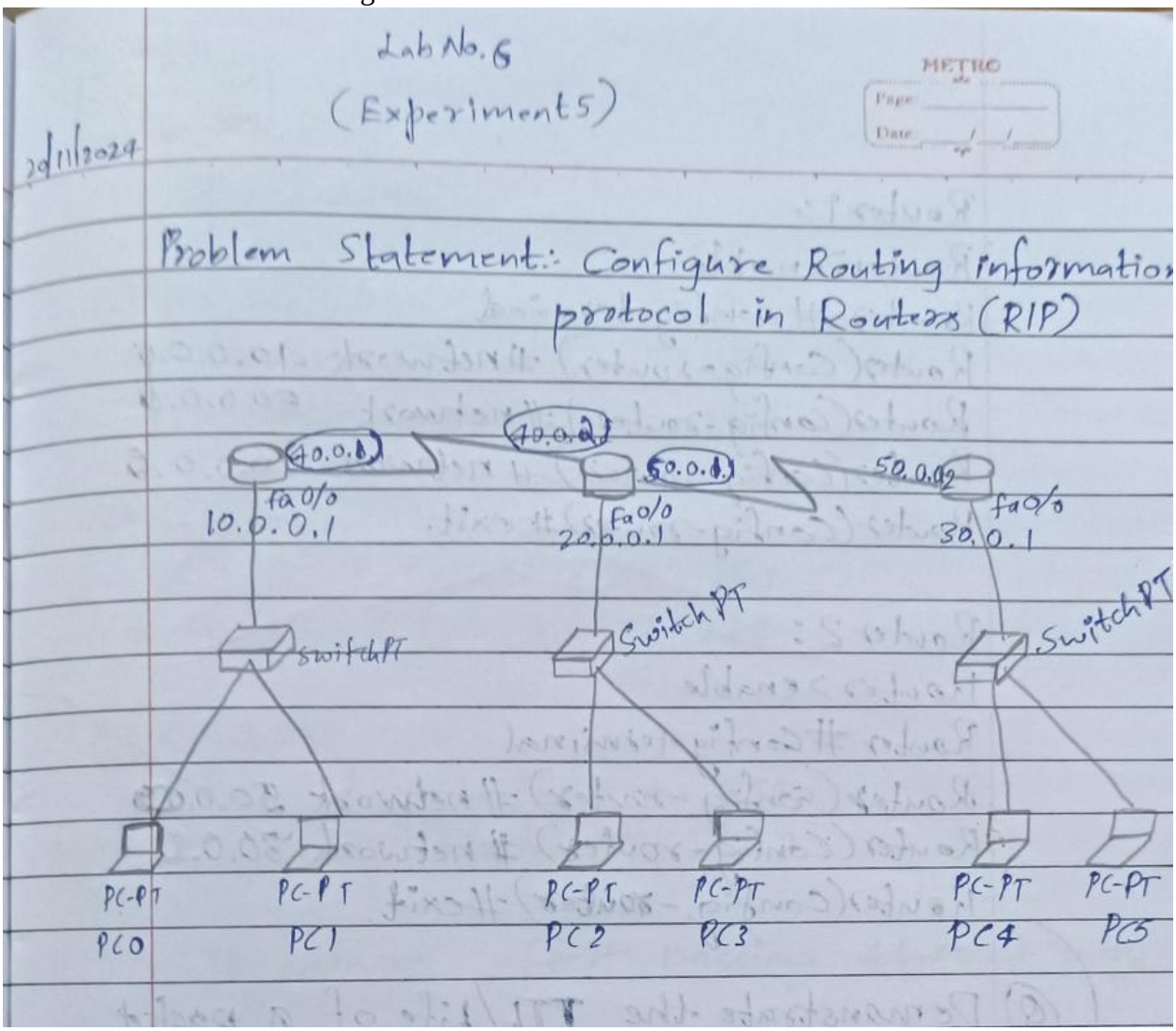
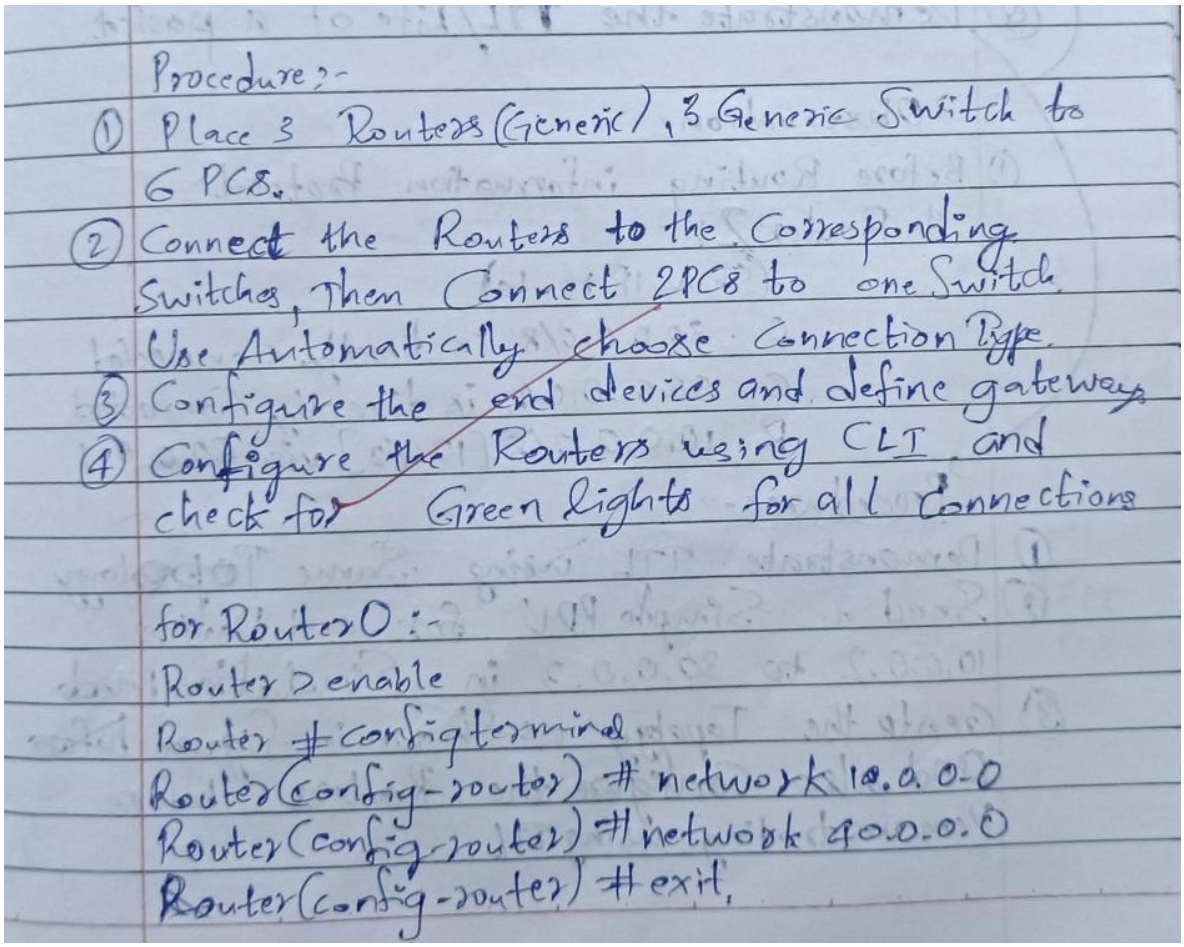
LABORATORY PROGRAM – 4

Configure DHCP within a LAN and outside LAN





Procedure:-

1. Place 3 Routers (Generic), 3 Generic Switch to 6 PCs.
2. Connect the Routers to the corresponding Switches, Then Connect 2PCs to one Switch. Use Automatically choose Connection Type.
3. Configure the end devices and define gateways.
4. Configure the Routers using CLI and check for Green lights for all connections

for Router0 :-

```
Router > enable
Router # configterminal
Router(config-router) # network 10.0.0.0
Router(config-router) # network 40.0.0.0
Router(config-router) # exit
```

Observations:-

① IP address were allocated dynamically
② When we ping from one PC to another data was sent Successfully
③ PC > ping 10.0.0.4

10.0.0.2

Pinging 10.0.0.4 with 32 bytes of data

Reply from 10.0.0.4 : bytes=32 time=0ms TTL=128
Reply from 10.0.0.4 : bytes=32 time=0ms TTL=128
Reply from 10.0.0.4 : bytes=32 time=0ms TTL=128
Reply from 10.0.0.4 : bytes=32 time=0ms TTL=128

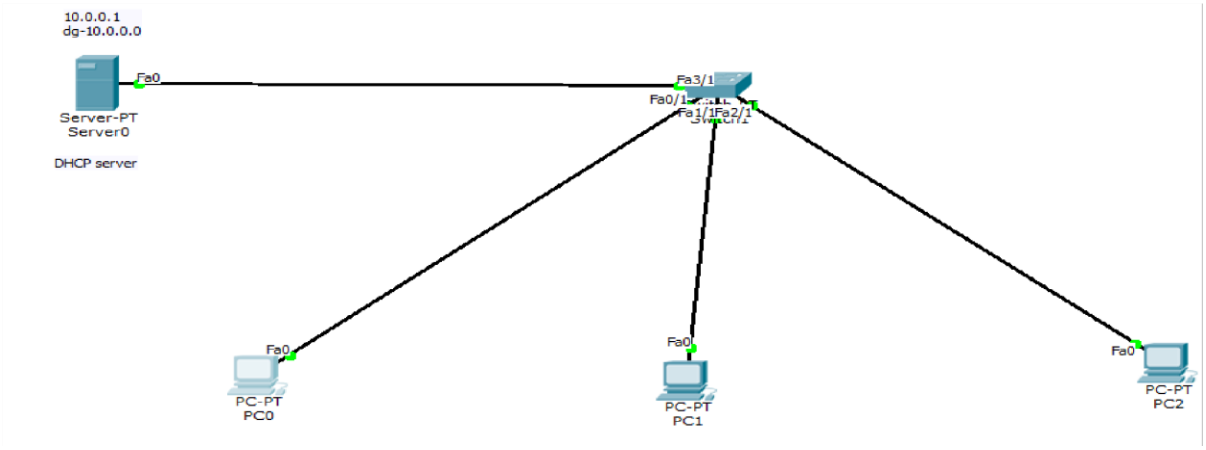
ping Statistics for 10.0.0.4:
Packets: Sent=4, Recieved=4, Lost=0
Approximate round trip times in ms
minimum Outside LAN

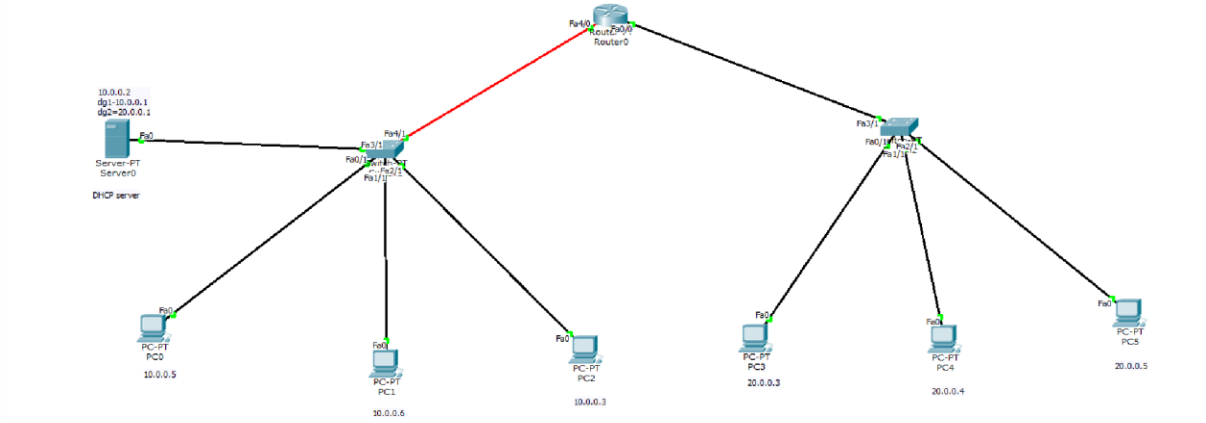
Procedure (2):-

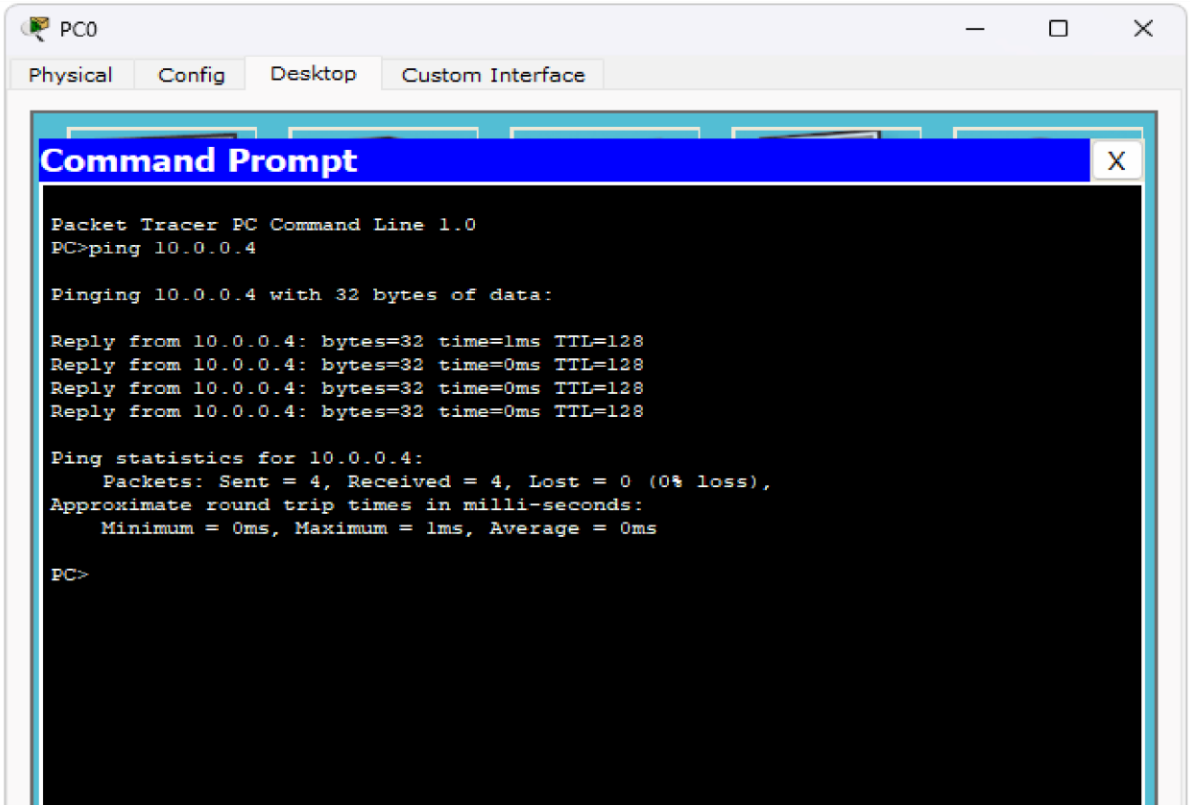
① Dynamically enable ip address for end Devices

CLI Commands

Router>enable
Router# Config terminal
Router(Config-if) # interface fast ethernet
Router(config-if) # ipaddress 100.0.1. 255.0.0.
Router(config-if) # ip-helper address 10.0.0.2


10.0.0.1
dg-10.0.0.0
Fa0
Server-PT
Server0
DHCP server
Fa3/1
Fa0/1
Fa1/1
Fa2/1
Fa0
PC-PT
PC0
Fa0
PC-PT
PC1
Fa0
PC-PT
PC2


Router0
Server-PT
Server0
DHCP server
PC-PT
PC0
PC-PT
PC1
PC-PT
PC2
PC-PT
PC3
PC-PT
PC4
PC-PT
PC5


PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
X
Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.4
Pinging 10.0.0.4 with 32 bytes of data:
Reply from 10.0.0.4: bytes=32 time=1ms TTL=128
Reply from 10.0.0.4: bytes=32 time=0ms TTL=128
Reply from 10.0.0.4: bytes=32 time=0ms TTL=128
Reply from 10.0.0.4: bytes=32 time=0ms TTL=128
Ping statistics for 10.0.0.4:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 1ms, Average = 0ms
PC>