COMPUTER NETWORKS

LAB REPORT # 4

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CE-42-A

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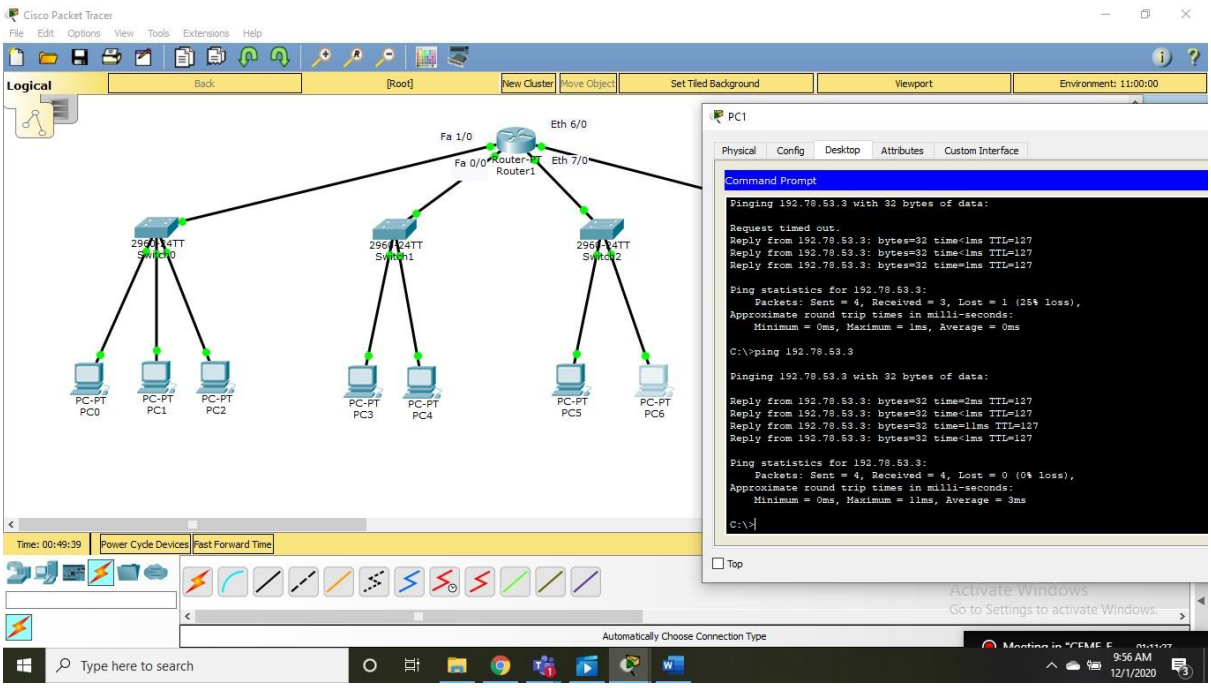
TASK # 4.1:

OUTPUT:



Upon pinging PC 6 from PC 1, it can be seen that first initially one packet was lost as there were no information however on pinging the 2nd time all 4 were received properly shows that the routing tables maintained which helped in smooth pinging.

However, we can safely say that PC 1 is able to ping PC 6 successfully.

TASK # 4.2:

OUTPUT:

Routing Table for Router1

Type	Network	Port	Next Hop IP	Metric
C	72.0.0.0/8	FastEthernet1/0	---	0/0
C	144.78.0.0/16	FastEthernet0/0	---	0/0
C	192.78.53.0/24	Ethernet7/0	---	0/0
C	192.100.20.0/24	Ethernet6/0	---	0/0

Routing Table for Router1

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C	72.0.0.0/8	FastEthernet1/0	---	0/0
C	144.78.0.0/16	FastEthernet0/0	---	0/0
C	192.78.53.0/24	Ethernet7/0	---	0/0
C	192.100.20.0/24	Ethernet6/0	---	0/0

ARP Table for Router1

IP Address	Hardware Address	Interface
72.31.1.1	000D.BD0B.A224	FastEthernet1/0
72.31.1.3	0060.7079.4A58	FastEthernet1/0
144.78.210.1	0002.17DC.B09A	FastEthernet0/0
192.78.53.1	0001.6496.D511	Ethernet7/0
192.78.53.3	00E0.8F86.04D5	Ethernet7/0
192.100.20.1	0060.3E14.6D83	Ethernet6/0

QoSTable

- Router1
  - FastEthernet0/0
    - Hardware Queue: FIFO (0)
    - Software Queue: FIFO (0)
  - FastEthernet1/0
    - Hardware Queue: FIFO (0)
    - Software Queue: FIFO (0)
  - Serial2/0
    - Hardware Queue: FIFO (0)
    - Software Queue: Weighted Fair
  - Serial3/0
    - Hardware Queue: FIFO (0)
    - Software Queue: Weighted Fair
  - FastEthernet4/0
    - Hardware Queue: FIFO (0)
    - Software Queue: FIFO (0)
  - FastEthernet5/0
    - Hardware Queue: FIFO (0)
    - Software Queue: FIFO (0)
  - Ethernet7/0
    - Hardware Queue: FIFO (0)
    - Software Queue: FIFO (0)
  - Ethernet6/0
    - Hardware Queue: FIFO (0)
    - Software Queue: FIFO (0)

Port Status Summary Table for Router1

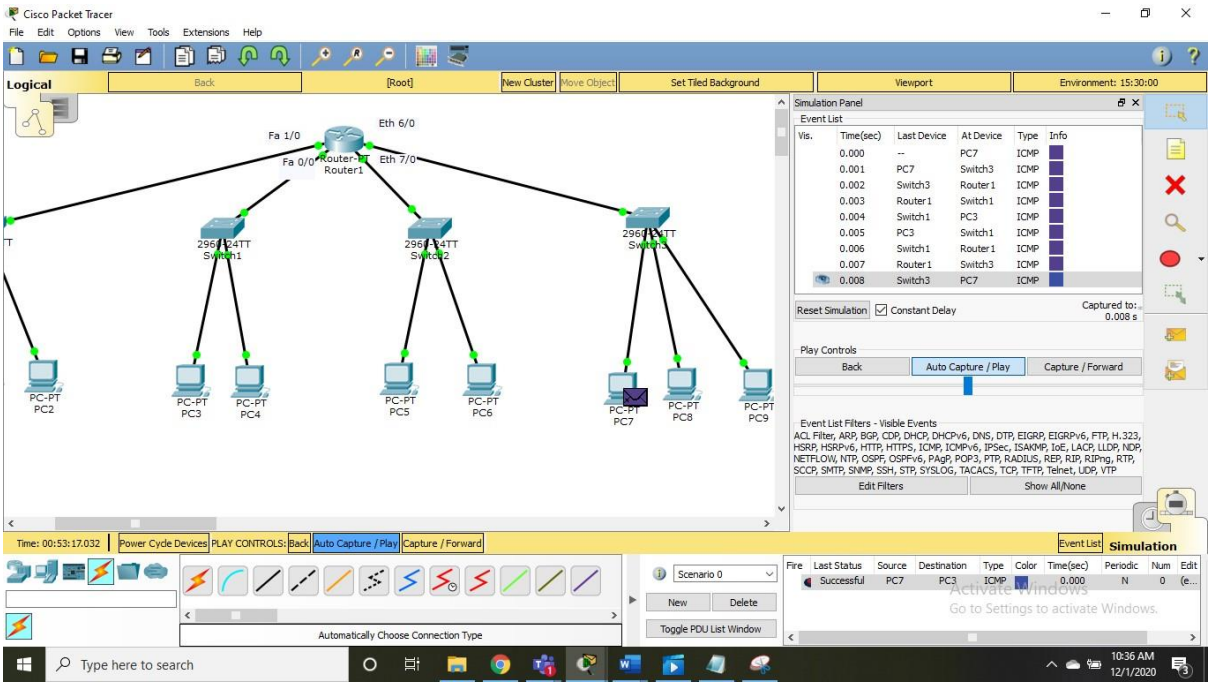
Port	Link	IP Address	IPv6 Address	MAC Address
FastEthernet0/0	Up	144.78.210.1/16	<not set>	0002.17DC.B09A
FastEthernet1/0	Up	72.31.1.1/8	<not set>	000D.BD0B.A224
Serial2/0	Down	<not set>	<not set>	<not set>
Serial3/0	Down	<not set>	<not set>	<not set>
FastEthernet4/0	Down	<not set>	<not set>	00E0.8F88.A651
FastEthernet5/0	Down	<not set>	<not set>	0001.9711.D125
Ethernet6/0	Up	192.100.20.1/24	<not set>	0060.3E14.6D83
Ethernet7/0	Up	192.78.53.1/24	<not set>	0001.6496.D511

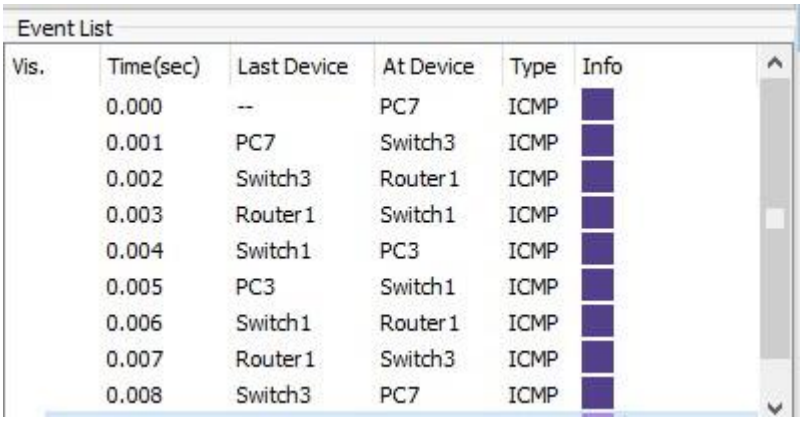
Hostname: Router

Physical Location: Intercity, Home City, Corporate Office, Main Wiring Closet

TASK # 4.3:

OUTPUT:





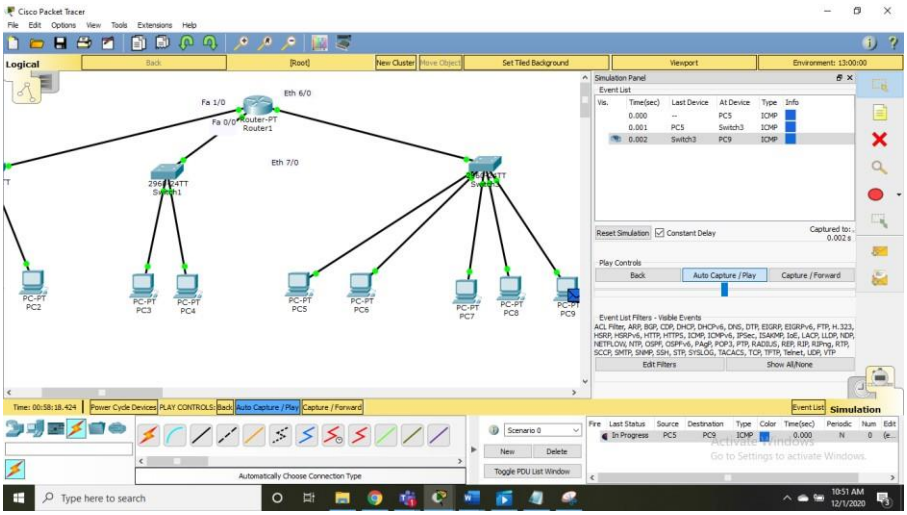
Event List

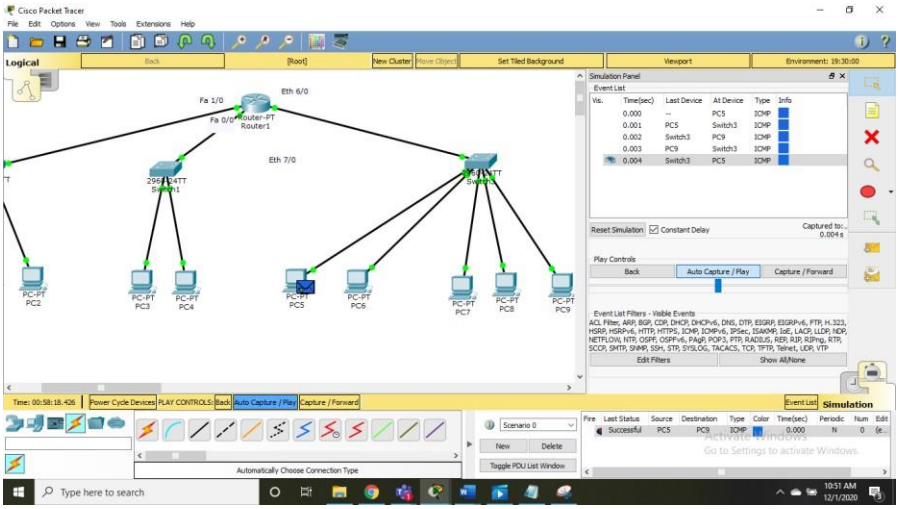
Vis.	Time(sec)	Last Device	At Device	Type	Info
	0.000	--	PC7	ICMP	
	0.001	PC7	Switch3	ICMP	
	0.002	Switch3	Router1	ICMP	
	0.003	Router1	Switch1	ICMP	
	0.004	Switch1	PC3	ICMP	
	0.005	PC3	Switch1	ICMP	
	0.006	Switch1	Router1	ICMP	
	0.007	Router1	Switch3	ICMP	
	0.008	Switch3	PC7	ICMP	

We can see through the event list and screenshot above that the packet/message was successfully sent from PC7 to PC3 with the help of router despite being on different network IDs and different IP Addresses. This shows that router helps us communicate between different network IDs too.

TASK # 4.4:

OUTPUT:





Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device	Type	Info
	0.000	--	PC5	ICMP	
	0.001	PC5	Switch3	ICMP	
	0.002	Switch3	PC9	ICMP	
	0.003	PC9	Switch3	ICMP	
	0.004	Switch3	PC5	ICMP	

Yes, it is successful this time because PC5 and PC9 are on same network which means they can easily communicate with each other through switch. In addition to that it does not even need any router's help as it can also be seen in event list that PC5 to switch, switch to PC9 and back was done and no router was used.