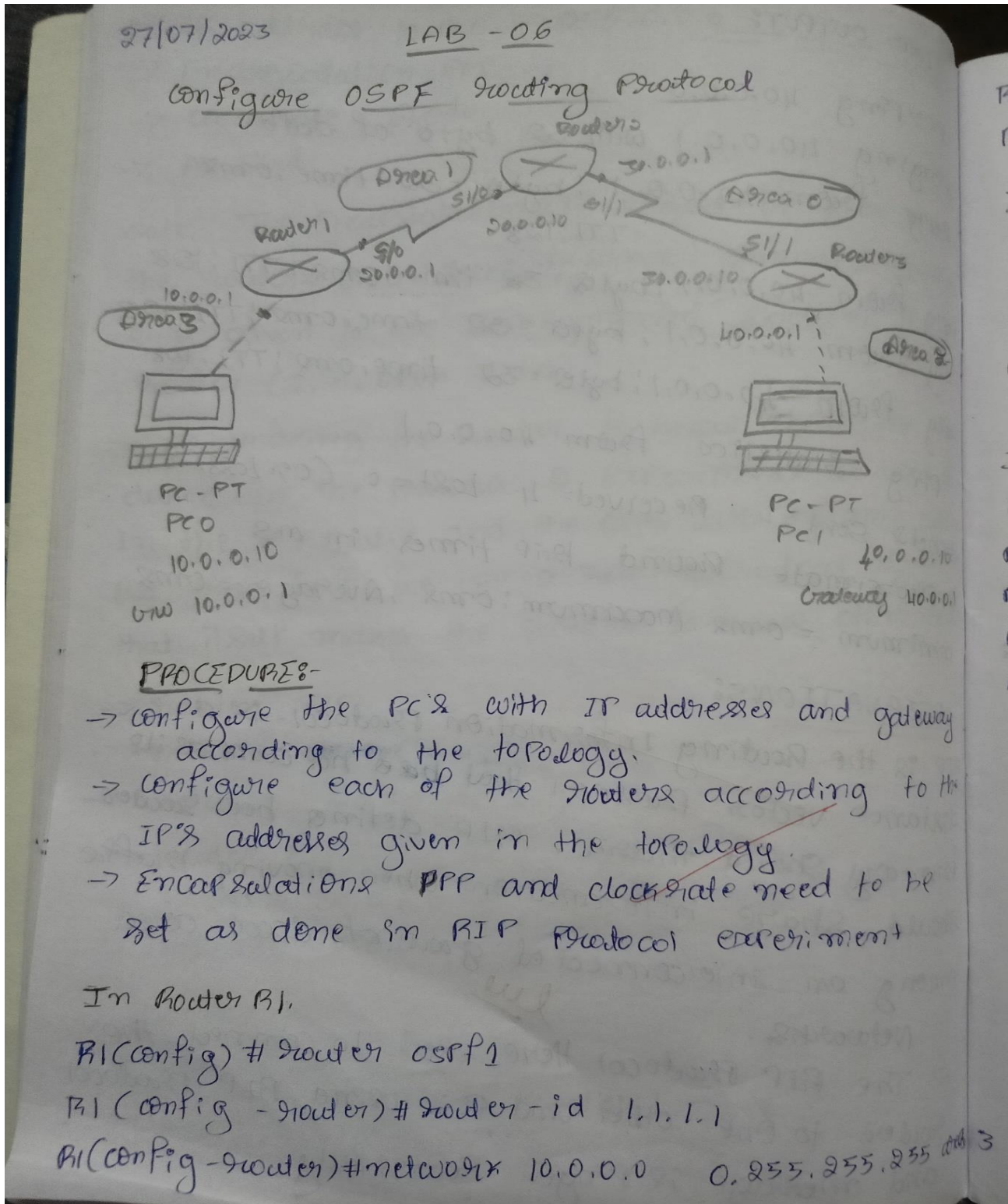


LAB 7

Configure OSPF routing protocol.

OBSERVATION:



Virtual link:-

In Router R1.

R1(config)#router ospf 1

R1(config-router)#area 1 virtual-link 2.2.2.2

In Router R2.

R2(config)#router ospf 1

R2(config-router)#area 1 virtual-link 1.1.1.1

R2(config-router)#exit

→ Show IP route

OUTPUT:-

Reply from 40.0.0.10: bytes=32 time=0ms TTL=128

Reply from 40.0.0.10: bytes=32 time=0ms TTL=128

Reply from 40.0.0.10: bytes=32 time=0ms TTL=128

Reply from 40.0.0.10: bytes=32 time=0ms TTL=128

Pinging statistics from 40.0.0.10

Packet sent = 4 Received = 4 lost = 0 (0% loss)

Approximate round trip time in ms

minimum = 0ms maximum = 0ms Average = 0ms

Lee
3/17/23


```
R1(config-router)#network 20.0.0.0 0.255.255.255 area 0  
R1(config-router)#exit
```

In Router R2.

```
R2(config)#router ospf 1  
R2(config-router)#router-id 2.2.2.2  
R2(config-router)#network 20.0.0.0 0.255.255.255 area 0  
R2(config-router)#network 30.0.0.0 0.255.255.255 area 0  
R2(config-router)#exit
```

In Router R3.

```
R3(config)#router ospf 1  
R3(config-router)#router-id 3.3.3.3  
R3(config-router)#network 30.0.0.0 0.255.255.255 area 0  
R3(config-router)#network 40.0.0.0 0.255.255.255 area 2  
R3(config-router)#exit
```

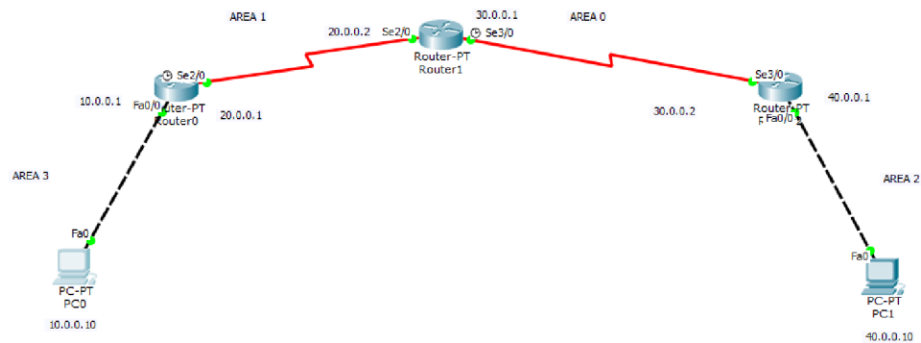
Interfaces Loopback:-

```
R1(config-if)#interface loopback 0  
R1(config-if)#ip address 172.16.1.252 255.255.0.0  
R1(config-if)#no shutdown
```

```
R2(config-if)#interface loopback 0  
R2(config-if)#ip address 172.16.1.253 255.255.0.0  
R2(config-if)#no shutdown
```

```
R3(config-if)#interface loopback 0  
R3(config-if)#ip address 172.16.1.254 255.255.0.0  
R3(config-if)#no shutdown.
```

TOPOLOGY:



OUTPUT:

```
PC0
Physical Config Desktop Custom Interface
Command Prompt
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.
Reply from 10.0.0.1: Destination host unreachable.
Reply from 10.0.0.1: Destination host unreachable.
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>
```

