Computing and Data Science

***Computer network***

**Assignment (Section 3)**

**Odd numbers**

**3rd** Year

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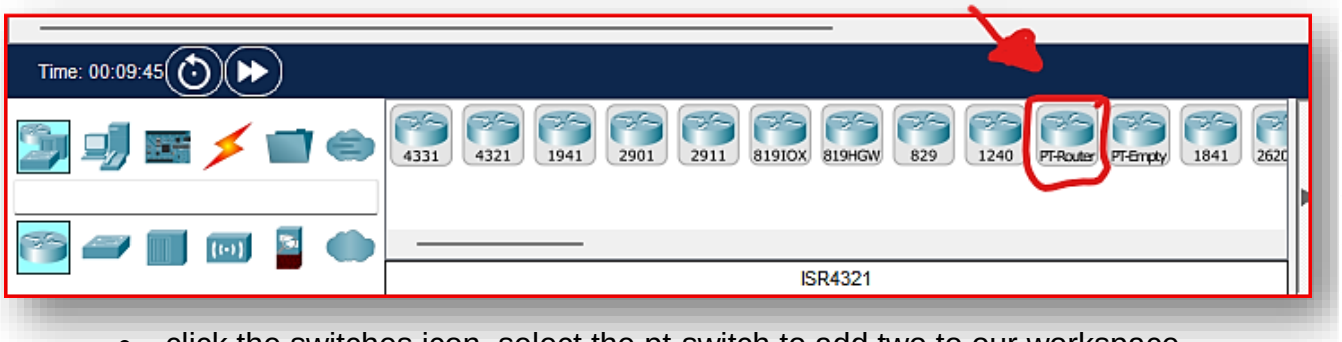
**Steps:**

1. Build the Network Topology Diagram
2. Configure the Routers from the CLI
3. Simulation to Assess Network Connectivity

**First step: Build the Network Topology Diagram**

- Open the application and log in to the service with the same credentials that were used to sign up for the Cisco course. There are icons located at the bottom of the screen for network devices, end devices, and other options to map our network. Click Network Devices, Routers, and the pt-Router to add the icon to our workspace




- click the switches icon, select the pt-switch to add two to our workspace.
- Click the Connections (lightning bolt) icon, select Copper Straight-Through, click Router in the workspace, and select fa0/0. Connect this to the switch by clicking the switch icon and selecting fa0/1.
- Repeat the process but this time to connect the switch with fa1/0 to Router1 with fa0/1 using the same Copper Straight-Through connection.

**Step 2: Configure the Routers:**

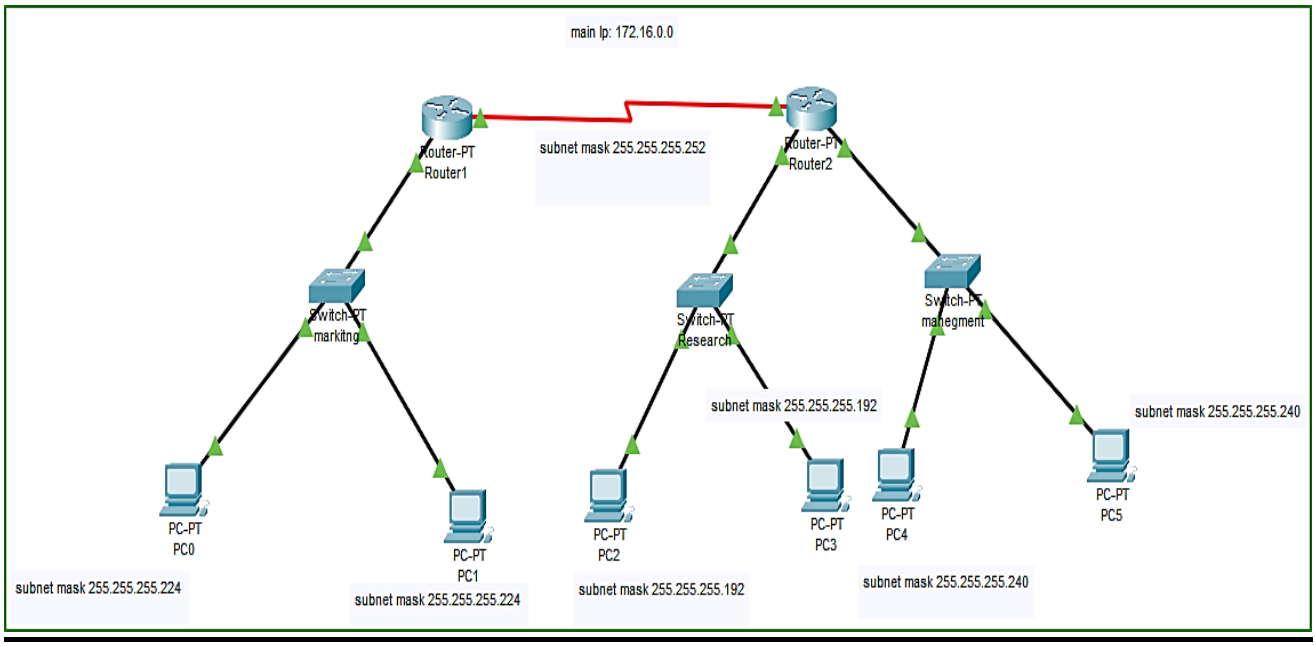
With put the IP addresses that it is default gateway for the end device
And put the subnet mask for each fast Ethernet for each network

**Finally Verify the connectivity:**

- Using ping command, verify the connectivity between two networks. From PC1, enter the command
  - **Ping + ip address for other end device**
- I get replies from the other PC then the connections are correct.

**Repeat this steps for each question and check the connection with ping command.**

## Question 1:




## The check connection: from pc0 to pc2

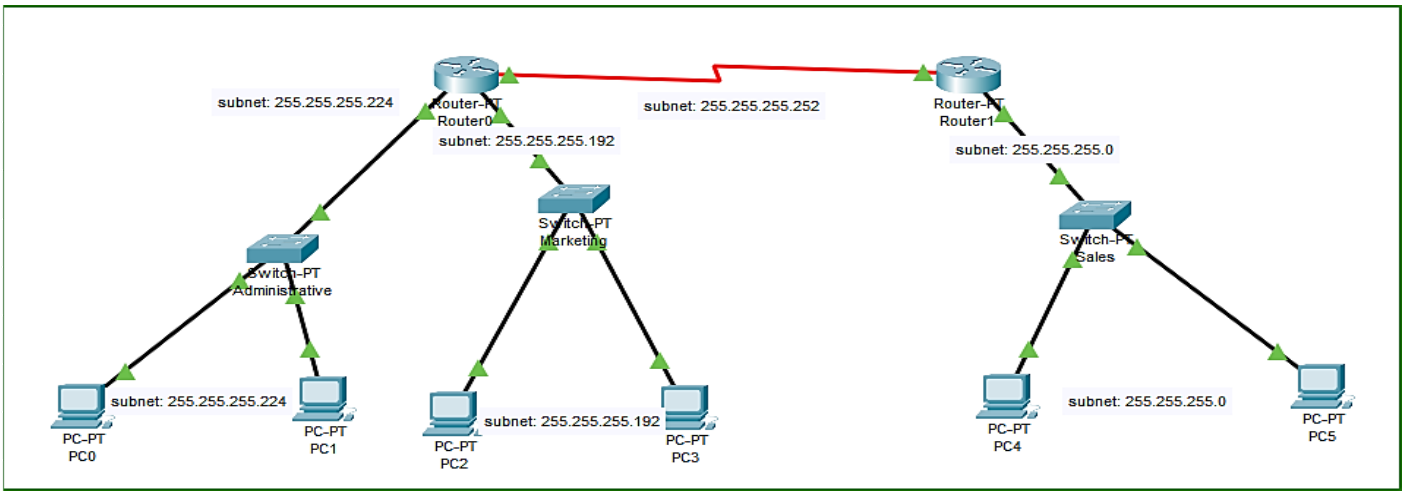
```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 172.16.0.2

Pinging 172.16.0.2 with 32 bytes of data:

Request timed out.
Reply from 172.16.0.2: bytes=32 time=8ms TTL=126
Reply from 172.16.0.2: bytes=32 time=1ms TTL=126
Reply from 172.16.0.2: bytes=32 time=18ms TTL=126

Ping statistics for 172.16.0.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 18ms, Average = 9ms
```

# Question 3:




# The check connection: from pc0 to pc2

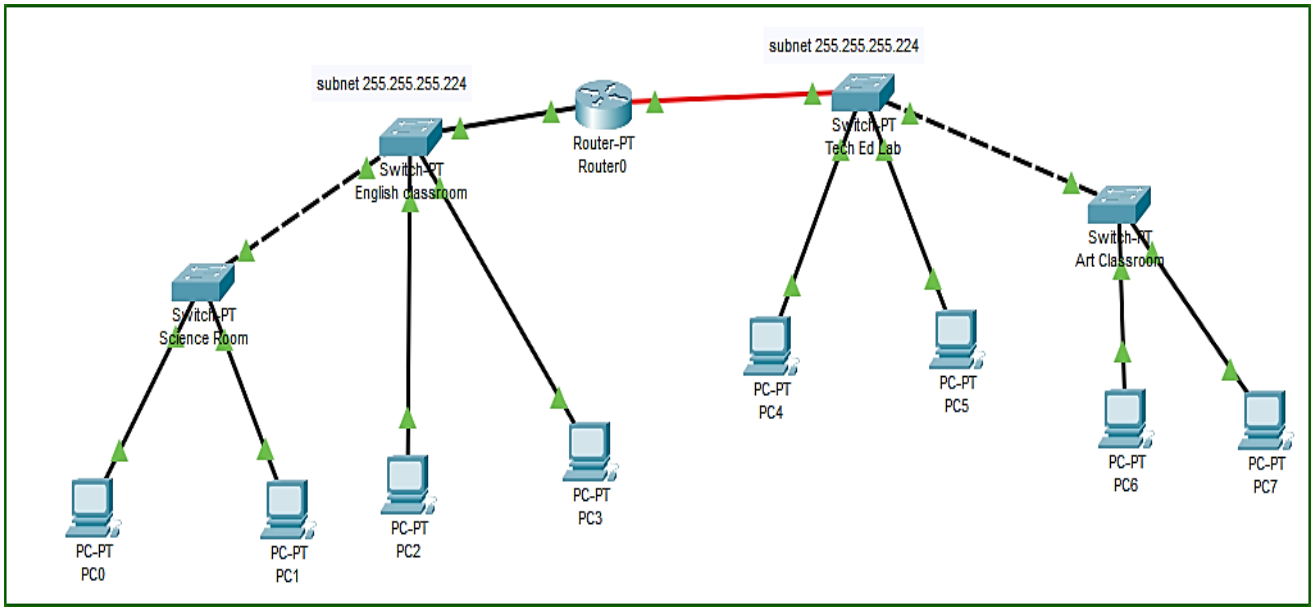
```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 172.16.1.2

Pinging 172.16.1.2 with 32 bytes of data:

Reply from 172.16.1.2: bytes=32 time<1ms TTL=127
Reply from 172.16.1.2: bytes=32 time<1ms TTL=127
Reply from 172.16.1.2: bytes=32 time<1ms TTL=127
Reply from 172.16.1.2: bytes=32 time<1ms TTL=127

Ping statistics for 172.16.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

# Question 5:



## The check connection: from pc0 to pc4

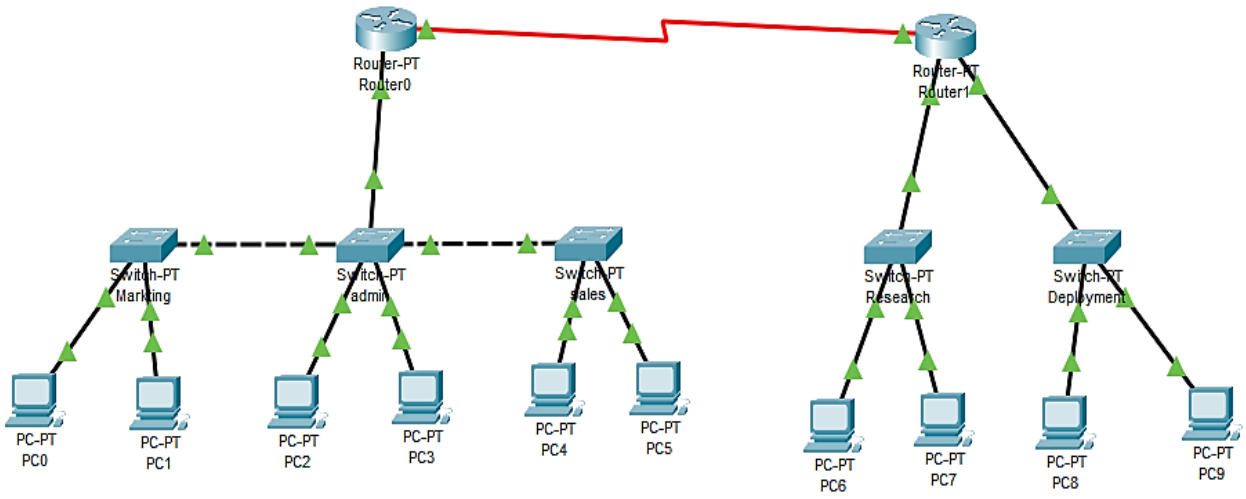
```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 210.15.10.66

Pinging 210.15.10.66 with 32 bytes of data:

Reply from 210.15.10.66: bytes=32 time<1ms TTL=127
Reply from 210.15.10.66: bytes=32 time<1ms TTL=127
Reply from 210.15.10.66: bytes=32 time<1ms TTL=127
Reply from 210.15.10.66: bytes=32 time=6ms TTL=127

Ping statistics for 210.15.10.66:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 6ms, Average = 1ms
```

## Question 7:




## The check connection: from pc0 to pc7

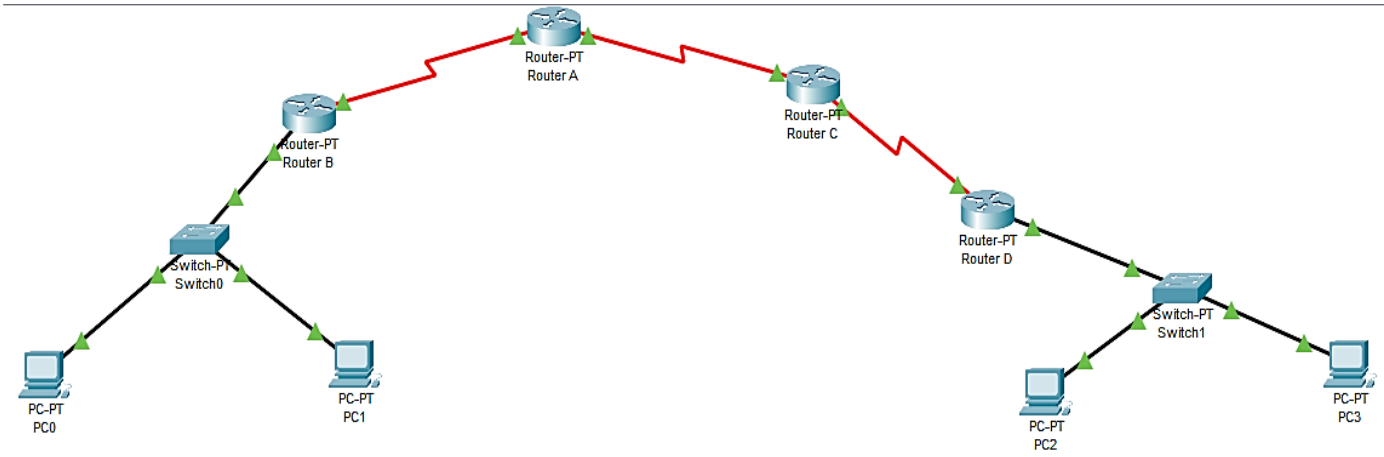
```
C:\>ping 177.135.4.137

Pinging 177.135.4.137 with 32 bytes of data:

Reply from 177.135.4.137: bytes=32 time=10ms TTL=126
Reply from 177.135.4.137: bytes=32 time=9ms TTL=126
Reply from 177.135.4.137: bytes=32 time=10ms TTL=126
Reply from 177.135.4.137: bytes=32 time=10ms TTL=126

Ping statistics for 177.135.4.137:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 9ms, Maximum = 10ms, Average = 9ms
```

# Question 9:




## The check connection: from pc0 to pc3

```
C:\>ping 148.55.16.19

Pinging 148.55.16.19 with 32 bytes of data:

Reply from 148.55.16.19: bytes=32 time=16ms TTL=124
Reply from 148.55.16.19: bytes=32 time=11ms TTL=124
Reply from 148.55.16.19: bytes=32 time=5ms TTL=124
Reply from 148.55.16.19: bytes=32 time=4ms TTL=124

Ping statistics for 148.55.16.19:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 4ms, Maximum = 16ms, Average = 9ms

C:\>
```