

Experiment-2

To make a complex network and applying EIGRP and OSPF routing protocols

Name:	Rishabh Anand	UID:	19BCS4525
Branch:	CSE-IoT	Sec/Grp:	19AIT_KRG_A
Semester:	6 th	Date:	24.02.2022
Subject:	NOS LAB	Code:	CSD-396

1. Aim/Overview of the practical:

- a You will write the difference between the Cat5e and Cat6 cables based on their costing in points.
- b You will mention the advantages and disadvantages of both cables in different scenarios.

2. Task to be done:

- a You will write the difference between the Cat5e and Cat6 cables based on their costing in points.
- b You will mention the advantages and disadvantages of both cables in different scenarios.

3. Apparatus:

Cisco packet tracer.

4. Algorithm/Flowchart:

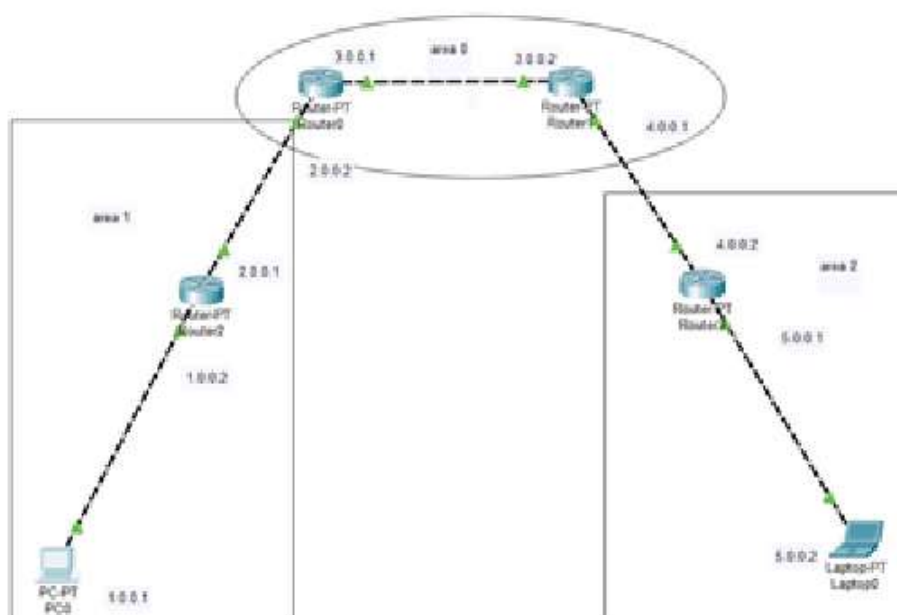
5. Theme/Interests definition(For creative domains):

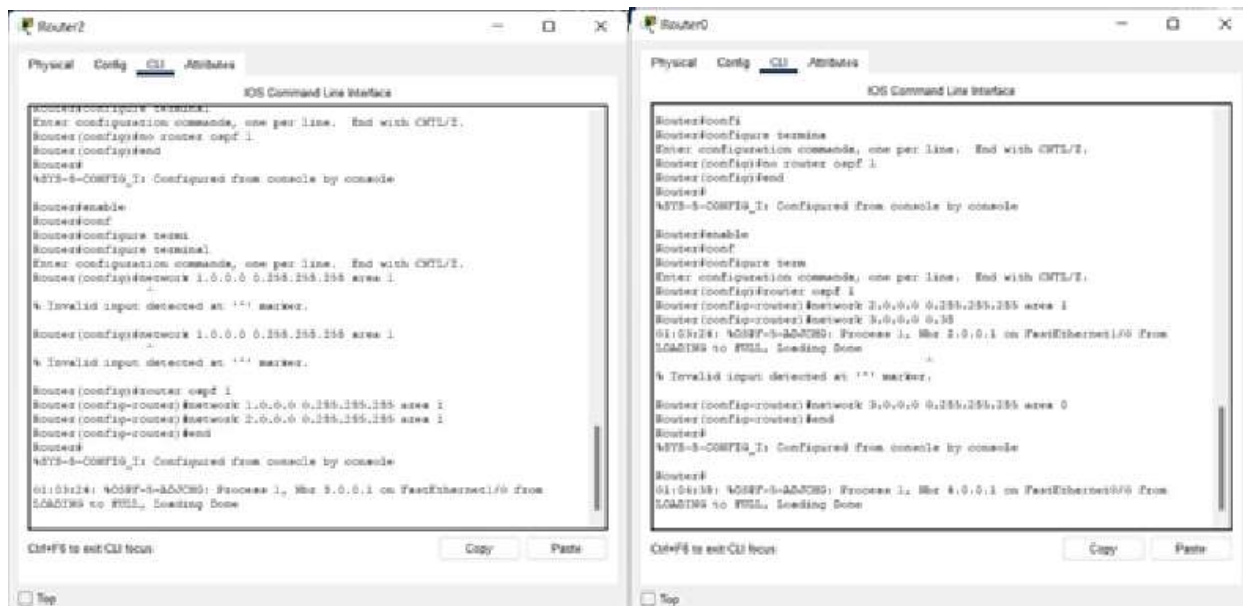
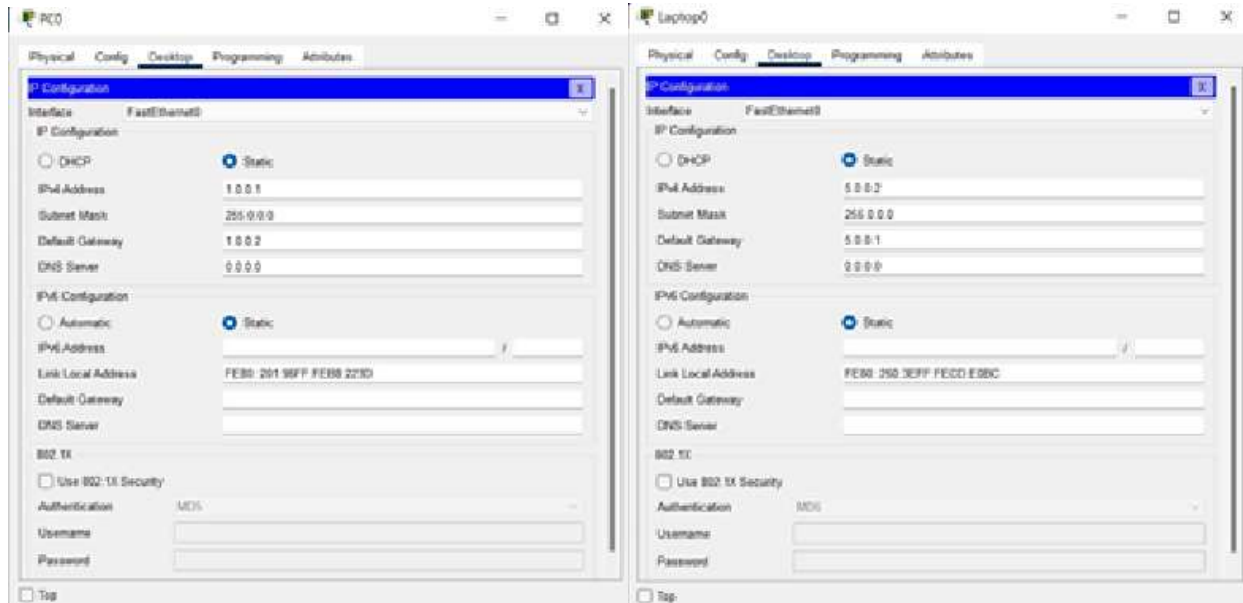
a OSPF:- The OSPF (Open Shortest Path First) protocol is one of a family of IP Routing protocols, and is an Interior Gateway Protocol (IGP) for the Internet, used to distribute IP routing information throughout a single Autonomous System (AS) in an IP network. The OSPF protocol is a link-state routing protocol.

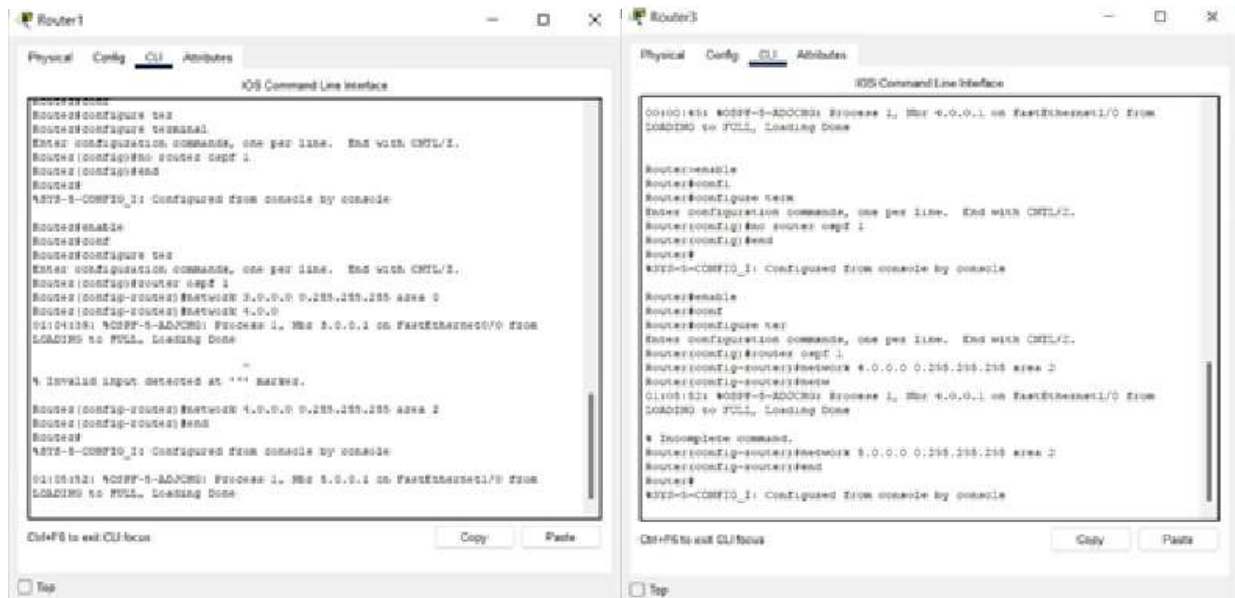
b EIGRP:- One of the routing protocols is EIGRP. Enhanced Interior Gateway Routing Protocol (EIGRP) is a dynamic routing protocol that is used to find the best path between any two layer 3 devices to deliver the packet. EIGRP works on network layer Protocol of OSI model and uses protocol number 88.

6. Steps for experiment/practical:

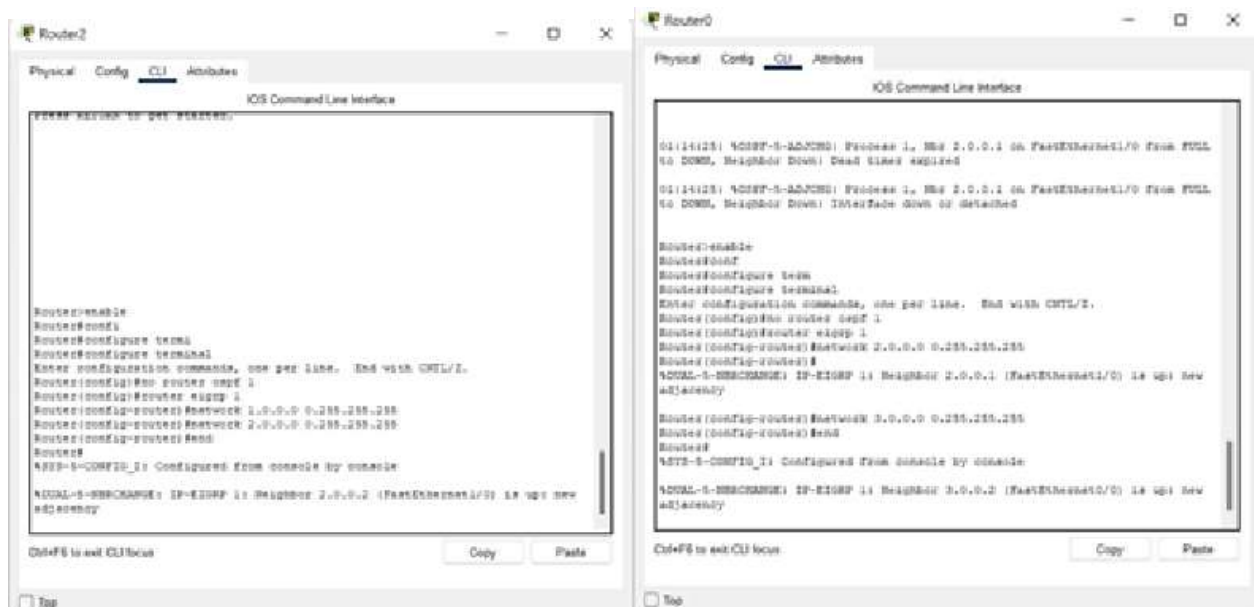
a OSPF protocol

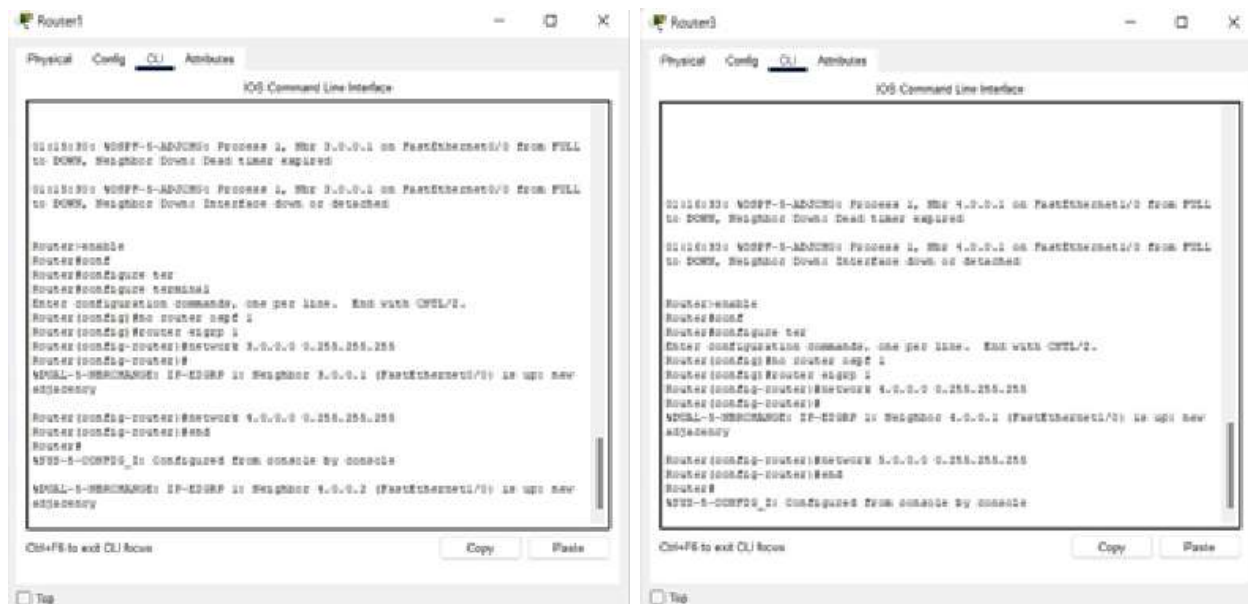






b EIGRP steps





7. Observations/Discussions:

After making all the connections and performing ospf and eigrp commands we were able to make a successful connection throughout the network.

8. Percentage error: None

9. Calculations/ Chemical Reactions / Theorems /Formulas used etc : None

10. Result/Output/Writing Summary :

a (OSPF results)

PC0

```

Physical  Config  Desktop  Programming  Attributes
Command Prompt

Ping statistics for 5.0.0.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 5.0.0.2

Pinging 5.0.0.2 with 32 bytes of data:
Request timed out.
Reply from 5.0.0.2: bytes=32 time=1ms TTL=124
Reply from 5.0.0.2: bytes=32 time=1ms TTL=124
Reply from 5.0.0.2: bytes=32 time=1ms TTL=124

Ping statistics for 5.0.0.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>ping 5.0.0.2

Pinging 5.0.0.2 with 32 bytes of data:
Reply from 5.0.0.2: bytes=32 time=1ms TTL=124
Reply from 5.0.0.2: bytes=32 time=1ms TTL=124
Reply from 5.0.0.2: bytes=32 time=1ms TTL=124
Reply from 5.0.0.2: bytes=32 time=1ms TTL=124

Ping statistics for 5.0.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

Laptop0

```

Physical  Config  Desktop  Programming  Attributes
Packet Tracer PC Command Line 1.0
C:\>ping 1.0.0.1

Pinging 1.0.0.1 with 32 bytes of data:
Reply from 1.0.0.1: bytes=32 time=1ms TTL=124
Reply from 1.0.0.1: bytes=32 time=1ms TTL=124
Reply from 1.0.0.1: bytes=32 time=1ms TTL=124
Reply from 1.0.0.1: bytes=32 time=1ms TTL=124

Ping statistics for 1.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

b EIFRP results

PC0

```

Physical  Config  Desktop  Programming  Attributes
Command Prompt

Pinging 5.0.0.2 with 32 bytes of data:
Reply from 5.0.0.2: bytes=32 time=1ms TTL=124
Reply from 5.0.0.2: bytes=32 time=1ms TTL=124
Reply from 5.0.0.2: bytes=32 time=1ms TTL=124
Reply from 5.0.0.2: bytes=32 time=1ms TTL=124

Ping statistics for 5.0.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 5.0.0.2

Pinging 5.0.0.2 with 32 bytes of data:
Reply from 5.0.0.2: bytes=32 time=1ms TTL=124
Reply from 5.0.0.2: bytes=32 time=1ms TTL=124
Reply from 5.0.0.2: bytes=32 time=1ms TTL=124
Reply from 5.0.0.2: bytes=32 time=1ms TTL=124

Ping statistics for 5.0.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

Laptop0

```

Physical  Config  Desktop  Programming  Attributes
Packet Tracer PC Command Line 1.0
C:\>ping 1.0.0.1

Pinging 1.0.0.1 with 32 bytes of data:
Reply from 1.0.0.1: bytes=32 time=1ms TTL=124
Reply from 1.0.0.1: bytes=32 time=1ms TTL=124
Reply from 1.0.0.1: bytes=32 time=1ms TTL=124
Reply from 1.0.0.1: bytes=32 time=1ms TTL=124

Ping statistics for 1.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 1.0.0.0

Pinging 1.0.0.0 with 32 bytes of data:
Reply from 1.0.0.0: bytes=32 time=1ms TTL=124
Reply from 1.0.0.0: bytes=32 time=1ms TTL=124
Reply from 1.0.0.0: bytes=32 time=1ms TTL=124
Reply from 1.0.0.0: bytes=32 time=1ms TTL=124

Ping statistics for 1.0.0.0:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

11. Graphs:

Learning outcomes (What I have learnt):

1. Learnt about Cisco packet Tracer.
2. Learnt about OSPF protocol.
3. Learnt about EIGRP.

Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			