# EXPERIMENT NO. 9

**SEMESTER: V** **DATE OF PERFORMANCE: 02nd October 2024**

**SUBJECT: CN Lab** **DATE OF SUBMISSION: 11th October 2024**

**NAME OF THE STUDENT: David James Eluvathingal ROLL NO.: 22**

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| **AIM** | To build a simple network topology and configure it for static routingprotocol using cisco packet tracer. |
| **LEARNING OBJECTIVE** | The student will use static routing for a network using CISCO packet tracer. |
| **LEARNING OUTCOME** | The student will configure the topology for static routing protocol using ciscopacket tracer. |
| **COURSE OUTCOME** | CSL502.6: Design and Build a network topology using packet tracer. |
| **PROGRAM OUTCOME** | PO1,PO5,PO9,PO10,PSO1,PSO2,PSO3 |
| **BLOOM'S TAXONOMY LEVEL** | Create |
| **THEORY** | Cisco Packet Tracer is a cross-platform visual simulation tool designed by Cisco Systems that allows users to create network topologies and imitate modern computer networks. The software allows users to simulate the configuration of Cisco routers and switches using a simulated command line interface. Packet Tracer makes use of a drag and drop user interface, allowingusers to add and remove simulated network devices as they see fit. The software is mainly focused towards Certified Cisco Network Associate Academy students as an educational tool for helping them learn fundamental CCNA concepts.<br><br>**Features of Cisco Packet Tracer**<br>• Cisco Packet Tracer supports a multi-user system that allows manyusers to connect various topologies across a computer network. Instructors can also build exercises for students to perform using Packet Tracer.<br>• Supports feature expansion via additional programmes that use an APIto improve Cisco Packet Tracer's capabilities in areas including curriculum and assessment delivery, gaming, accessibility, and interacting with real-world equipment.<br>• The Enhanced Physical Mode transports you to a virtual lab where you can simulate cabling devices on a rack. Refresh key skills such as device placement (Rack & Stack), on-device power switching, device port-to-port cabling (including cable selection and management), troubleshooting, and more. |

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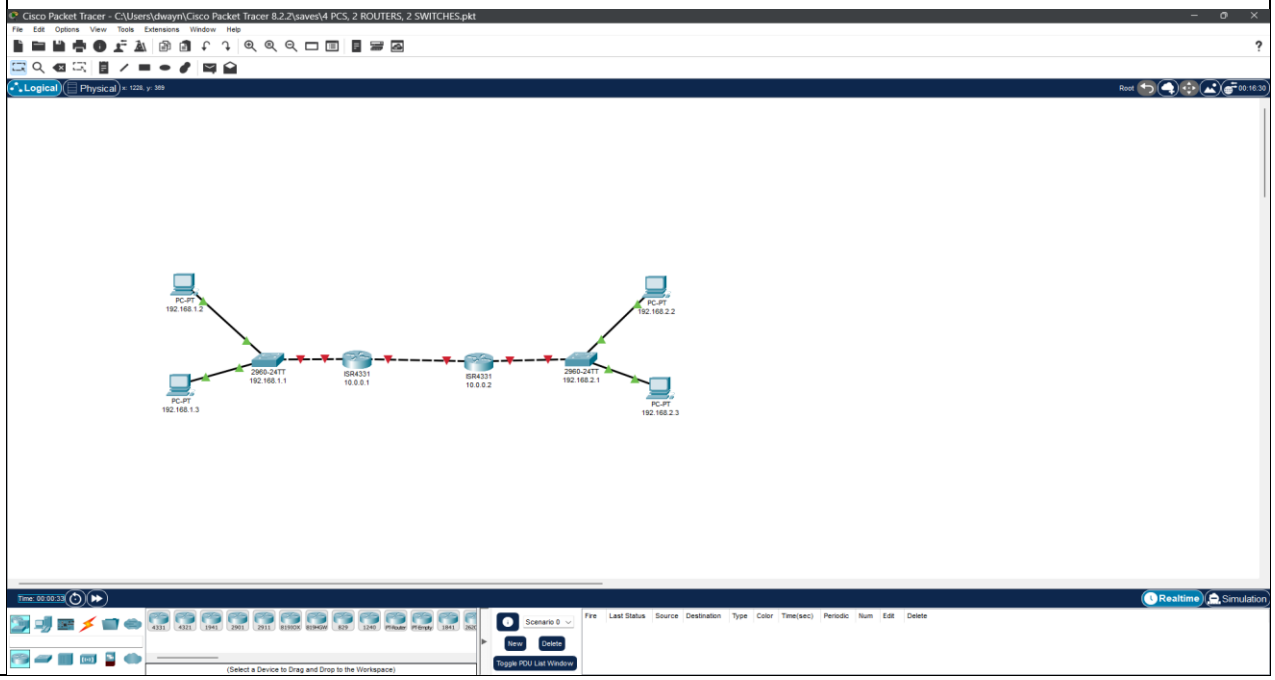
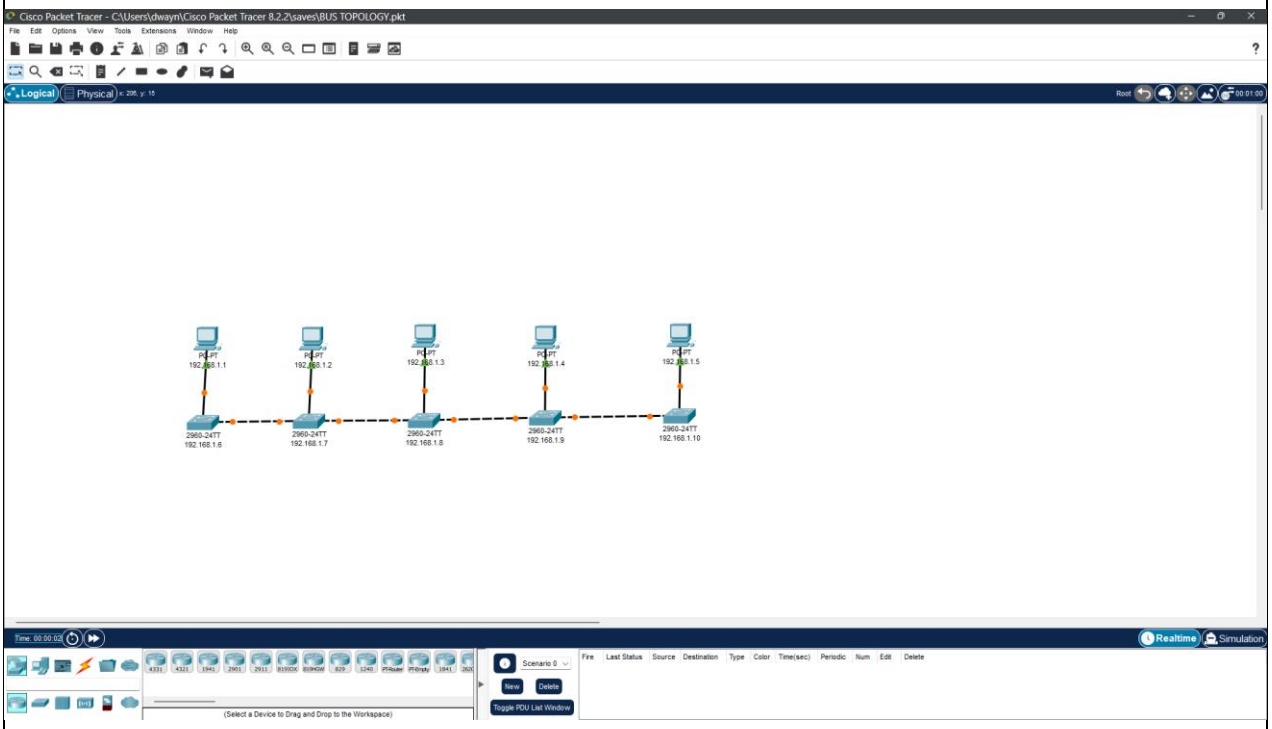
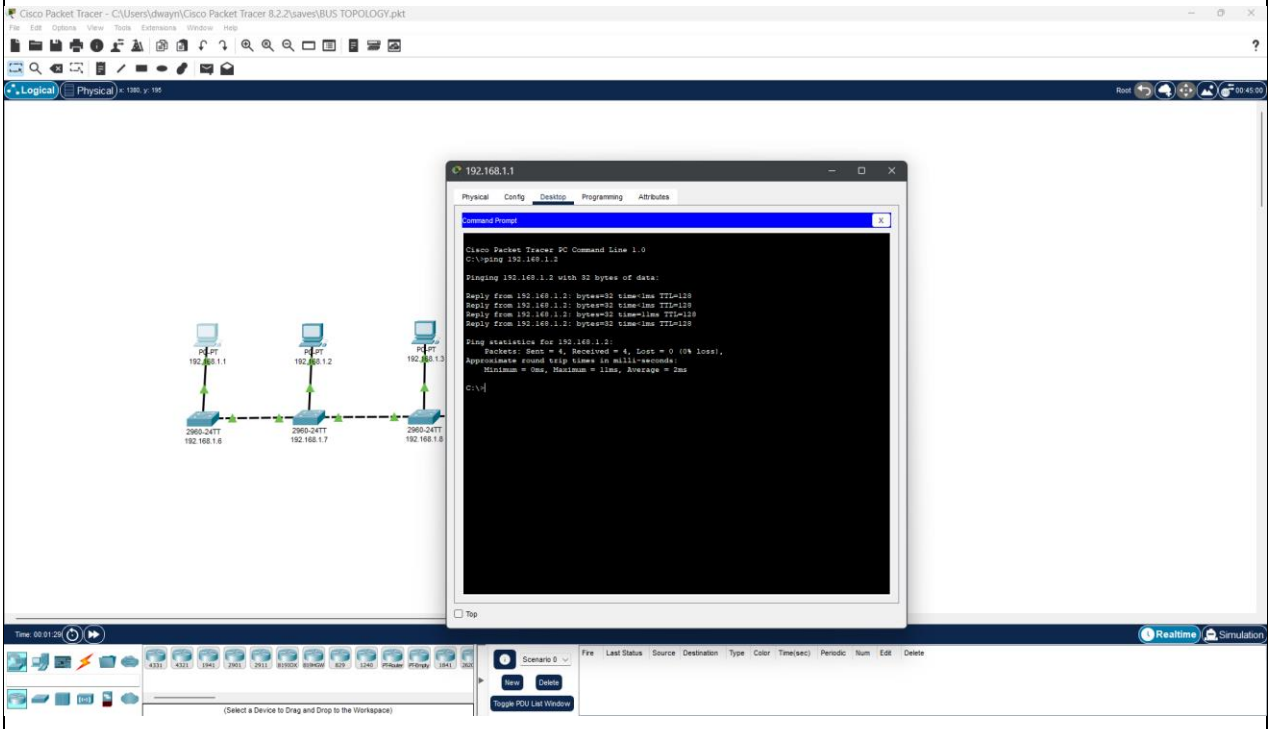
| | • It can be downloaded for free through a Netacad account.<br>• It enables its users to simulate the configuration relating to the Cisco routers and can be accessed anywhere anytime.<br>• The Network Controller allows you a centralised dashboard to see the network's state, instantly discover and diagnose issues, and push configuration changes to all managed devices at once, whether you use its Web GUI or its APIs. You may also use real-world programmes on your computer to access the Network Controller and run your own infrastructure automation scripts.<br>• It can be accessed through unlimited devices.<br>• Provides an interactive and self-paced environment. |
| **LAB EXERCISE** | • Build a network scenario having 4PCs, 2 switches and 2 routers and provide static routing.<br>• Build topology -Bus with 5 PCs and transfer packets between two PCs using CISCO packet tracer.<br>• Build topology - Mesh with 5 PCs and transfer packets between twoPCs using CISCO packet tracer.<br>• Build topology - Ring with 5 PCs and transfer packets between twoPCs using CISCO packet tracer.<br>**Append all snapshots here.**<br><br>**Output:**<br><br>**Build a network scenario having 4PCs, 2 switches and 2 routers and provide static routing.**<br>  |

**Build topology -Bus with 5 PCs and transfer packets between two PCs using CISCO packet tracer.**



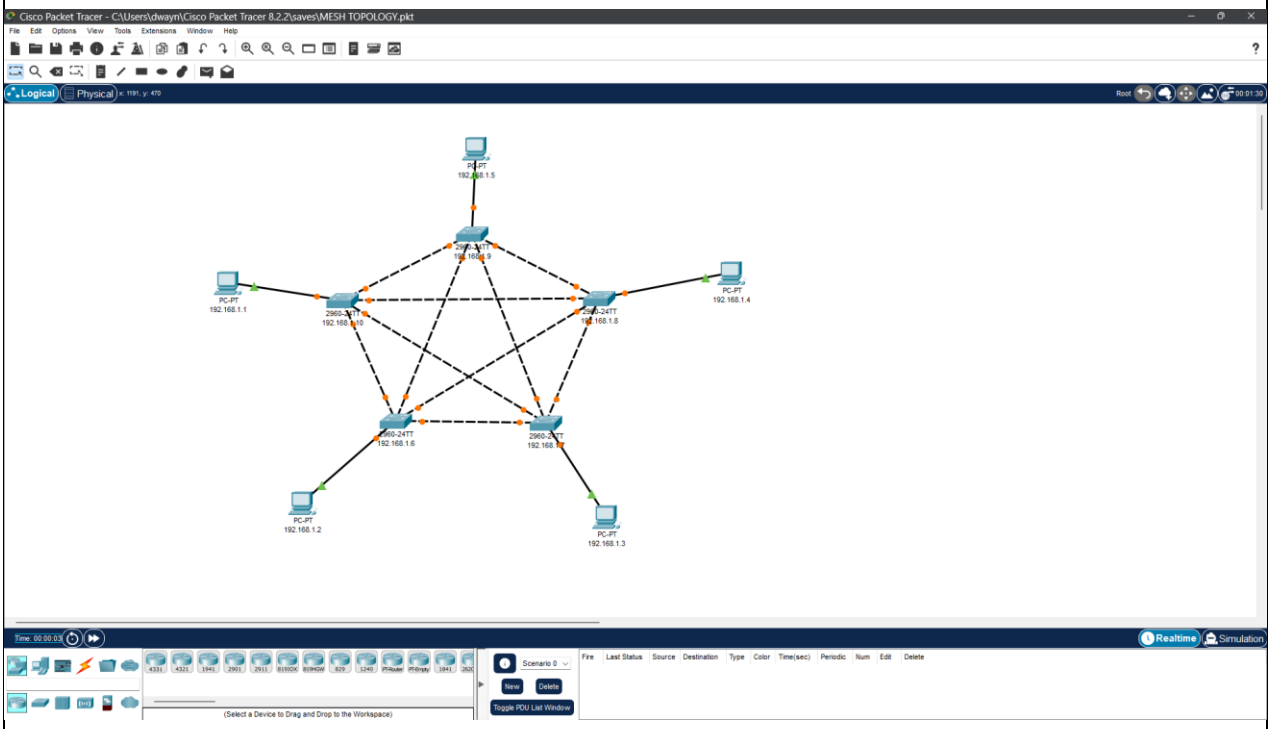



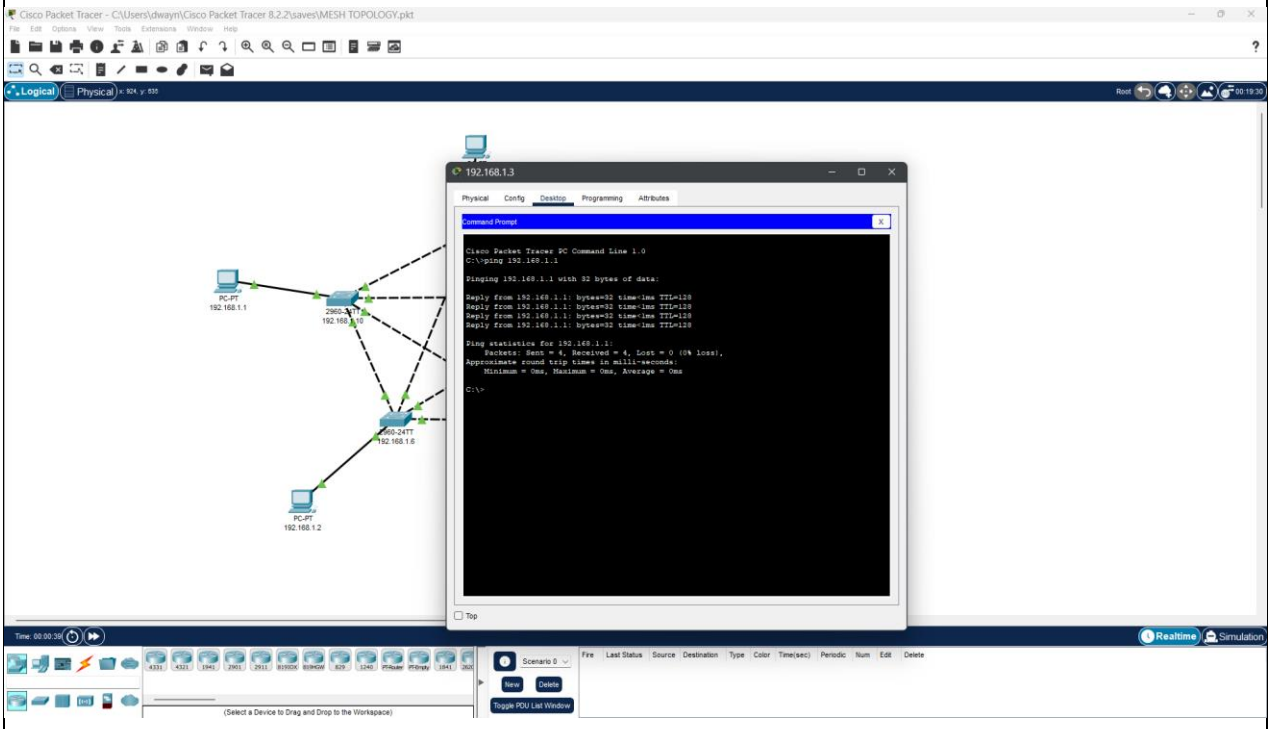

Class: T.E Comps (Sem V)

Lecturer: Varsha Kulkarni

Subject: CN Lab

**Build topology - Mesh with 5 PCs and transfer packets between twoPCs using CISCO packet tracer.**

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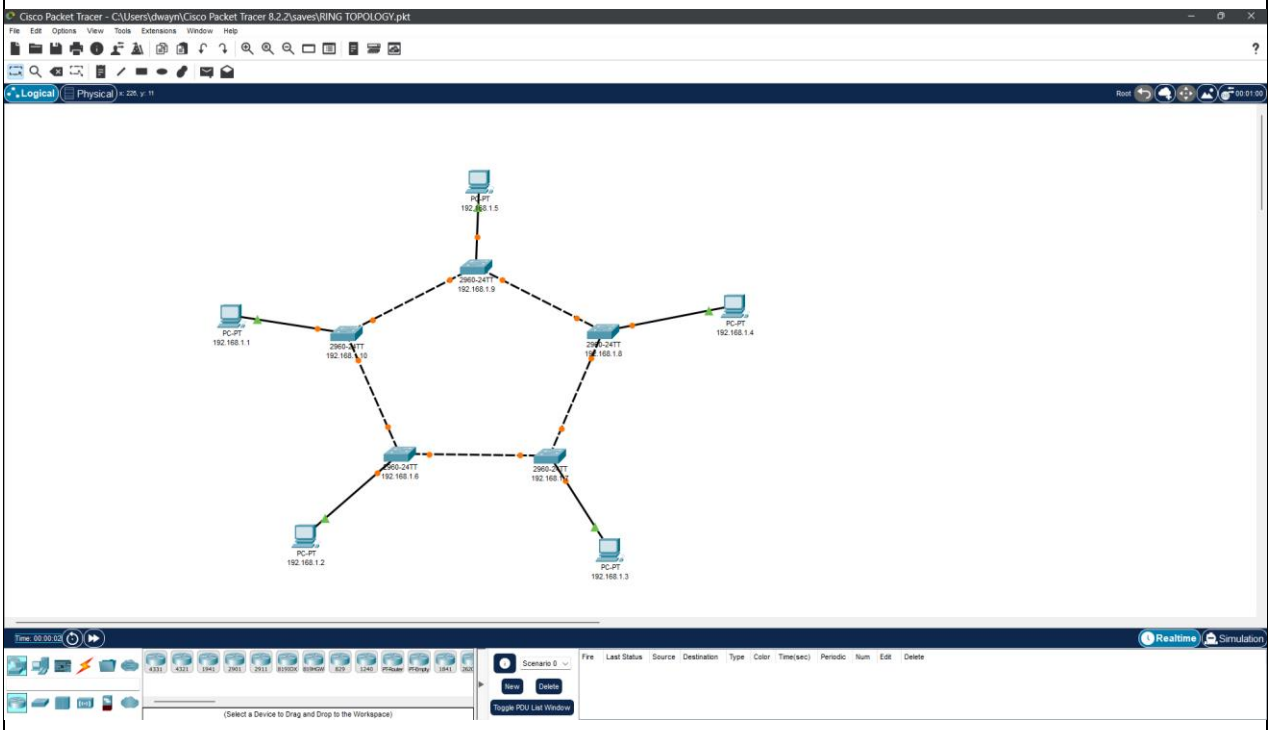
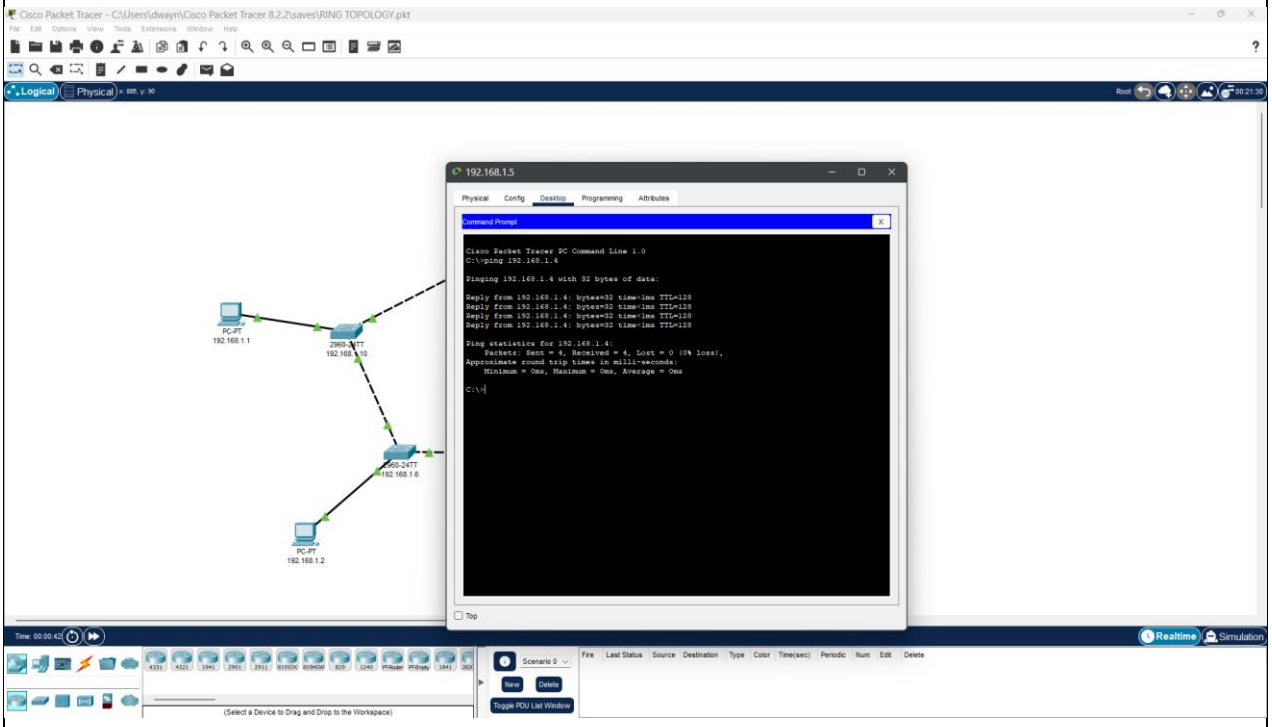
**Build topology - Ring with 5 PCs and transfer packets between twoPCs using CISCO packet tracer.**

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| **REFERENCES** | • B.A. Forouzan, "Data Communications and Networking", TMH,Fourth Edition.<br>• https://www.tutorialspoint.com/what-is-cisco-packet-tracer<br>• Help video for static routing:https://www.youtube.com/watch?v=lmnptnqn-WI<br>• Help video for Bus Topology:https://www.youtube.com/watch?v=A7kOCHdfYtw<br>• Help video for Mesh Topology:https://www.youtube.com/watch?v=cXZedUwvP-A<br>• Help video for Ring Topology:https://www.youtube.com/watch?v=8vPexT-70vA |