

Chakali Madhu – CA and Networking – Satinnder

Date: 04/06/2024

1.BINARY TO DECIMAL CONVERSION

1	0	0	1	0	0	1	0	146
0	1	1	1	0	1	1	1	119
1	1	1	1	1	1	1	1	255
1	1	0	0	0	1	1	1	197
1	1	1	1	0	1	1	0	246
0	0	0	1	0	0	0	1	19
1	0	0	0	0	0	0	0	129
0	0	1	1	0	0	0	1	49
0	1	1	1	1	0	0	0	120
1	1	1	1	0	0	0	0	240
0	0	1	1	1	0	1	1	59
0	0	0	0	0	1	1	1	7
0	0	0	1	1	0	1	1	27
1	0	1	0	1	0	1	0	170

2.ADDRESS CLASS IDENTIFICATION

RULES

A = 1-126

B = 128-191

C = 192-223

D = 224-239

10.250.1.1 ----- → A

150.10.15.0 ----- → B

192.14.2.0 ----- → C

148.17.9.1 ----- → B

193.42.1.1 ----- → C

126.8.156.0 ----- → B

230.230.45.58 ----- → D

177.100.18.4 -----→B

119.18.45.0 -----→B

249.240.80.78 -----→E

3.NETWORK HOST IDENTIFICATION

A->1-126
B->128-191 A→N H H H
C->192-223 B->N N H H
D->224-239 C-> N N N H

IP ADRESS	NETWORK	HOST
177.100.18.4	177.100	18.4
119.18.45.0	119	18.45.0
209.240.80.78	209.240.80	78
199.155.77.56	199.155	77.56
117.89.56.45	117	89.56.45
215.45.45.0	215.45.45	0
192.200.15.0	192.200.15	0
95.0.21.90	95	0.21.90
33.0.0.0	33	0.0.0
158.98.80.0	158.98	80.0
217.21.56.0	217.21.56	0
10.250.1.1	10	250.1.1

4.DECIMAL TO BINARY

DECIMAL	128	64	32	16	8	4	2	1
238	1	1	1	0	1	1	1	0
34	0	0	1	0	0	0	1	0
123	0	1	1	1	1	0	1	1
50	0	0	1	1	0	0	1	0
255	1	1	1	1	1	1	1	1
200	1	1	0	0	1	0	0	0
10	0	0	0	0	1	0	1	0
138	1	0	0	0	1	0	1	0
1	0	0	0	0	0	0	0	1
13	0	0	0	0	1	1	0	1
250	1	1	1	1	1	0	1	0
107	0	1	1	0	1	0	1	1
227	0	1	1	1	1	1	1	1
114	0	1	1	1	0	0	1	0

192	1	1	0	0	0	0	0	0
-----	---	---	---	---	---	---	---	---

Date:05/06/2024

5.DEFAULT SUBNET MARKS

A->1-126
B->128-191 A→250.0.0.0
C->192-223 B->255.255.0.0.
D->224-239 C-> 255.255.255.0

177.100.18.4	255.255.0.0
119.18.45.0	255.0.0.0
191.249.234.109	255.255.0.0
10.10.250.1	255.0.0.0
126.123.23.1	255.0.0.0
223.69.230.250	255.255.255.0
192.12.35.105	255.255.255.0
77.251.200.51	255.0.0.0
189.210.50.1	225.255.0.0
88.45.65.35	255.0.0.0
128.212.250.254	255.255.0.0

6.NETWORK ADDRESS

188.10.18.2	188.10.0.0
255.255.0.0	
10.10.48.80	10.10.48.0
255.255.255.0	
192.149.24.191	192.149.24.0
255.255.255.0	
150.203.23.19	150.203.0.0
255.255.0.0	
10.10.10.10	10.0.0.0
255.0.0.0	
186.13.23.110	186.13.23.0
255.255.255.0	
223.69.230.250	223.69.0.0
255.255.0.0	
200.120.135.15	200.120.135.0

255.255.255.0	
223.169.23.20	223.169.23.0
255.255.255.0	

7. HOST ADDRESS

188.10.18.2	0.0.18.2
255.255.0.0	
10.10.48.80	0.0.0.80
255.255.255.0	
222.49.49.11	0.0.0.11
255.255.255.0	
128.23.230.19	0.0.230.19
255.255.0.0	
10.10.10.10	0.10.10.10
255.0.0.0	
200.113.123.11	0.0.0.11
255.255.255.0	
223.169.23.20	0.0.23.20
255.255.0.0	

8.BROADCAST ADDRESS ADDRESS

188.10.18.2	188.10.255.255
255.255.0.0	
10.10.48.80	10.10.48.255
255.255.255.0	
192.149.24.191	192.149.24.255
255.255.255.0	
150.203.23.19	150.203.255.255
255.255.0.0	
10.10.10.10	10.255.255.255
255.0.0.0	
186.13.23.110	186.13.23.255
255.255.255.0	
223.69.230.250	223.69.255.255
255.255.0.0	
200.120.135.15	200.120.135.255
255.255.255.0	
223.169.23.20	223.169.23.255
255.255.255.0	

9.CUSTOM SUBNET PROBLEM

Number of needed subnets →6

Number of needed usable hosts →30

Network Address →195.85.8.0

Address class →C

Default subnet mask →255.255.255.0

Custom subnet mask →255.255.255.224

Total number of subnets →8

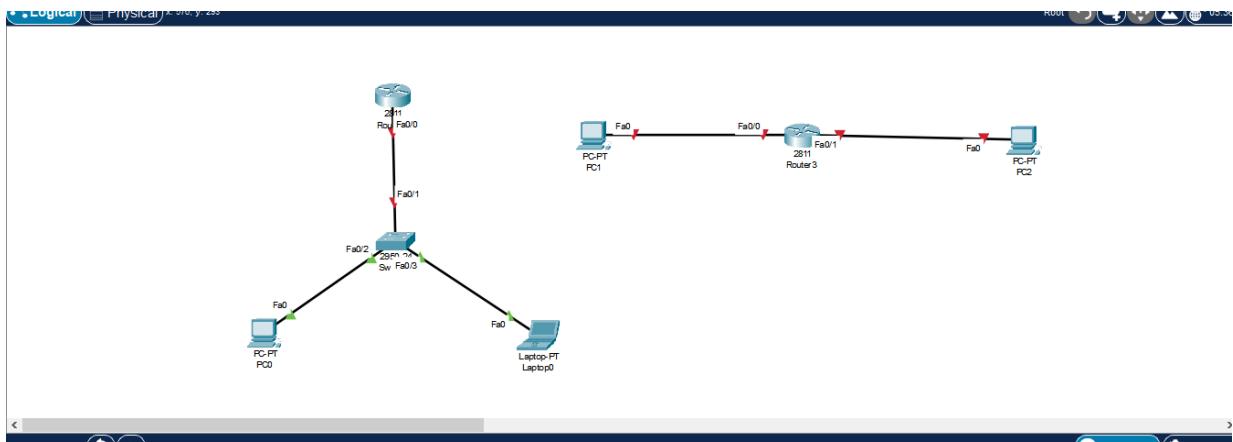
Total number of host addresses →8

Number of usable addresses →30

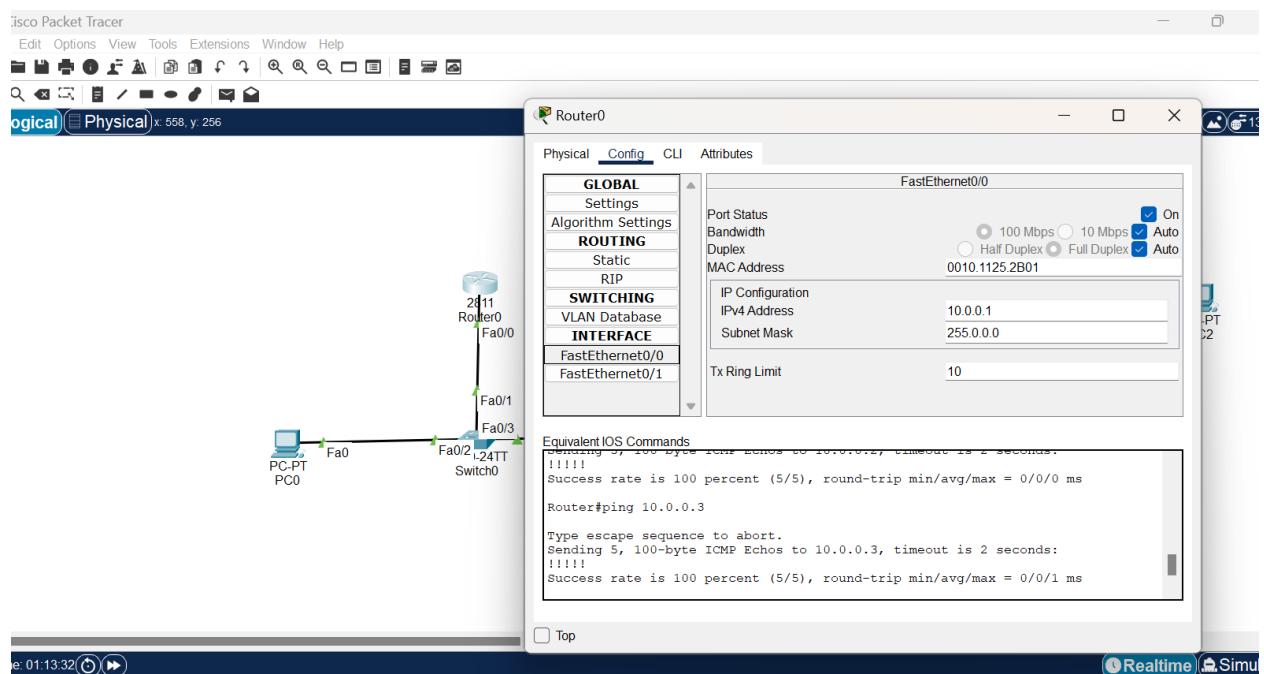
Number of bits borrowed →3

Date:06/06/2024

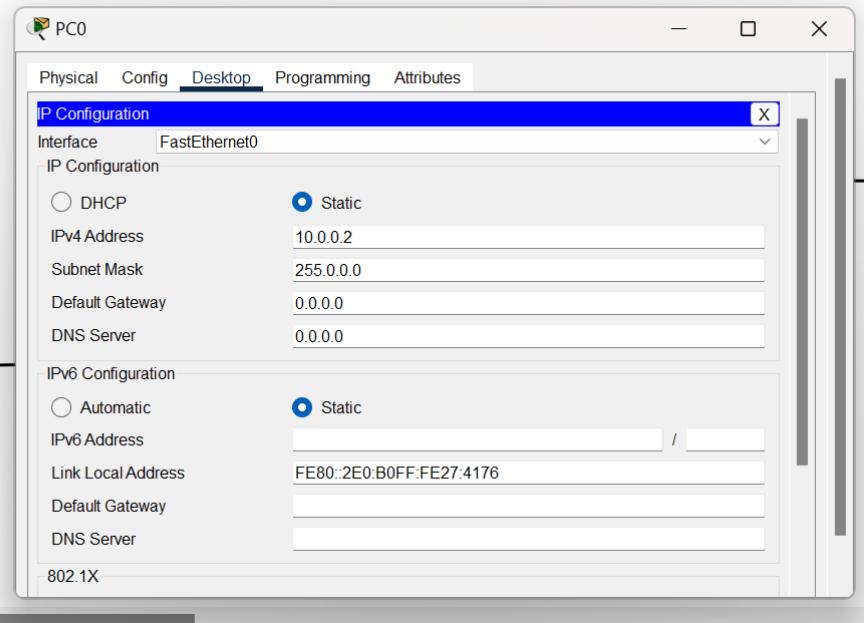
Lab1: Connecting the Devices



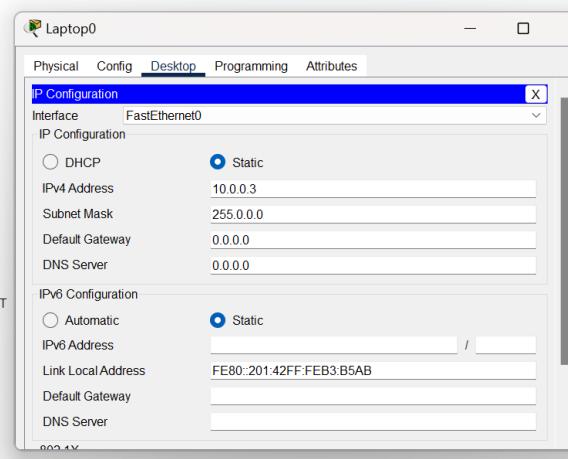
Lab2: IP address Configuration and Ping check

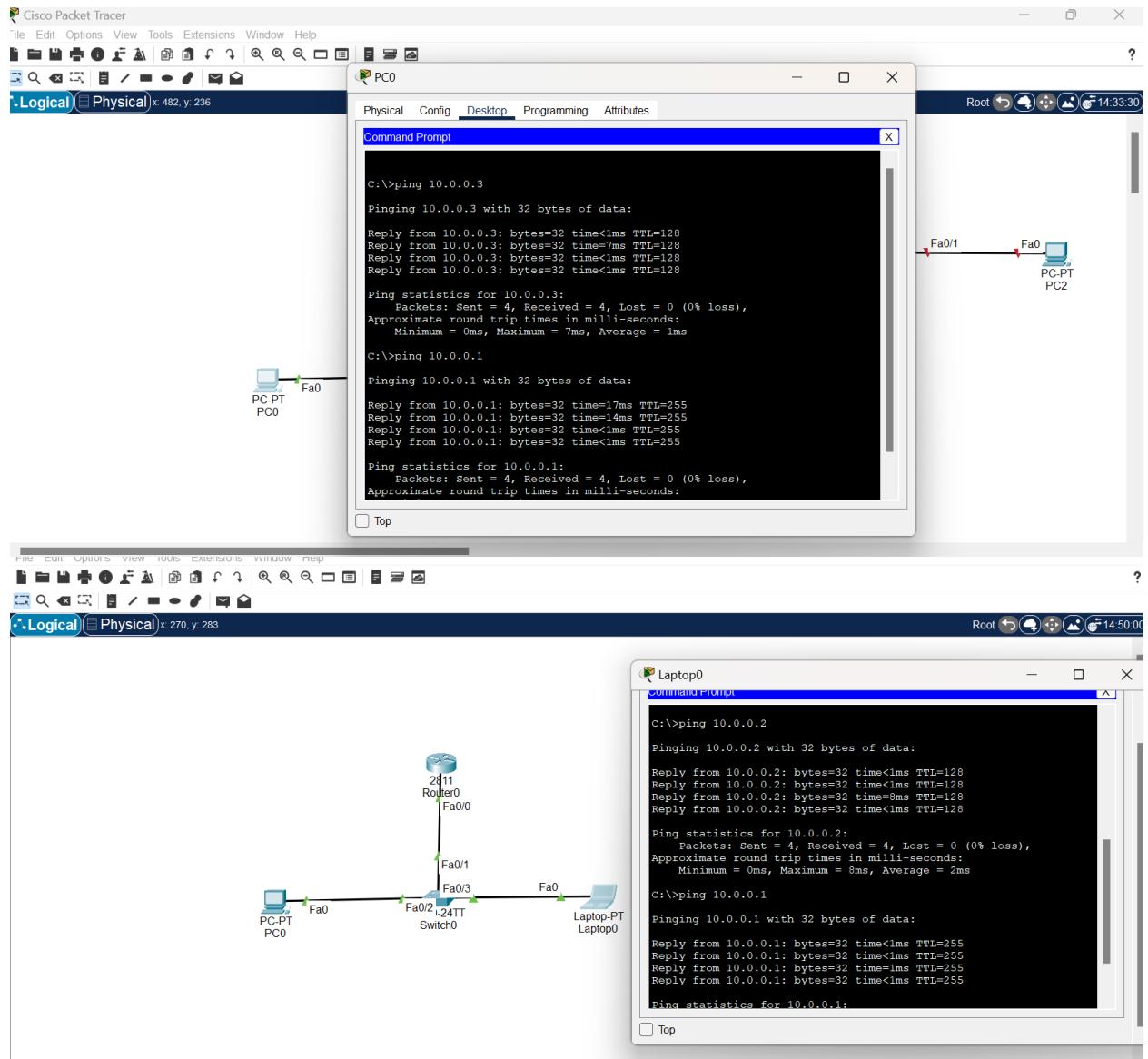


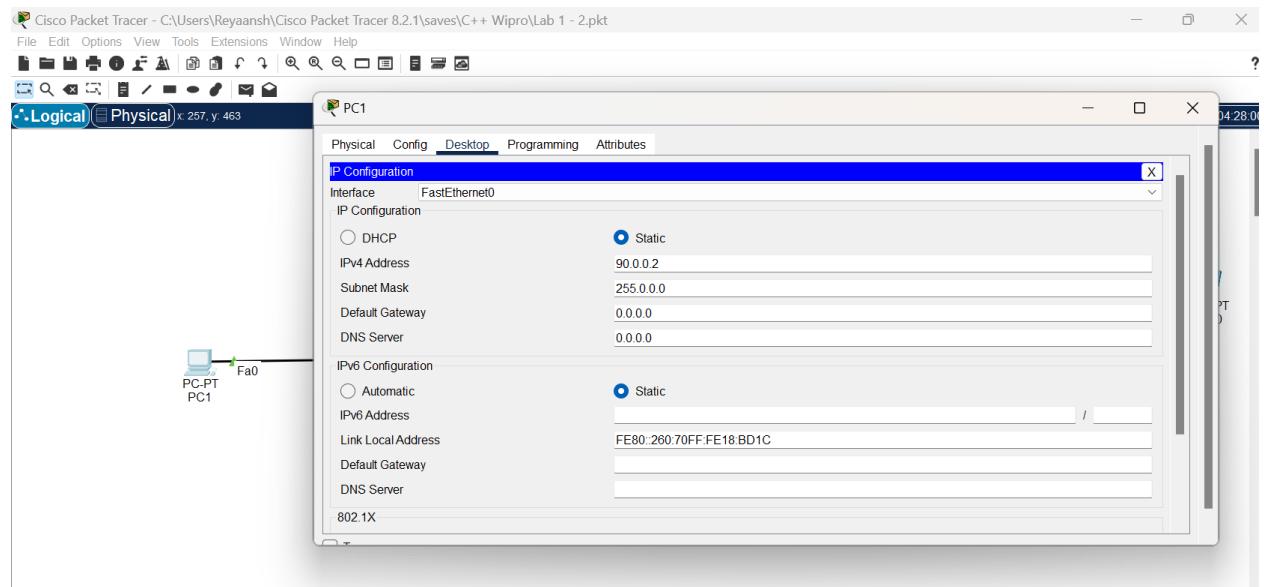
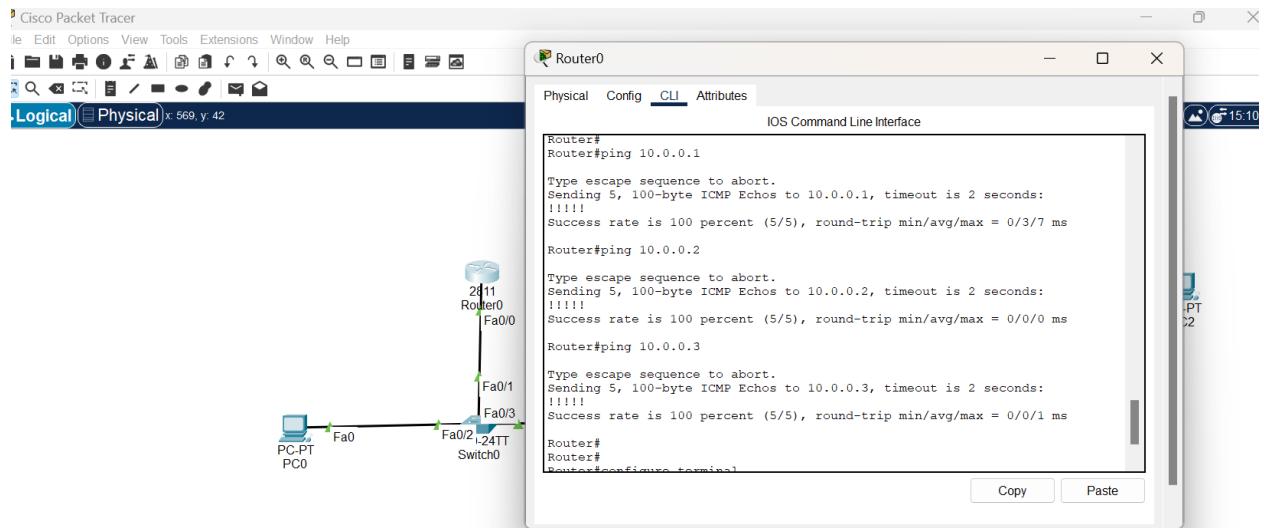
Physical (x: 934, y: 222)

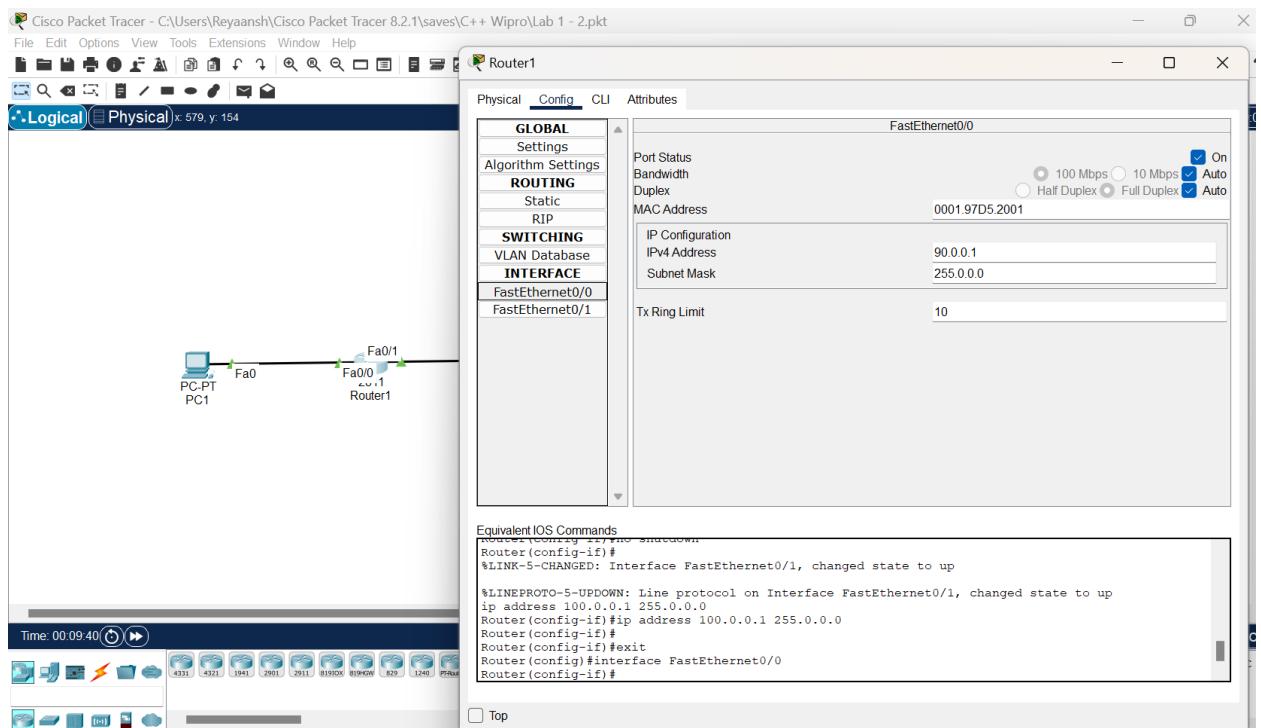
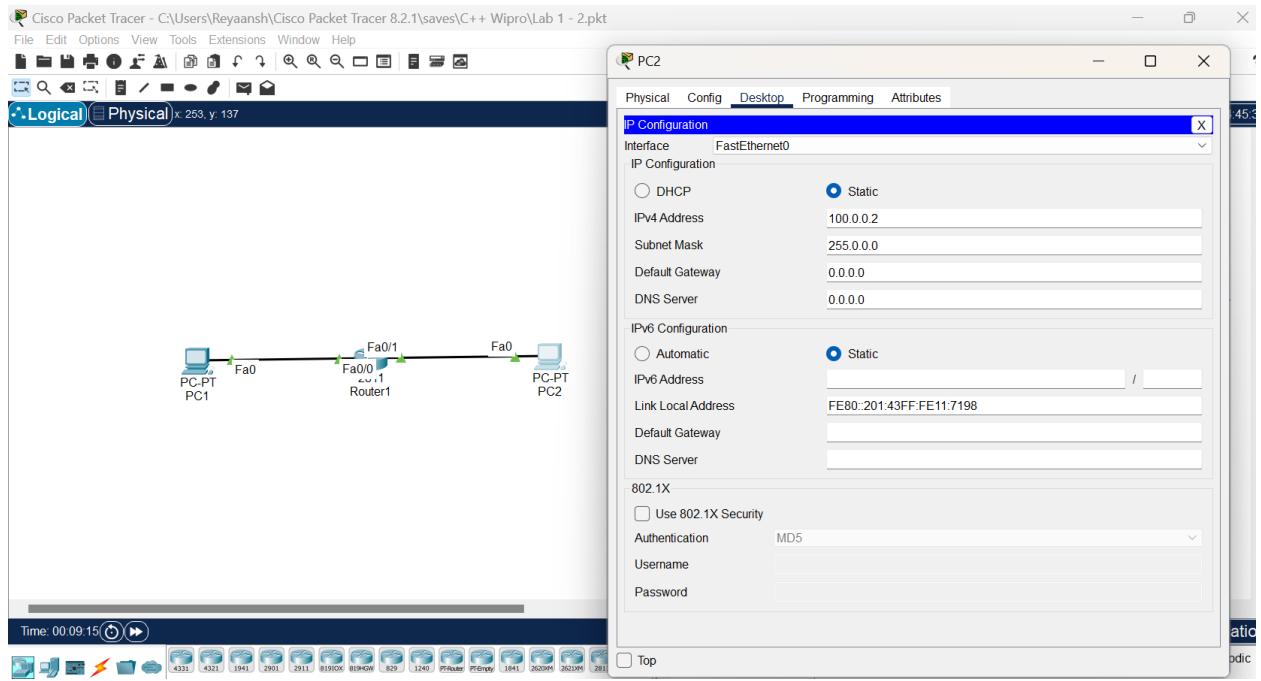


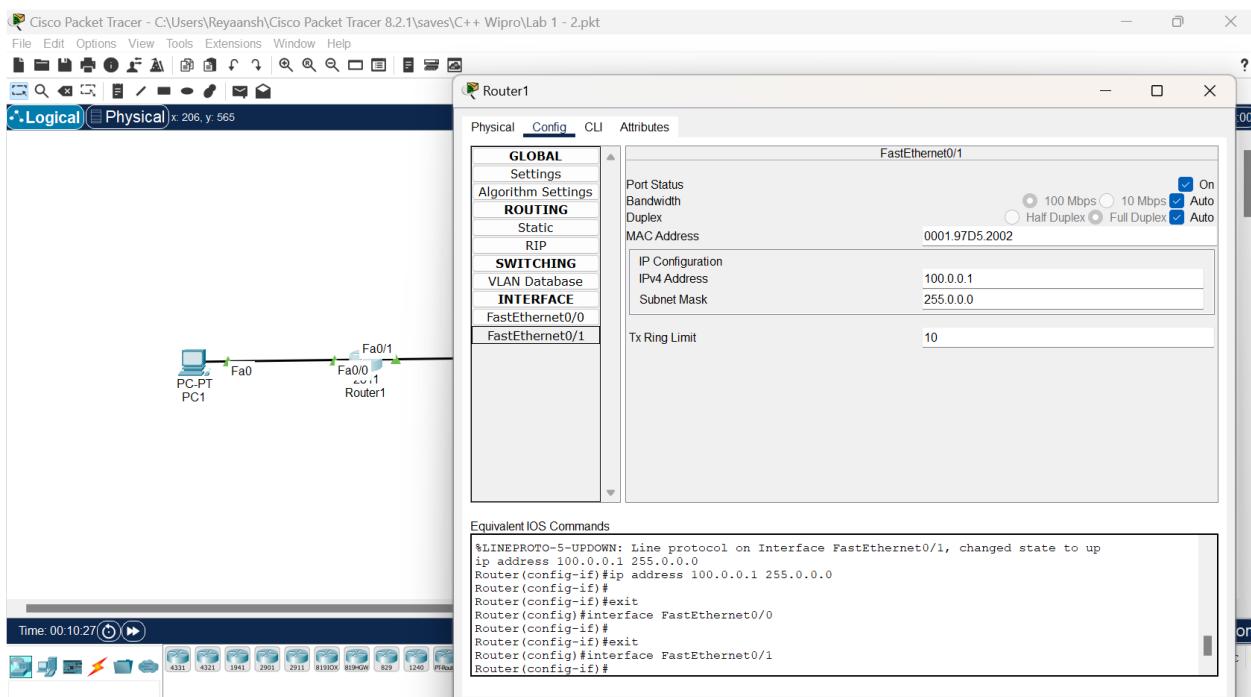
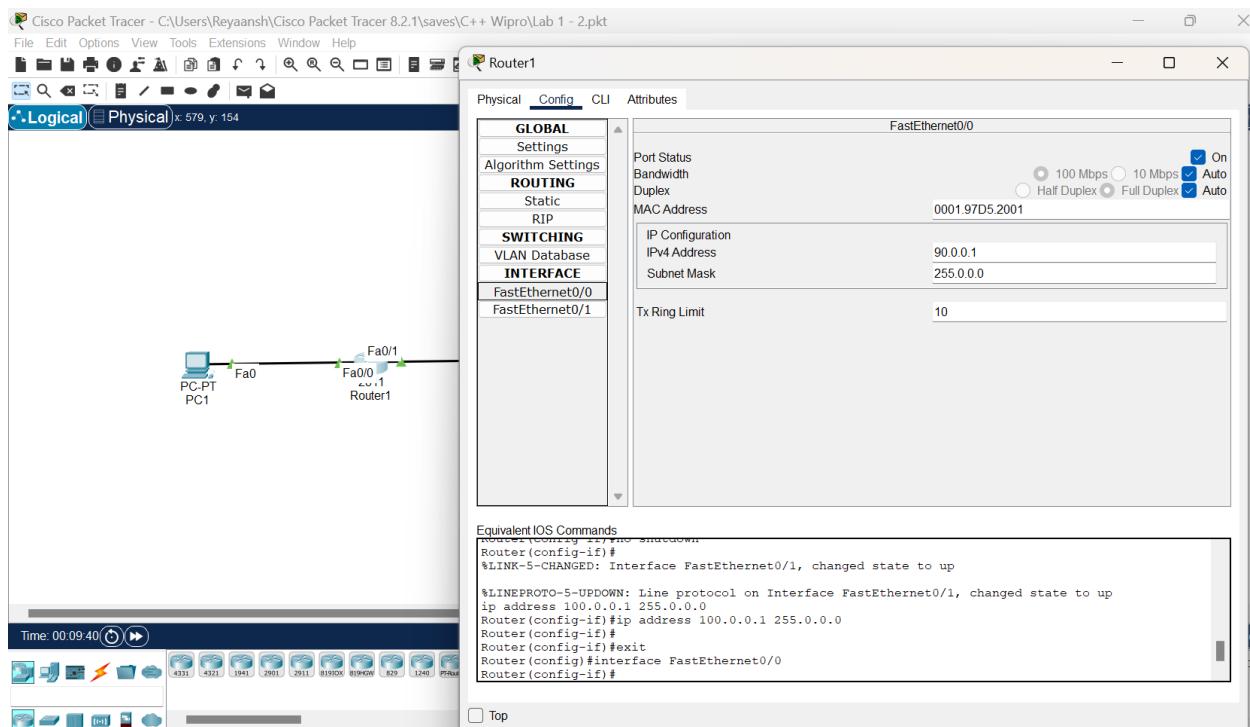
Logical (Physical) (x: 607, y: 186)

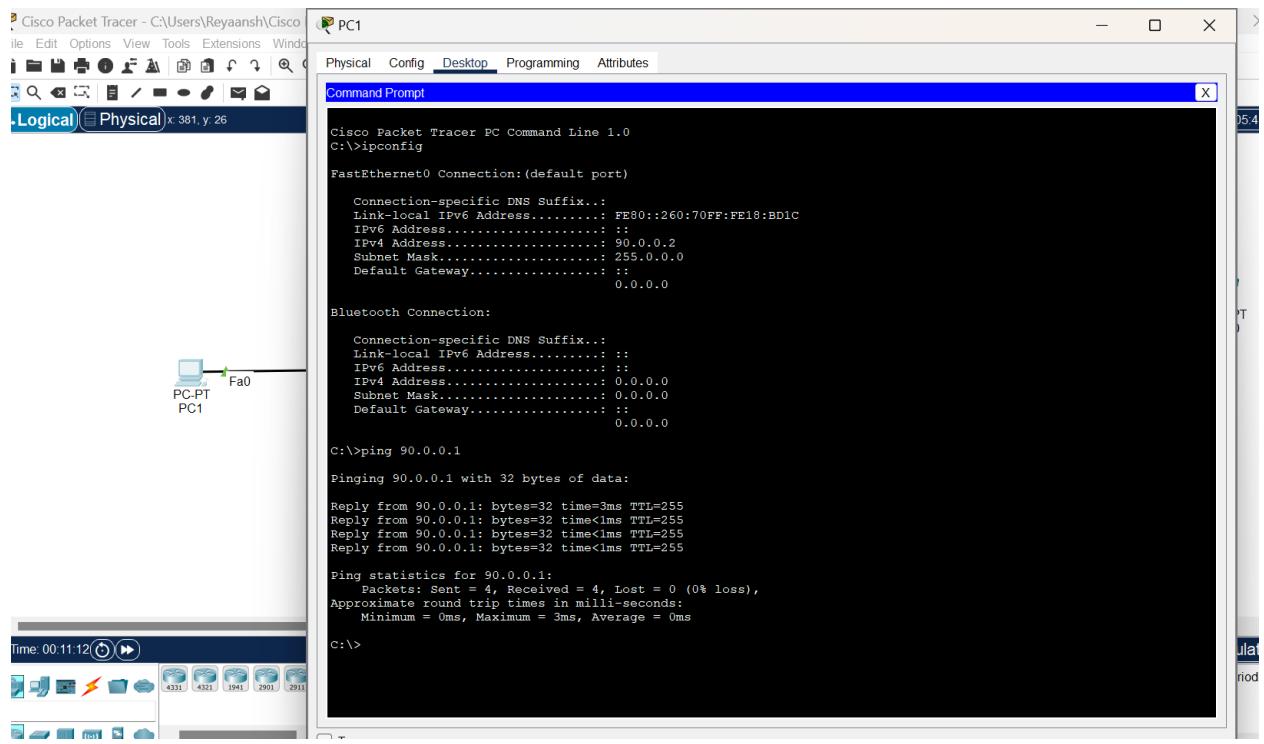




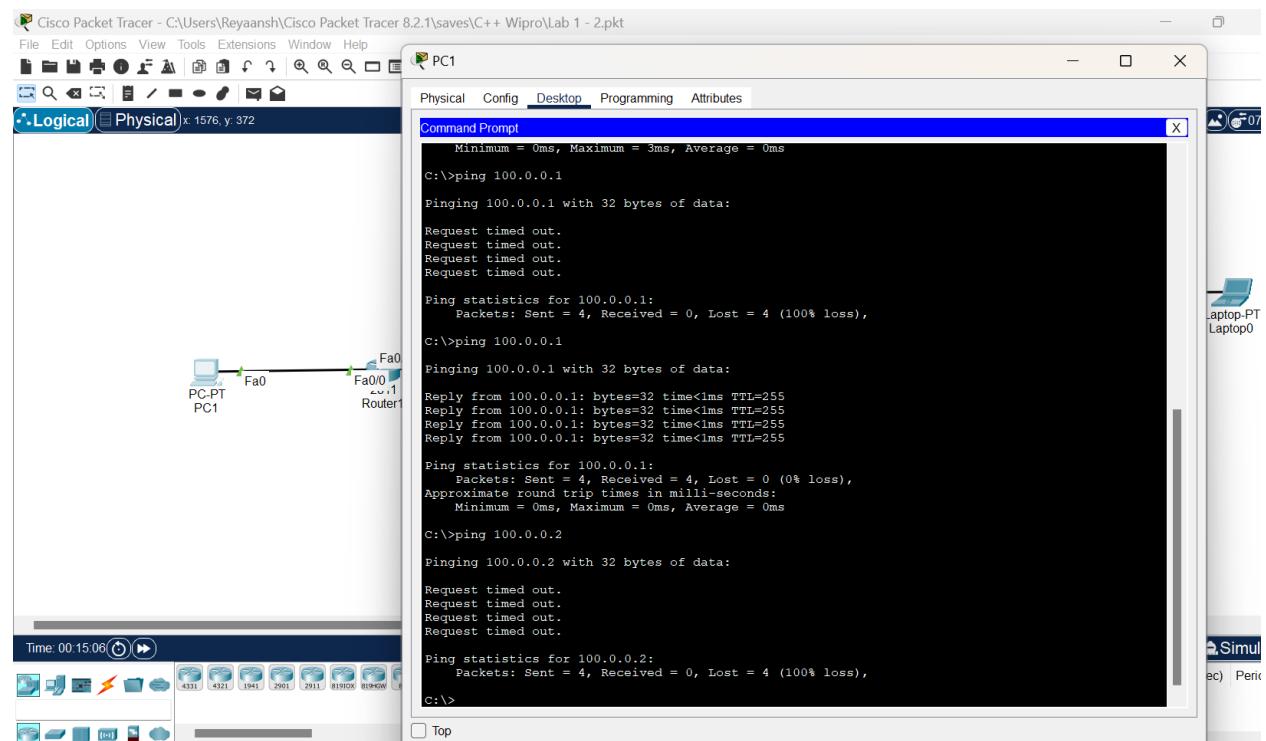
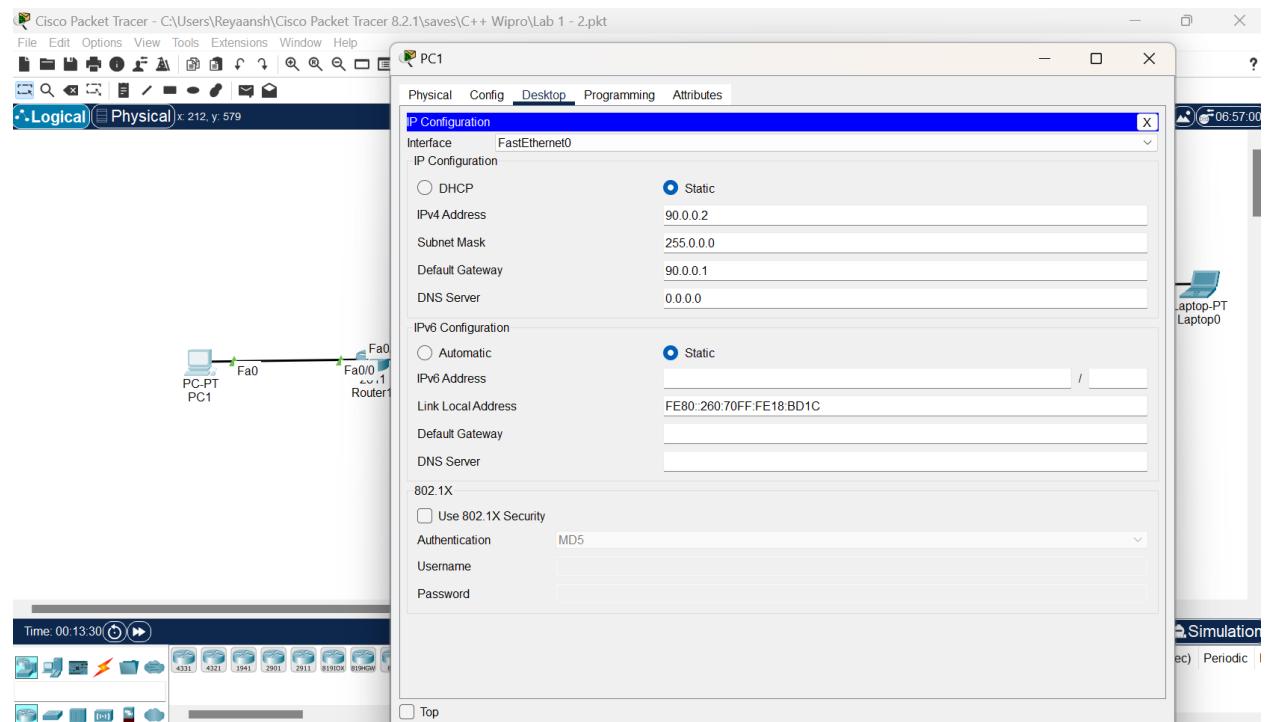


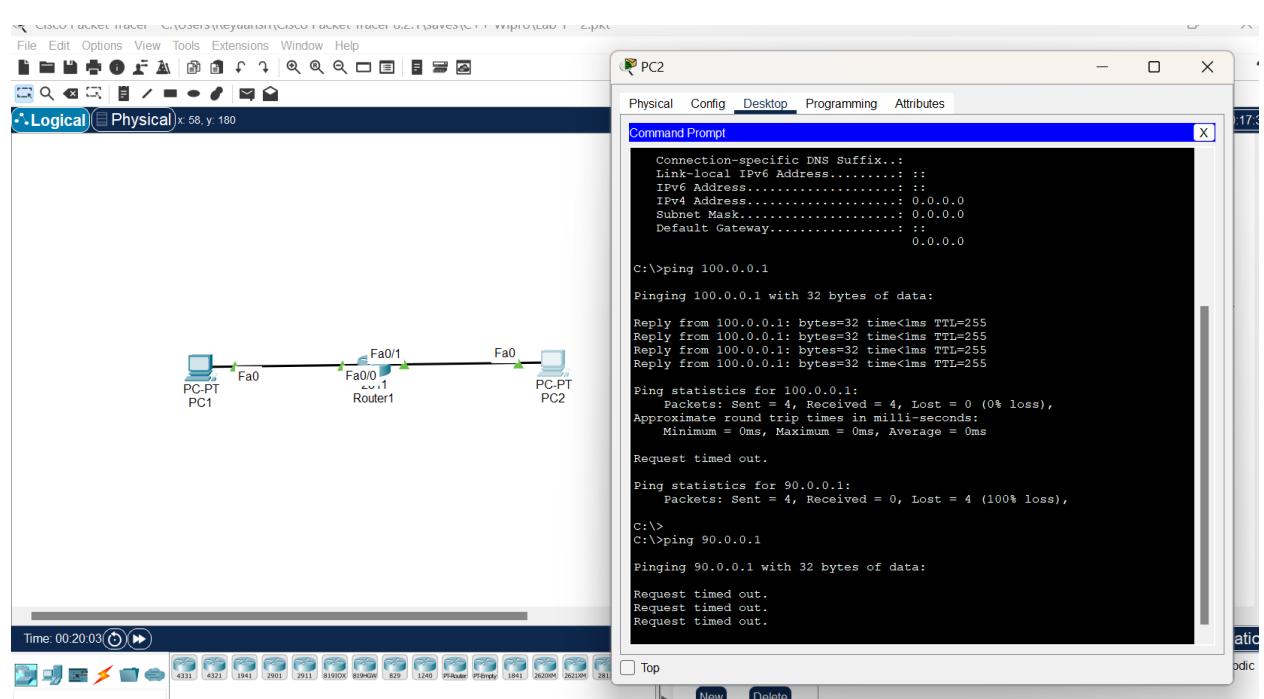
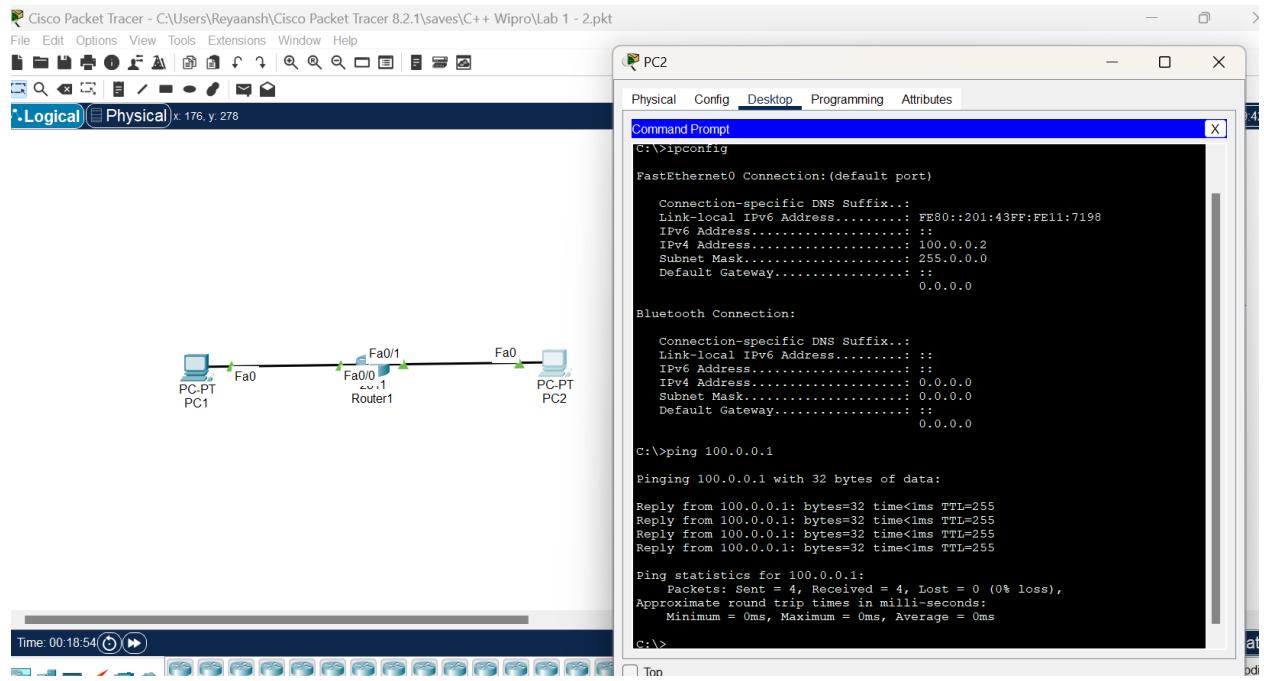


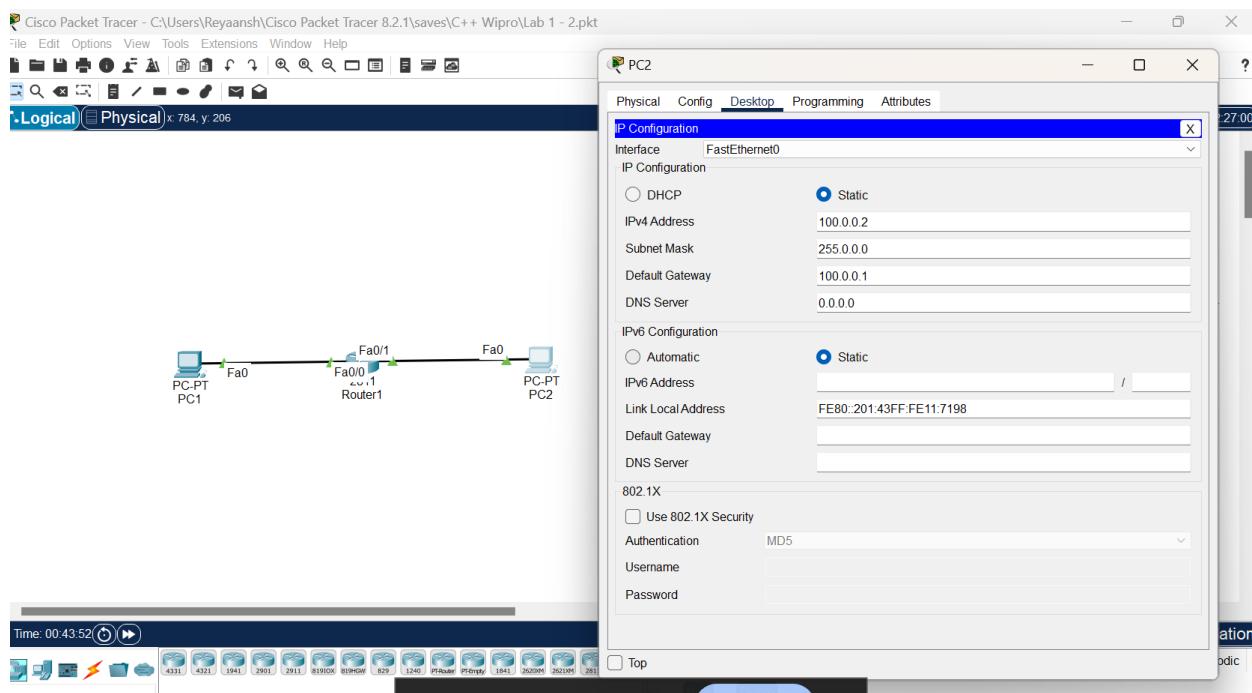
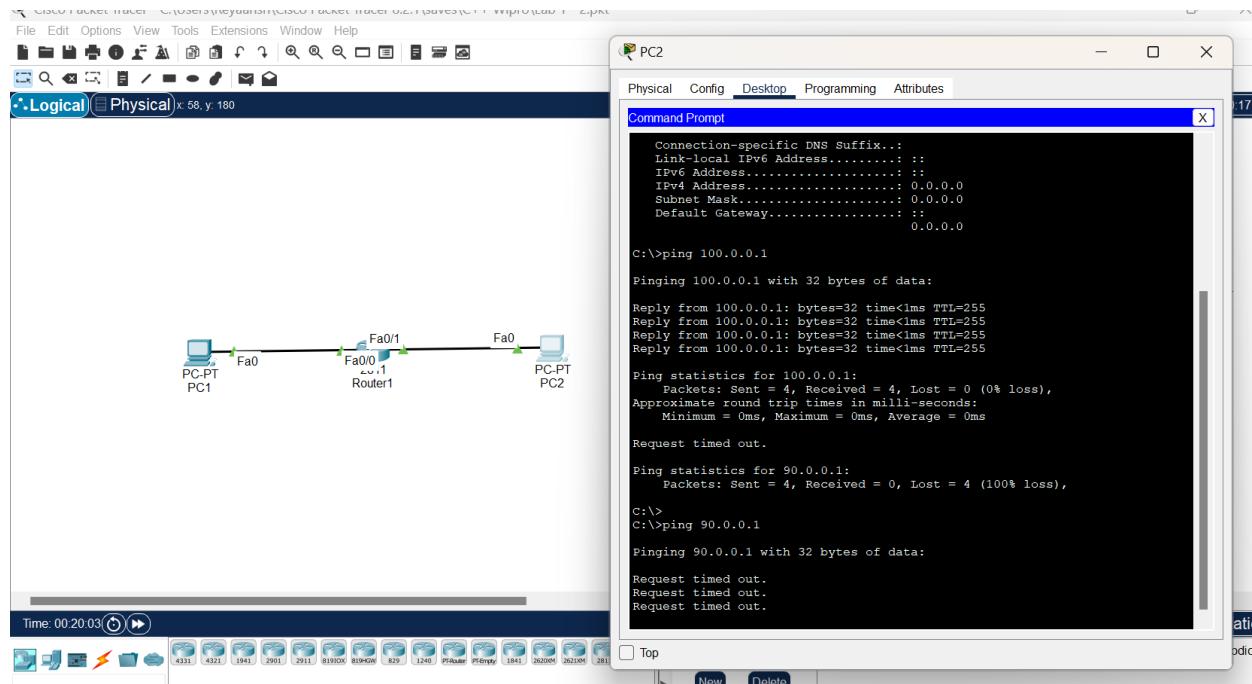




Lab 3: Configuration of Default Gateway

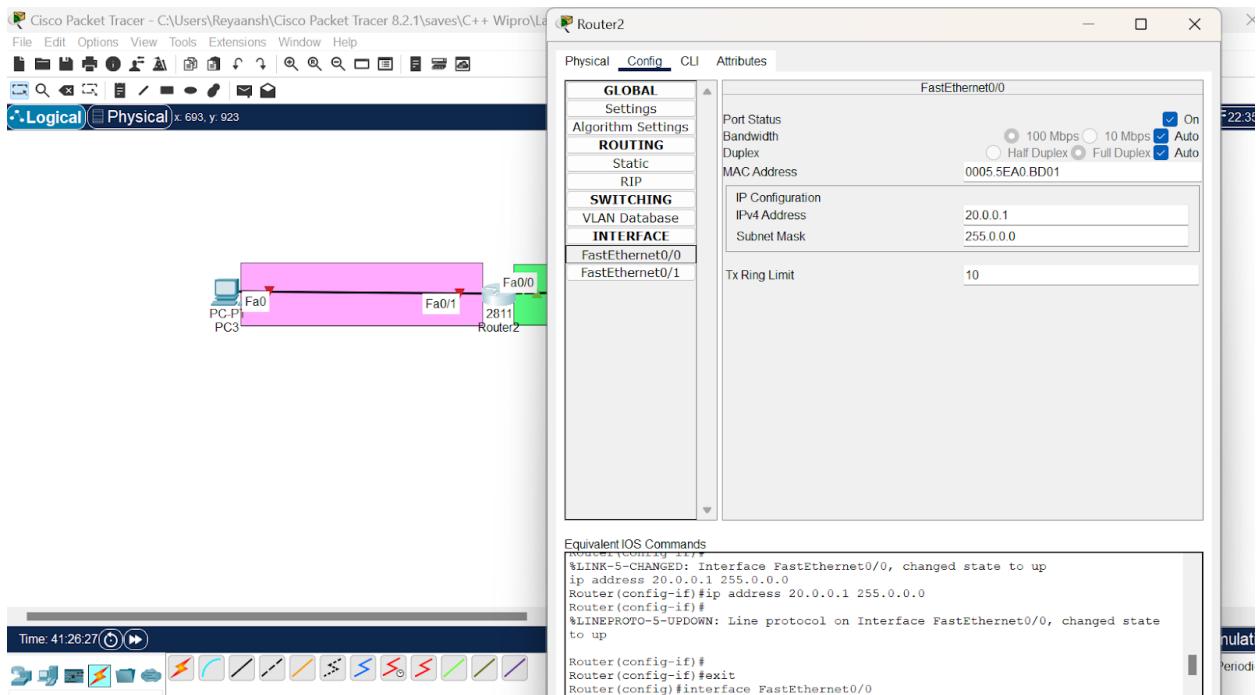
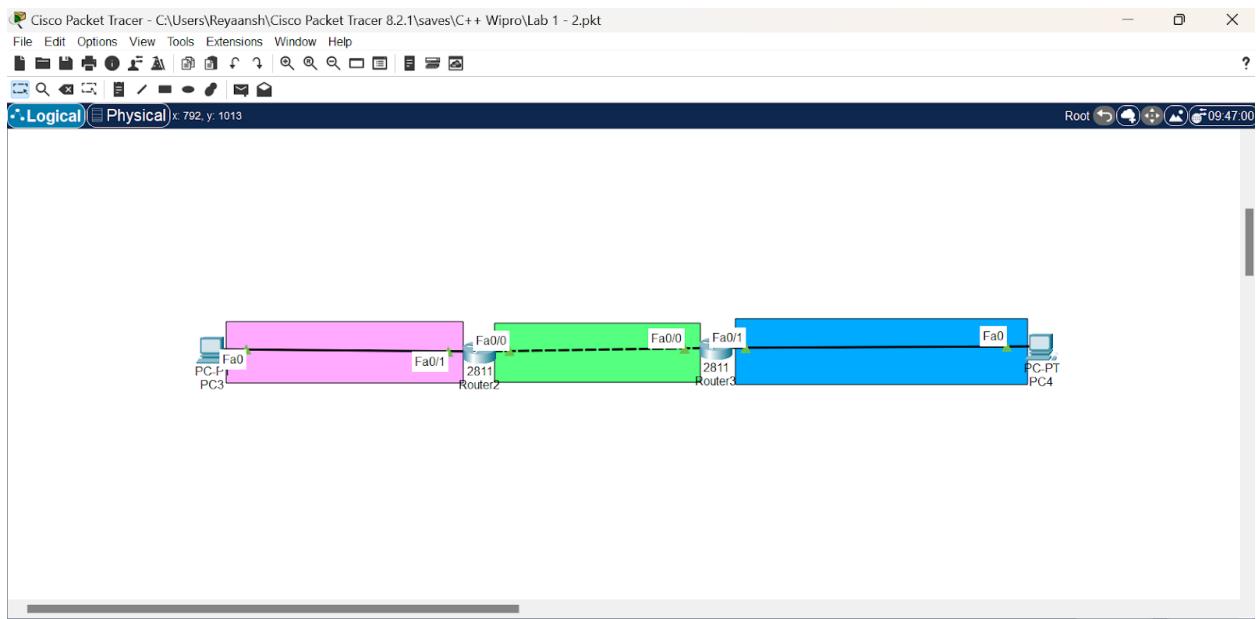


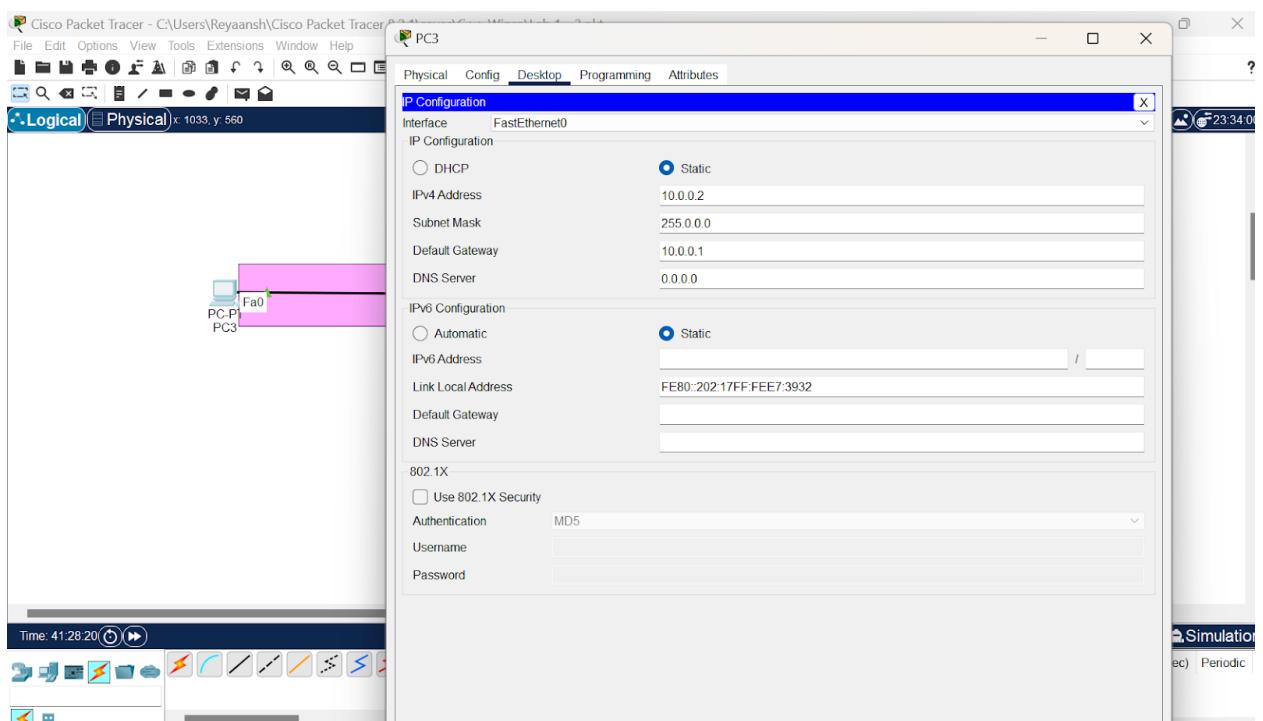
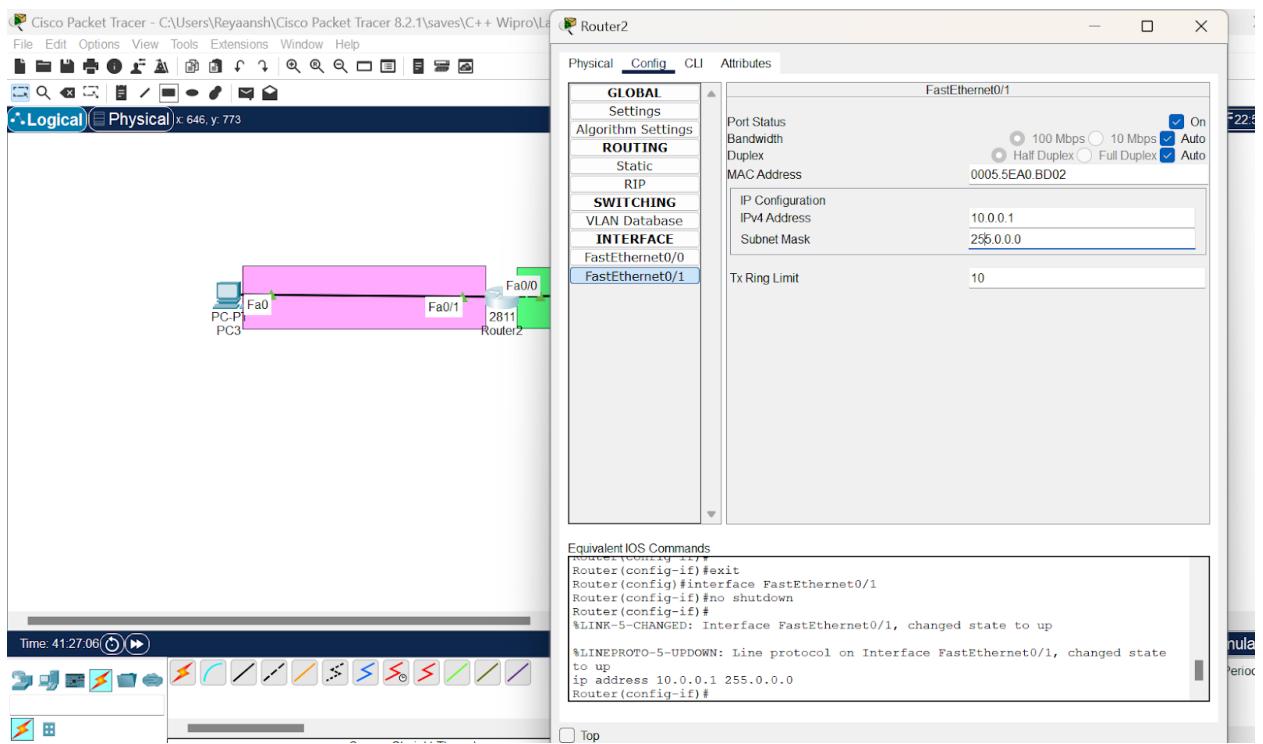


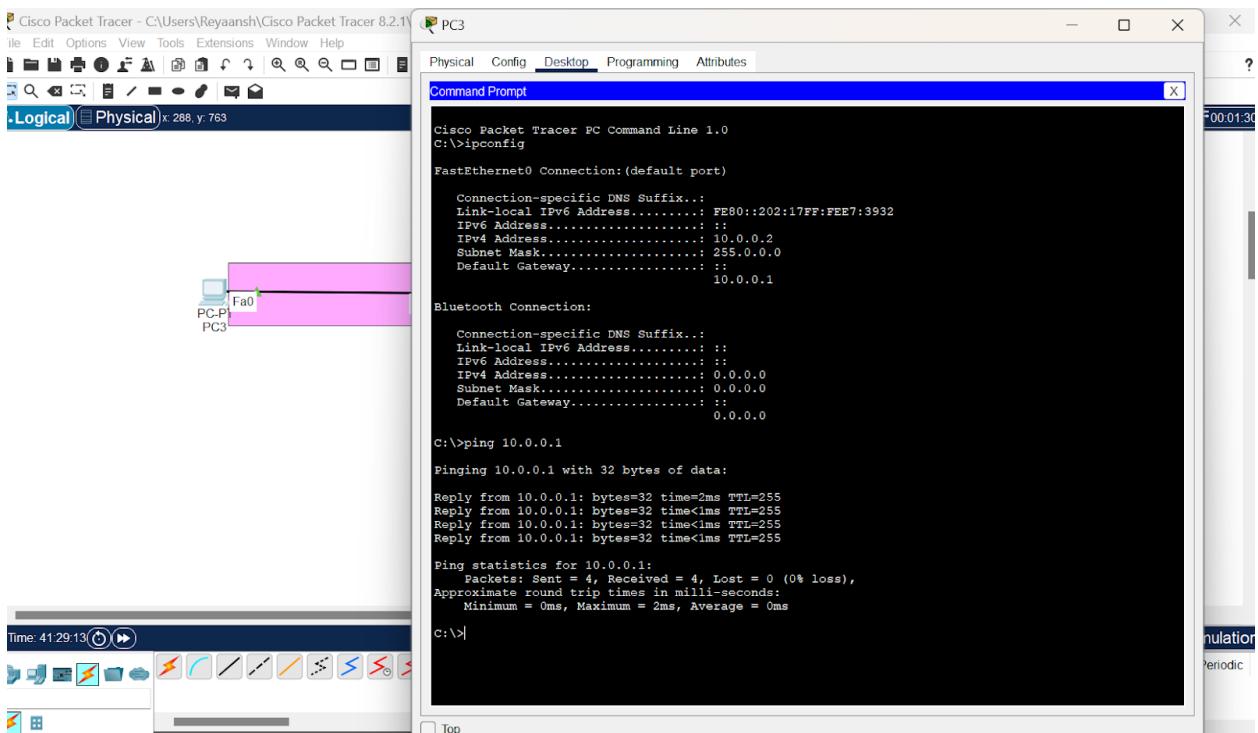
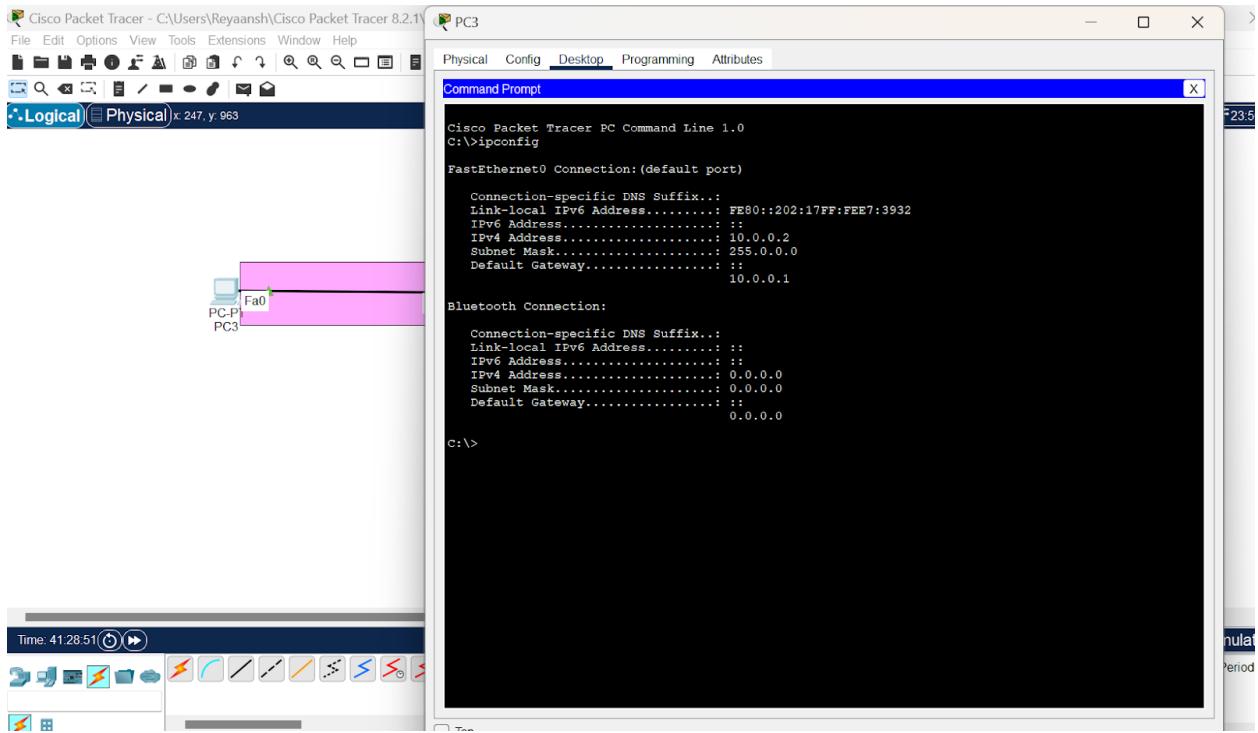


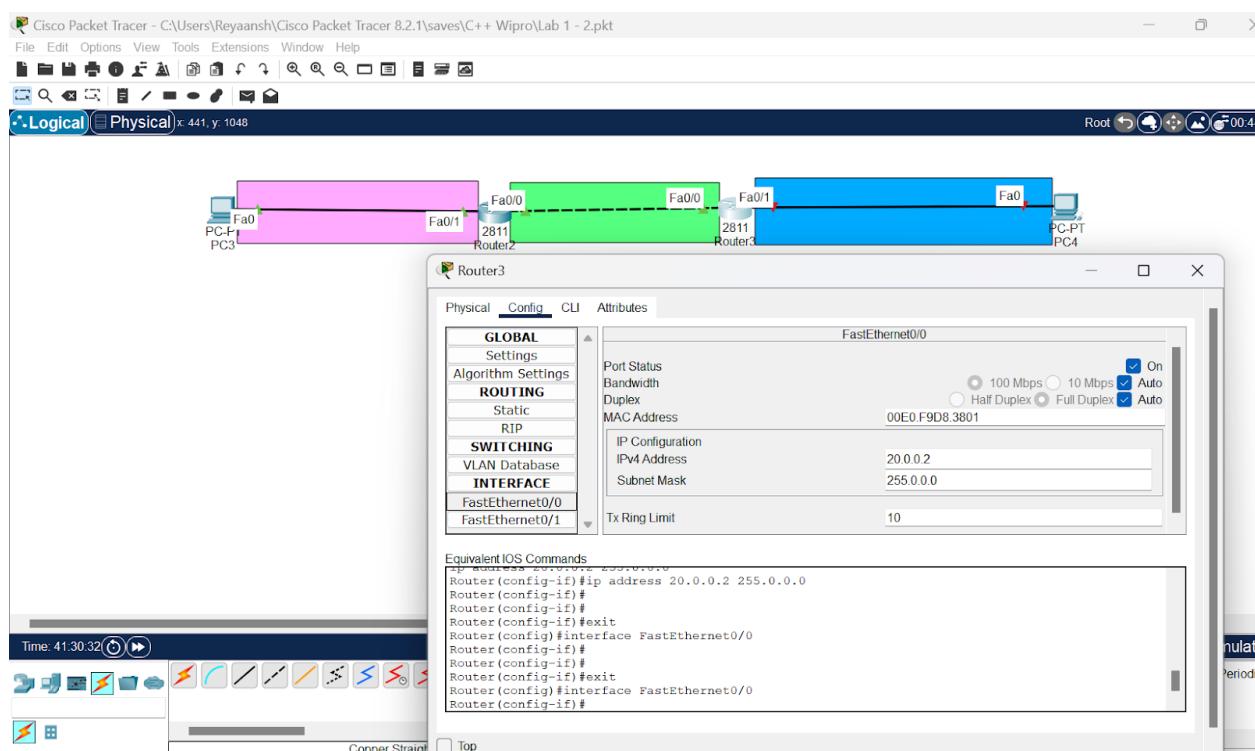
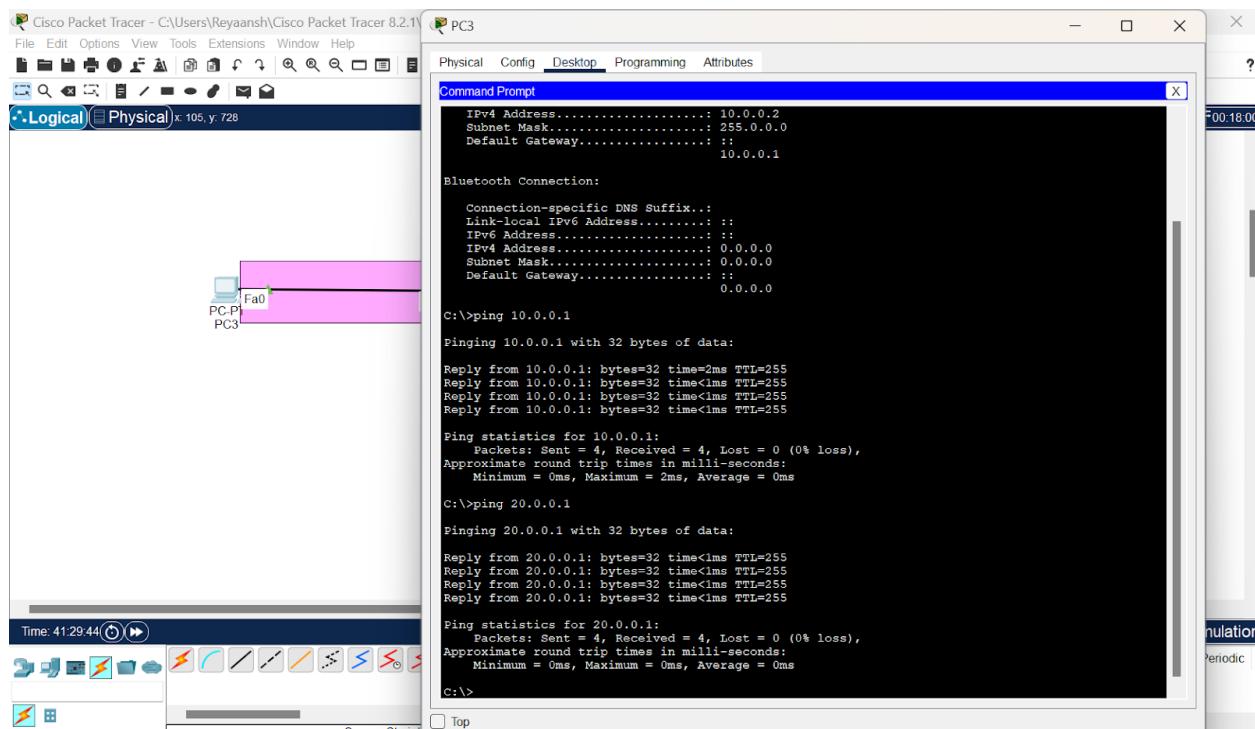
Date:07/06/2024

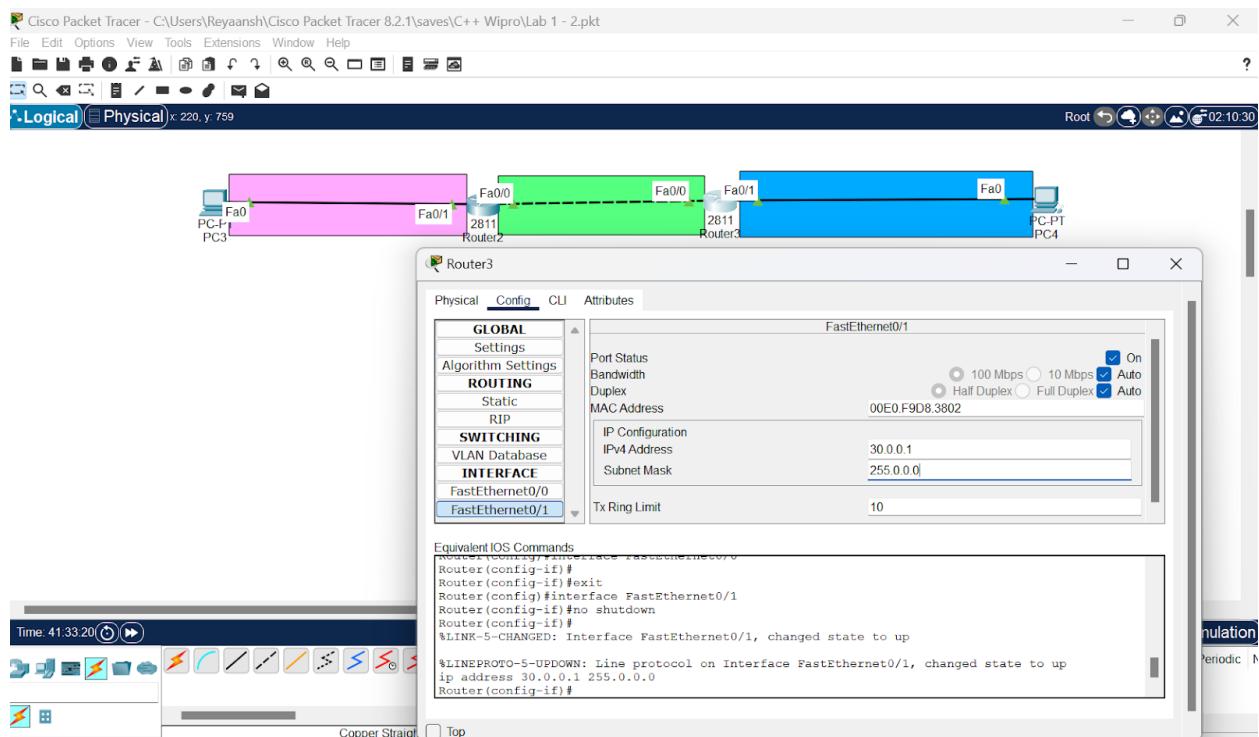
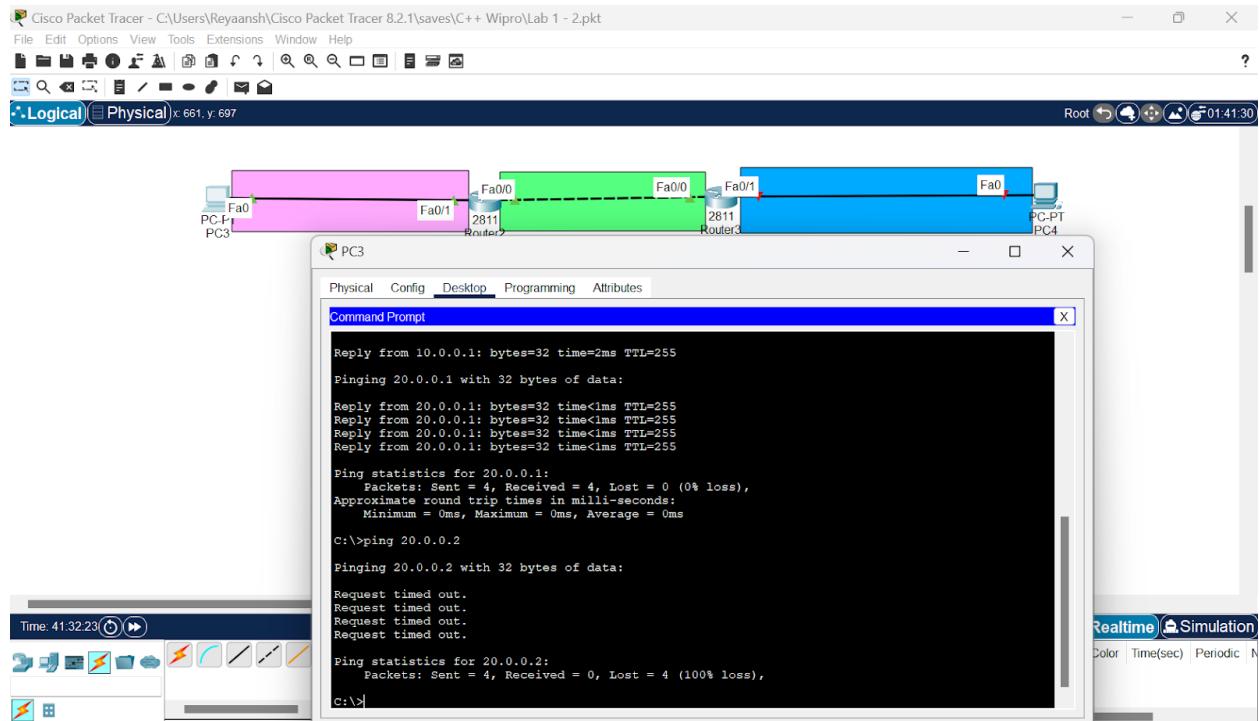
Lab 4 : Static Routing (on two routers)

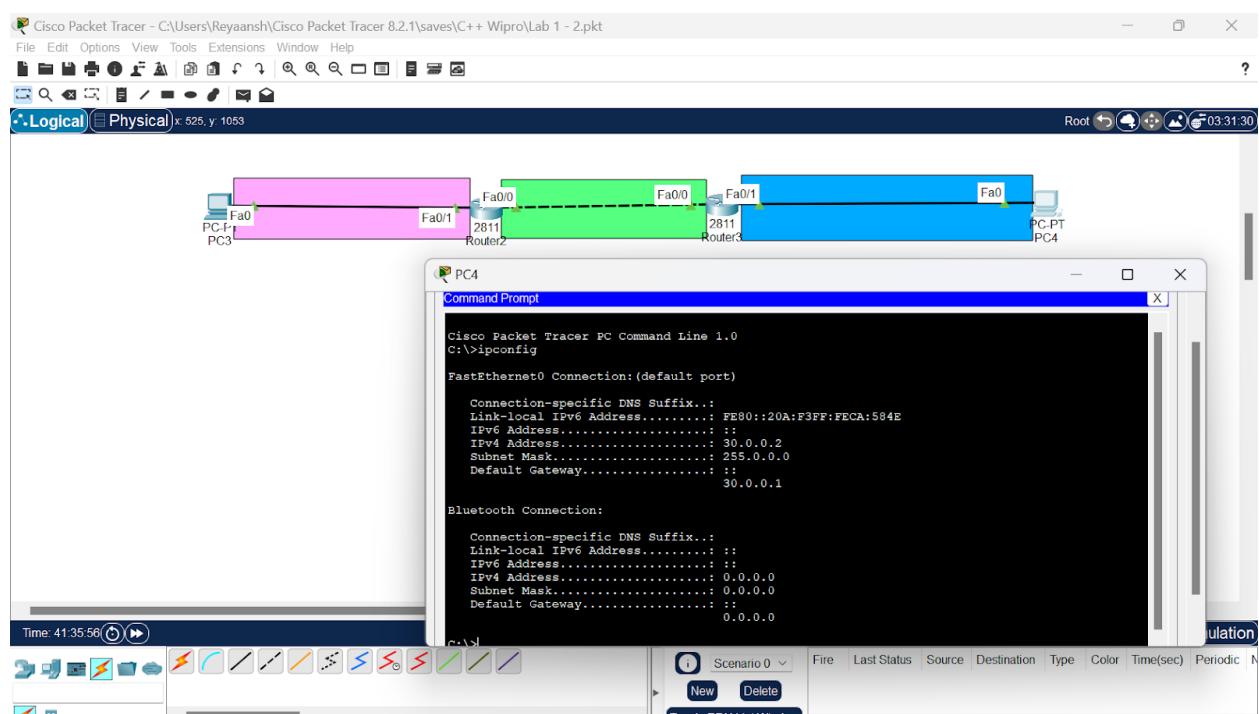
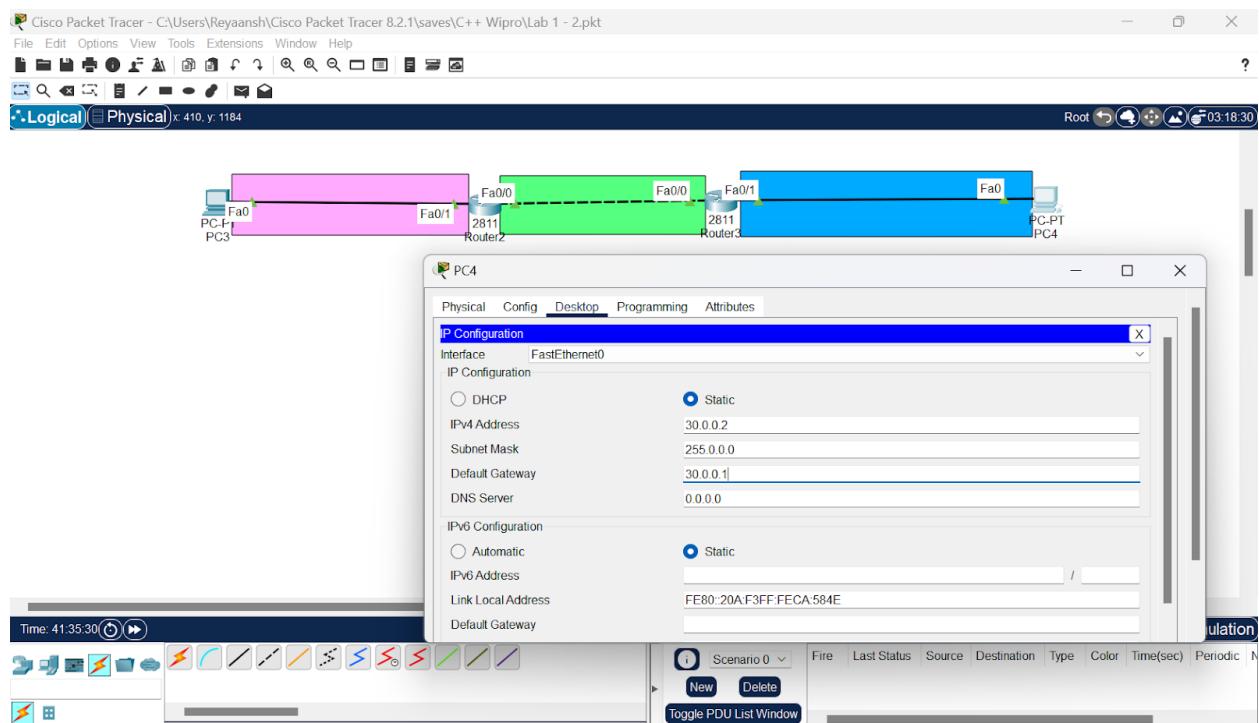


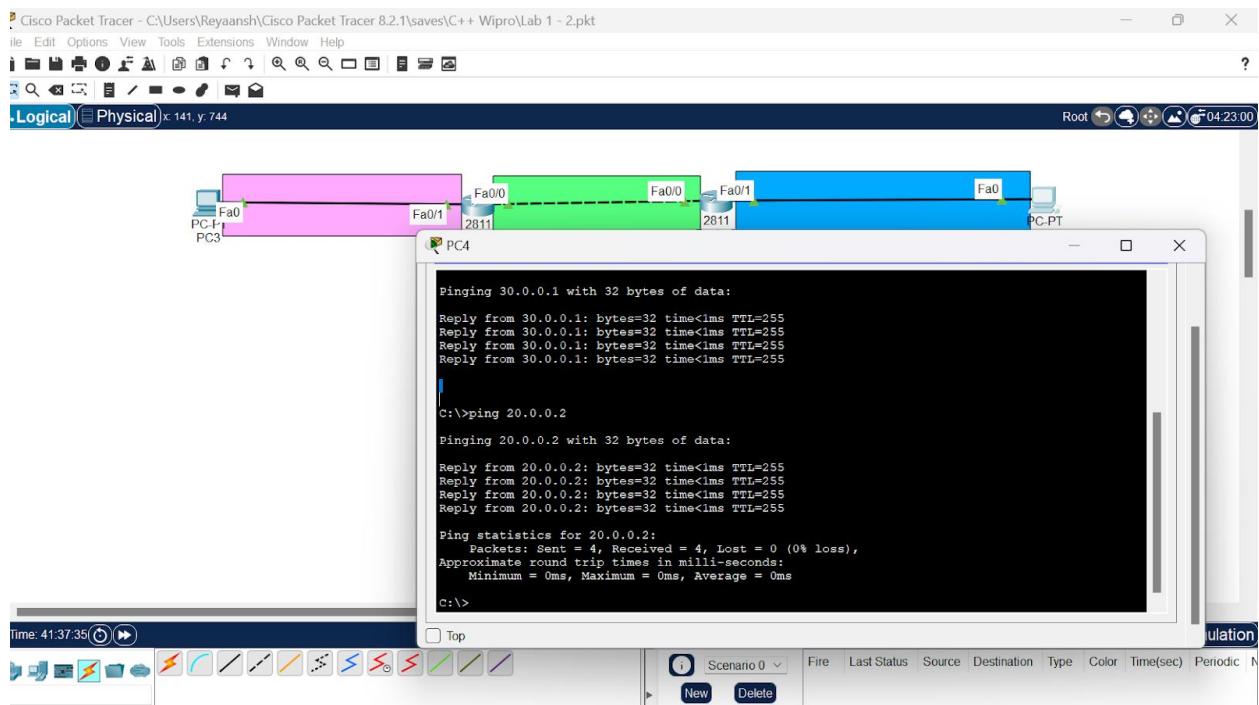
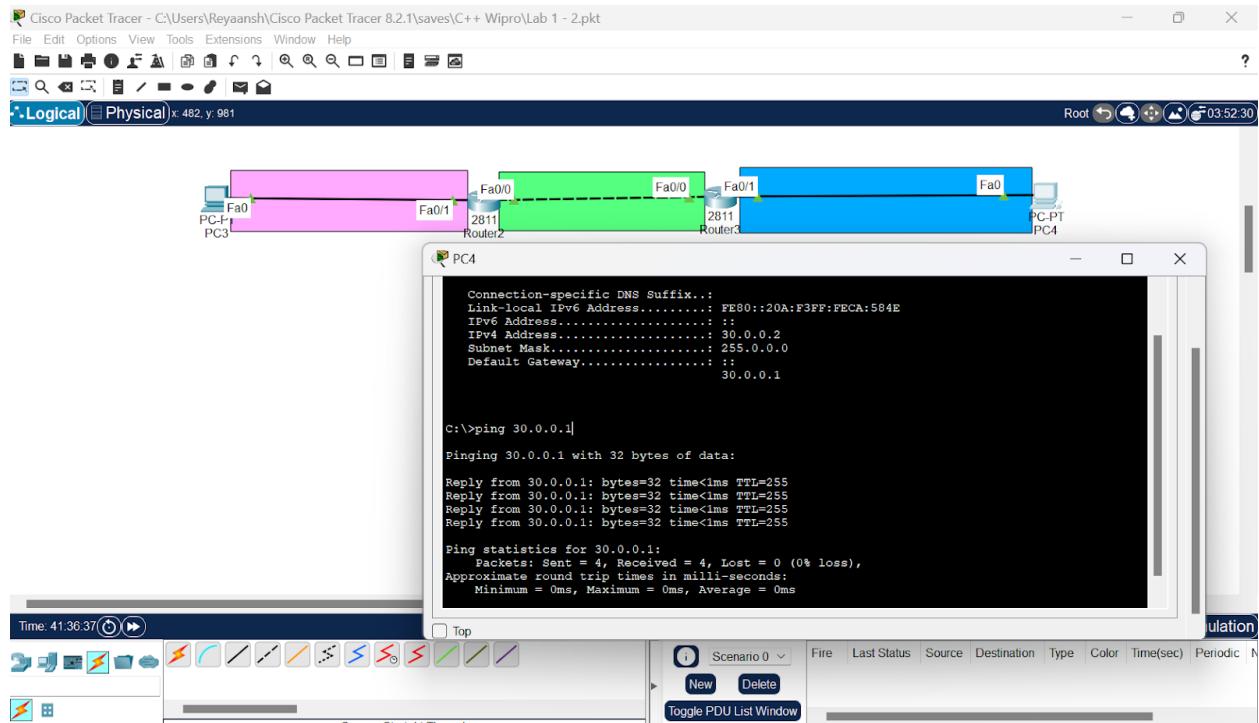


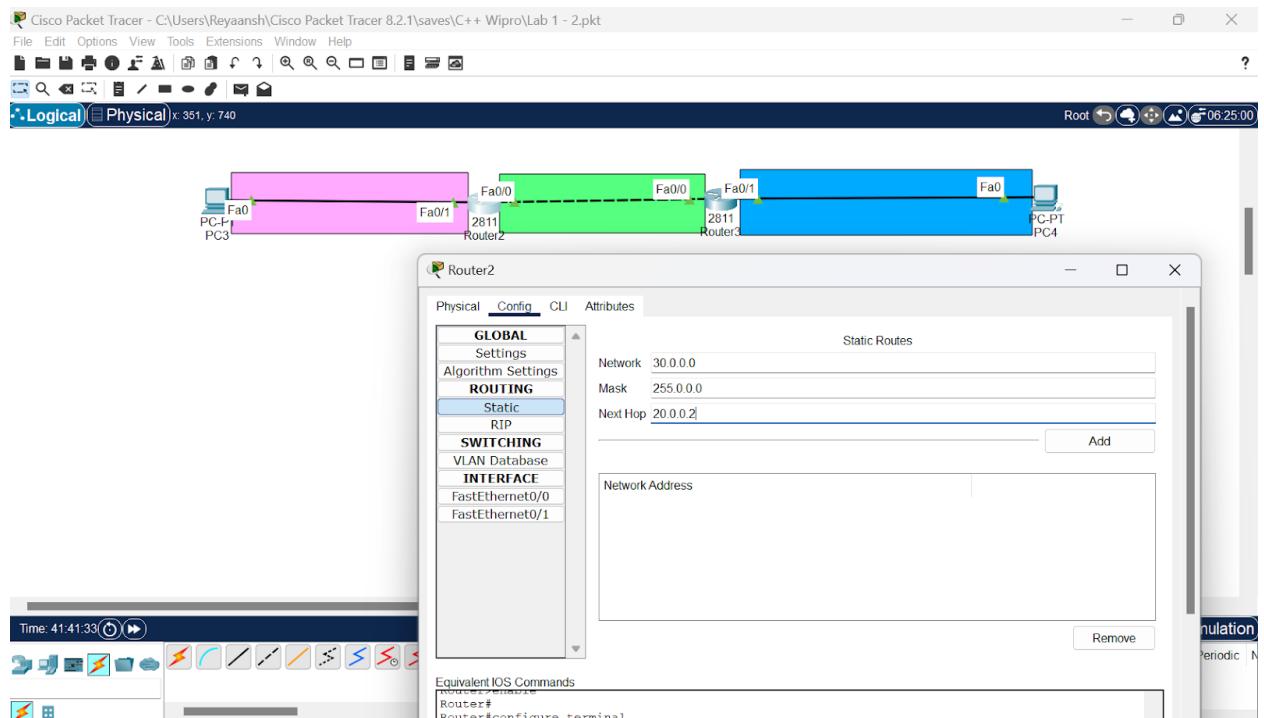
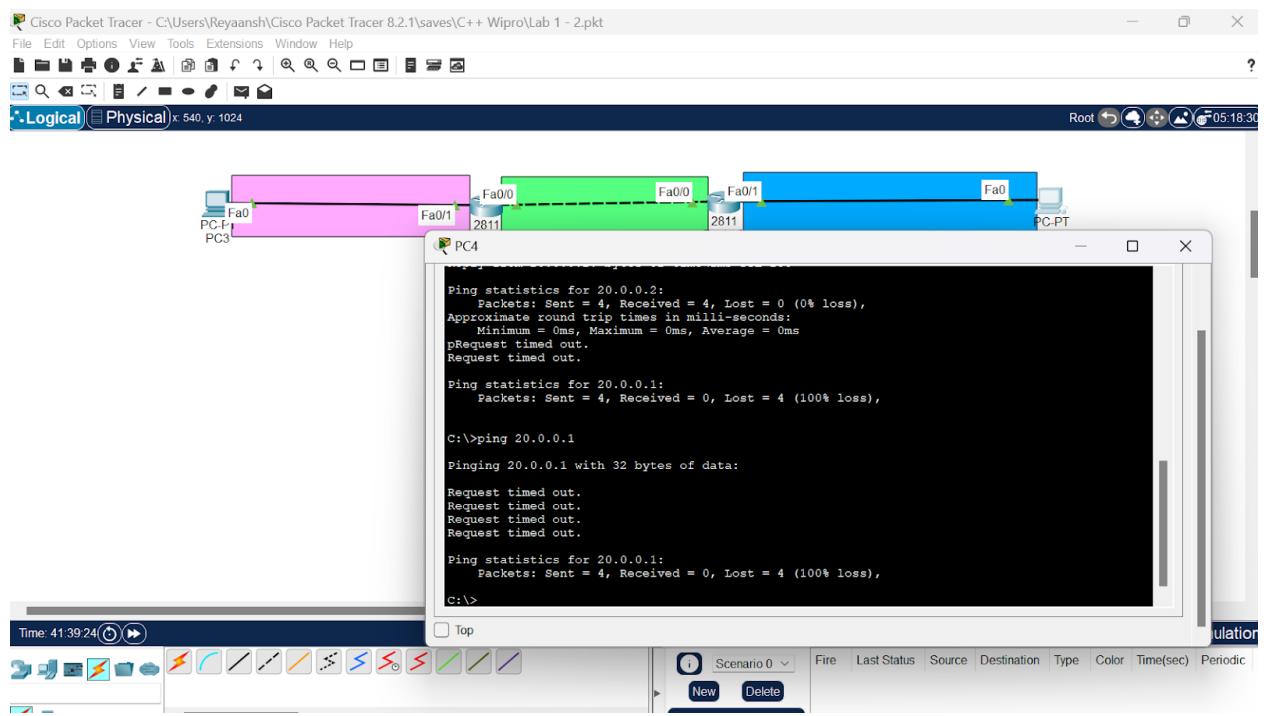


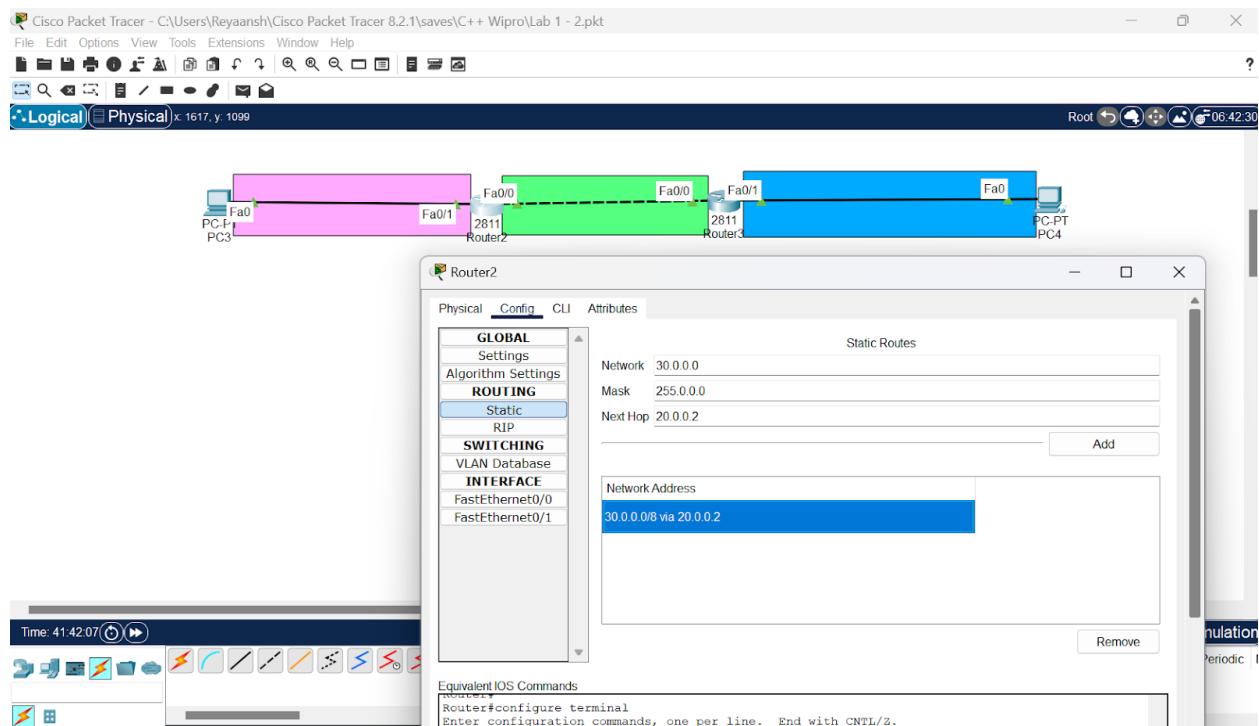
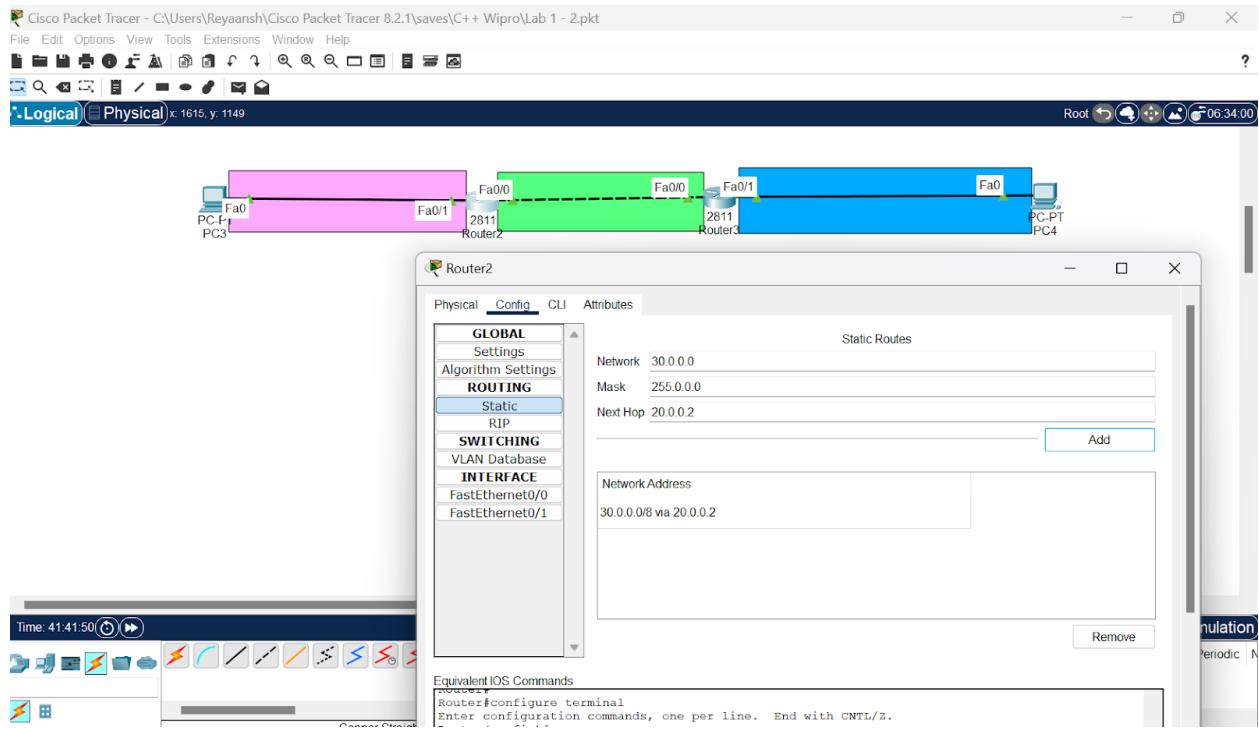


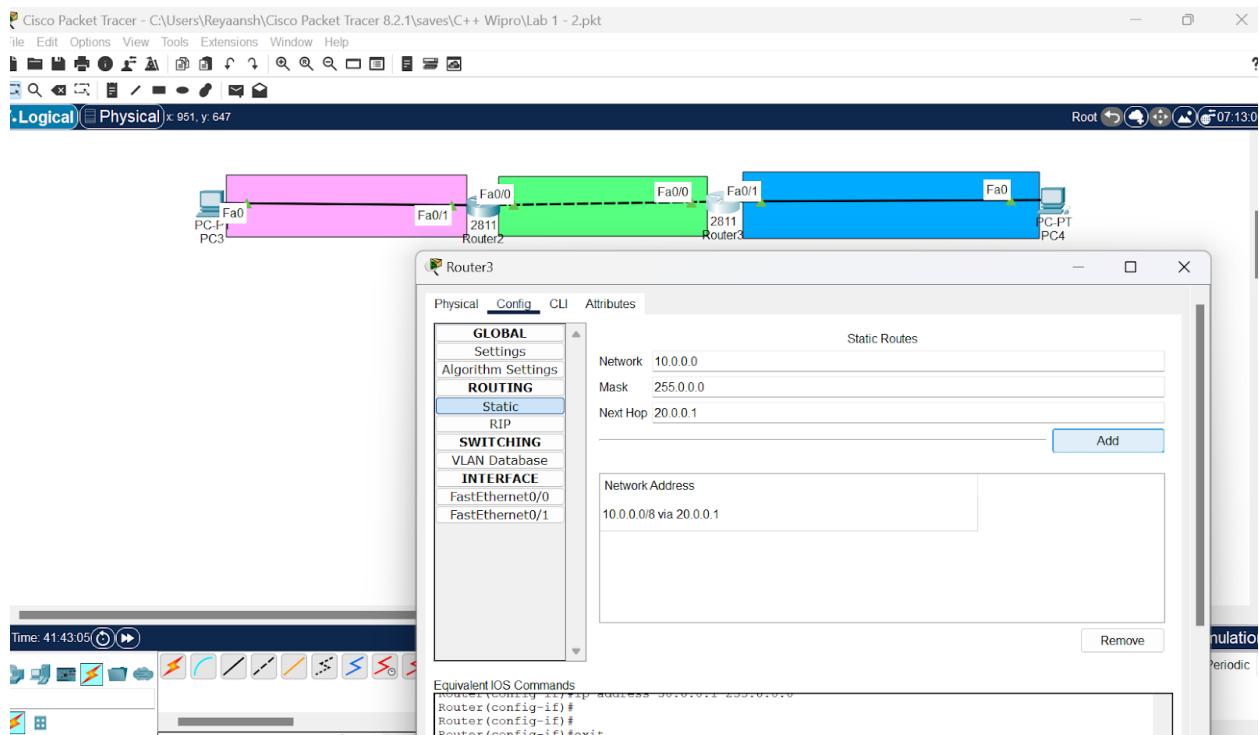
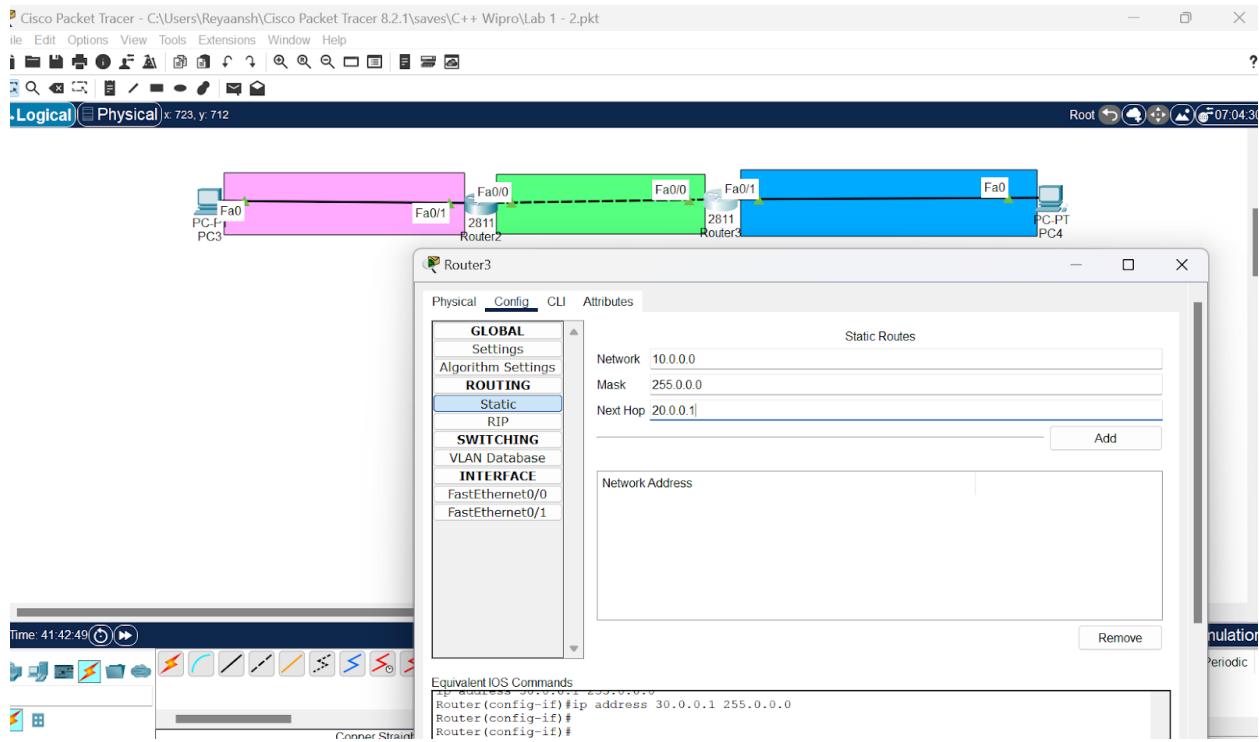


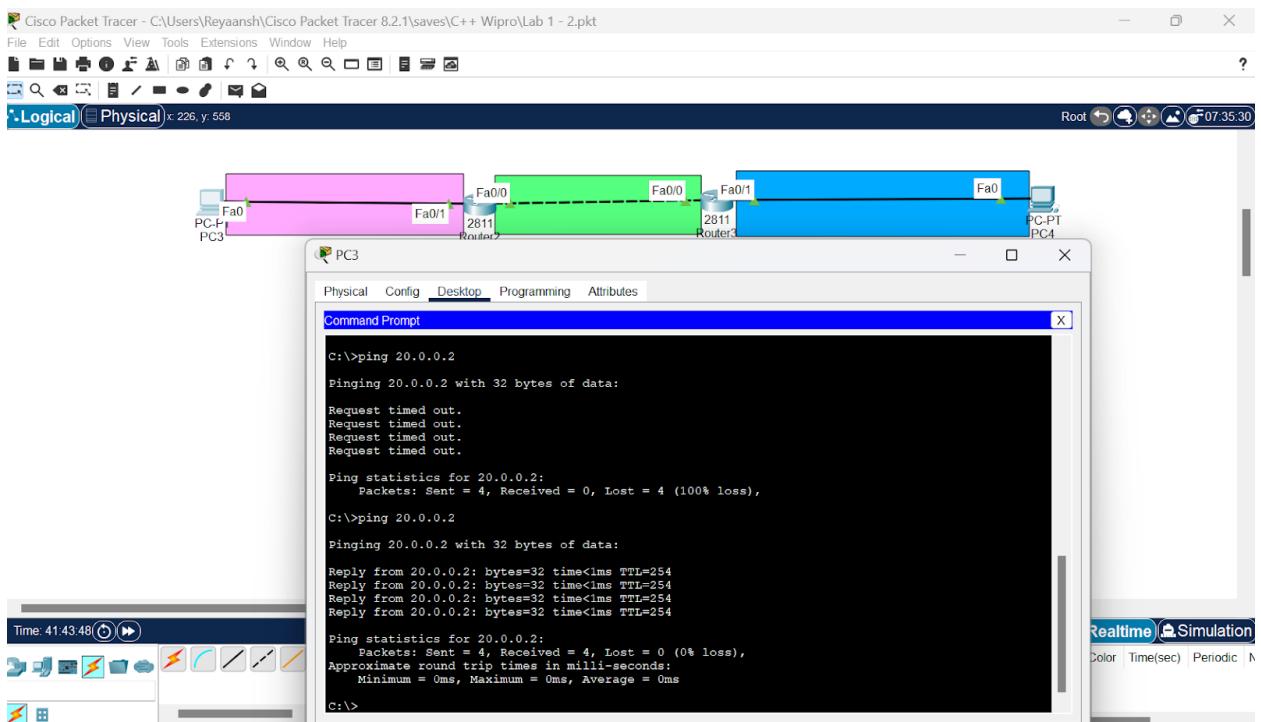
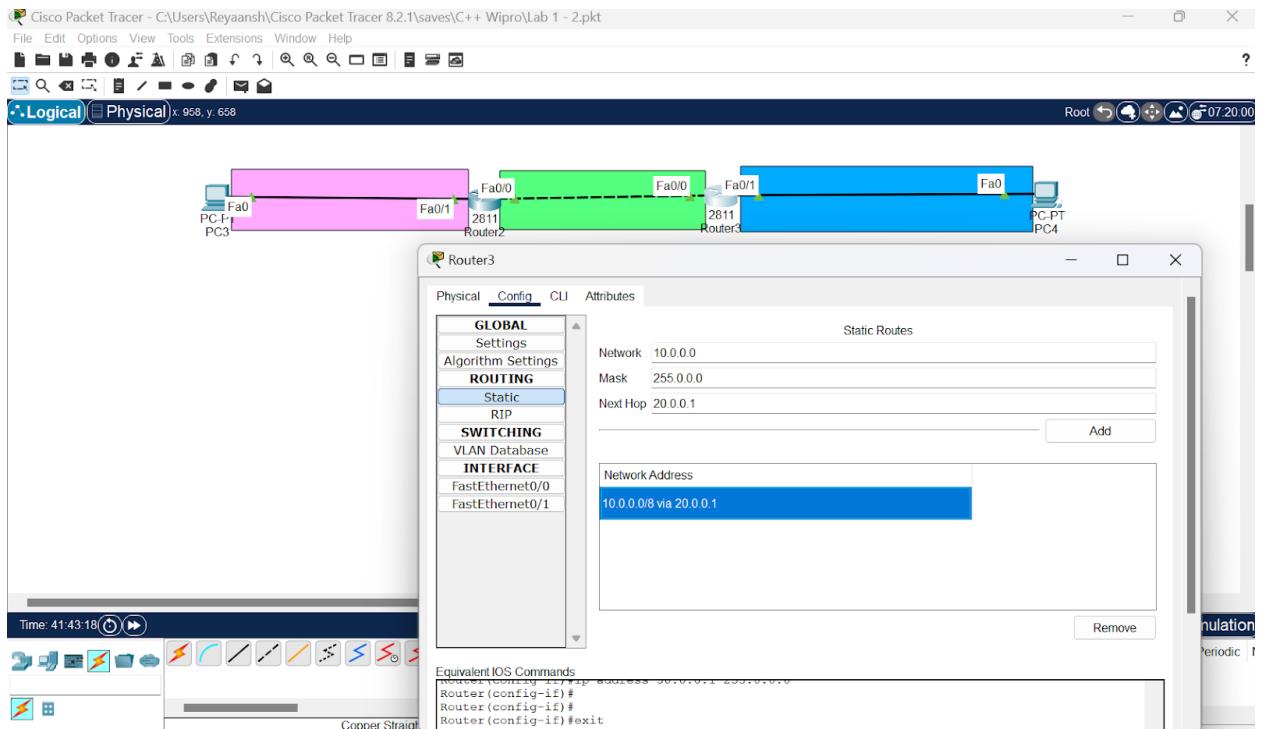


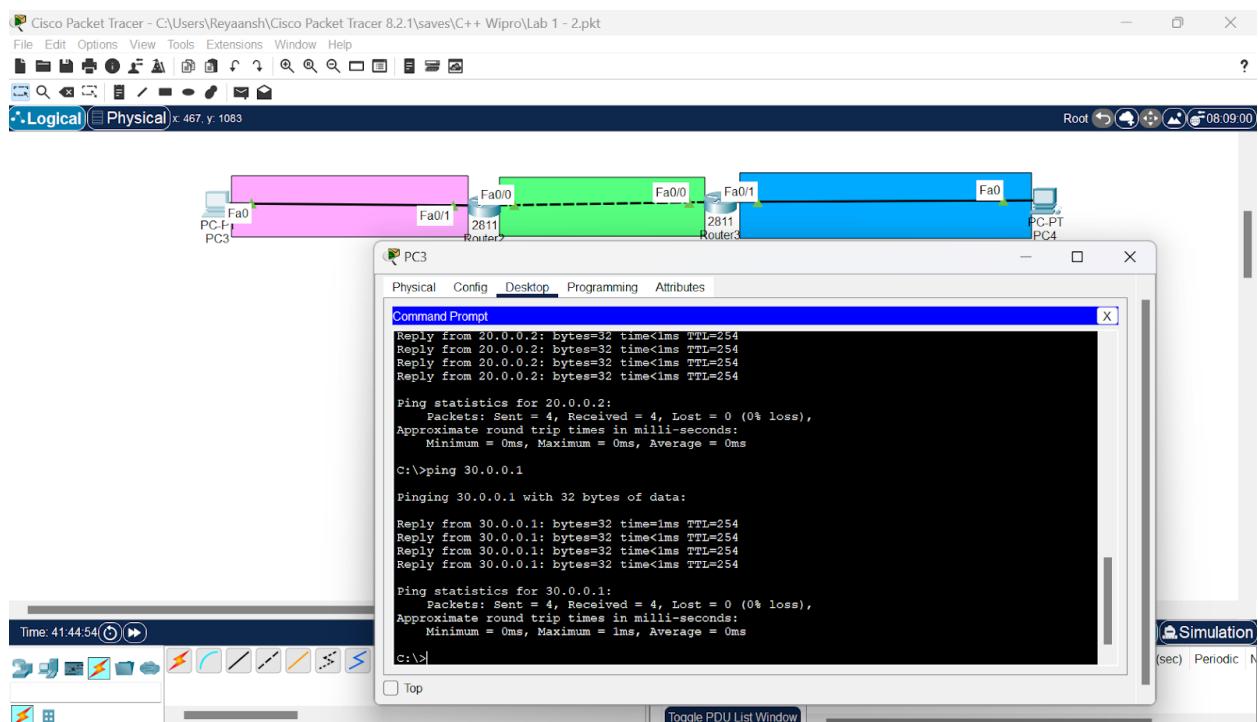
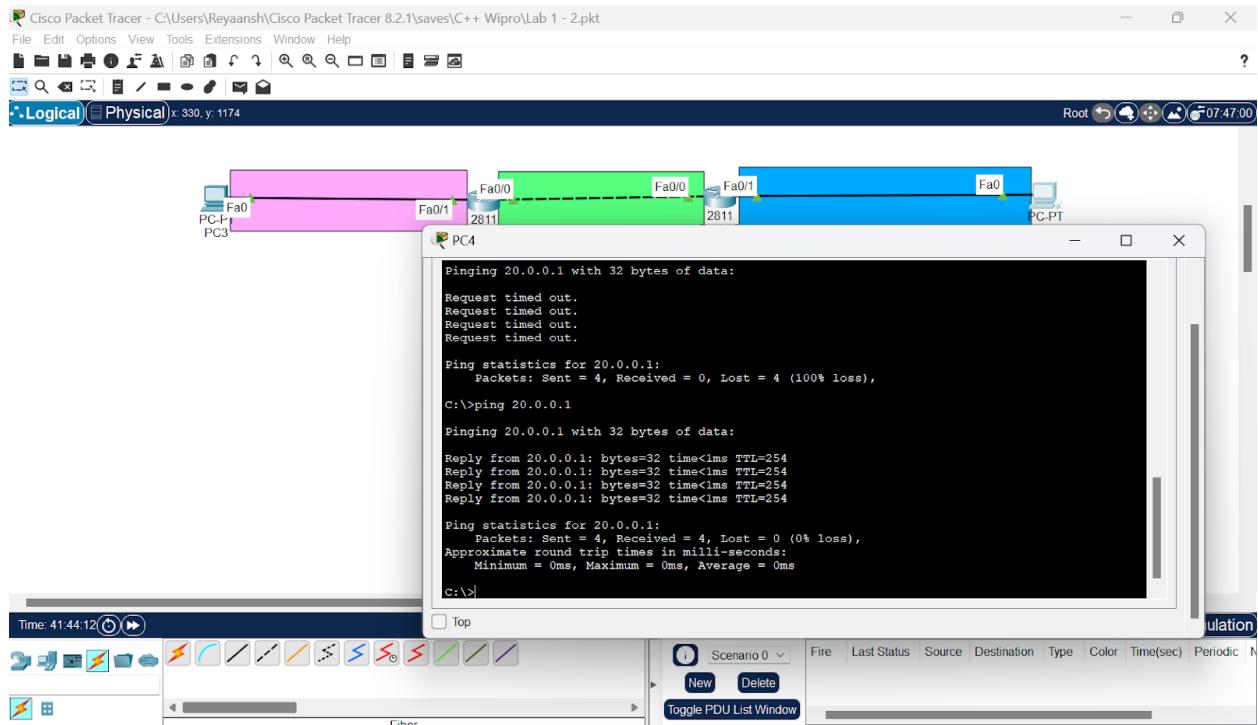


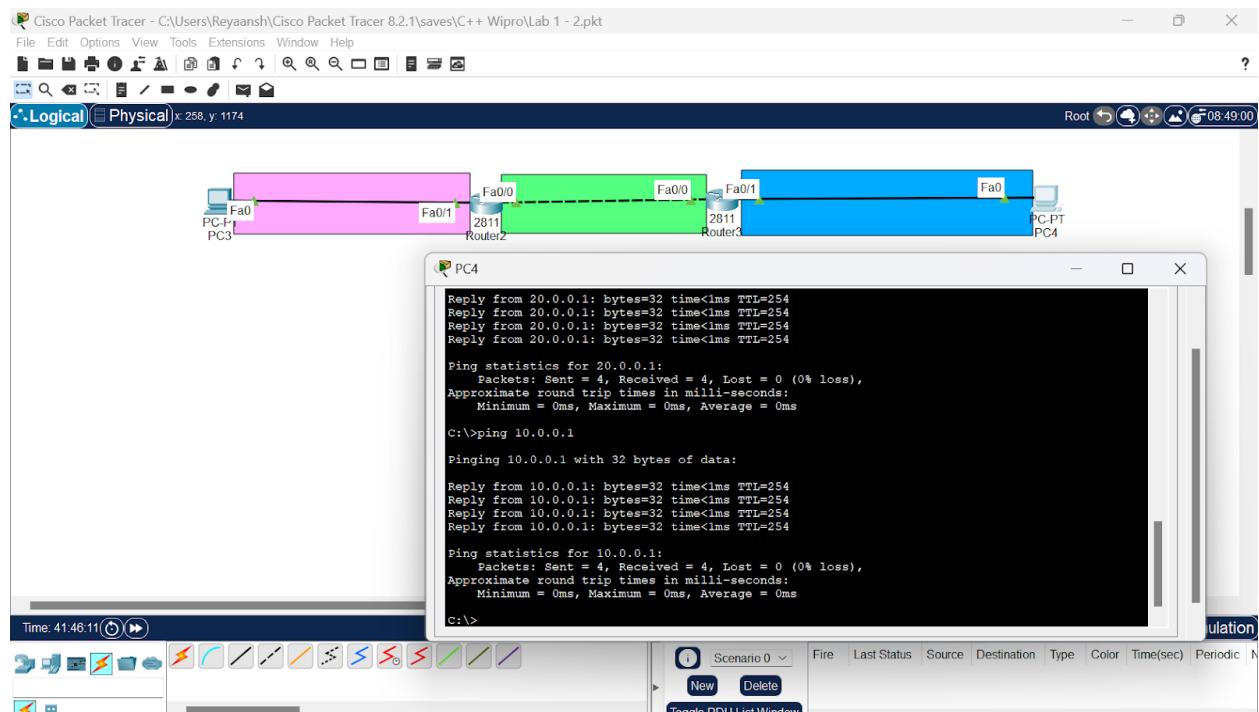
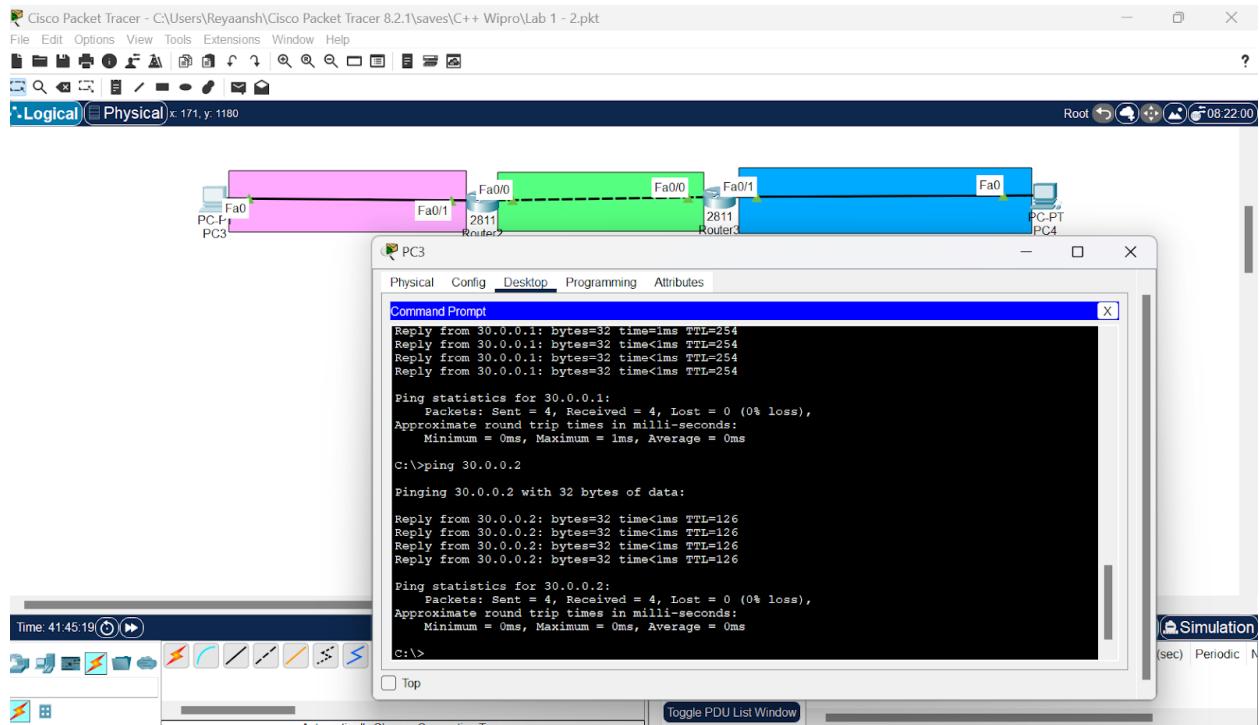


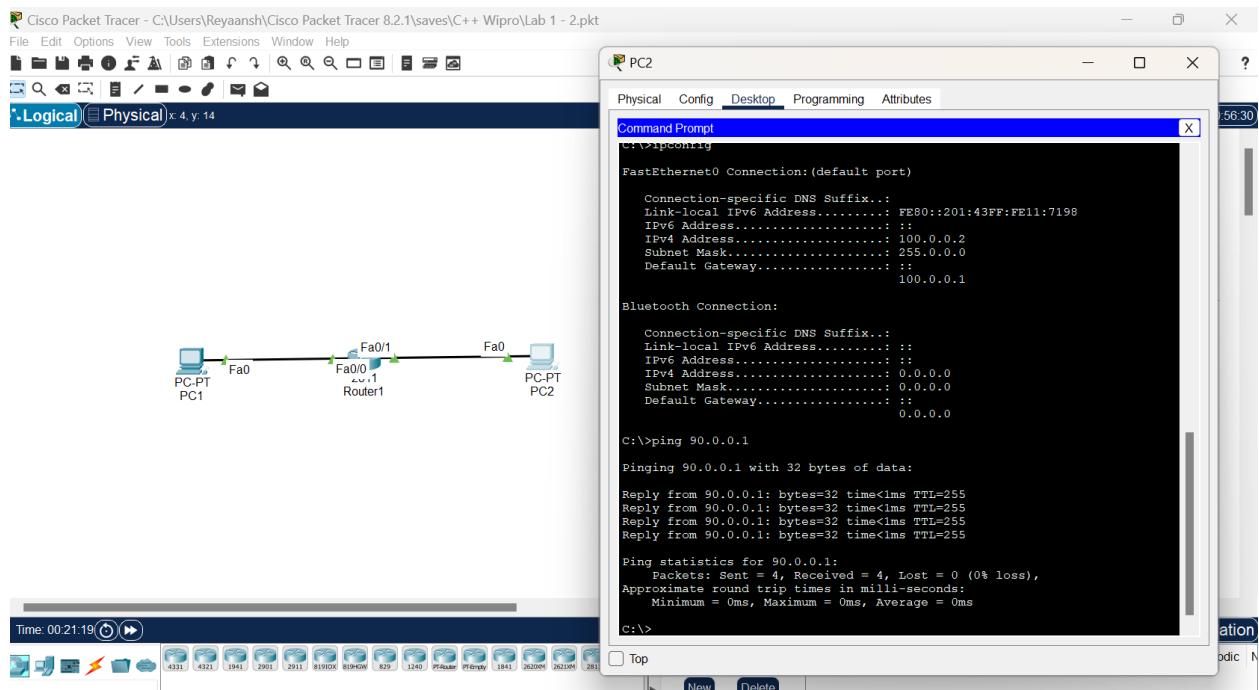
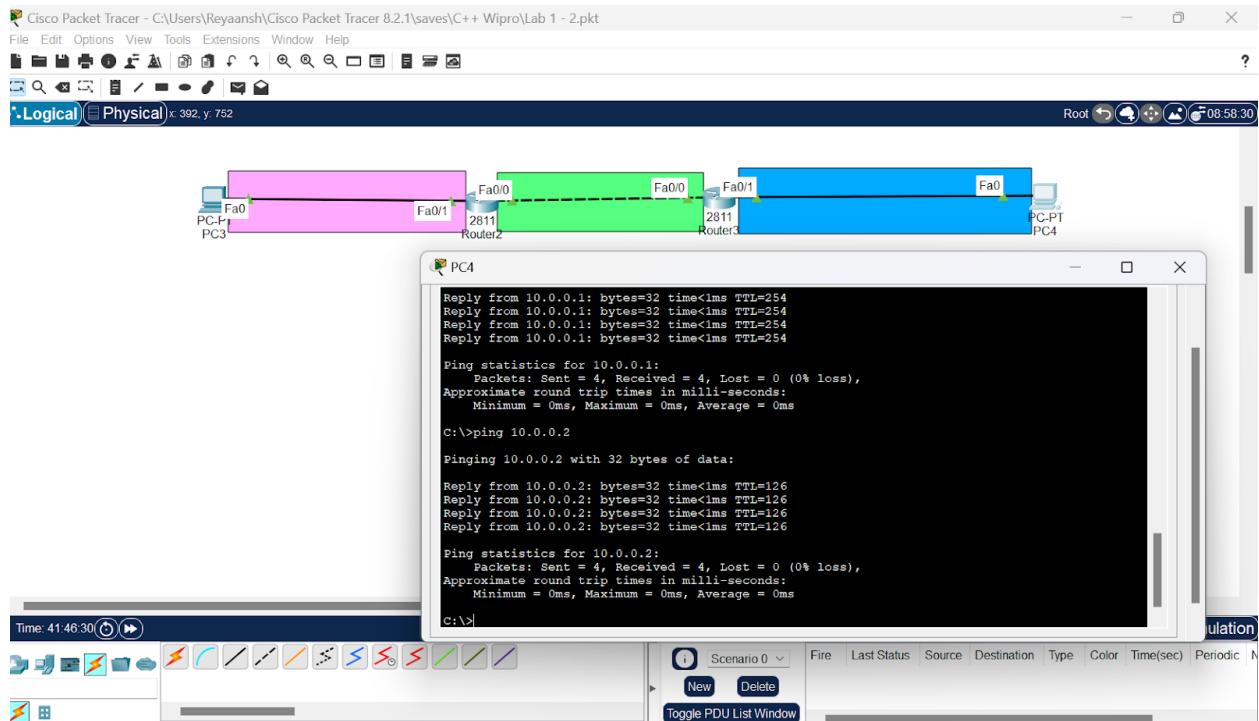




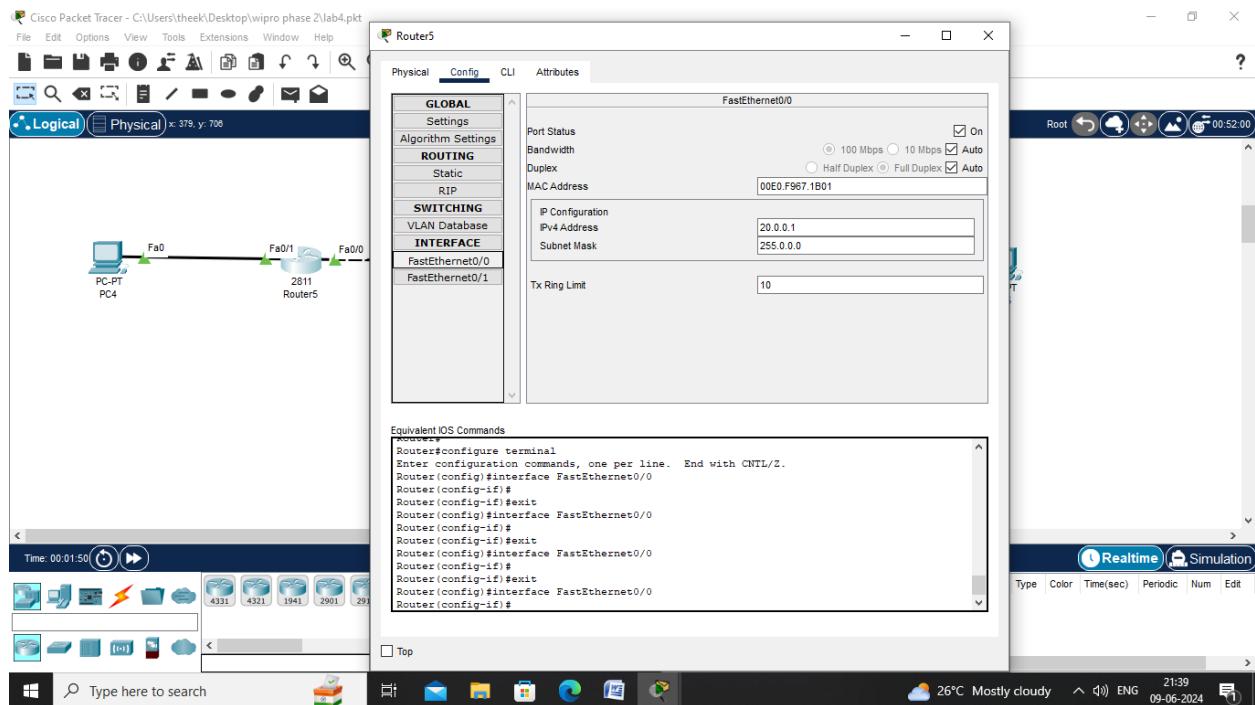


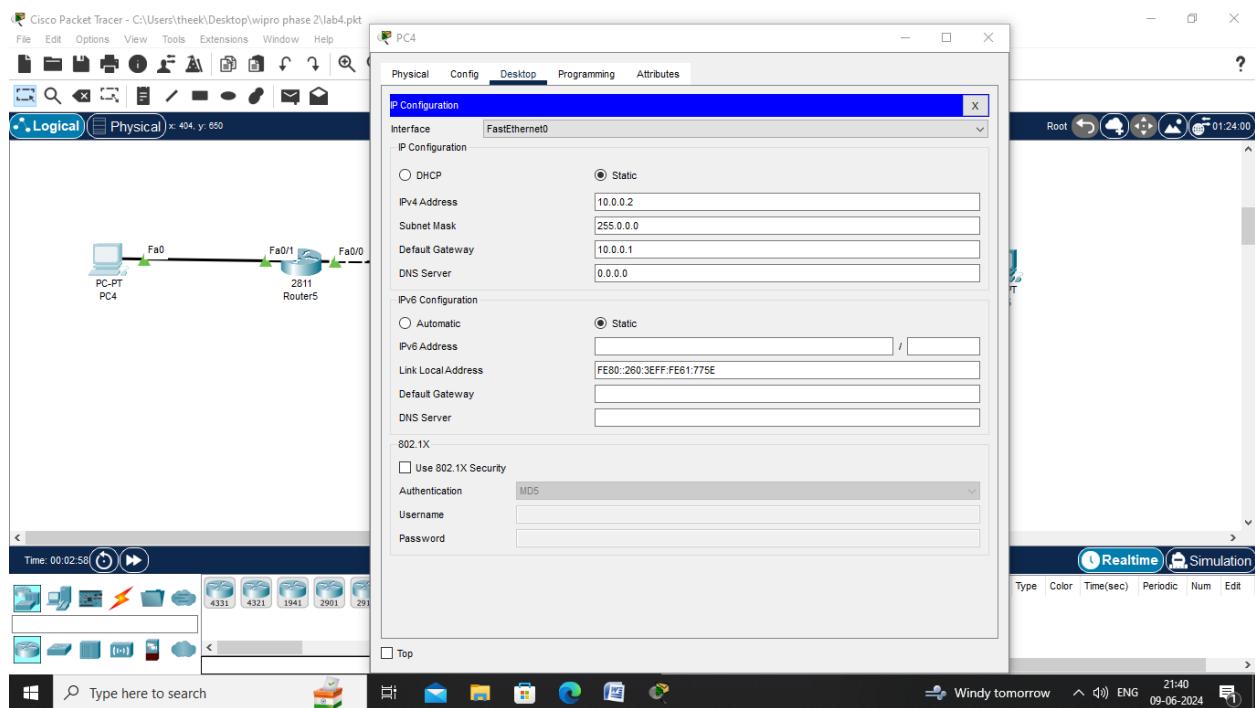
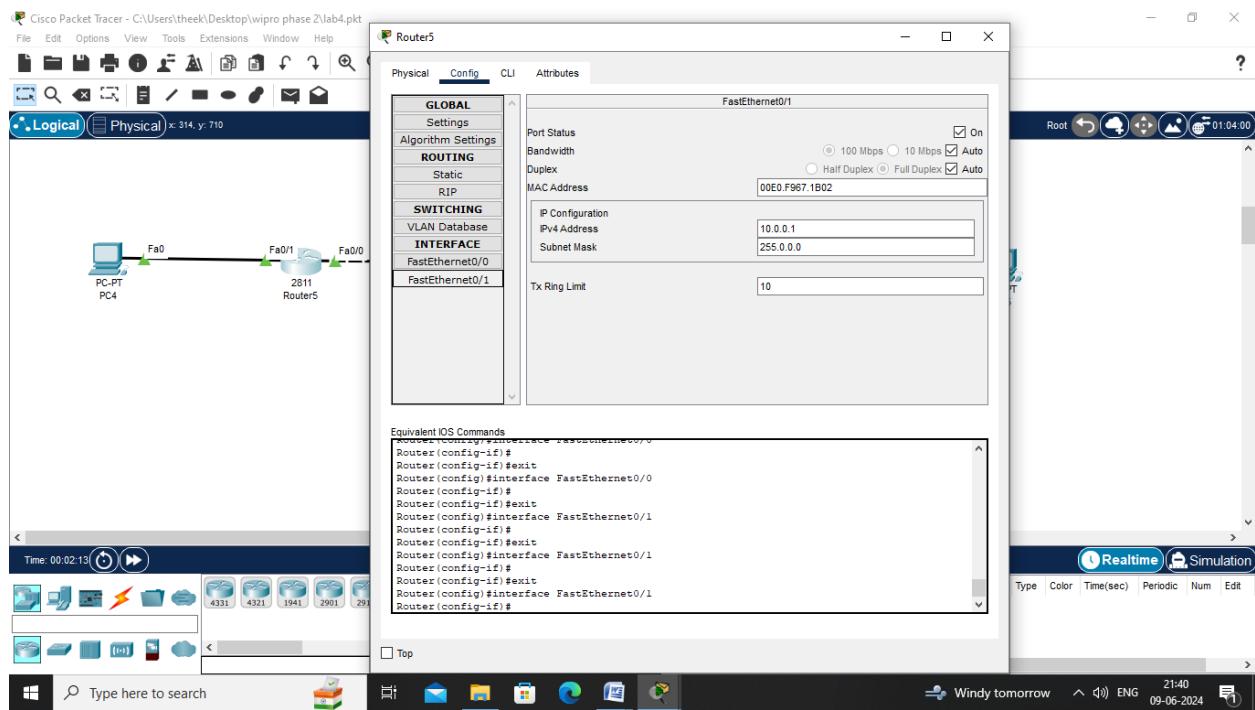


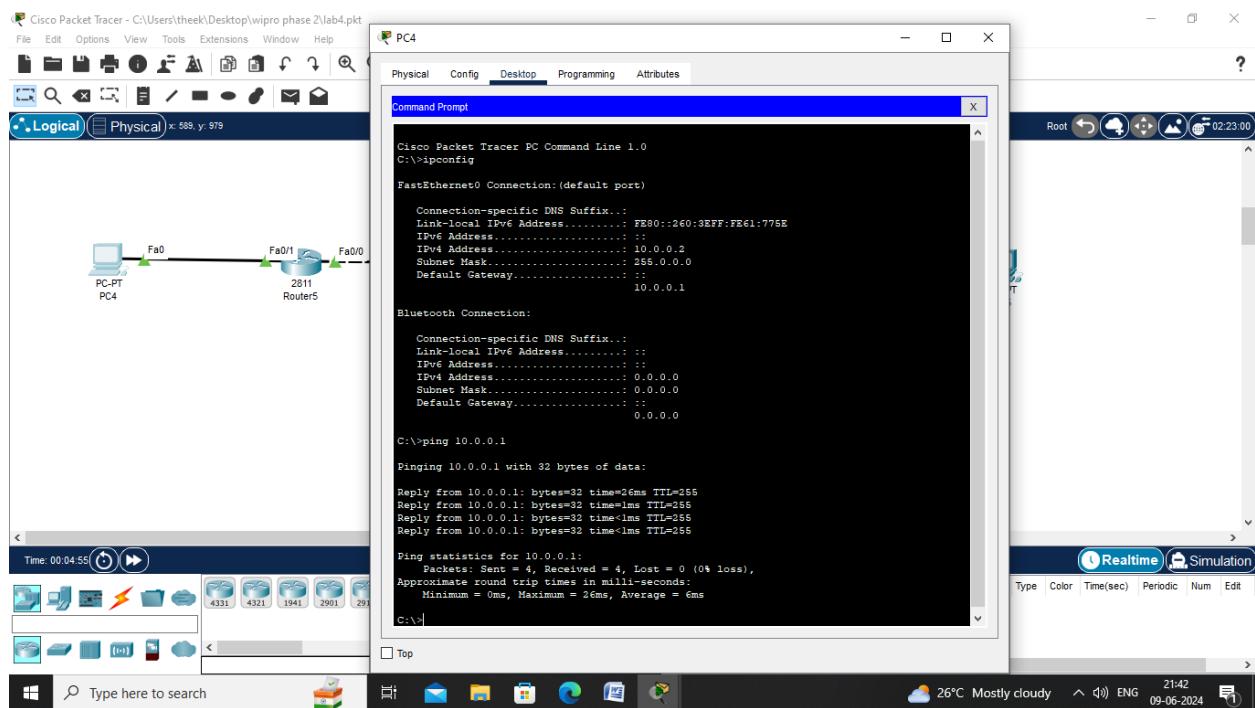
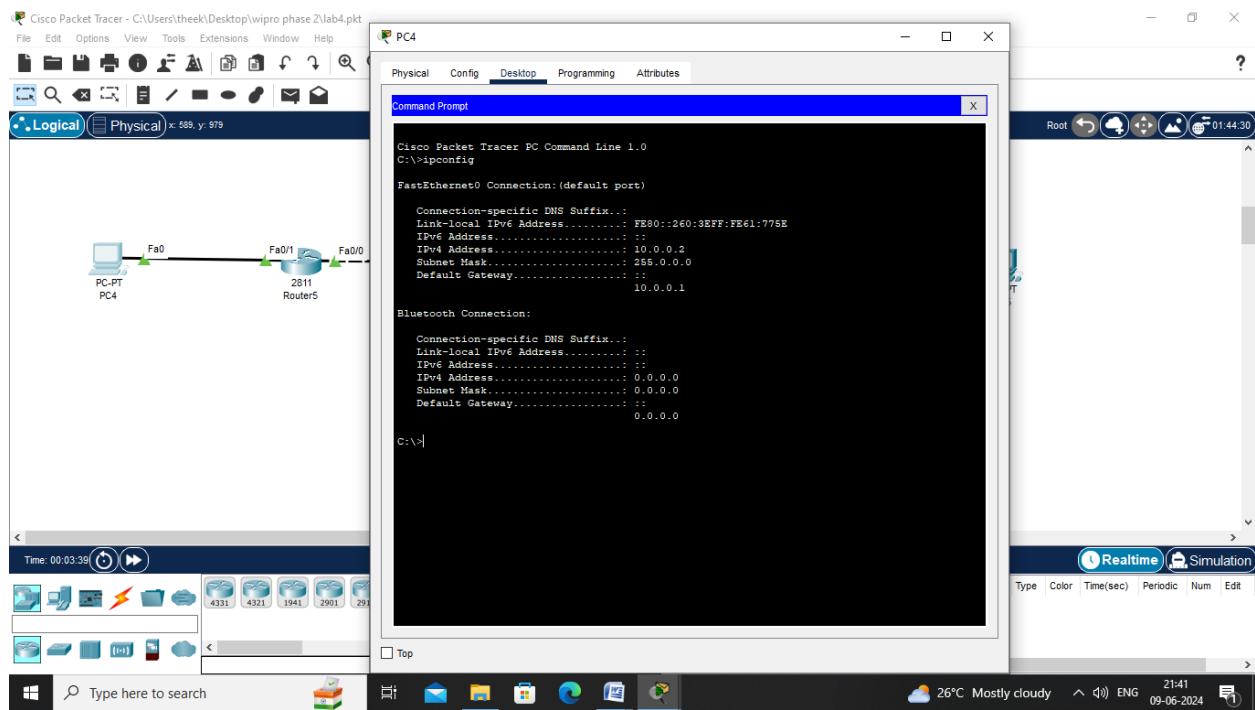


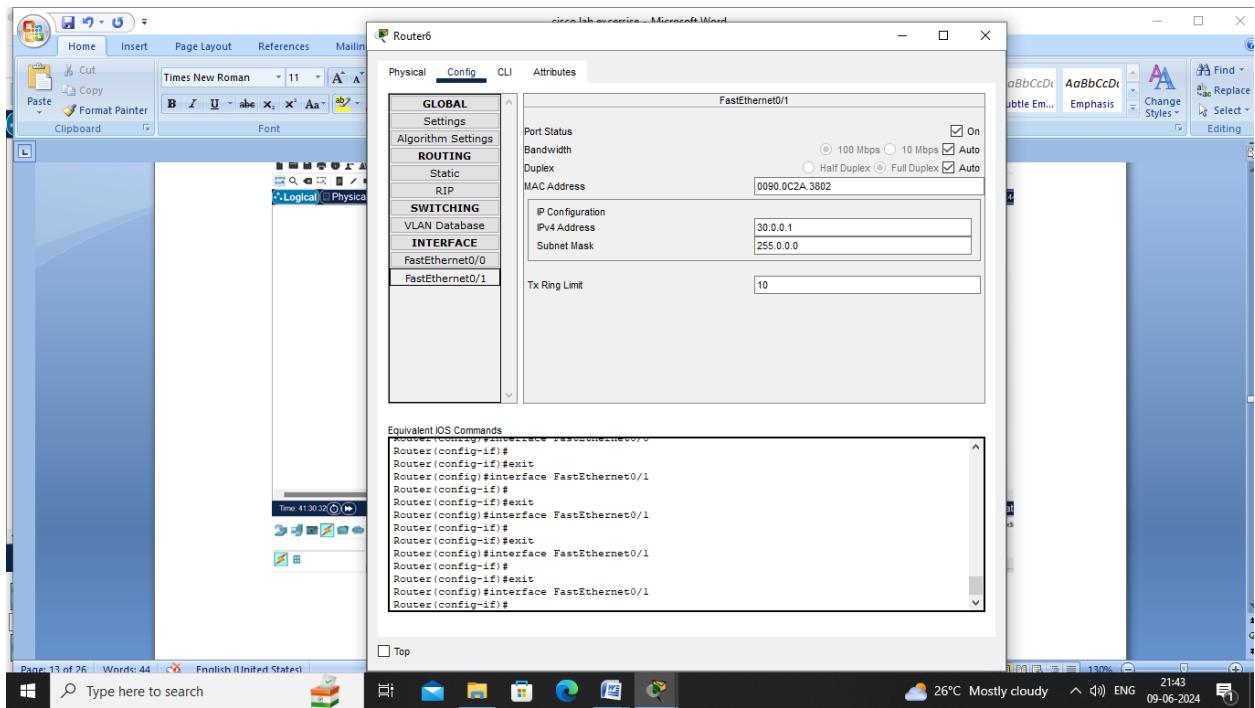
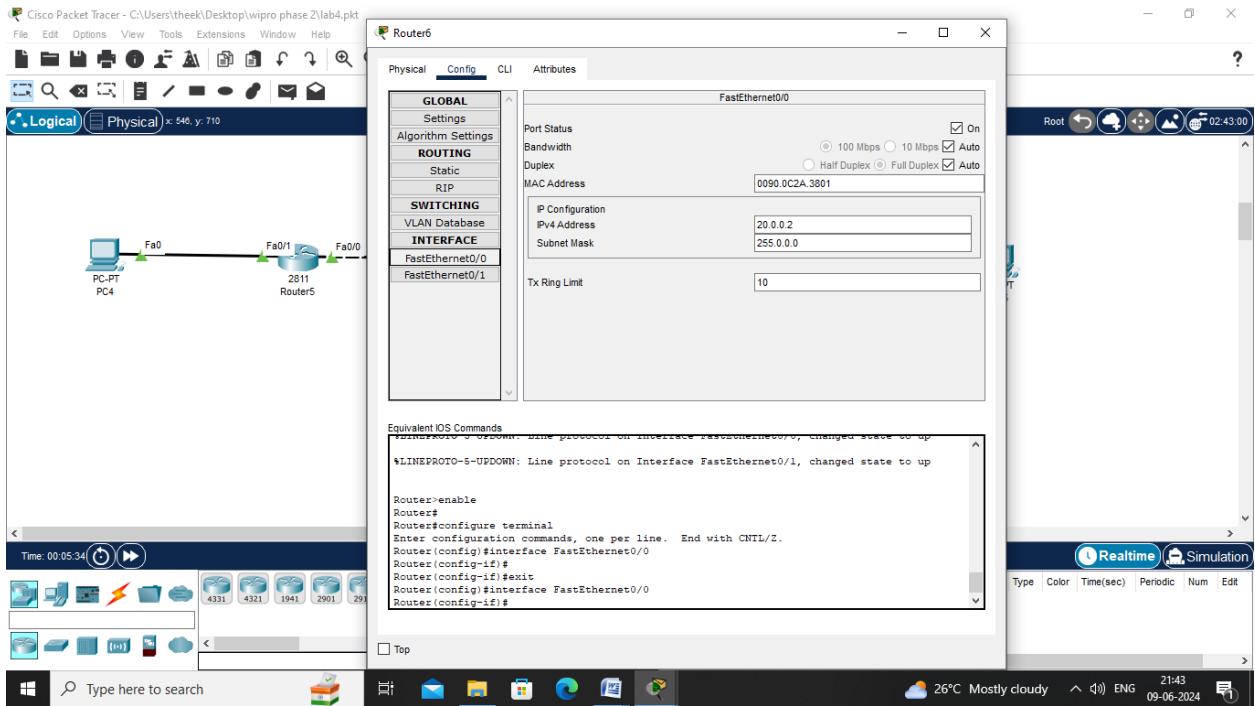


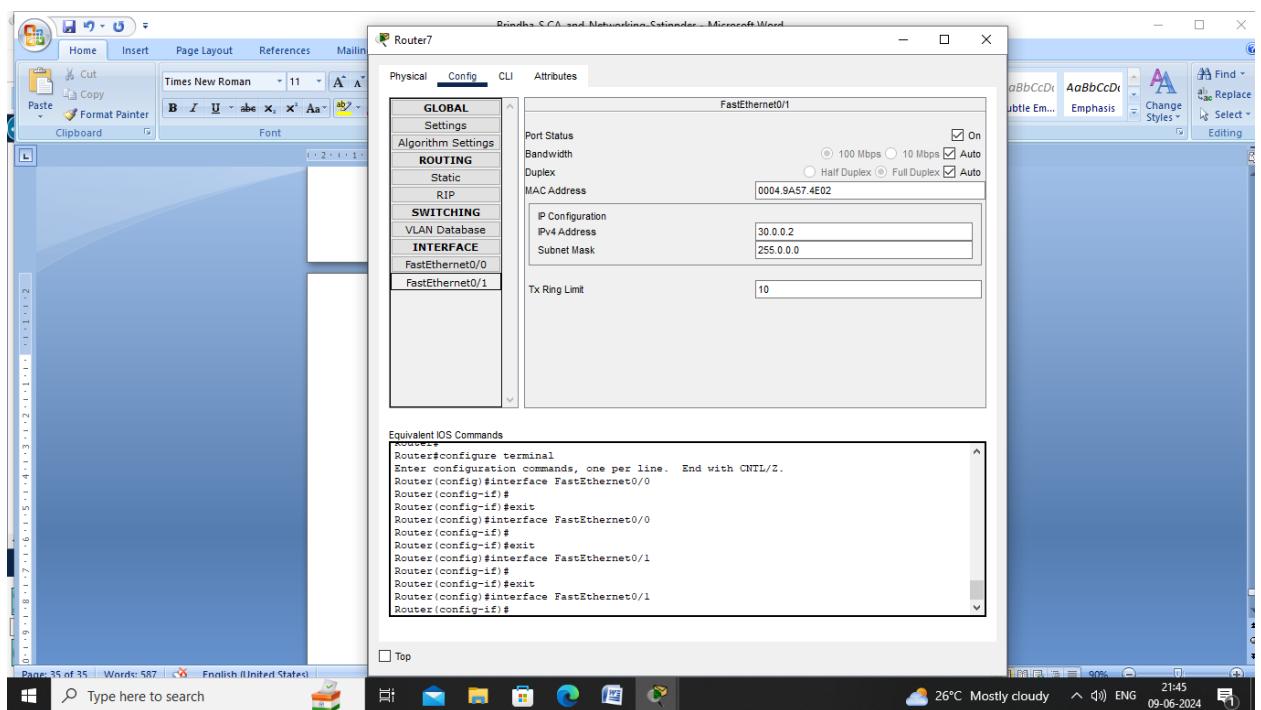
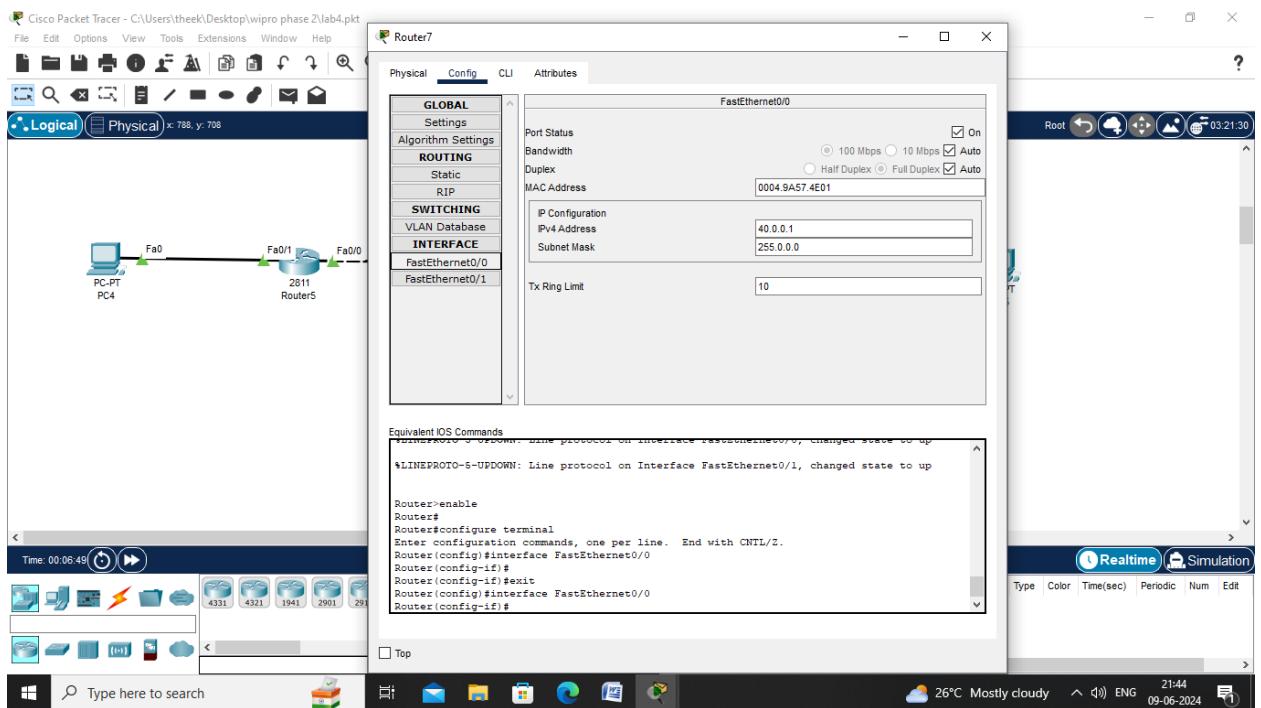
Lab 5 : Static Routing (on three routers)

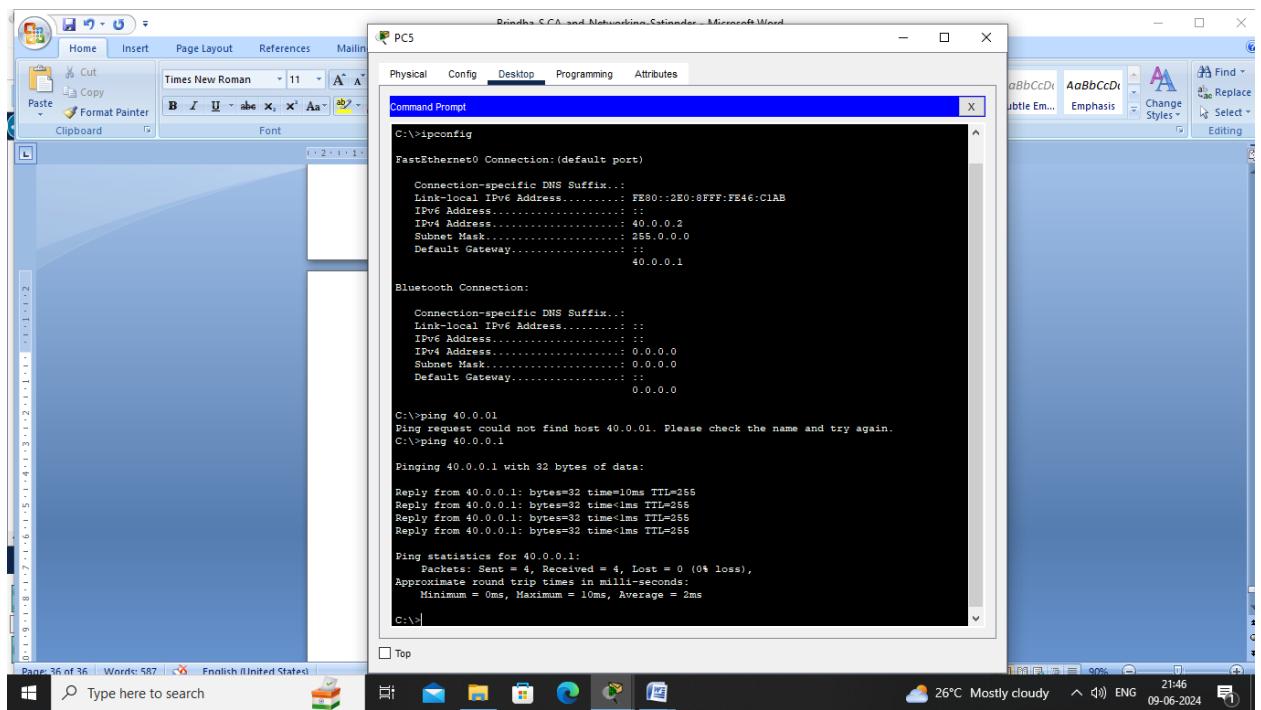
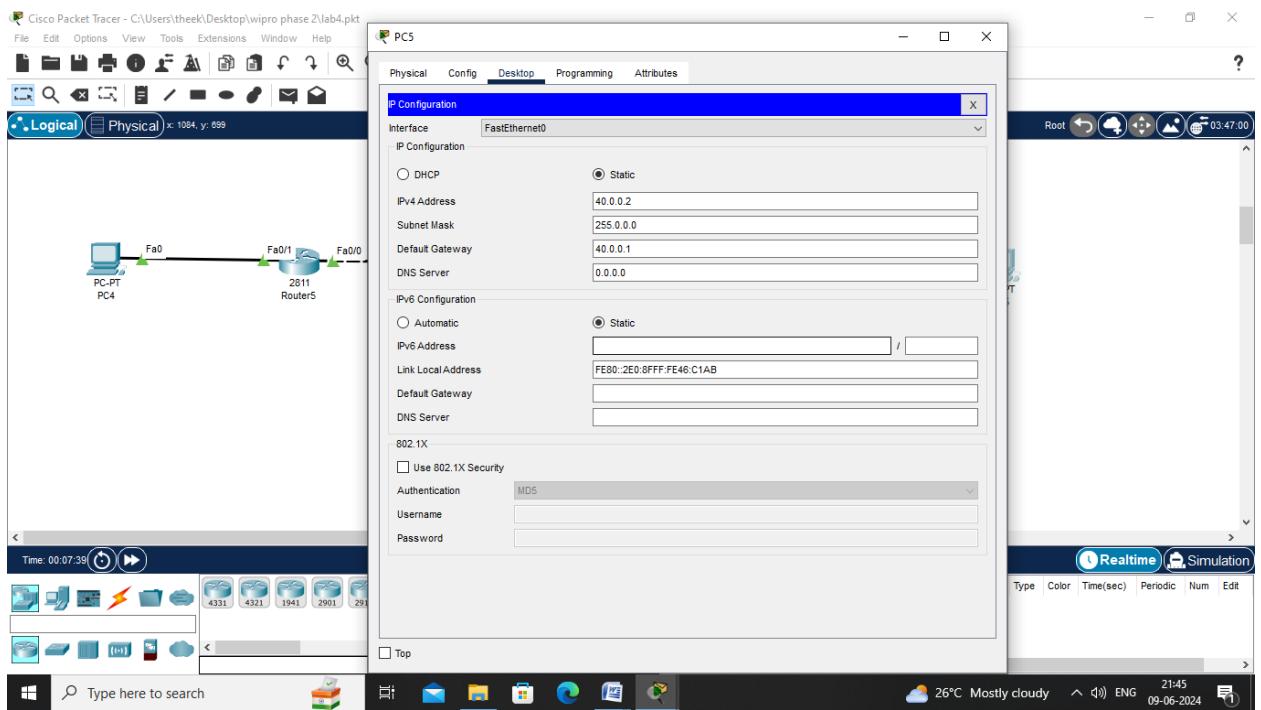


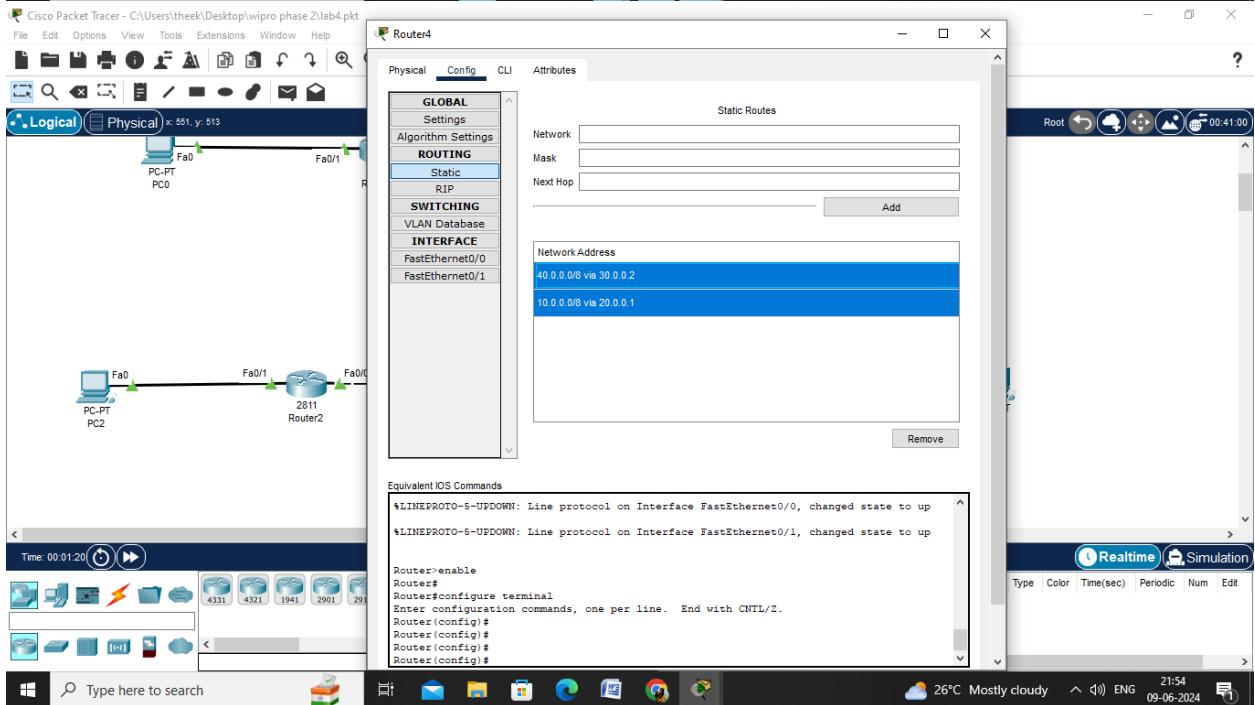
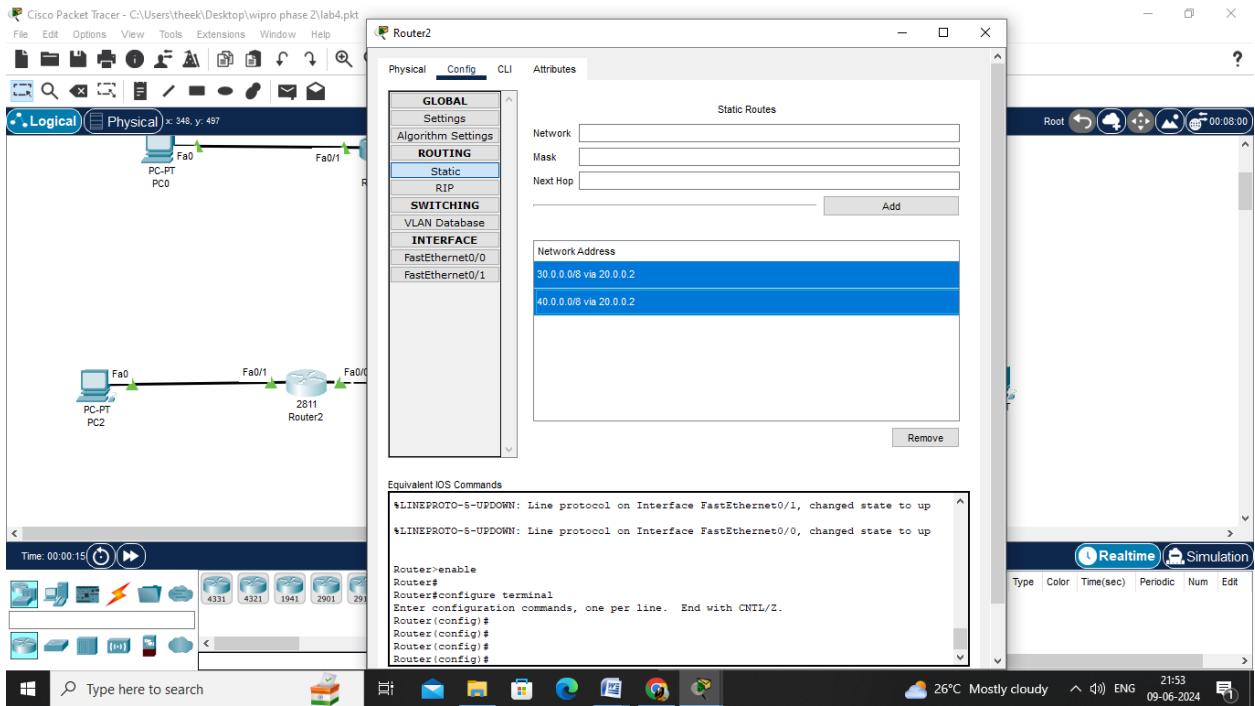


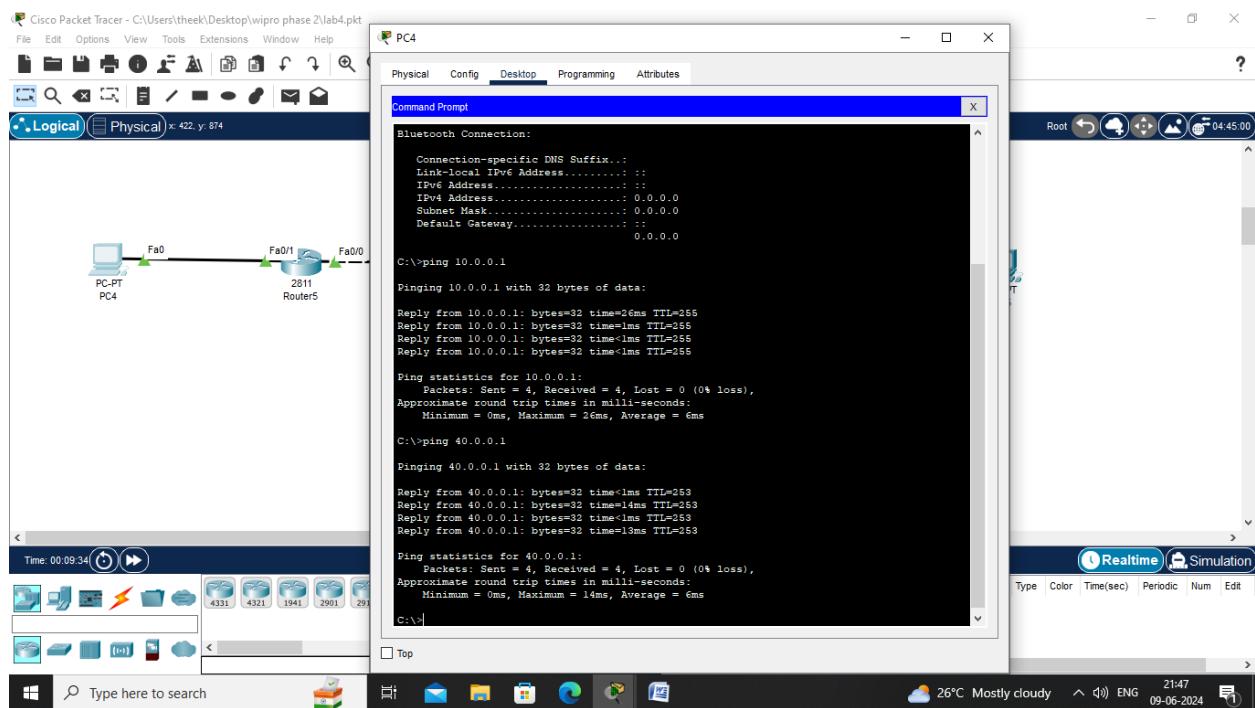
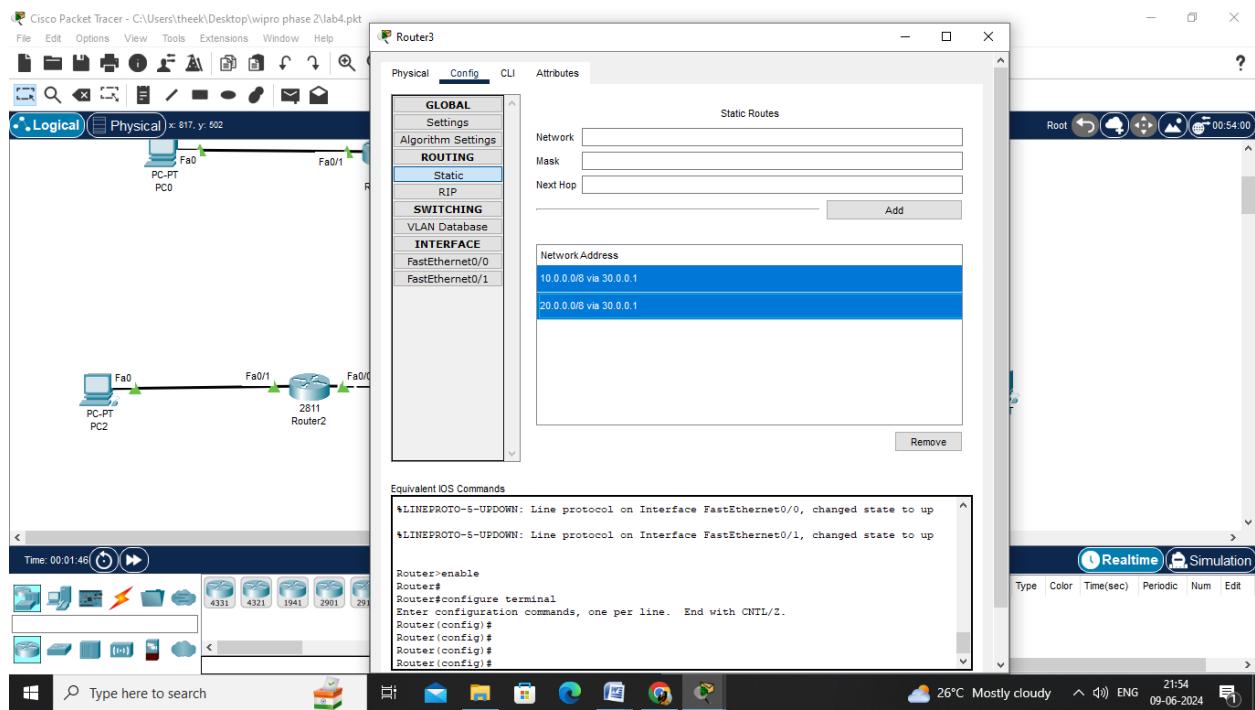


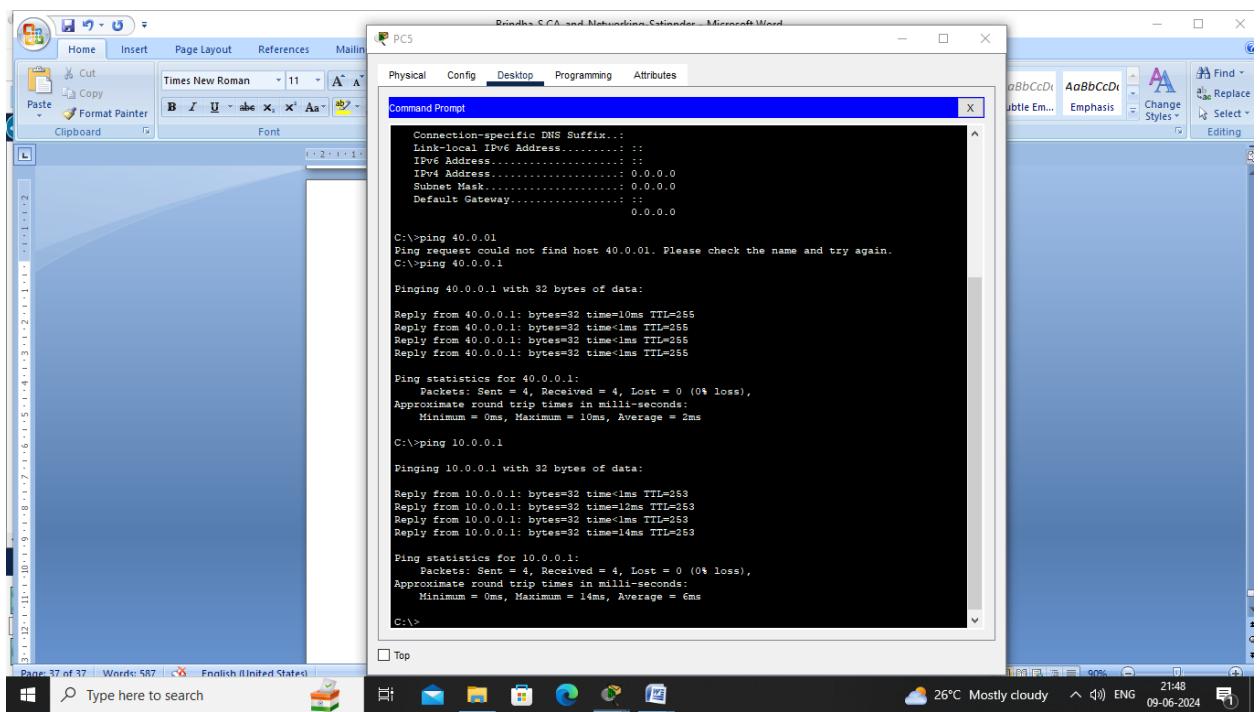












Lab 6: Dynamic Routing (on three routers)

