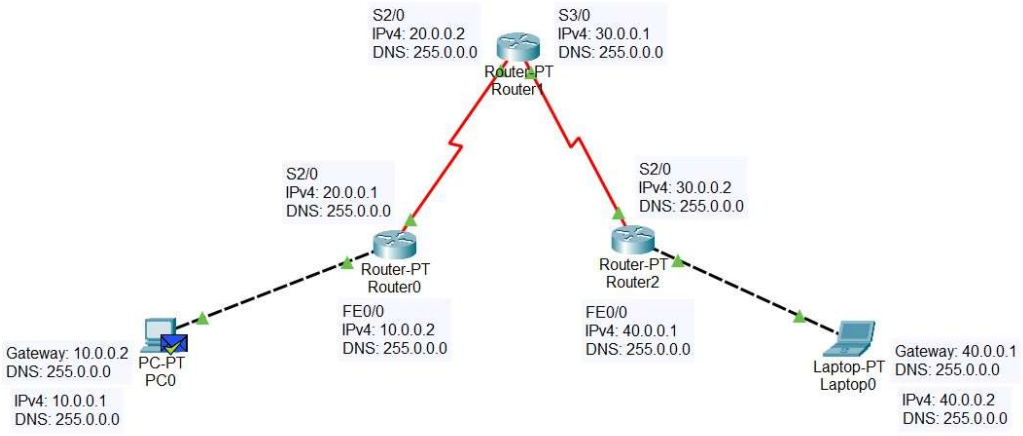
LABORATORY PROGRAM – 3

Configure static route to the Router.

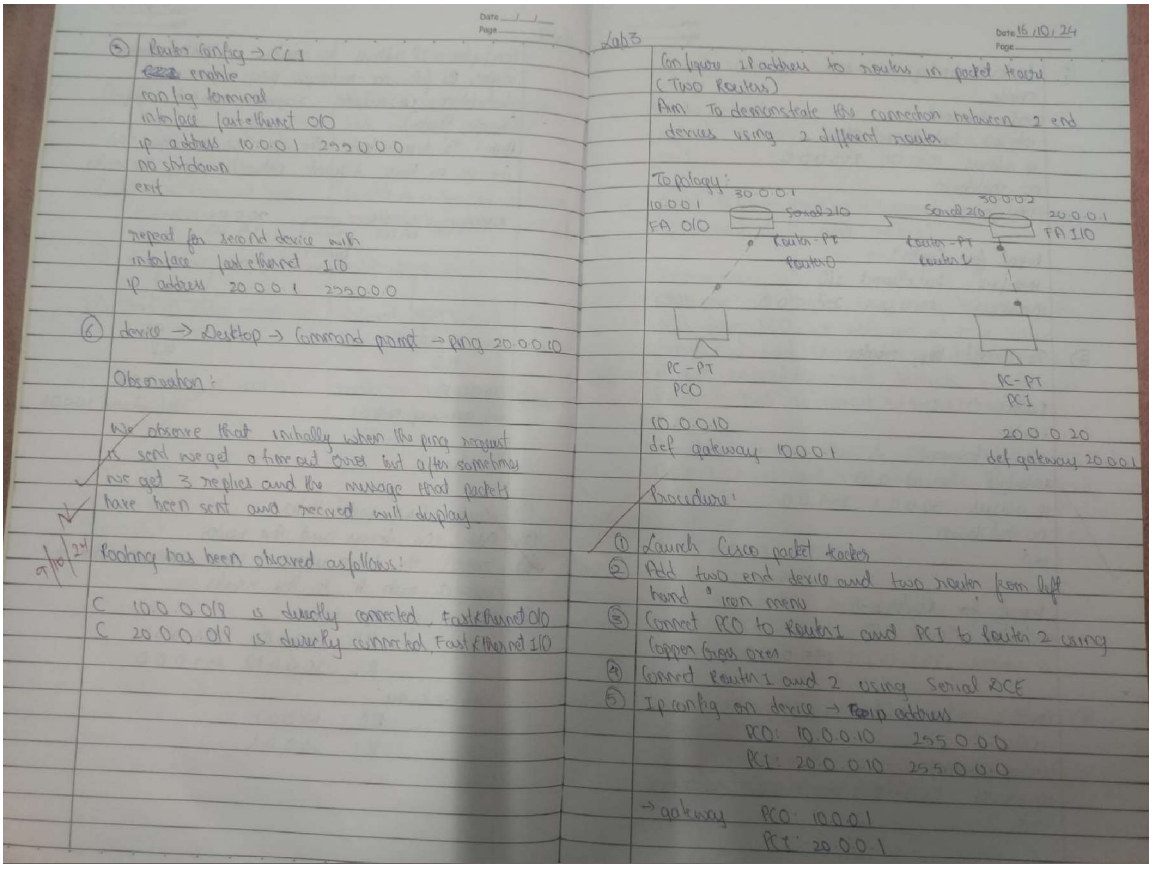



```
C    10.0.0.0/8 is directly connected, FastEthernet0/0
C    20.0.0.0/8 is directly connected, Serial2/0
S    30.0.0.0/8 [1/0] via 20.0.0.2
S    40.0.0.0/8 [1/0] via 20.0.0.2
```

```
S    10.0.0.0/8 [1/0] via 20.0.0.1
C    20.0.0.0/8 is directly connected, Serial2/0
C    30.0.0.0/8 is directly connected, Serial3/0
S    40.0.0.0/8 [1/0] via 30.0.0.2
```

```
S    10.0.0.0/8 [1/0] via 30.0.0.1
S    20.0.0.0/8 [1/0] via 30.0.0.1
C    30.0.0.0/8 is directly connected, Serial2/0
C    40.0.0.0/8 is directly connected, FastEthernet0/0
```

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC0	Laptop0	ICMP		0.000	N	0	(edit)	



⑥ Router 1 config → CLI →
enable
config terminal
interface fastethernet 0/0
ip address 10.0.0.1 255.0.0.0
no shutdown
exit

Repeat for Router 2 →
interface fastethernet 1/0
ipaddress 20.0.0.1 255.0.0.0

⑦ To connect two routers

Router 1 → CLI →
enable
config terminal
interface Serial 2/0
ip address 30.0.0.1 255.0.0.0
no shut down
exit

Repeat for Router 2 →
interface Serial 2/0
ip address 30.0.0.2 255.0.0.0

⑧ Router 1 config → CLI
enable
config terminal
ip router 20.0.0.0 255.0.0.0 30.0.0.2
exit

Repeat same for Router 2 → CLI →
enable
config terminal
ip route 10.0.0.0 255.0.0.0 30.0.0.1
exit

⑨ Select PC0 → Desktop → Command prompt → ping (ip address of PC and routers)

Observation:
When we 1st try to ping msg to Router 2 or PC 1 from PC0 we will get a msg saying timed out and unreachable. But for Router 1 it will successfully reach because it identifies Router 1 but it cannot recognise router 2 or PC1
We have to manually do it and tell Router 1 that Router 2 exist and vice versa with ⑧ command.

Before:
ping 20.0.0.10
unreachable x4
Received = 0 Lost = 4

ping 30.0.0.2
timed out x4
Received = 0 Lost = 4

ping 10.0.0.1
Received = 4 Lost = 0

After: ping 20.0.0.10
Received = 4 Lost = 0

ping 30.0.0.2
Received = 4 Lost = 0

Routing has been observed as follows for Router 1:

C 10.0.0.0/8 is directly connected, FastEthernet 0/0
S 20.0.0.0/8 [1/0] via 30.0.0.2
C 30.0.0.0/8 is directly connected, Serial 2/0

Routing has been observed as follows for Router 2:

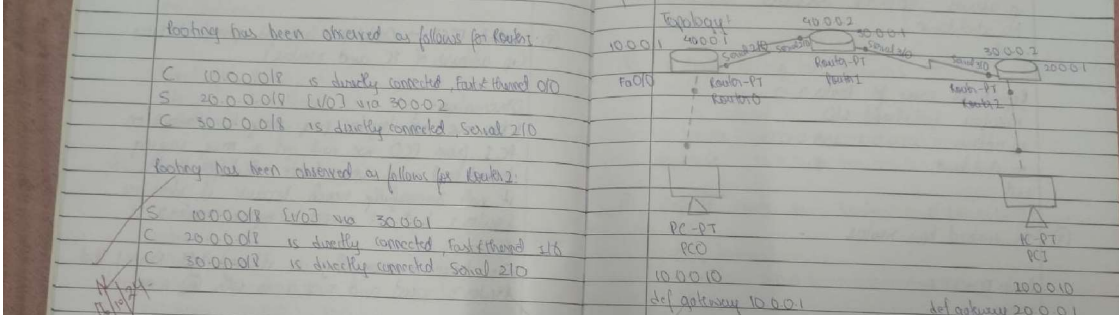
S 10.0.0.0/8 [1/0] via 30.0.0.1
C 20.0.0.0/8 is directly connected, FastEthernet 1/0
C 30.0.0.0/8 is directly connected, Serial 2/0

Lab 4

Date 23.10.24

Configure default route, static route to the Router

Aim: To demonstrate static and default route using 3 routers and 2 PCs



Procedure:

① Launch Cisco Packet Tracer
② Add 2 end devices and 3 routers
③ Connect PC0 to Router 0 and PC1 to Router 2 using Copper cross-over
④ Connect Router 0 to Router 1 using Serial DCE 2/0 and Router 1 to Router 2 using Serial DCE 3/0
⑤ Ip config on device → ip address
PC0: 10.0.0.10 255.0.0.0
PC1: 20.0.0.10 255.0.0.0
def gateway →
PC0: 10.0.0.1
PC1: 20.0.0.1