Experiment No. 01

Date:- 7/1/25

ROLL NO :- A054

Aim :- To demonstrate Network Packet Tracer

Theory :-

Cisco Packet Tracer :-

Cisco Packet Tracer is a network simulation tool designed by Cisco Systems that allows uses to create, configure & simulate networks. It is widely used for education training & practice in computer networks.

Features :-

1) Network simulation :- Simulates real world networking scenarios.
2) Multi-platform support :- Available for Mac, Linux, Windows.
3) Hands on Learning :- Ideal for students to get practical experience without requiring physical hardware.
4) Interactive Environment :- Allows building, testing and troubleshooting networks in a virtual space.
5) It also supports IoT.
6) Multi-User collection :- Users can work together remotely to design & test networks.
7) Real time & simulation :- Real time modes runs the network like actual hardware
   Provides step by step packet flow analysis

Steps to download Cisco Packet Tracer :-
1) Access the Cisco Networking Academy Website
2) Create or Log in into an account
3) Navigate to Download Page & Download the installer
4) Locate the installer.
5) Run the installer
6) Accept the License Agreement
7) Choose installation directory
8) Complete the setup
9) Finish installation.

Configuration of PC :-
1) Place the PC
2) Open PC configuration
3) Assign an IP Address
4) Set Gateway address
5) Verify using "ping".

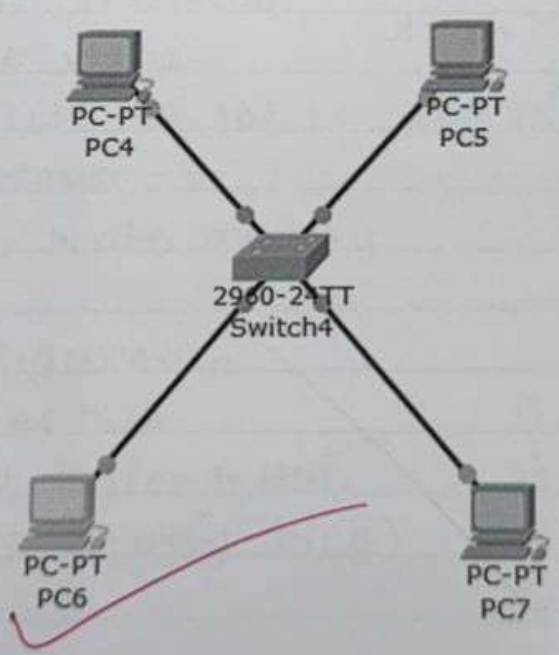
Configuration of switch :-
1) Place the switch
2) Connect devices to switch
3) Open switch configuration
4) Set managem. IP Address
5) Save configuration.

Configuration of Hub :-
1) Place the Hub
2) Connect devices to the Hub
3) Test connectivity

Basic LAN configuration :-
I. Network Topology Setup
i Devices requirement.
1) 1 switch 2) 2 or more PC
3) Copper straight-through cable

ii Setup Topology.
1) Drag switch & PC
2) Use "13" cable.

HUB CONFIGURATION



BASIC LAN CONFIGURATION

Properties of LAN configuration

Network :- 198 168 1.0

Subnet Mask :- 255 255. 255.0

Default Gateway :- 192. 168. 1. 1

DNS Server :- 0. 0. 0 0

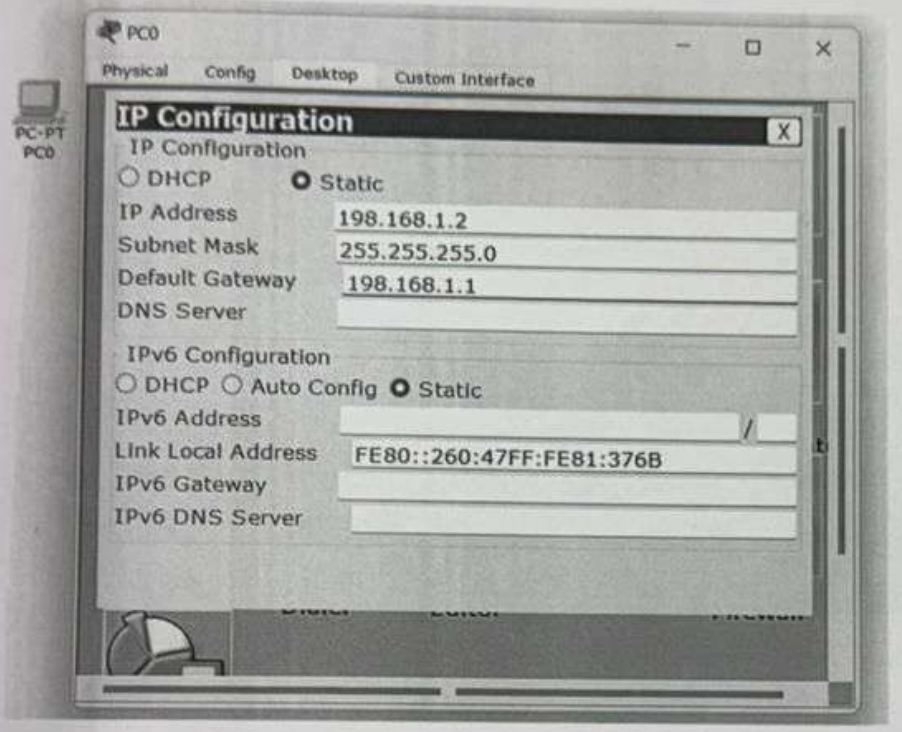
Host Address Range :- 192. 168. 1. 100 - 192. 168. 1. 200

Drag in Drop the following devices

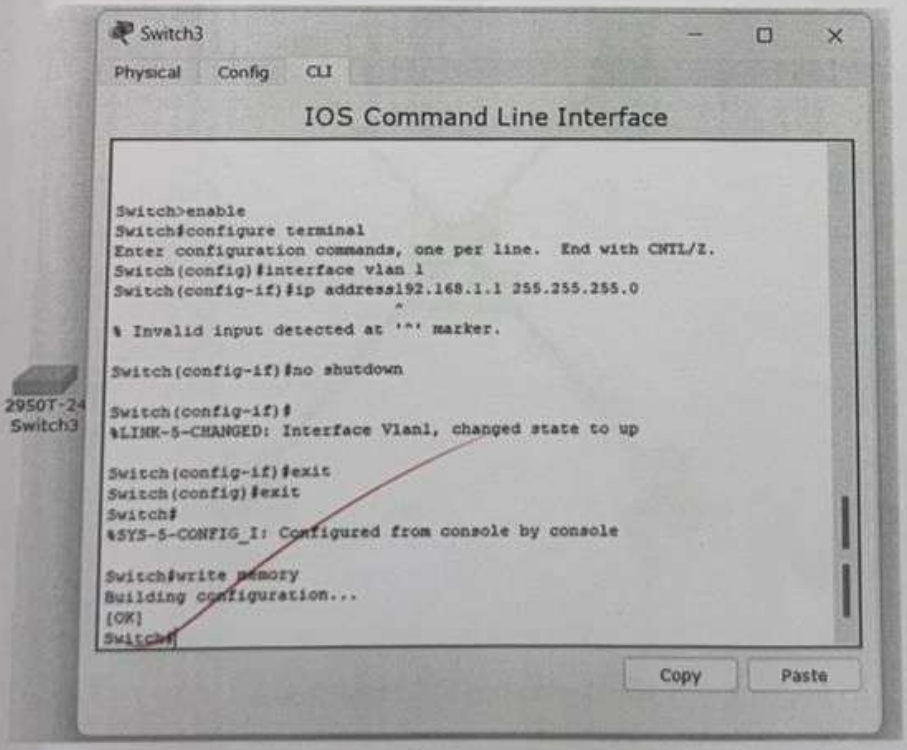
3-4 Generic PCs

1- 2950 24H switch

Copper cables



PC CONFIGURATION



SWITCH CONFIGURATION

II Configure IP Address for PCs
1) Click on PC
2) Go to FastEthernet Interface & assign IP Address
3) Repeat for other PCs
III. Test Connectivity
1) Open the command prompt on PC1
2) Use ping command
3) Observe the results
IV Switch configuration
1) Click on switch
2) Open CLI Tab
3) Enter following commands :-
enable
configure terminal
interface vlan1
ip address 192.168.1.1 255.255.255.0
no shutdown
exit ; write memory.

Hub configuration
1) Place the hub
2) connect devices to Hub
3) Test connectivity (ping)

LAN configuration
1) Network Topology setup
2) Configure IP Address
3) Test connectivity (ping)
4) switch configuration.
enable configure terminal
ip address 192.168.1.1 255.255.255.0

conclusion :- Hence we have successfully demonstrated Network Packet Tracer.