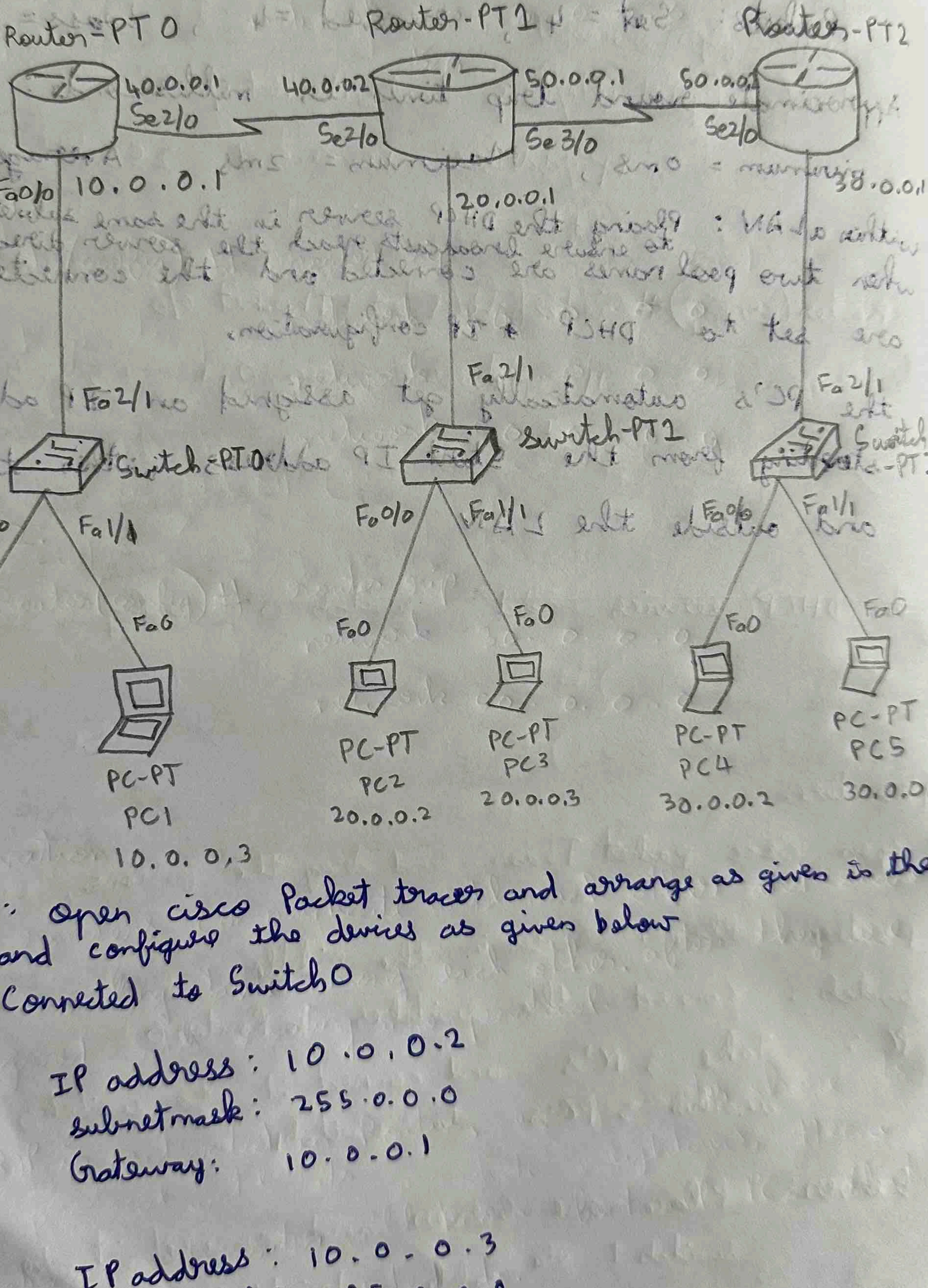
configure routing information protocol in Routers

Aim :- To Demonstrate routing information protocol in routers

Topology:



Procedure: Open cisco Packet tracer and arrange as given in the topology and configure the devices as given below

Devices Connected to Switch 0

PC 0 : IP address : 10.0.0.2
subnet mask : 255.0.0.0
Gateway : 10.0.0.1

PC 1 : IP address : 10.0.0.3
subnet mask : 255.0.0.0
Gateway : 10.0.0.2

Router0 :

Fa 0/0 is connected to switch0

Fa 0/0 IP address is 10.0.0.1

Se 2/0 connected to router1

Se 2/0 IP address is 40.0.0.1

Devices Connected to Switch1

PC2 : IP address : 20.0.0.2

subnet mask : 255.0.0.0

Gateway : 20.0.0.1

PC3 : IP address : 20.0.0.3

subnet mask : 255.0.0.0

Gateway : 20.0.0.1

Router1 :

Fa0/0 is connected to switch1

Fa0/0 IP address is 20.0.0.1

Se2/0 is connected to router0

Se2/0 IP address is 40.0.0.1

Se 3/0 is connected to router2

Se3/0 IP address is 50.0.0.1

Devices Connected to Switch2

PC4 : IP address : 30.0.0.2

subnet mask : 255.0.0.0

Gateway : 30.0.0.1

PC5 : IP address : 30.0.0.3

subnet mask : 255.0.0.0

Gateway : 30.0.0.1

Router2 :

Fa0/0 is connected to switch2

Fa0/0 IP address is 30.0.0.1

Se 2/0 is connected to router1

Se2/0 IP address is 50.0.0.2

For Each Routers do the following:

Router0:

```
Router(config)# router rip
              network 10.0.0.0
              network 20.0.0.0
              network 30.0.0.0
```

Router1:

```
Router(config)# router rip
              network 40.0.0.0
              network 30.0.0.0
              network 50.0.0.0
```

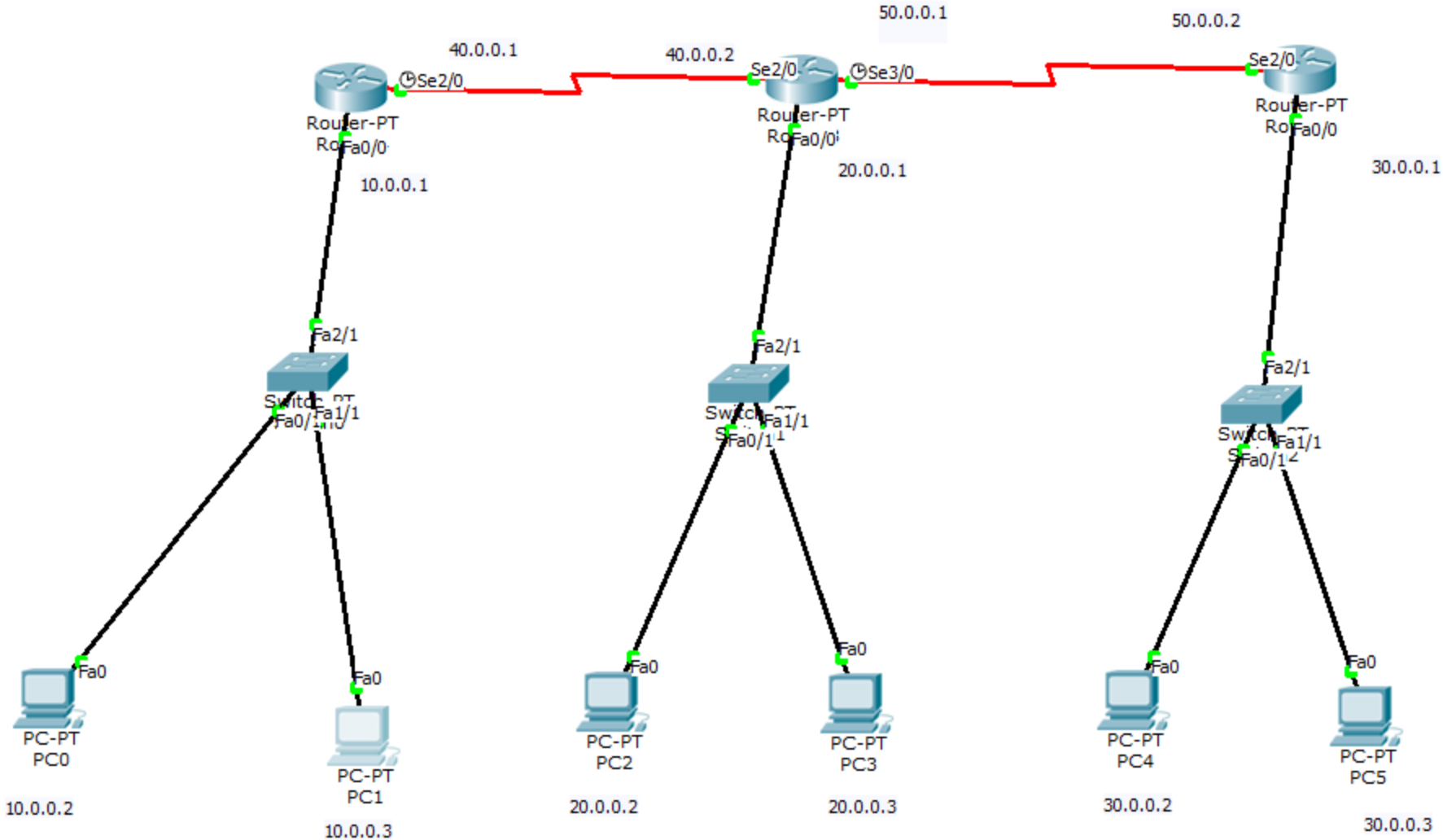
Router2:

```
Router(config)# router rip
              network 30.0.0.0
              network 50.0.0.0
```

Observation:

The routers communicate with each other and share their routking table among each other. after, they are configured with routing info protocol.

Once RIP is activated in Routus, every router share its routing protocol with its immediate neighbours, Hence in iterations every router will know about all PC, that their neighbours are connected to.


50.0.0.1
50.0.0.2
40.0.0.1
40.0.0.2
Se2/0
Se3/0
Router-PT
Fa0/0
10.0.0.1
20.0.0.1
30.0.0.1
Fa2/1
Fa1/1
Fa0
PC-PT
PC0
PC1
PC2
PC3
PC4
PC5
10.0.0.2
10.0.0.3
20.0.0.2
20.0.0.3
30.0.0.2
30.0.0.3

```
Router(config)#router rip
Router(config-router)#network 10.0.0.0
Router(config-router)#network 40.0.0.0
```

```
Router(config-router)#network 40.0.0.0
Router(config-router)#network 50.0.0.0
Router(config-router)#network 20.0.0.0
```

```
Router(config-router)#router rip
Router(config-router)#network 30.0.0.0
Router(config-router)#network 50.0.0.0
```

```
PC>ping 20.0.0.2

Pinging 20.0.0.2 with 32 bytes of data:

Reply from 20.0.0.2: bytes=32 time=2ms TTL=126
Reply from 20.0.0.2: bytes=32 time=3ms TTL=126
Reply from 20.0.0.2: bytes=32 time=2ms TTL=126
Reply from 20.0.0.2: bytes=32 time=2ms TTL=126

Ping statistics for 20.0.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 3ms, Average = 2ms
```