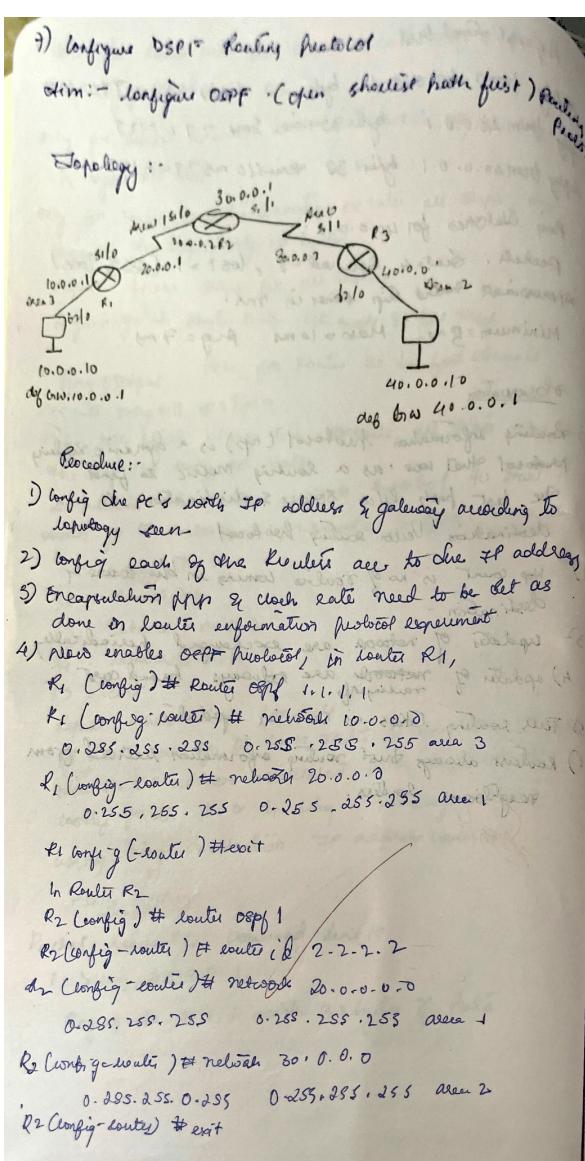


WEEK 7

Configure OSPF routing protocol.

OBSERVATION:



→ Router R₃
R₃(config) # router ospf 1
R₃(config-router) # router id 3.3.3.3
R₃(config-router) # network 80.0.0.0
8.255.255.255 0.255.255.255. 0.0.0.
R₃(config-router) # exit

R₁(config-if) # interface loopback 0
R₁(config-if) # ip add 172.14.70.52.255.0
R₁(config-if) # no shut

R₂(config-if) # interface loopback 0
R₂(config-if) # ip add 172.16.1.125 255.255.0.0
R₂(config-if) # no shut

R₃(config-if) # interface loopback 0
R₃(config-if) # ip add 172.16.1.254 255.255.0.0
R₃(config-if) # no shut

→ Virtual link between R₁ & R₂

R₁(config) # router ospf 1
R₁(config-router) # area 1 virtual link 2-2-2.0

R₂(config) # router ospf 1
R₂(config-router) # area 1 virtual link 1-1-1.1

→ Shows how route is executed

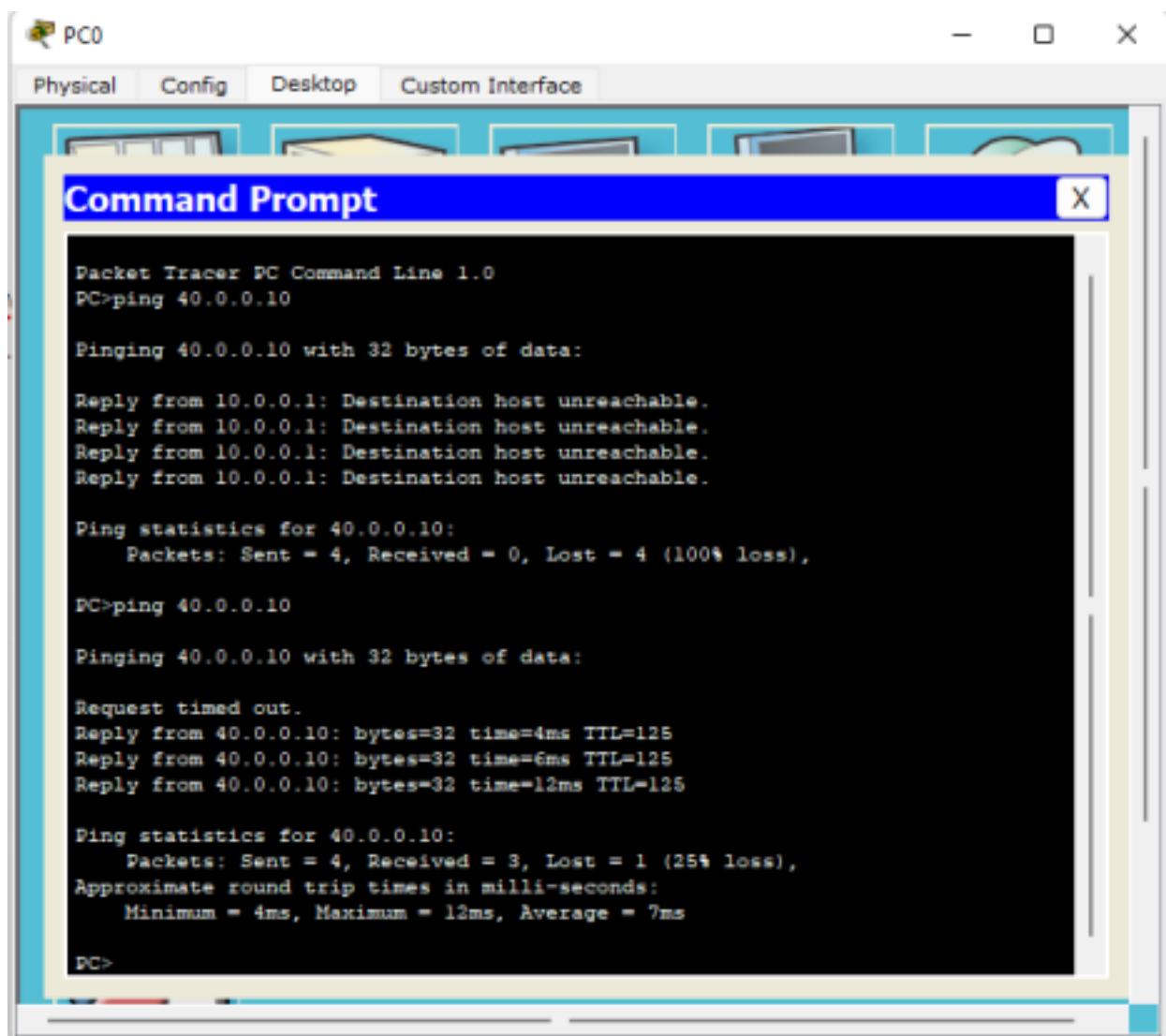
Observation

- 1) OSPF is a link State Routing Protocol. Dijkstra is used to find the best path from source to destination by using its area
- 2) The network is divided into 4 areas where area 0 is backbone
- 3) After we make virtual link b/w the area which is not connected to backbone, we can ping message successfully

TOPOLOGY:



OUTPUT:



The screenshot shows a Windows-style window titled "Command Prompt" from the "PC0" interface in Packet Tracer. The window contains the following command-line output:

```
Packet Tracer PC Command Line 1.0
PC>ping 40.0.0.10

Pinging 40.0.0.10 with 32 bytes of data:

Reply from 10.0.0.1: Destination host unreachable.

Ping statistics for 40.0.0.10:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
PC>ping 40.0.0.10

Pinging 40.0.0.10 with 32 bytes of data:

Request timed out.
Reply from 40.0.0.10: bytes=32 time=4ms TTL=125
Reply from 40.0.0.10: bytes=32 time=6ms TTL=125
Reply from 40.0.0.10: bytes=32 time=12ms TTL=125

Ping statistics for 40.0.0.10:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 4ms, Maximum = 12ms, Average = 7ms

PC>
```

