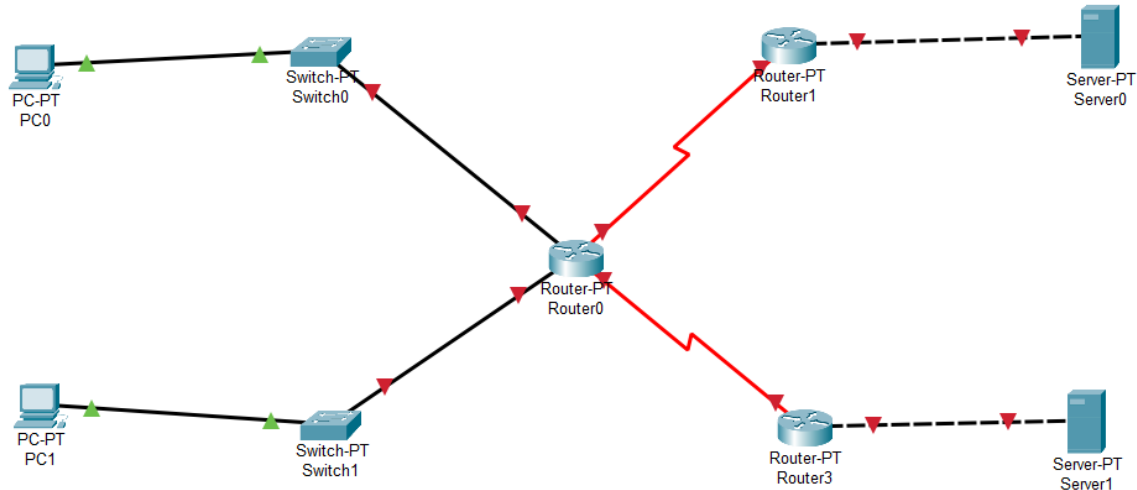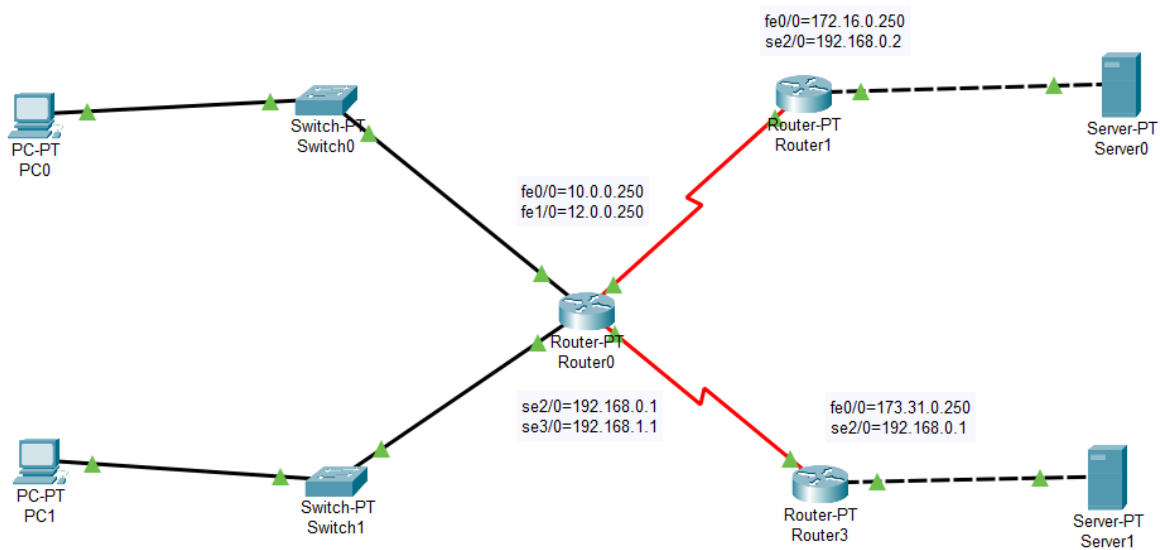## Practical 5

Aim: Understanding , Reading and Analyzing Routing Table of a network.

Step 1: Basic setup

The below image is just for quick reference
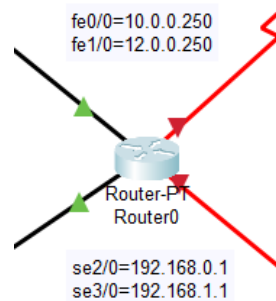
Step 2: Click on Router 0, then go to config and make the following changes:

FastEthernet0/0 ———→ IP address : 10.0.0.250 & hit enter & tick the On checkbox
FastEthernet1/0 ———→ IP address : 12.0.0.250 & hit enter & tick the On checkbox
Serial2/0 ———→ IP address : 192.168.0.1 & hit enter & tick the On checkbox
Serial3/0 ———→ IP address : 192.168.1.1 & hit enter & tick the On checkbox

fe0/0=10.0.0.250
fe1/0=12.0.0.250

Router-PT
Router0

se2/0=192.168.0.1
se3/0=192.168.1.1

Router0   —   □   ✕

Physical   Config   CLI   Attributes

GLOBAL	FastEthernet0/0
Settings	Port Status ☑ On
Algorithm Settings	Bandwidth ◉ 100 Mbps ○ 10 Mbps ☑ Auto
ROUTING	Duplex ○ Half Duplex ◉ Full Duplex ☑ Auto
Static	MAC Address 0009.7C03.D6C9

IP Configuration
IP Address   10.0.0.250
Subnet Mask   255.0.0.0

INTERFACE
FastEthernet0/0
FastEthernet1/0
Serial2/0   Tx Ring Limit   10
Serial3/0
FastEthernet4/0
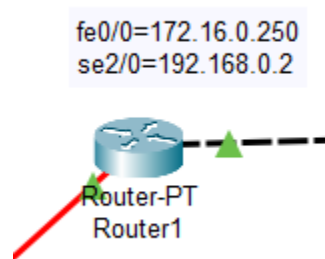FastEthernet5/0

Equivalent IOS Commands

```
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial3/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

☐ Top

Step 3: Similarly for Router 1
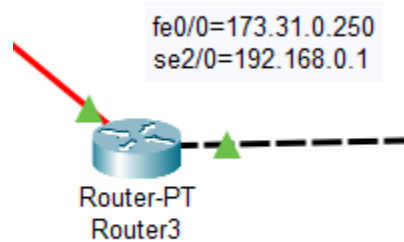FastEthernet0/0 ⟶ IP address : 172.16.0.250 & hit enter & tick the On checkbox
Serial2/0 ⟶ IP address : 192.168.0.2 & hit enter & tick the On checkbox

fe0/0=172.16.0.250
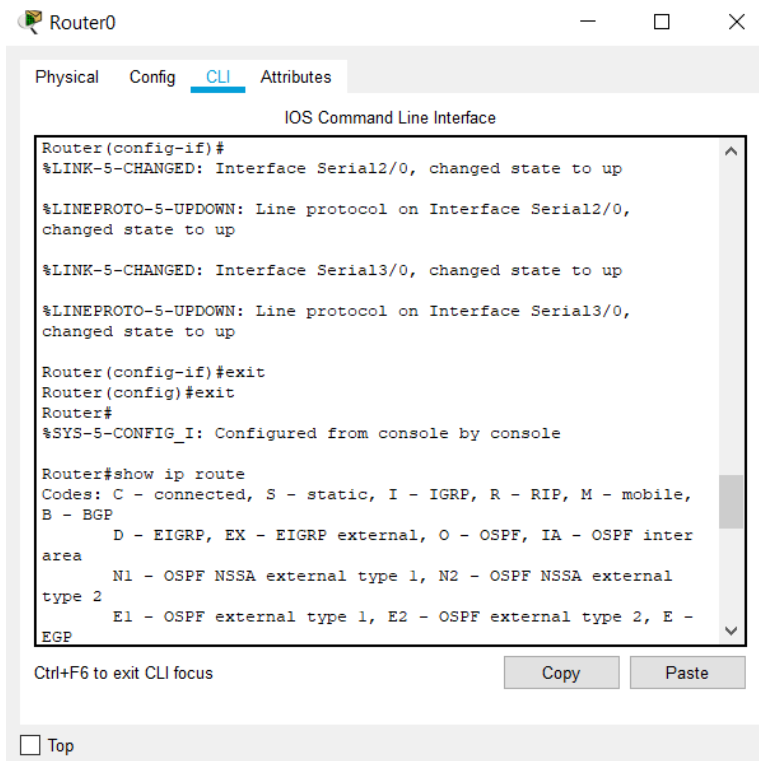se2/0=192.168.0.2

Router-PT
Router1

Step 4: Similarly for Router 3
FastEthernet0/0 ⟶ IP address : 173.31.0.250 & hit enter & tick the On checkbox
Serial2/0 ⟶ IP address : 192.168.0.1 & hit enter & tick the On checkbox

fe0/0=173.31.0.250
se2/0=192.168.0.1

Router-PT
Router3

Step 5: Now click on Router 0 and go to CLI

In CLI write **exit** until you come to the **Router#** (Here we have written exit twice and then pressed enter)
Then write the command: show ip route

You will get the output like this:


```
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile,
B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter
area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external
type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E -
EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia -
IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

C    10.0.0.0/8 is directly connected, FastEthernet0/0
C    12.0.0.0/8 is directly connected, FastEthernet1/0
C    192.168.0.0/24 is directly connected, Serial2/0
C    192.168.1.0/24 is directly connected, Serial3/0

Router#
```