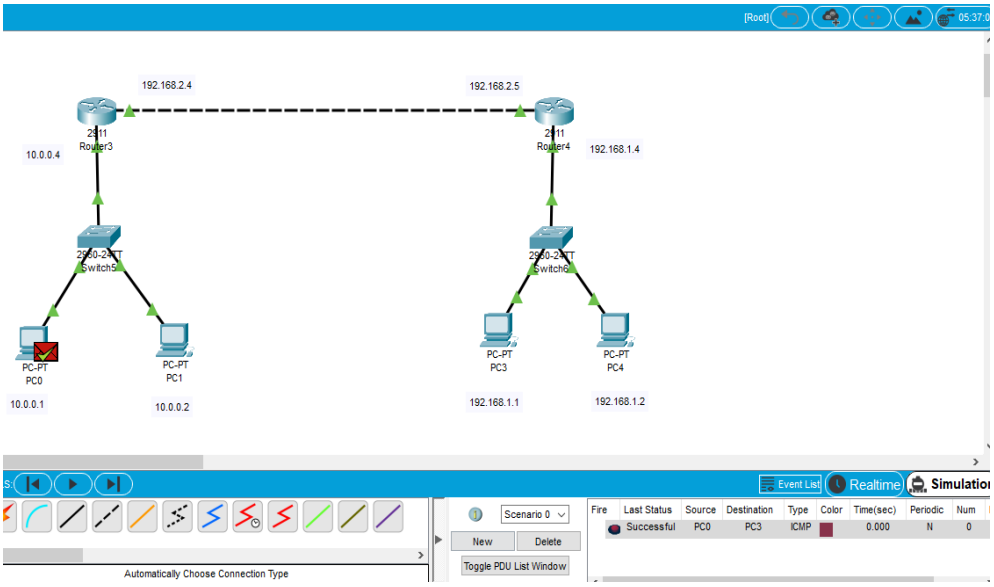
EXPERIMENT NO. 3

SEMESTER: V **DATE OFPERFORMANCE:03/08/2022**

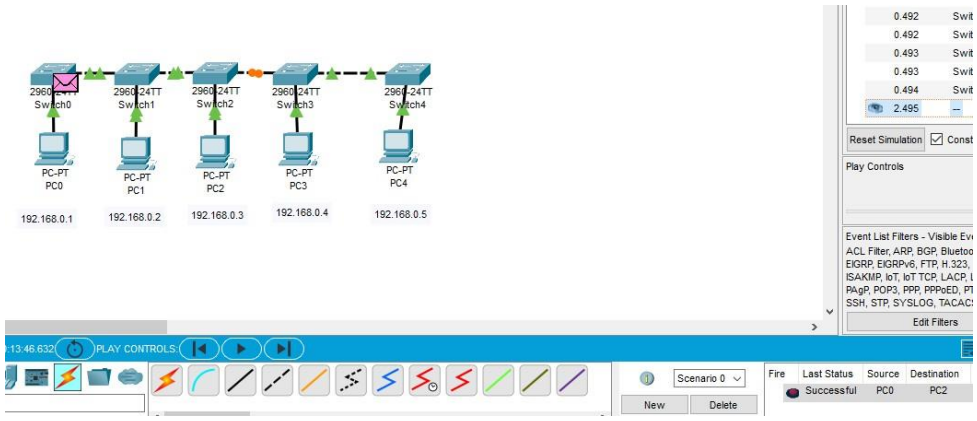
SUBJECT: CN Lab **DATE OF SUBMISSION:12/08.2022**

NAME OF THE STUDENT: Aashish Jha **ROLL NO.: 27**

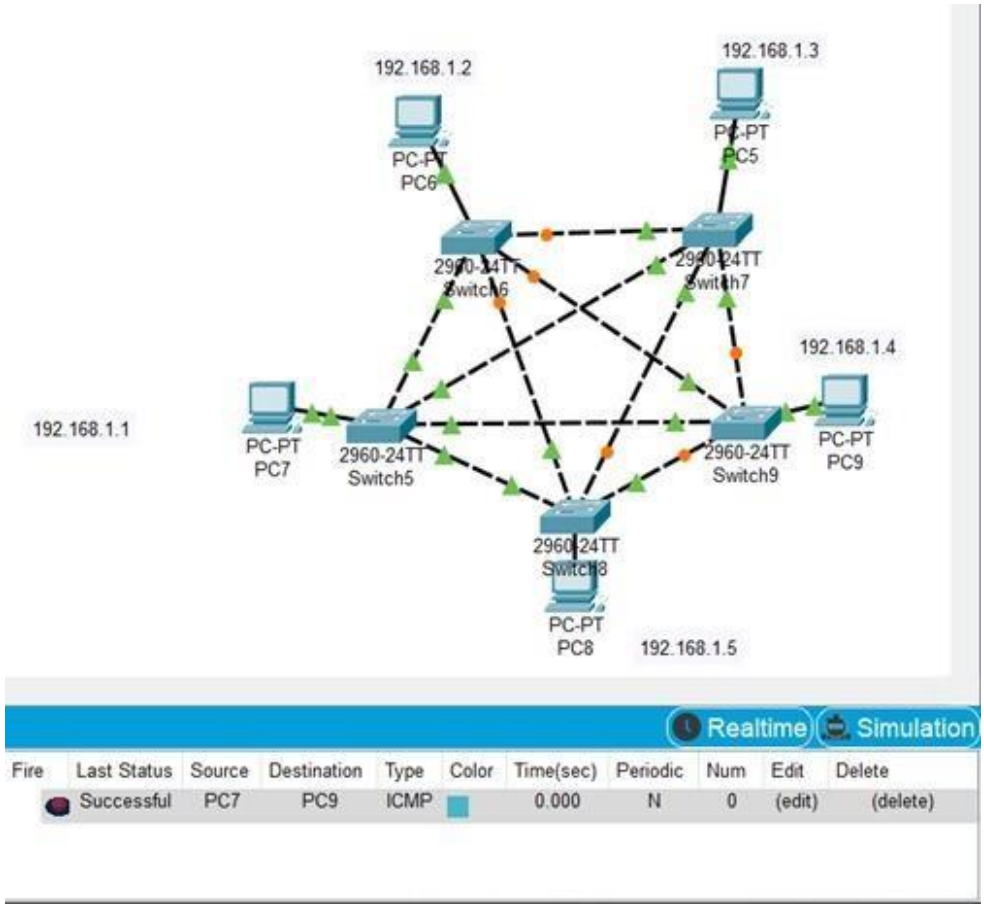
AIM	To setup a network and configure IP addressing, subnetting, Masking using cisco packet tracer.
LEARNING OBJECTIVE	The student will understand use of CISCO packet tracer for network configurations.
LEARNING OUTCOME	The student will create the topology and complete IP address configuration for given scenario using cisco packet tracer. The student will create subnet for the given scenario using cisco packet tracer.
COURSE OUTCOME	CSL502.6: Design and Build a network topology usingpacket 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, allowing users 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. **Features of Cisco Packet Tracer** • Cisco Packet Tracer supports a multi-user system that allows many users to connect various topologies across a computer network. Instructors can also build exercises for students to perform using Packet Tracer. • Supports feature expansion via additional programmes that use an API to improve Cisco Packet Tracer's capabilities in areas including curriculum and assessment delivery, gaming, accessibility, and interacting with real-world equipment.

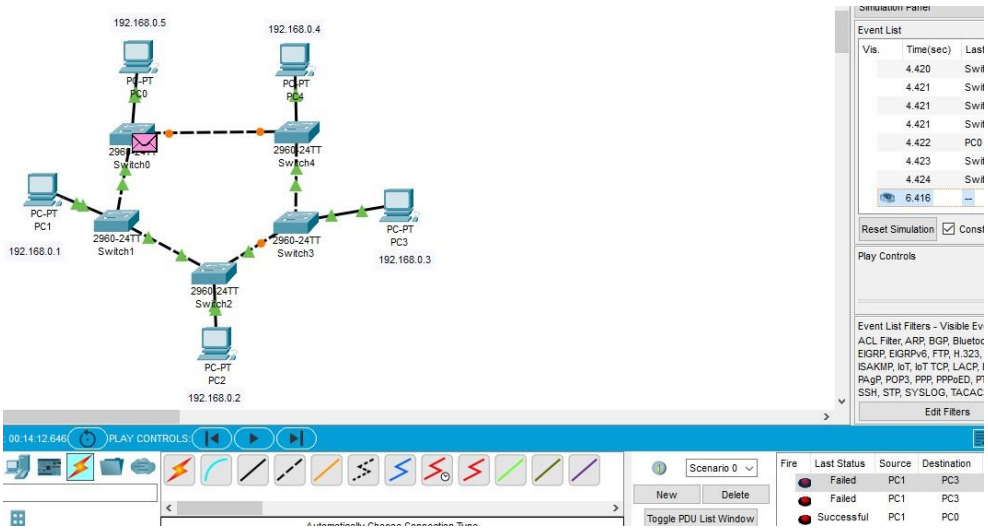
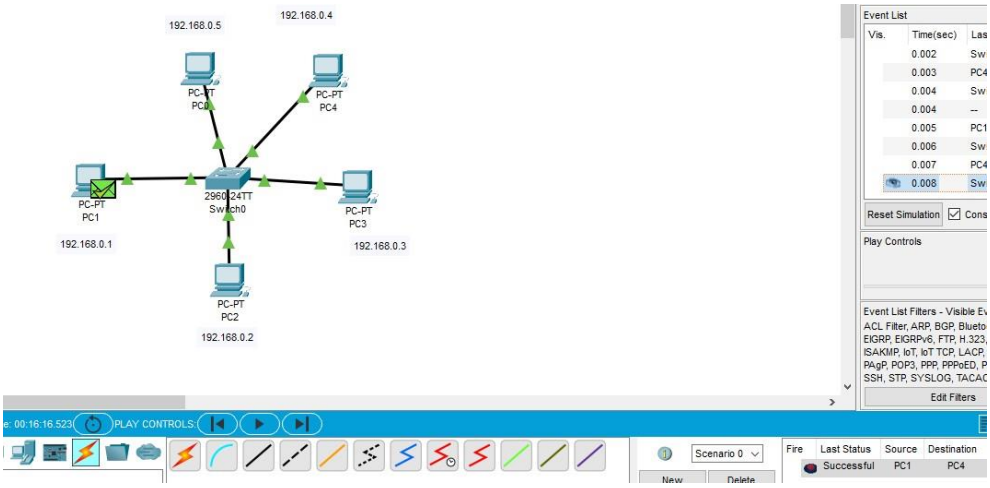
	• The Enhanced Physical Mode transports you to a virtual lab where you can simulate cabling devices on a rack. Refresh key skills such as device placement (Rack & Stack), on-device power switching, device port-to-port cabling (including cable selection and management), troubleshooting, and more. • It can be downloaded for free through a Netacad account. • It enables its users to simulate the configuration relating to the Cisco routers and can be accessed anywhere anytime. • 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. • It can be accessed through unlimited devices. • Provides an interactive and self-paced environment.
LAB EXERCISE	• Build a network scenario having 4PCs, 2 switches and 2 routers.  • Build topologies -Bus, Mesh, Ring and Star with 5 PCs.

Bus-


Switch0
Switch1
Switch2
Switch3
Switch4
PC-PT PC0
PC-PT PC1
PC-PT PC2
PC-PT PC3
PC-PT PC4
192.168.0.1
192.168.0.2
192.168.0.3
192.168.0.4
192.168.0.5
Reset Simulation
Play Controls
Edit Filters
PLAY CONTROLS:
Scenario 0
New
Delete
Fire
Last Status
Source
Destination
Successful
PC0
PC2

Mesh-


192.168.1.2
192.168.1.3
PC-PT PC6
PC-PT PC5
2960-24TT Switch6
2960-24TT Switch7
192.168.1.4
192.168.1.1
PC-PT PC7
2960-24TT Switch5
2960-24TT Switch9
PC-PT PC9
2960-24TT Switch8
PC-PT PC8
192.168.1.5
Realtime
Simulation
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
Successful
PC7
PC9
ICMP
0.000
N
0
(edit)
(delete)

	Ring-  **Star-** 
REFERENCES	• B.A. Forouzan, "Data Communications and Networking", TMH, Fourth Edition. • https://www.tutorialspoint.com/what-is-cisco-packet-tracer