

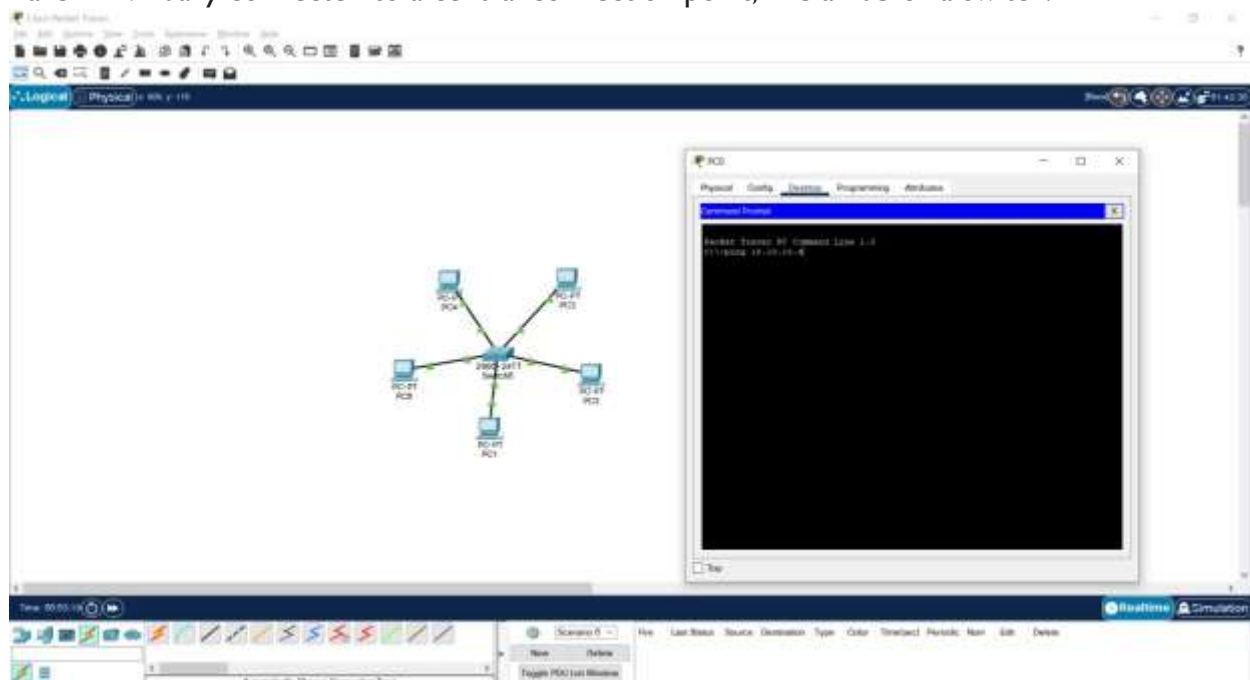
# Assignment 6

## Computer Networks

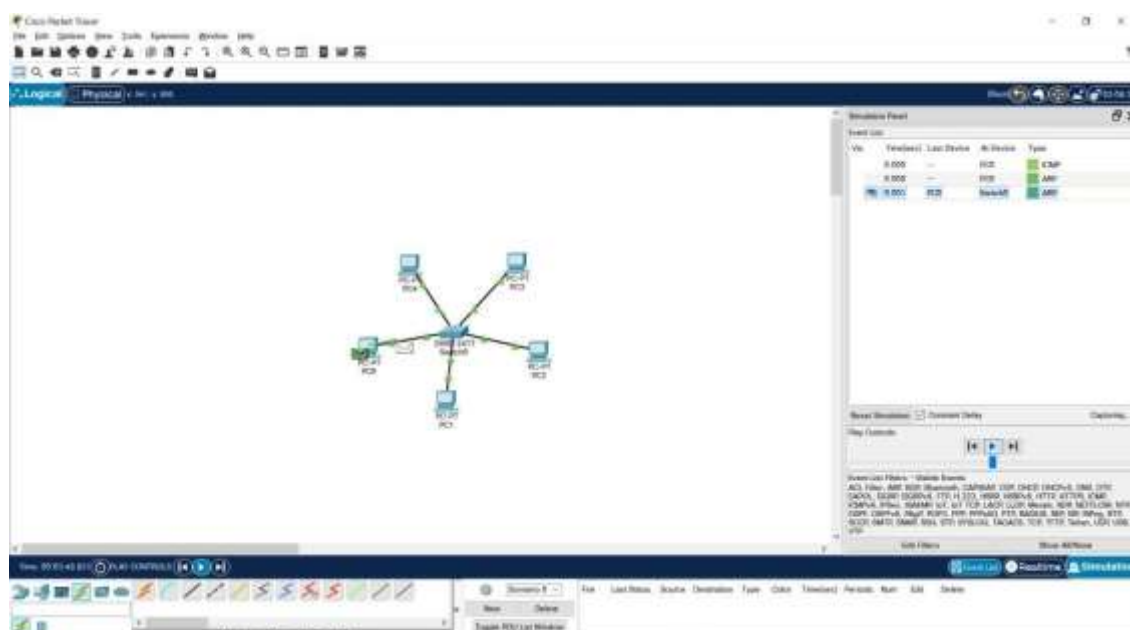
**NAME: SOURABH PATEL**  
**ADMISSION NO: UI9CS082**

### Star Topology

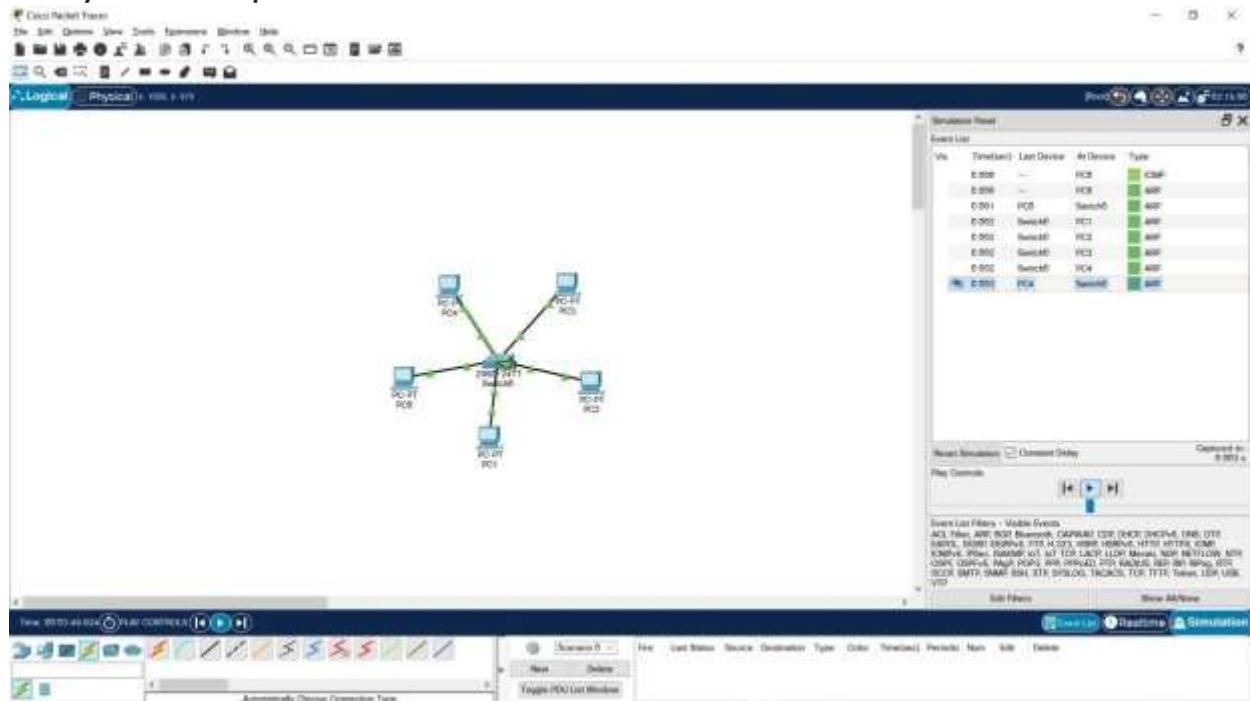
A star topology is a topology mainly for a Local Area Network (LAN) in which all nodes are individually connected to a central connection point, like a hub or a switch.



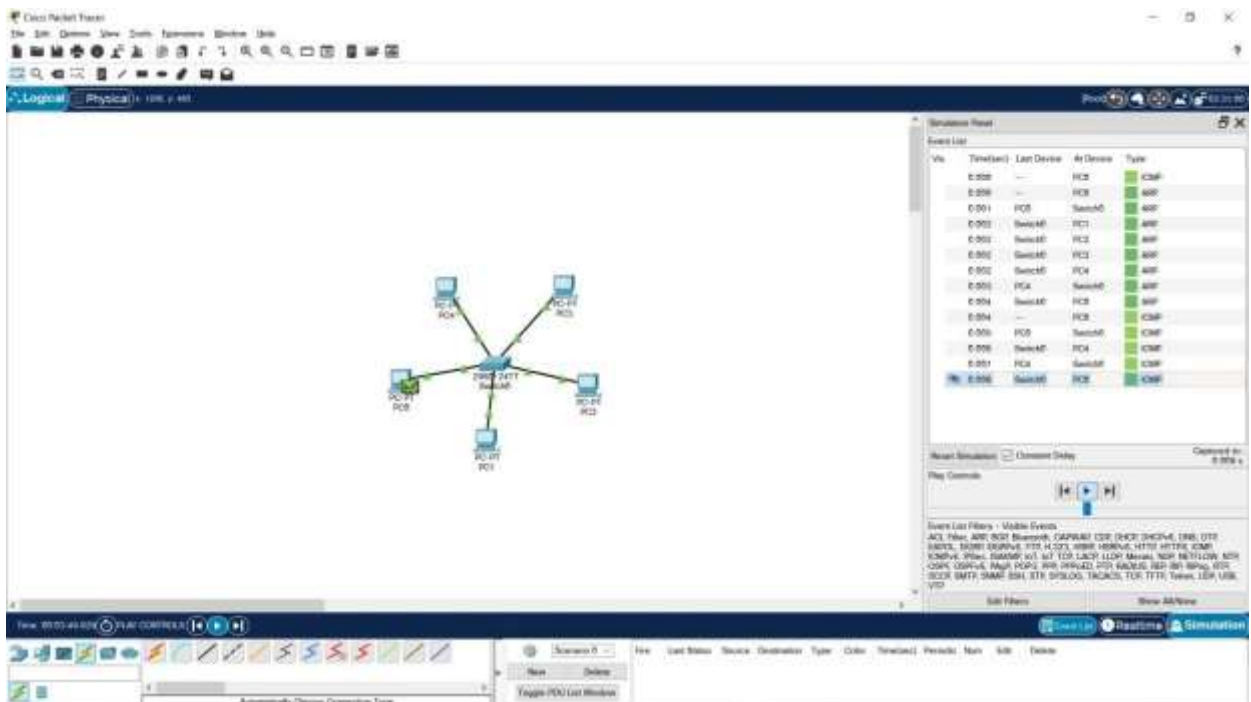
Let's try ping command from PC0 to PC4.



Only PC4 accepts.

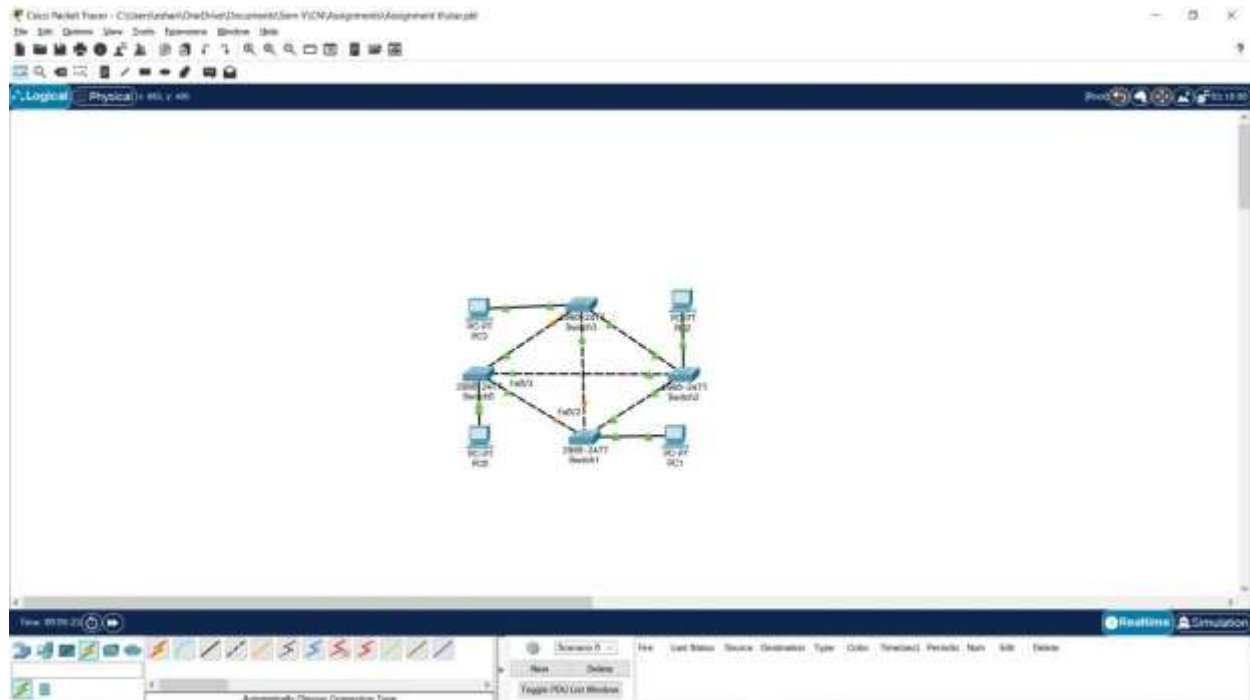


PC0 receives the reply.

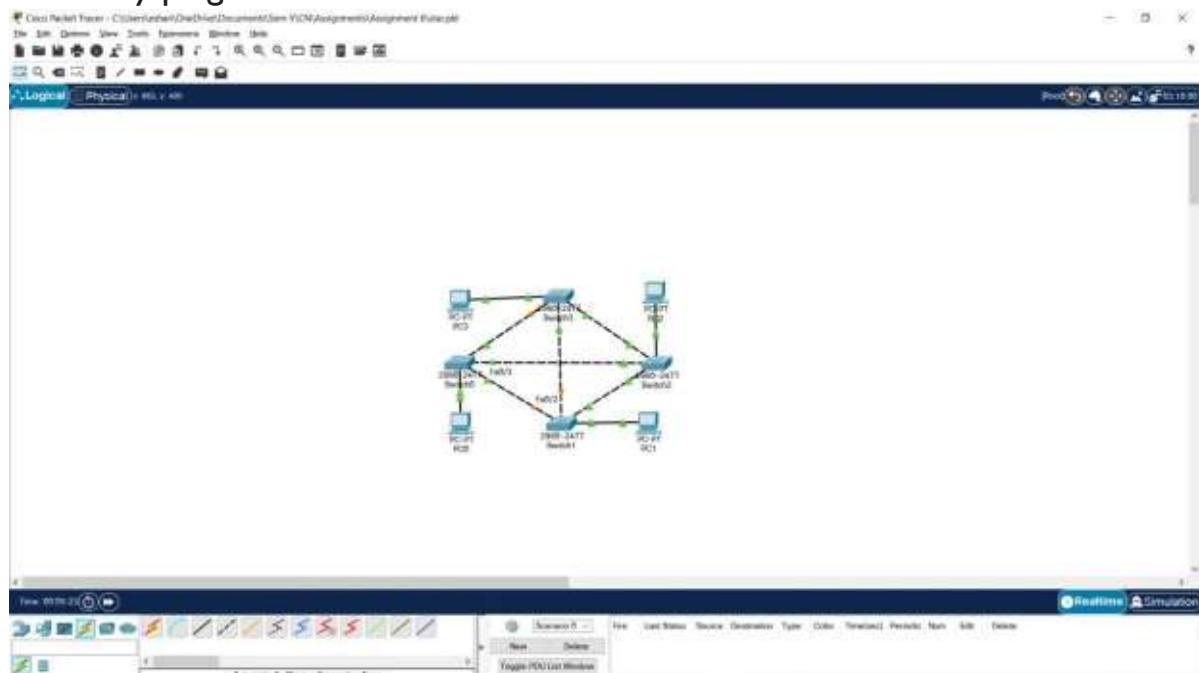


## Mesh Topology

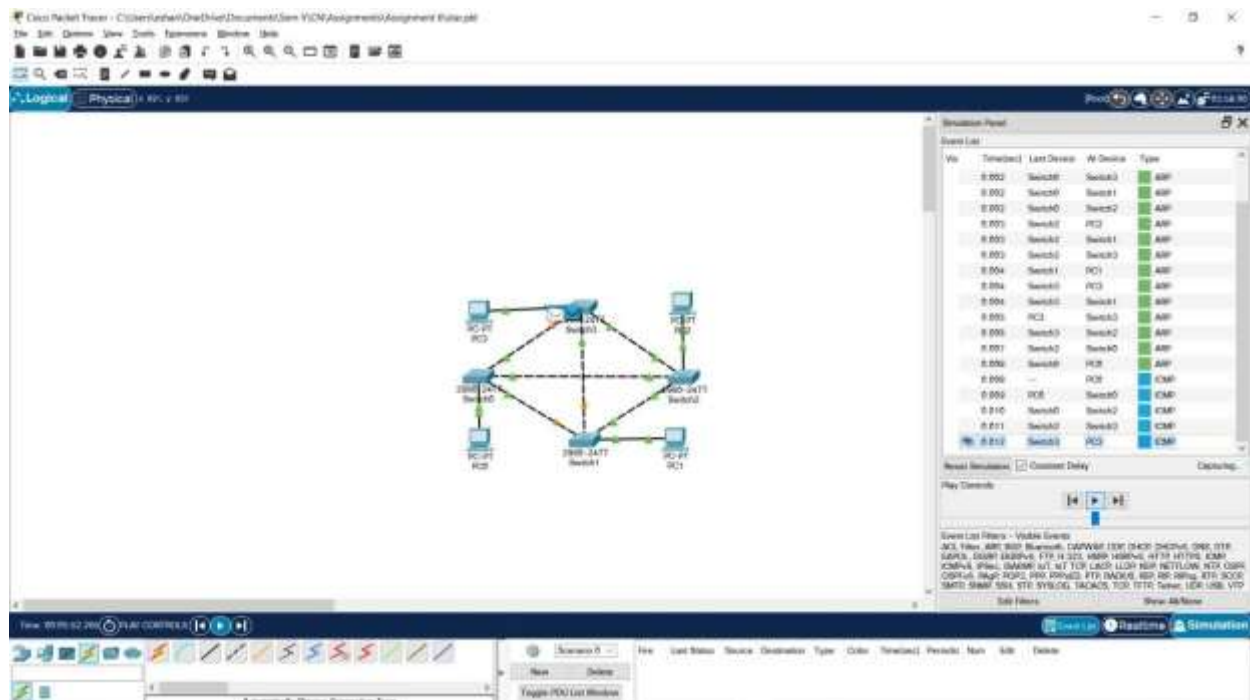
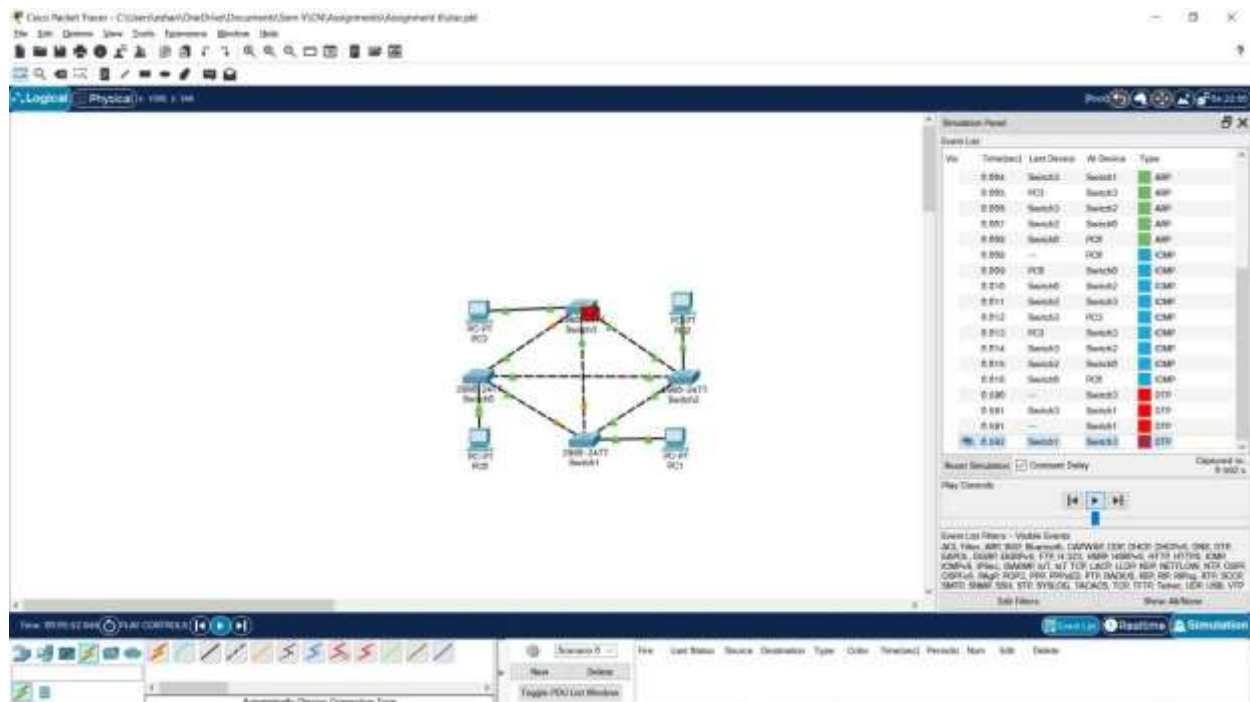
The mesh topology has a unique network design in which each computer on the network connects to every other. It develops a P2P (point-to-point) connection between all the devices of the network. It offers a high level of redundancy, so even if one network cable fails, still data has an alternative path to reach its destination.



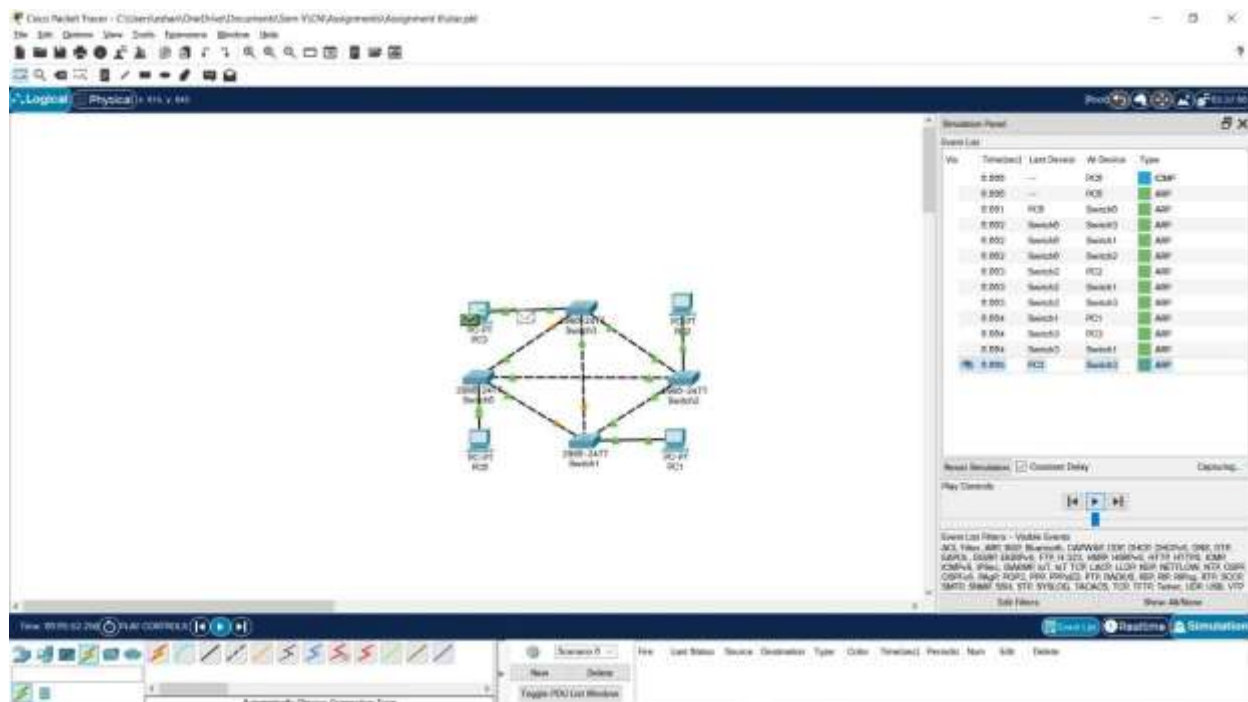
Let's try ping command from PC0 to PC3



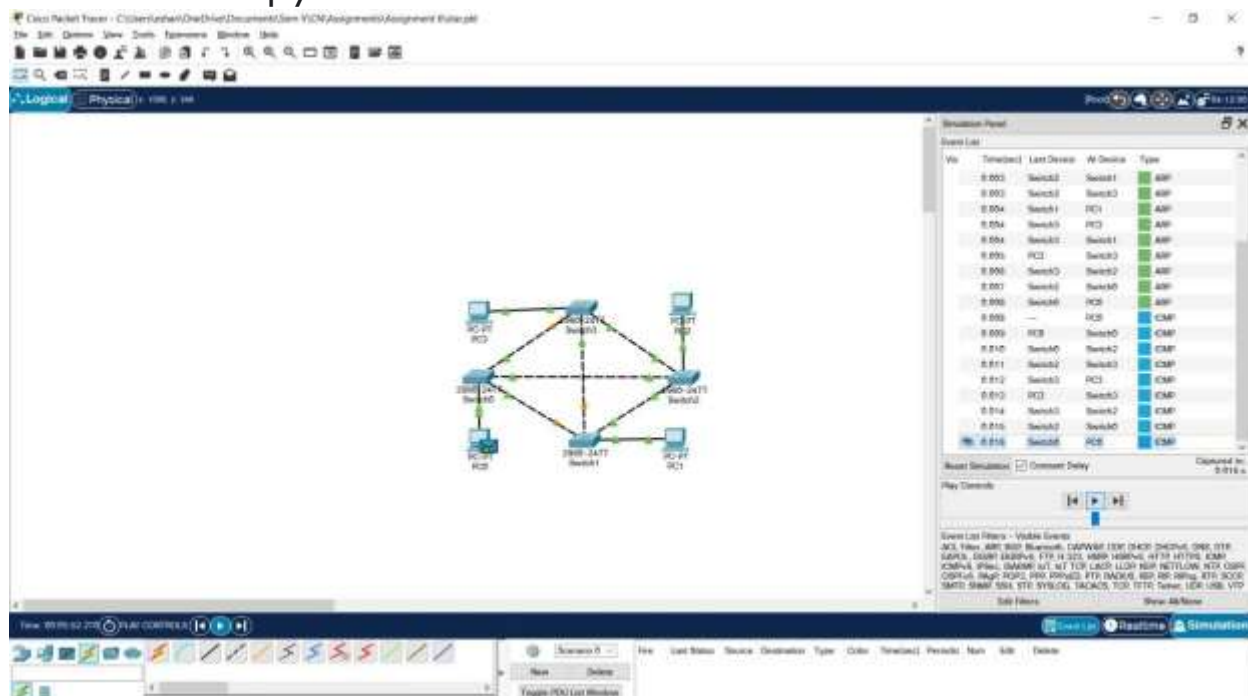
## Message travels from PC0



Message reaches destination (PC3).



PC0 receives reply.

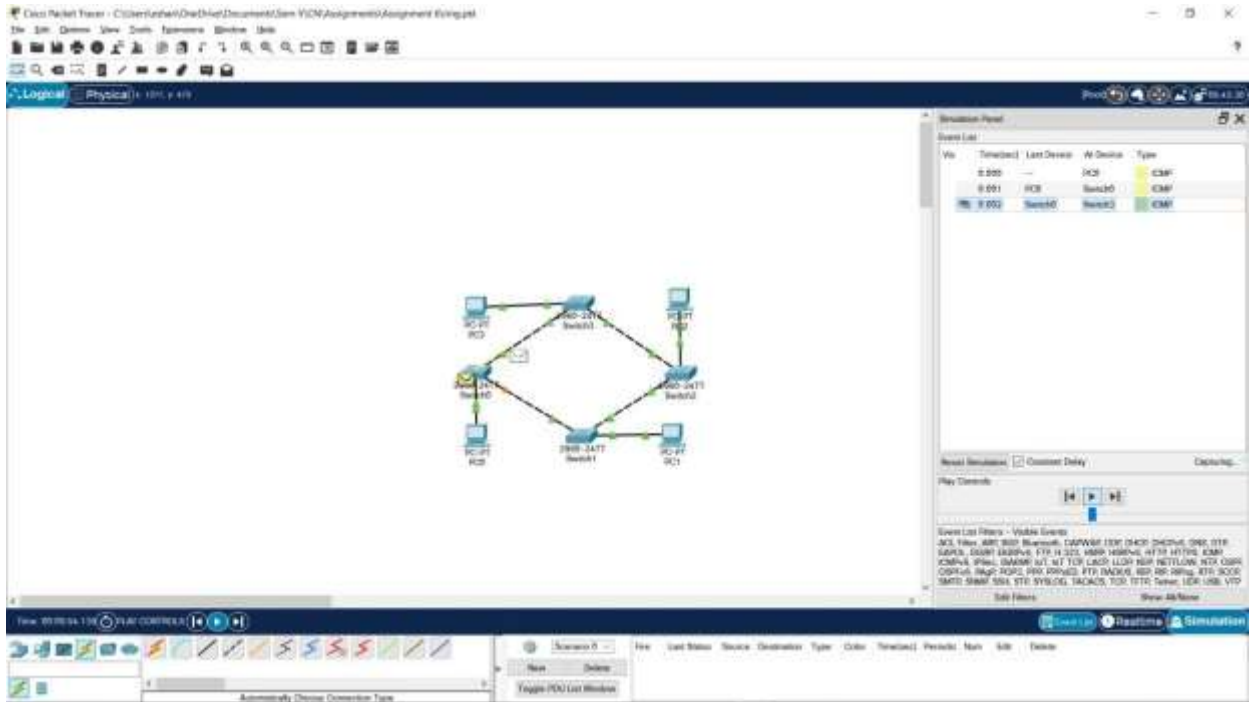


## RING TOPOLOGY

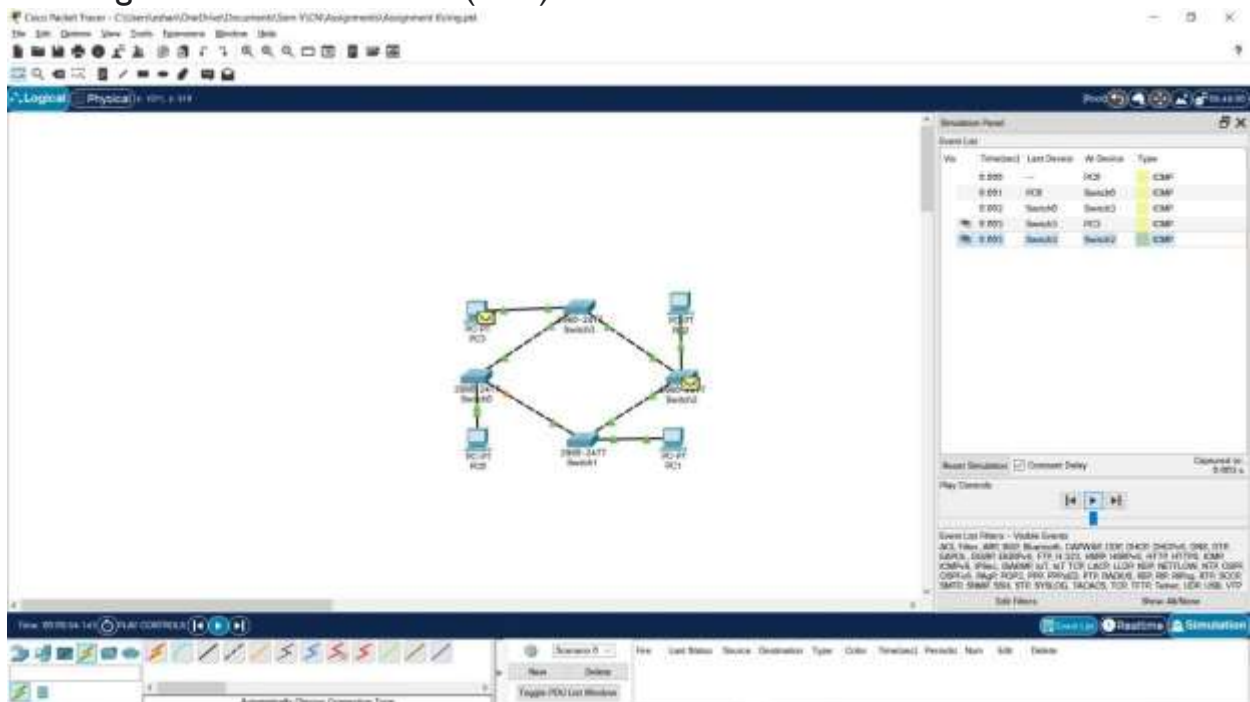
A ring topology is a network configuration where device connections create a circular data path. Each networked device is connected to two others, like points on a circle.



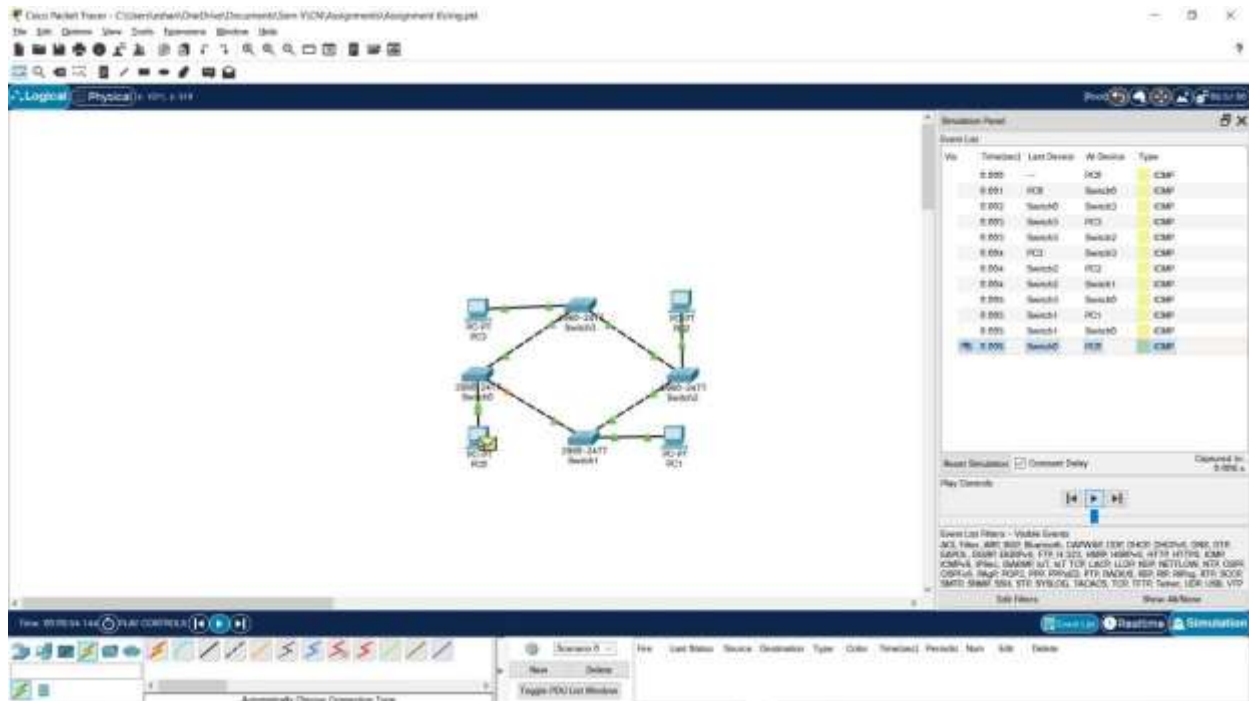




Message reaches destination (PC3).

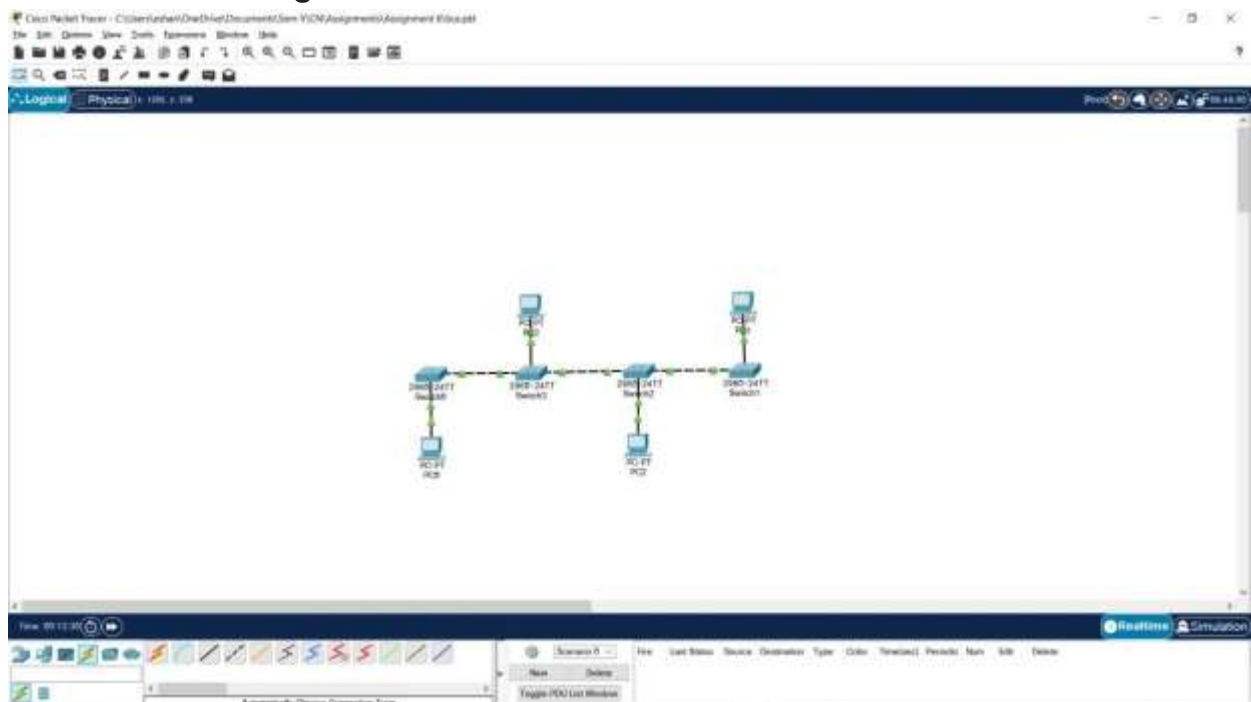


PC0 receives reply.



## BUS TOPOLOGY

Bus topology is a network setup where each computer and network device is connected to a single cable or backbone.



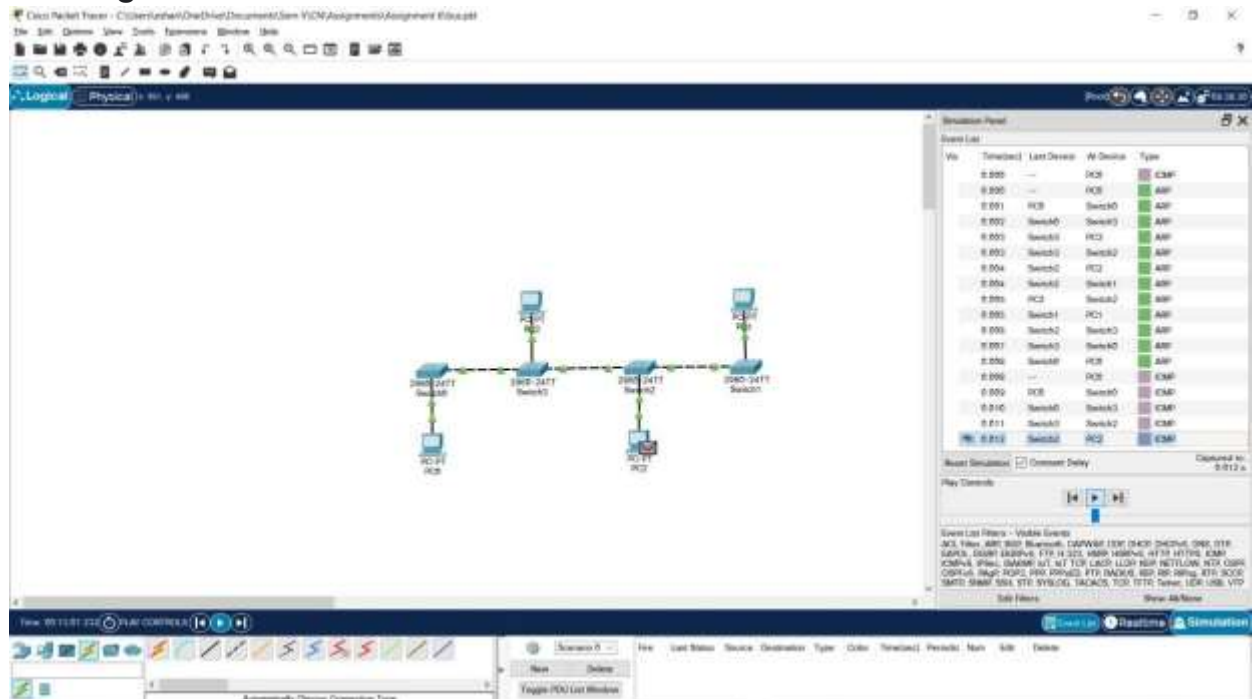


The screenshot displays the Cisco Packet Tracer interface. The main workspace shows a network topology with four switches labeled SW0, SW1, SW2, and SW3 connected in a linear fashion. Each switch has two PCs connected to it via Ethernet ports. The top toolbar contains various icons for creating and editing network components. On the right side, there is a terminal window titled "PCB" which shows a series of commands and their outputs, including IP address assignments and ping test results. At the bottom, there are tabs for "Realtime" and "Simulation" modes, along with a status bar indicating the current time and simulation state.

The screenshot displays the Cisco Packet Tracer software interface. At the top, there is a menu bar with options like File, Edit, Devices, View, Tools, Windows, and Help. Below the menu is a toolbar with various icons for network building. The main workspace shows a network topology with four switches (2950-24TT, 2950-24TT, 2950-24TT, and 2950-24TT) connected in a line. Each switch has several PCs connected to it. The right-hand panel is open to the 'Simulation' tab, showing an 'Events List' table with columns for Time, Location, Last Device, All Devices, and Type. The table contains three entries, all of which are 'Switch' events. Below the table, there are controls for 'Reset Simulation', 'Continue Delay', and 'Capturing...'. At the bottom, there is a 'Play Controls' section with buttons for 'Play', 'Pause', and 'Stop'. The bottom status bar shows 'New 80.11.01.201 PLAY CONTROLS' and 'Simulation'.



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