Assignment 1

- **Title** = Configuration of Initial Switch and Router Settings in Cisco Packet Tracer.

- **Aim** = To learn and implement the basic configuration of Cisco switches and routers using Packet Tracer for establishing initial network connectivity.

- **Objectives** =
    1. To understand the need for initial configuration of networking devices.
    2. To configure hostname, passwords, and banners on switch and router.
    3. To assign IP addresses and enable interfaces.
    4. To verify connectivity using ping command.
    5. To gain practical exposure to Cisco Packet Tracer environment.

- **Theory** =
Switches and routers are fundamental devices in networking.
    o **Switch**: Operates at Layer 2 (Data Link Layer) and forwards frames based on MAC addresses. It provides local network connectivity.
    o **Router**: Operates at Layer 3 (Network Layer) and forwards packets between different networks using IP addresses.

Initial Configuration Includes:

    1. Setting a hostname to identify the device.
    2. Configuring enable secret password for privileged access.
    3. Configuring console and subnet line passwords to secure access.
    4. Assigning IP address and subnet mask to interfaces.
    5. Enabling the interface using the no shutdown command.
    6. Configuring a banner MOTD for security warning.

- **Output** =

1. Configuring the routers and switches.

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Press RETURN to get started!


Router>enable
Router#config terminal
Enter configuration commands, one per line.  End with
CNTL/Z.
Router(config)#interface g0/1
Router(config-if)#ip address 192.168.1.1
255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/1,
changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface
GigabitEthernet0/1, changed state to up
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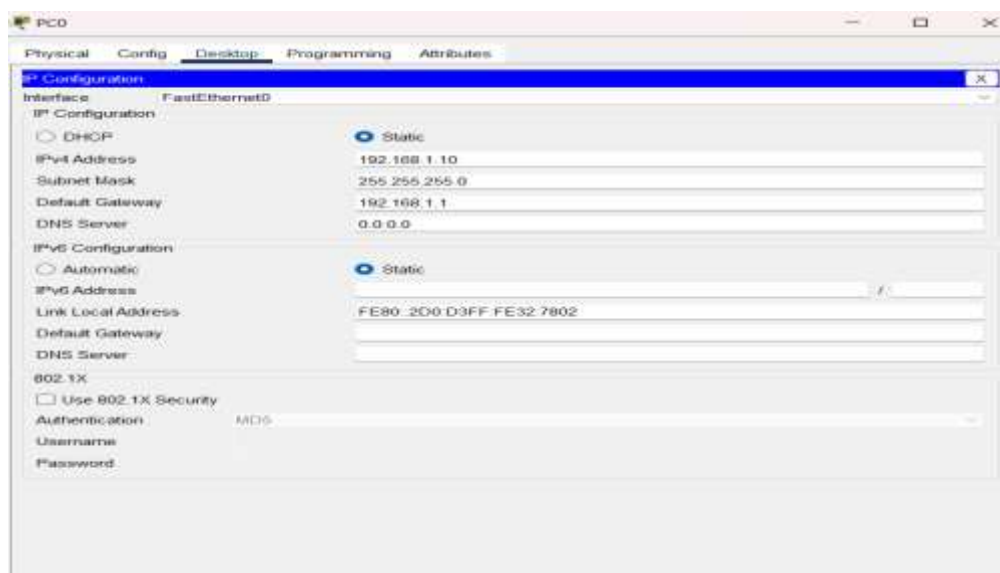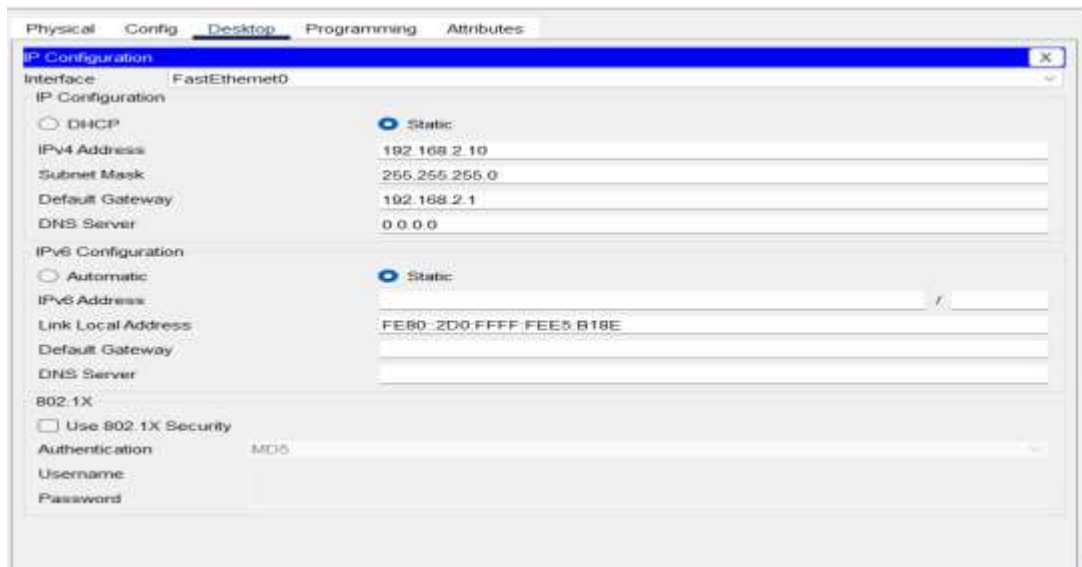
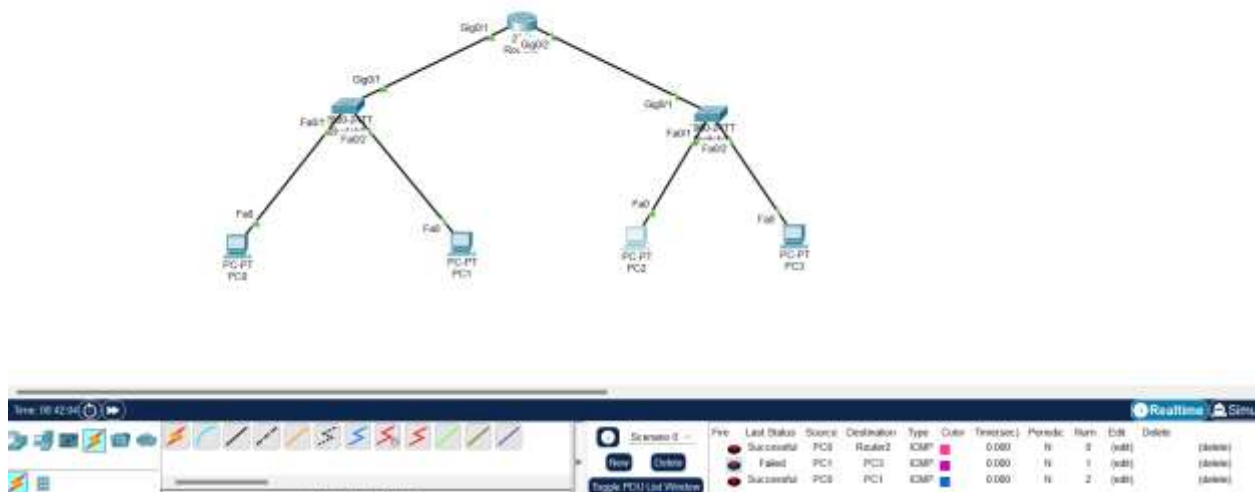2. Configuring First Switch and PC0 and PC1

3. Configuring Second Switch and PC2 PC3

4. Final Circuit

- **Conclusion** = In this assignment, we successfully configured the initial settings of a Cisco router and switch using Packet Tracer. The process included setting hostnames, securing devices with console, VTY, and enable passwords, assigning IP addresses, enabling interfaces, and configuring a management IP on the switch. After configuring PCs with proper IP addresses and gateways, end-to-end connectivity was verified using the ping command.

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