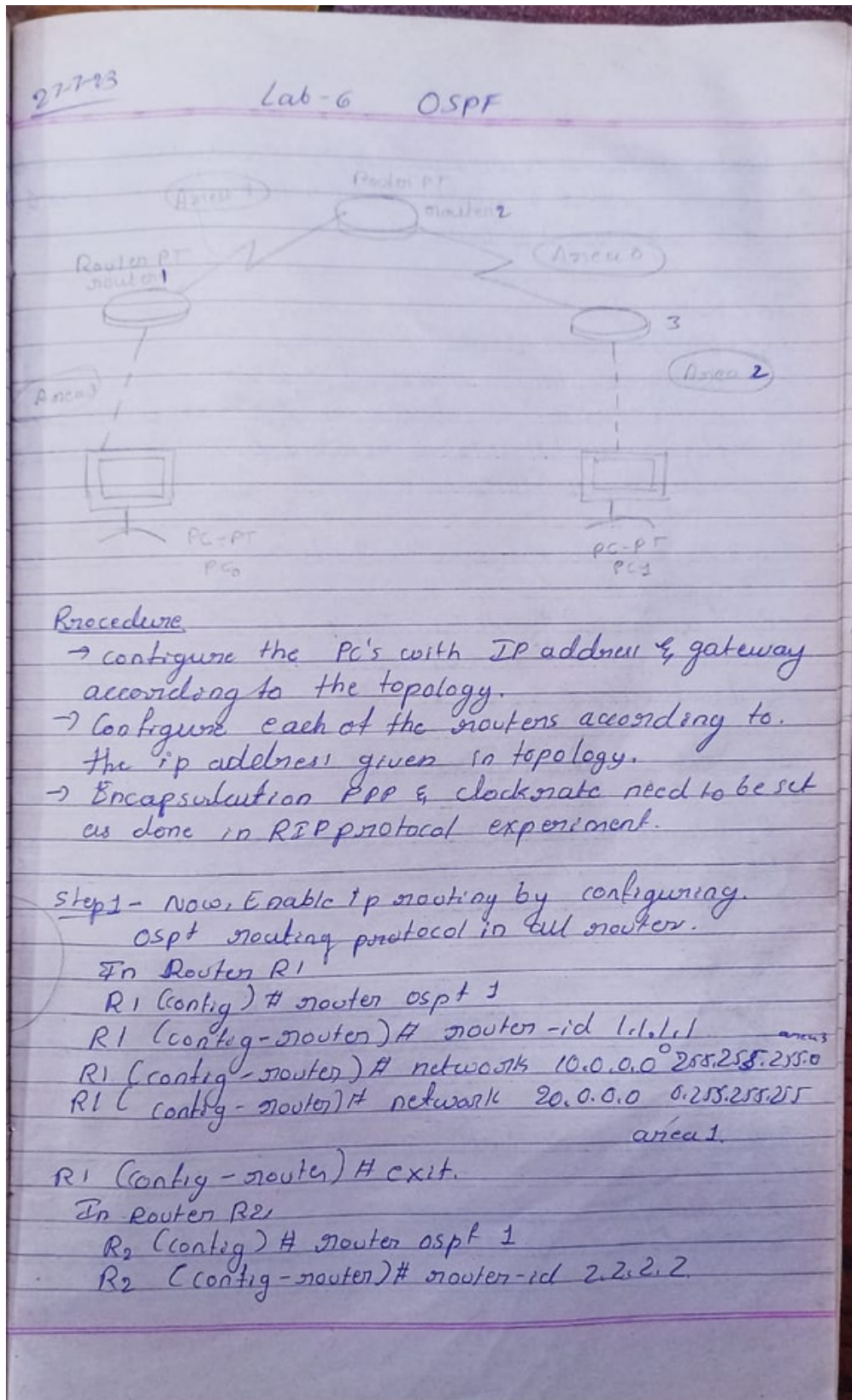


## WEEK 7

Configure OSPF routing

protocol. OBSERVATION:



R<sub>1</sub> (config-router) # network 20.0.0.0 0.255.255.255 area  
R<sub>2</sub> (config-router) # network 30.0.0.0 0.255.255.255 area  
R<sub>2</sub> (config-router) # exit.

In Router R<sub>3</sub>,

R<sub>3</sub> (config) # router ospf 1  
R<sub>3</sub> (config-router) # router-id 3.3.3.3  
R<sub>3</sub> (config-router) # network 30.0.0.0 0.255.255.255 area  
R<sub>3</sub> (config-router) # network 40.0.0.0 0.255.255.255 area  
R<sub>3</sub> (config-router) # exit.

Step 4:- Loopback on Serial interface

In router R<sub>1</sub>

R<sub>1</sub> (config-if) # interface loopback 0.  
R<sub>1</sub> (config-if) # ip address 172.16.1.252 255.255.0.0  
R<sub>1</sub> (config-if) # no shut

In router 2 in serial interface

R<sub>2</sub> (config-if) # interface loopback 0  
R<sub>2</sub> (config-if) # ip address 172.16.1.253 255.255.0.0  
R<sub>2</sub> (config-if) # no shut

In router 3

R<sub>3</sub> (config-if) # interface loopback 0  
R<sub>3</sub> (config-if) # ip address 172.16.1.254 255.255.0.0  
R<sub>3</sub> (config-if) # no shut

Step 5:- Virtual links

In router R<sub>1</sub>

R<sub>1</sub> (config) # router ospf 1  
R<sub>1</sub> (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

0 FA 10.0.0.0/8 [110/129] via 30.0.0.1 serial 3/0

0 IA 20.0.0.0/8 [110/128] via 30.0.0.1 serial 3/0

30.0.0.0/8 is variably subnetted, 2 subnets, 2 masks

c 30.0.0.0/8 is directly connected, serial 3/0

c 30.0.0.1/32 is directly connected, serial 3/0

c 40.0.0.0/8 is directly connected FastEthernet 0/0

c 172.16.0.0/16 is directly connected, Loopback 0.

## Ping output

Pinging 40.0.0.10 with 32 bytes of data:

Request timed out.

Reply from 40.0.0.10 bytes=32 time=2ms TTL=125

Reply from 40.0.0.10 bytes=32 time=9ms TTL=125

Reply from 40.0.0.10 bytes=32 time=10ms TTL=125

Pinging statistics for 40.0.0.10:

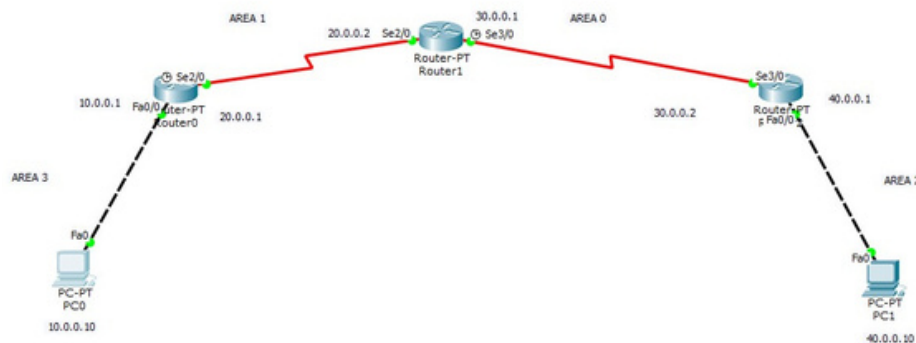
packets: sent=4, received=3, lost=1 (25% loss)

Approx round trip in ms:

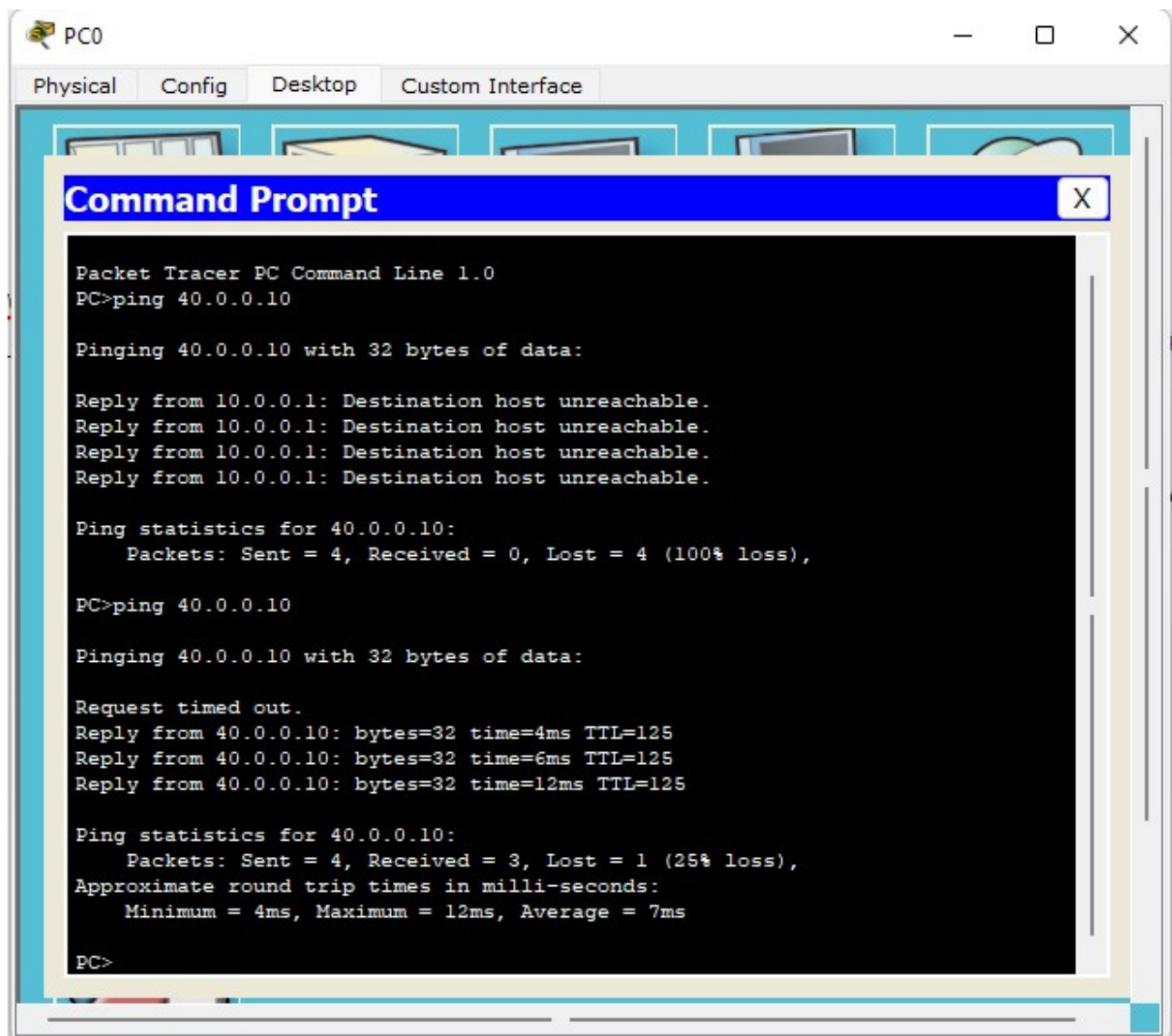
min=2ms, max=10ms, Average=7ms.

~~N~~  
3/8/2023

## TOPOLOGY:



## OUTPUT:



Cisco Packet Tracer Student - C:\Users\Admin\Desktop\18M21CS047\ongf.pkt

File Edit Options View Tools Extensions Help

Logical [Root] New Cluster Move Object Set Tiled Background Viewport

Simulation Panel

Event List

Time(sec)	Last Device	At Device	Type	Info
20.002	--	Router1	OSPF	
20.003	Router1	Router2	OSPF	
22.376	--	Router0	OSPF	
22.377	Router0	Router1	OSPF	
22.378	--	Router0	OSPF	
22.379	Router0	PC0	OSPF	
22.380	--	Router2	OSPF	
22.381	Router2	PC1	OSPF	
22.383	--	Router1	OSPF	

Reset Simulation: ☒ Constant Delay Captured to: 22.383 s

Play Controls: Back Auto Capture / Play Capture / Forward

Event List Filters - Visible Events

ACL, Filter, ARP, BGP, CDP, DHCP, DHCPv6, DNS, DTP, EIGRP, EIGRPv6, FTP, H.323, HSRP, IGMPv6, HTTP, HTTPv6, ICMP, ICMPv6, IPsec, IS-IS, LACP, NTP, NET/DO, NTP, OSPF, OSPFv6, PAgg, POP3, RADIUS, RDP, RDPv6, RTR, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TFTP, TFTPv6, Telnet, UDP, VTP

Edit Filters Show AllNone

Time: 00:05:30.703 Power Cycle Devices: PLAY CONTROLS: Back Auto Capture / Play Capture / Forward

Scenario 0

New Delete

Toggle PDU List Window

(Select a Device to Drag and Drop to the Workspace)

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC0	PC1	ICMP		0.000	N	0	(edit)	(delete)

22°C Mostly cloudy

1103 27-07-2023