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DESIGN A SIMPLE TOPOLOGY AND CONFIGURE WITH ONE ROUTER, 2 SWITCHES AND PCS USING CISCO PACKET TRACER

AIM:

To design and configure a simple network topology with **one router, two switches, and multiple PCs** using **Cisco Packet Tracer** for basic communication.

ALGORITHM:

1. Start **Cisco Packet Tracer**.

2. Drag and place **1 Router**, **2 Switches**, and **4 PCs**.

3. Connect the devices using **straight-through cables**.

4. Assign **IP addresses** to all PCs and router interfaces.

5. Configure the router interfaces with the given IP addresses and enable them.

6. Save the configuration.

7. **Ping** between PCs to check network connectivity.

CODE:

Router>enable

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#interface gigabitEthernet0/0

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 GigabitEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state to up

exit

Router(config)#interface gigabitEthernet0/1

Router(config-if)#ip address 192.168.2.1 255.255.255.0

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
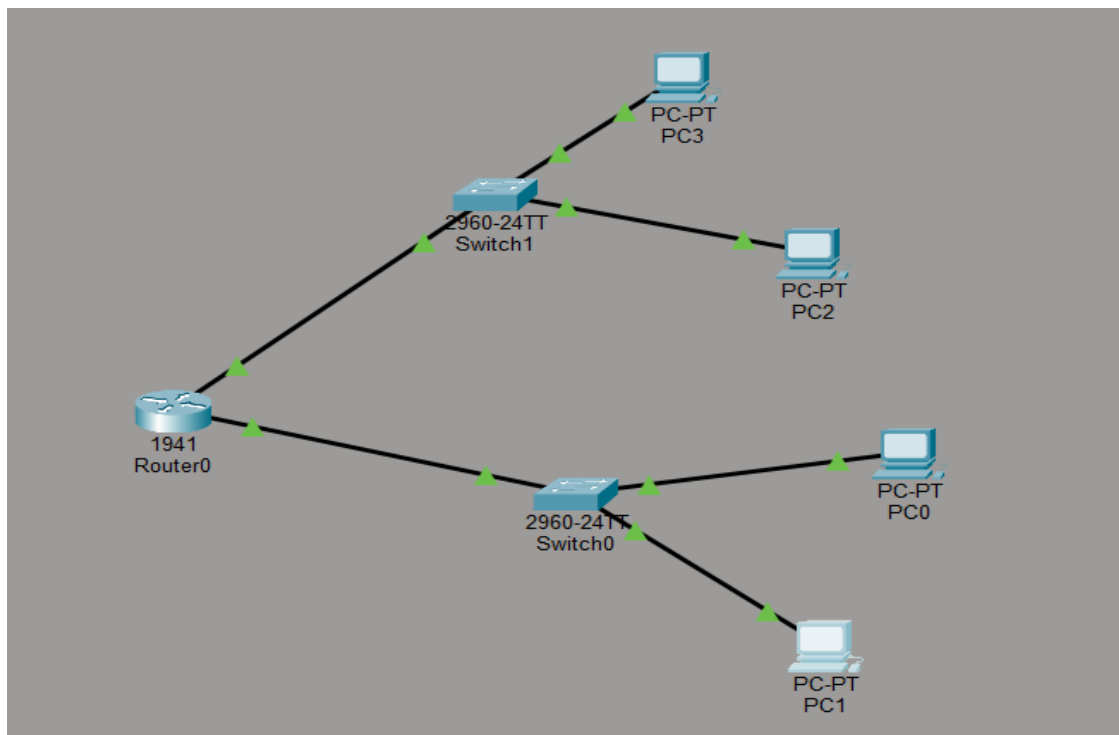
exit

Router(config)#exit

Router#

%SYS-5-CONFIG_I: Configured from console by console

write memory

Building configuration...

[OK]

Router#

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.12

Pinging 192.168.10.12 with 32 bytes of data:

Reply from 192.168.10.12: bytes=32 time=8ms TTL=128
Reply from 192.168.10.12: bytes=32 time=11ms TTL=128
Reply from 192.168.10.12: bytes=32 time=8ms TTL=128
Reply from 192.168.10.12: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.10.12:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 11ms, Average = 6ms

C:\>ping 192.168.20.21
```

RESULT:

Thus, the simple topology using router, switches and PCs are made using Cisco Packet Tracer.