multiple paths between devices, which improves redundancy and fault tolerance.

Advantages:

Data transmissions is reliable.
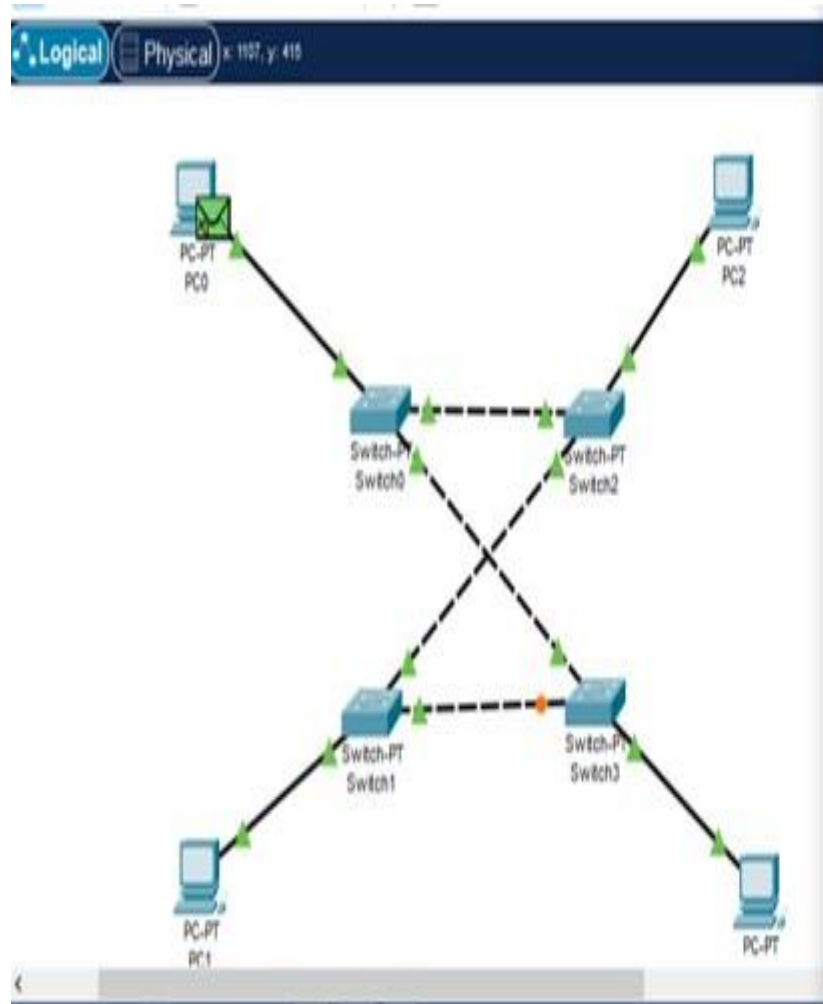Addition to add on hardware has no impact on data transmission.
Simple to add mesh topology.

Disadvantages:

Latency problem.

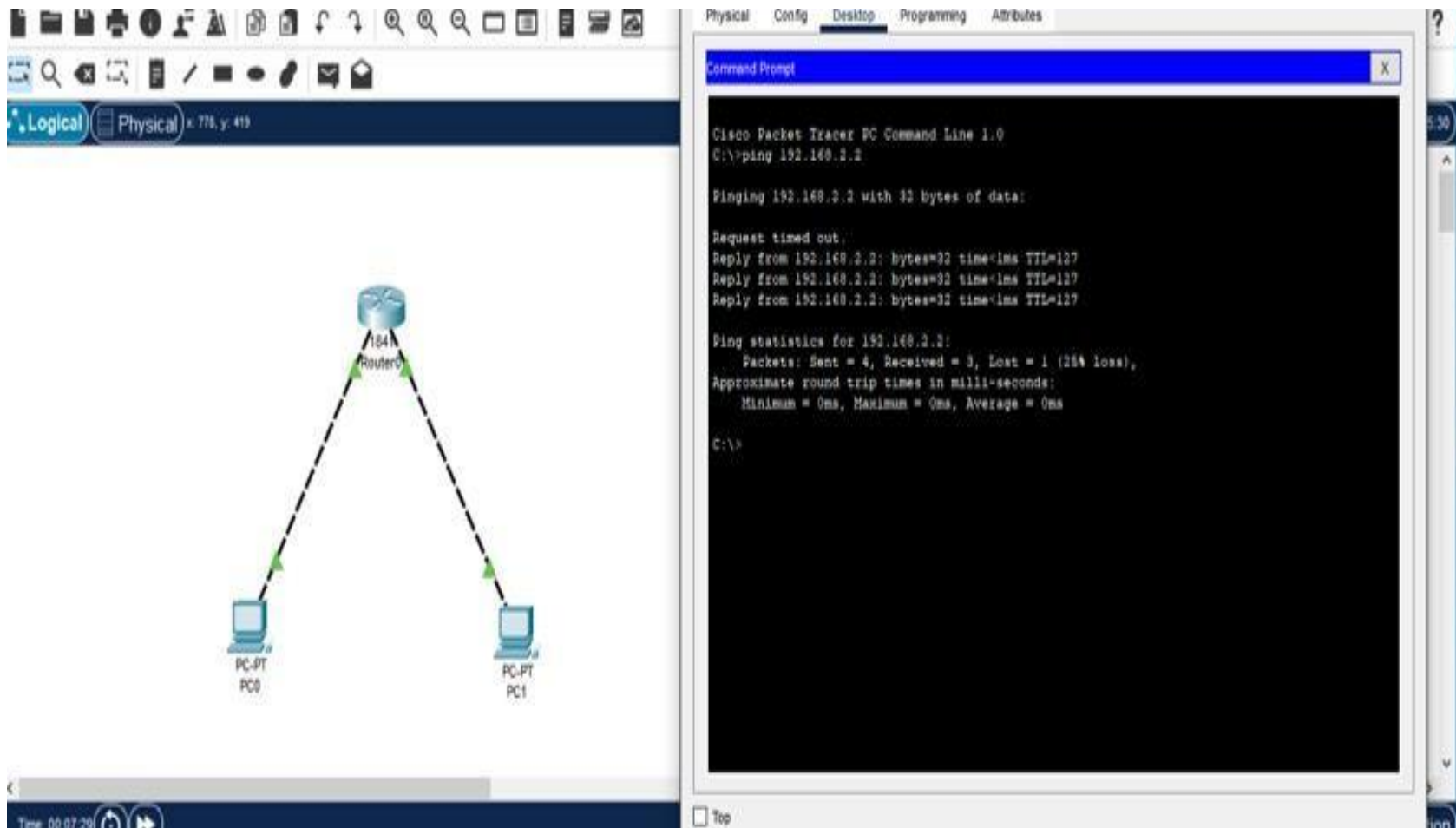The strain on each node has increased.

DIAGRAM:

METROPOLITAN NETWORK AREA(MAN)

◻ It is a high speed computer network that connects multiples of local area networks within a metropolotian area.

◻ A MAN is larger than a LAN that it cover s buildings ,offices but smaller than a WAN.

✈ Example:
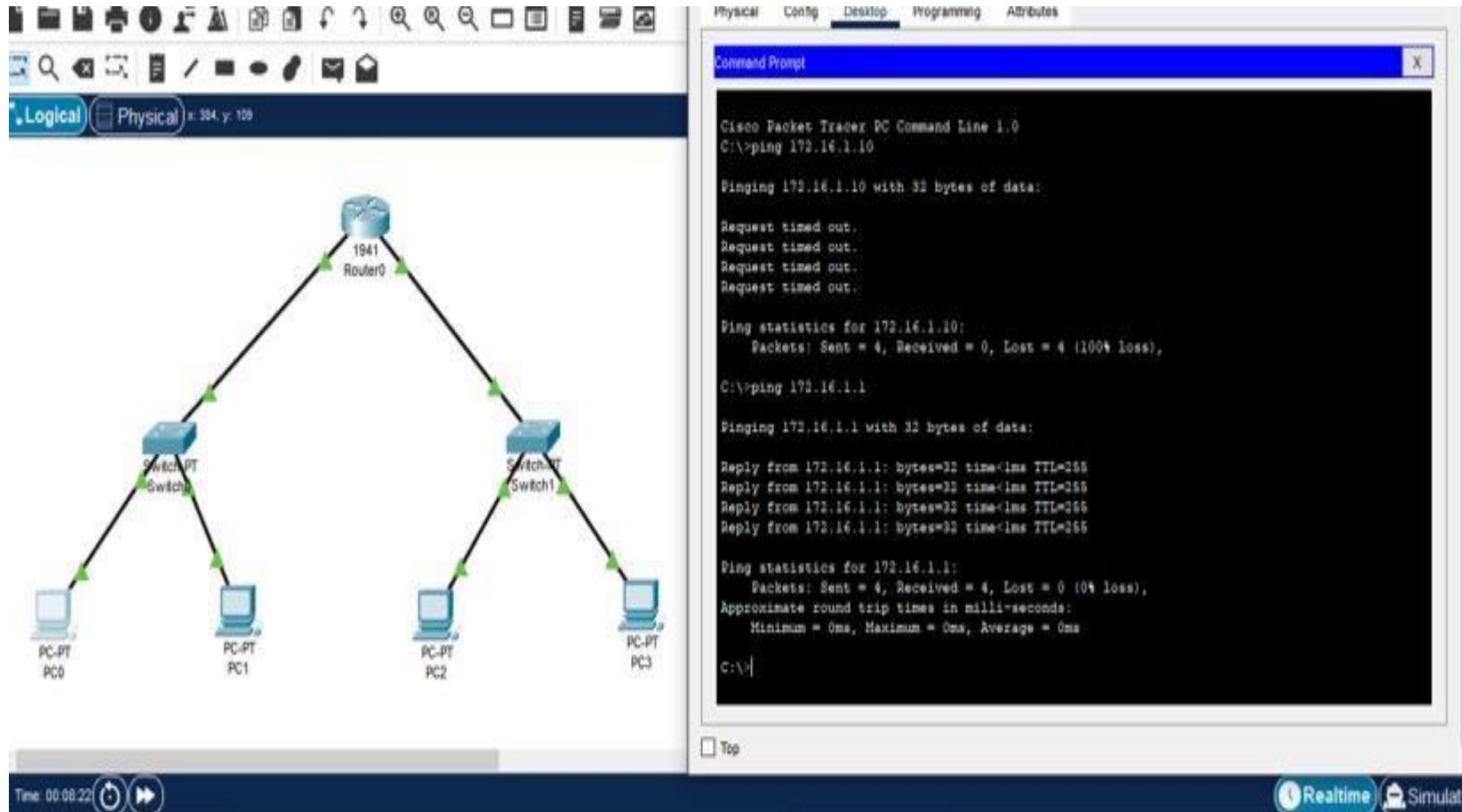
• Local companies.

• TV cable companies.

DIAGRAM:

PROCEDURE:

▶ Open Cisco Packet tracer.

- Select one router and two PCs
- Select wire and make connection between nodes and router.
- Provide IP Addresses and Gateway to nodes.
- Click router, go to CLI and should make your Connection wire green.
- Now click on command prompt and put there ping to check your connection.
- Now go to simulation and run it.
- MAN network is create now

DIAGRAM:

PROCEDURE:

▶ Open Cisco Packet tracer.

- Select one router and two Switches and 4 PCs (2 nodes should attach with each switch).
- Select wire and make connection between nodes, router and switches.
- Provide IP Addresses and Gateway to nodes.
- Click router, go to CLI and should make your Connection wire green.
- Now click on command prompt and put there ping to check your connection.
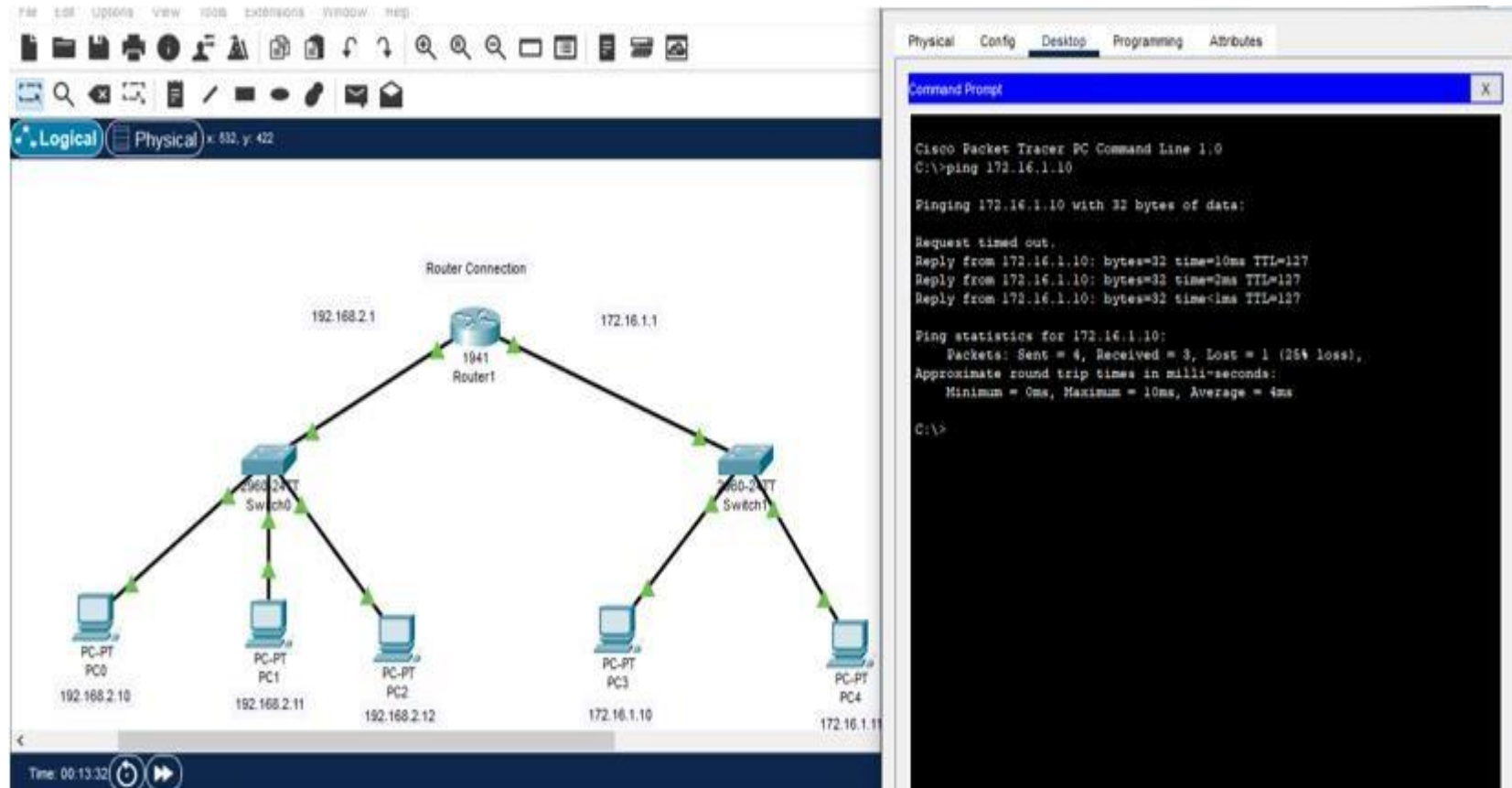- Now go to simulation and run it.
- MAN network is create now.

DIAGRAM:

PROCEDURE:

▶ Open Cisco Packet tracer.

- Select one router and two Switches and 4 nodes (3 nodes should attach with 1st switch and 2 nodes should attach with 2nd node).
- Select wire and make connection between nodes, router and switches.
- Provide IP Addresses and Gateway to nodes.
- Click router, go to CLI and should make your Connection wire green.
- Now click on command prompt and put there ping to check your connection.
- Now go to simulation and run it.
- MAN network is create now.

HUB NETWORK:

- A hub is a network that connects devices to central point called hub, for sharing information , services and resources.

- A hub is a device that receives data from all connected devices and broadcasts it to all other devices.

- Data is sent from one device to another via the hub.

- Hubs are relatively simple devices and are typically less expensive than switches or routers.

DIAGRAM:
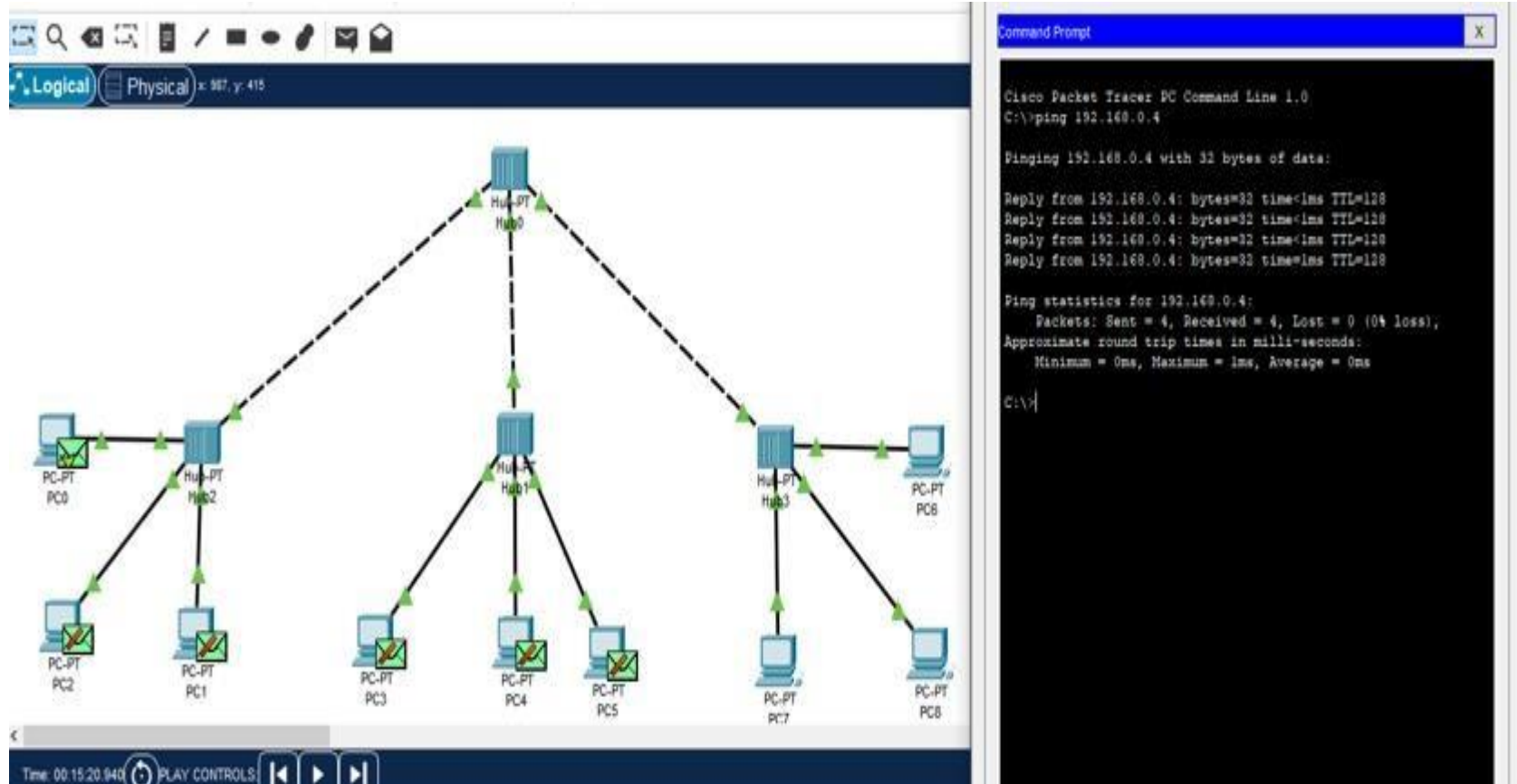
POCEDURE:

▶ Open Cisco Packet Tracer Software.

- Click on File and create a new file and save it.
- Take 9 PCs and 4 Hub (connect 3 hubs with one hub).
- Connect PCs and Hubs with wires.
- Assign Address like 192.168.0.1, 192.168.0.2, 192.168.0.3, and 192.168.0.4 respectively to each PC.
- Also Set gateway 192.168.1.4 for each PC.
- Now click on PC 1 Go on IP Configuration and gave their address of PC 2 and Enter.
- Now Click on PDU and gave message to PC 1and PC 7 than Click on Simulation.
- Hub Network is create now.