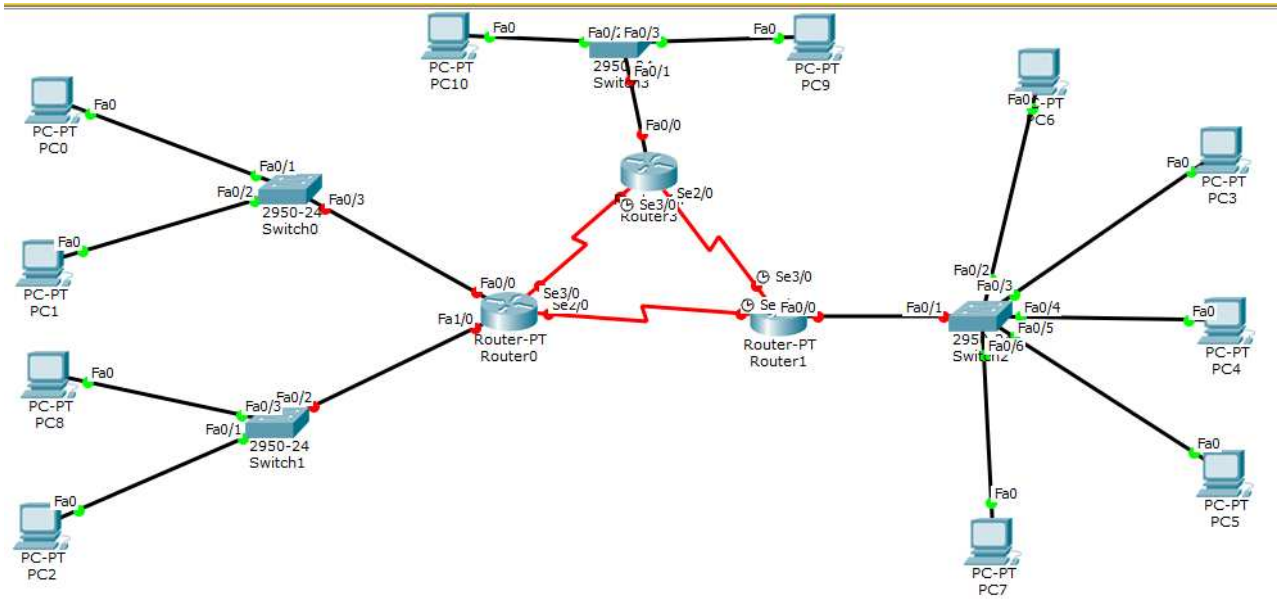
Computer Network (Lab) 2020-21

Practice Assignment 1

Indicative Solution

Network Scenario:



Step 1: Create a scenario in Packet tracer as per diagram.

Step 2: Set IP addresses to all PC (0-10)

PC0	
IP Address	10.0.0.2
Subnet Mask	255.0.0.0
Default Gateway	10.0.0.1
PC1	
IP Address	10.0.0.3
Subnet Mask	255.0.0.0
Default Gateway	10.0.0.1
PC2	
IP Address	20.0.0.3
Subnet Mask	255.0.0.0
Default Gateway	20.0.0.1
PC8	
IP Address	20.0.0.2
Subnet Mask	255.0.0.0
Default Gateway	20.0.0.1
PC3	
IP Address	40.0.0.3
Subnet Mask	255.0.0.0
Default Gateway	40.0.0.1

PC4	
IP Address	40.0.0.4
Subnet Mask	255.0.0.0
Default Gateway	40.0.0.1
PC5	
IP Address	40.0.0.5
Subnet Mask	255.0.0.0
Default Gateway	40.0.0.1
PC6	
IP Address	40.0.0.2
Subnet Mask	255.0.0.0
Default Gateway	40.0.0.1
PC7	
IP Address	40.0.0.6
Subnet Mask	255.0.0.0
Default Gateway	40.0.0.1
PC9	
IP Address	30.0.0.3
Subnet Mask	255.0.0.0
Default Gateway	30.0.0.1
PC10	
IP Address	30.0.0.2
Subnet Mask	255.0.0.0
Default Gateway	30.0.0.1

Step 3: Configure Router 0 (from CLI prompt of Router 0)

Router>enable

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#**interface FastEthernet0/0**

Router(config-if)#ip address 10.0.0.1 255.0.0.0

Router(config-if)#no shutdown

Router(config-if)#exit

Router(config)#**interface FastEthernet0/1**

Router(config-if)#ip address 20.0.0.1 255.0.0.0

Router(config-if)#no shutdown

Router(config-if)#exit

Router(config)#**interface Serial2/0**

Router(config-if)#ip address 192.168.0.253 255.255.255.0

Router(config-if)#no shutdown

Router(config-if)#exit

Router(config)#**interface Serial3/0**

Router(config-if)#ip address 193.168.0.253 255.255.255.0

Router(config-if)#no shutdown

Router(config-if)#exit

Router(config)#exit

Router#

Step 4: Configure Router 1 (from CLI prompt of Router 1)

Router>enable

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#**interface FastEthernet0/0**

Router(config-if)#ip address 40.0.0.1 255.0.0.0

Router(config-if)#no shutdown

Router(config-if)#exit

Router(config)#**interface Serial2/0**

Router(config-if)#ip address 192.168.0.254 255.255.255.0

Router(config-if)#no shutdown

Router(config-if)#exit

Router(config)#**interface Serial3/0**

Router(config-if)#ip address 194.168.0.251 255.255.255.0

Router(config-if)#no shutdown

Router(config-if)#exit

Router(config)#exit

Router#

Step 5: Configure Router 2 (from CLI prompt of Router 2)

Router>enable

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#**interface FastEthernet0/0**

Router(config-if)#ip address 30.0.0.1 255.0.0.0

Router(config-if)#no shutdown

Router(config-if)#exit

Router(config)#**interface Serial2/0**

Router(config-if)#ip address 194.168.0.252 255.255.255.0

Router(config-if)#no shutdown

Router(config-if)#exit

Router(config)#**interface Serial3/0**

Router(config-if)#ip address 193.168.0.252 255.255.255.0

Router(config-if)#no shutdown

Router(config-if)#exit

Router(config)#exit

Router#

Step 6: Configure routing table (static routing) in Router 0.

Router>enable

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#ip route 40.0.0.0 192.168.0.254

Router(config)#ip route 30.0.0.0 193.168.0.252

Router(config)#exit

Router#

Step 7: Configure routing table (static routing) in Router 1.

Router>enable

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#ip route 30.0.0.0 194.168.0.252

Router(config)#ip route 10.0.0.0 192.168.0.253

Router(config)#ip route 20.0.0.0 192.168.0.253

Router(config)#exit

Router#

Step 7: Configure routing table (static routing) in Router 2.

Router>enable

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#ip route 40.0.0.0 194.168.0.251

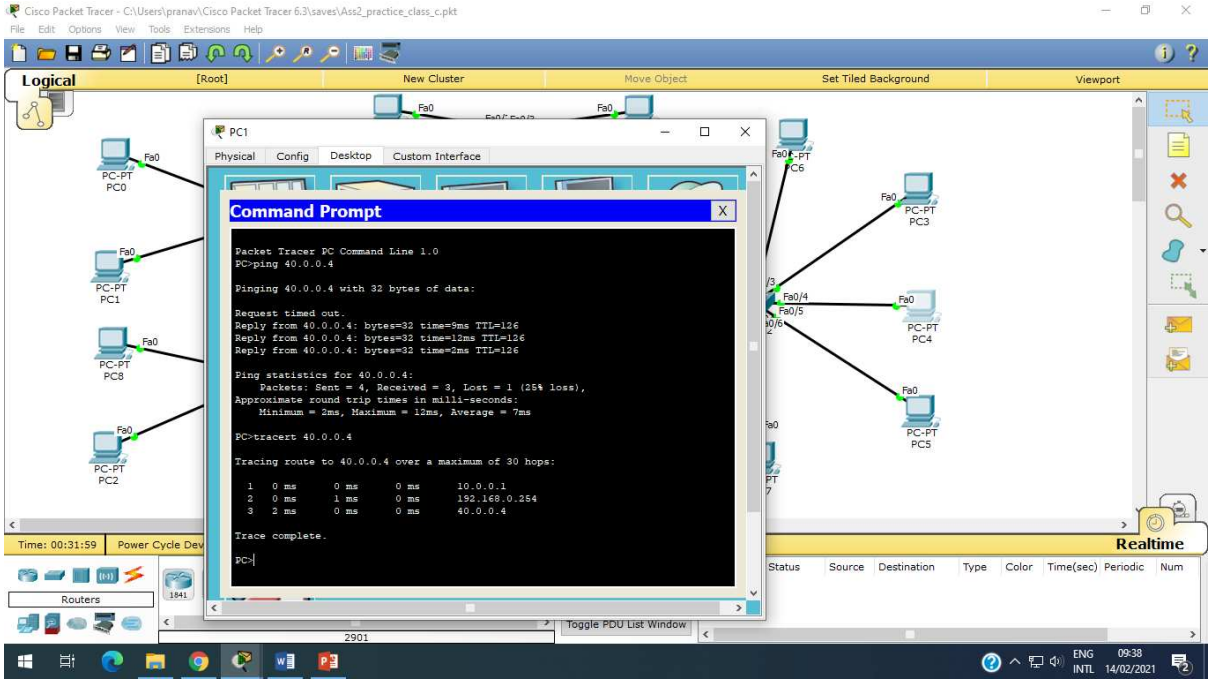
Router(config)#ip route 10.0.0.0 193.168.0.253

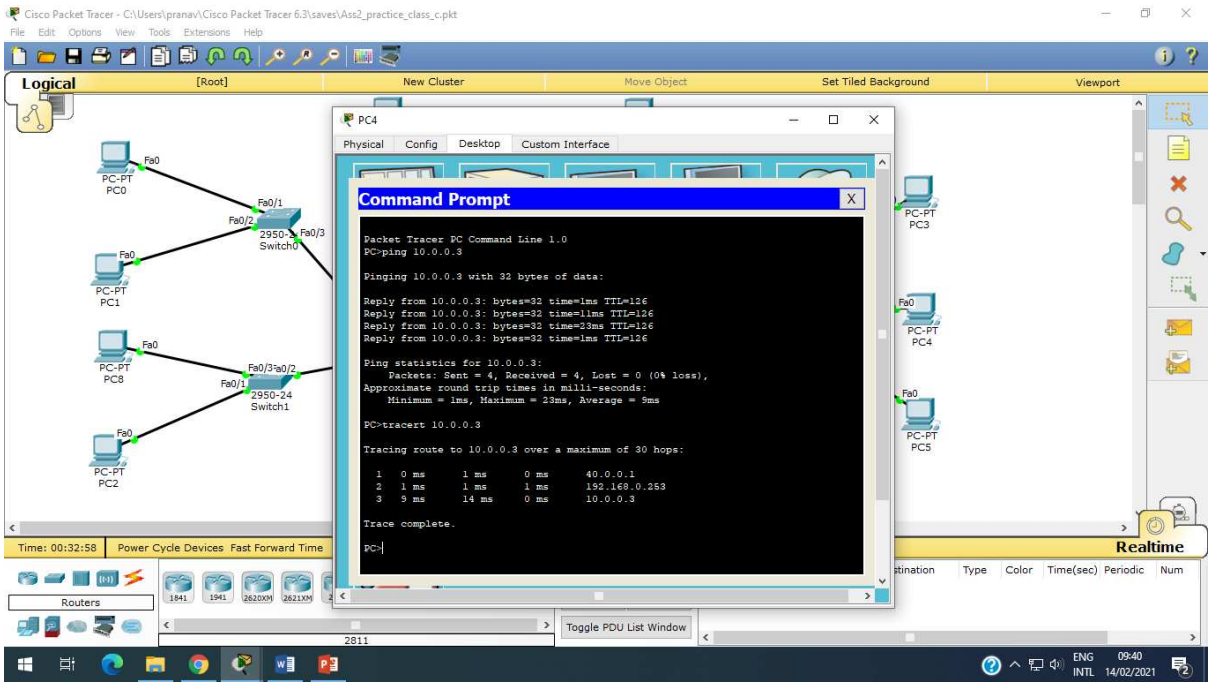
Router(config)#ip route 20.0.0.0 193.168.0.253

Router(config)#exit

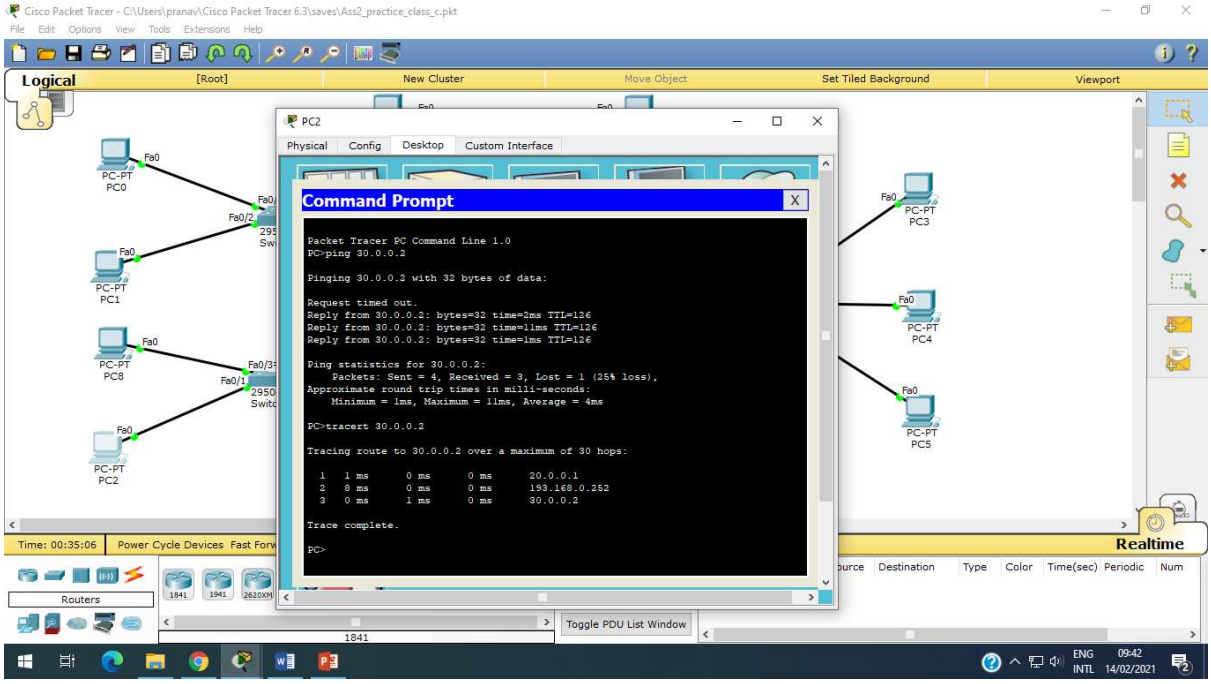
Router#

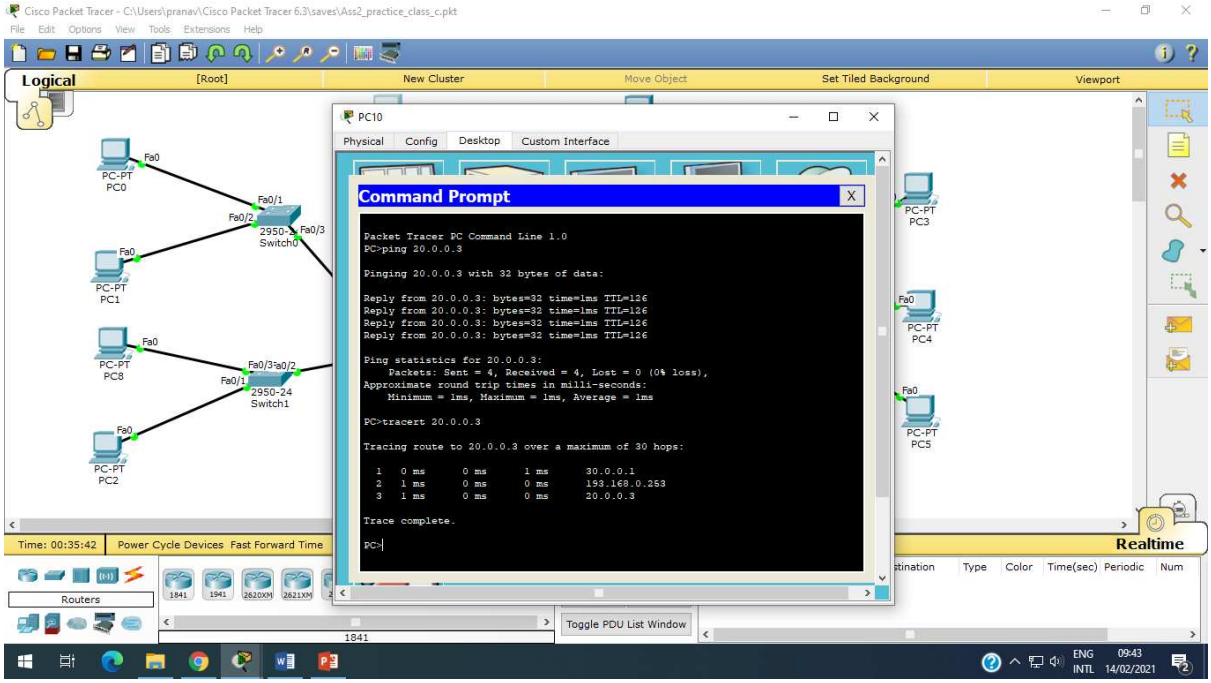
Step 8: Ping and tracert from PC1 to PC4 and vice versa.





Step 9: Ping and tracert from PC2 to PC10 and vice versa.





Step 10: Ping and tracert on all other machine, and check all connections are working or not.