Department of ICT

Faculty of Technology

University of Ruhuna

Computer Networks – ICT1253 **Level 1 - Semester - 2**

Lab Sheet 11

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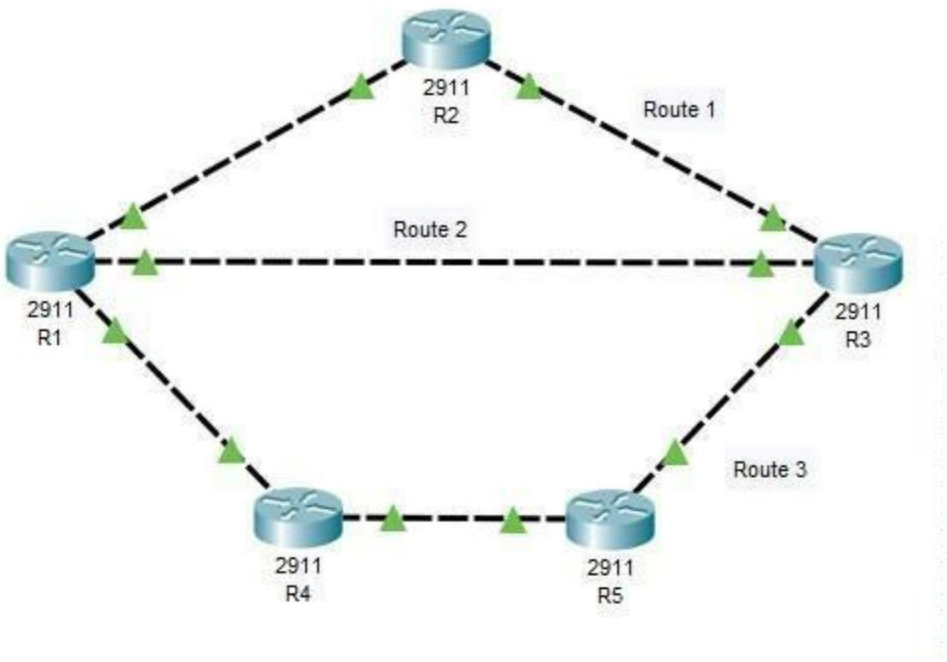
Goals:

Understand dynamic routing protocols (Part 1)

Exercise 1:

1. Read the document about Routing Information Protocol (RIP).
2. Consider following network segment.



3. The route from R1 to R3 which uses in RIP is route 2. Because it has the lowest hop count as one hop.

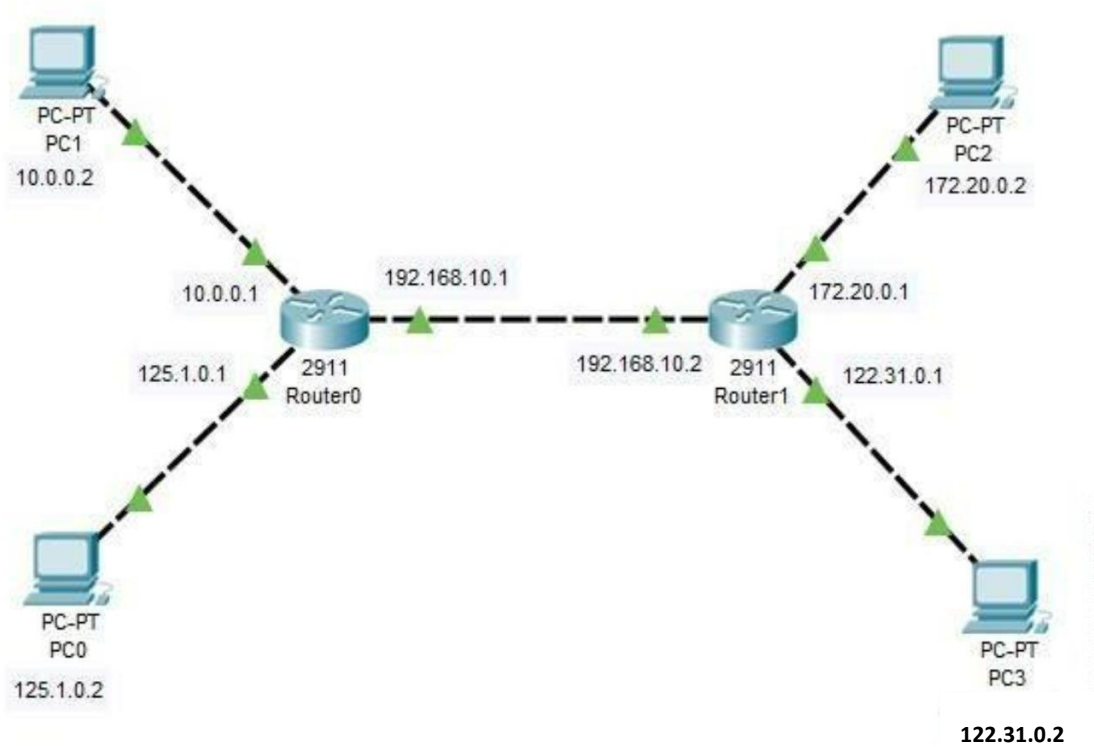
Route 1: R1 → R2 → R3: Hops 2

Route 2: R1 → R3: Hops 1

Route 3: R1 → R4 → R5 → R3: Hops 3

Exercise 2:

1. Open Cisco packet tracer.
2. Add devices to the workspace.



3. Connect those using proper cables.
4. Assign IP addresses to relevant PCs and routers.
5. RIPv1 configuration for Router 0.

```
Router(config)#router rip

Router(config-router)#network 10.0.0.0

Router(config-router)#network 125.0.0.0

Router(config-router)#network 192.168.10.0
```

6. RIPv1 configuration for Router 1.

```
Router(config)#router rip

Router(config-router)#network 122.0.0.0

Router(config-router)#network 172.20.0.0

Router(config-router)#network 192.168.10.0
```

7. Try these commands.

```
Router#show ip route

Router#show ip route rip

Router#debug ip rip

Router#undebug ip rip
```

8. Ping between PCs. Then save the workspace.
9. Remove all RIPv1 configurations from Router 0 and Router 1.
10. RIPv2 configuration for Router 0.

```
Router(config)#router rip

Router(config-router)#version 2

Router(config-router)#network 10.0.0.0

Router(config-router)#network 125.0.0.0

Router(config-router)#network 192.168.10.0

Router(config-router)#no auto-summary
```

11. RIPv2 configuration for Router 1.

```
Router(config)#router rip

Router(config-router)#version 2

Router(config-router)#network 122.0.0.0

Router(config-router)#network 172.20.0.0

Router(config-router)#network 192.168.10.0

Router(config-router)#no auto-summary
```

12. Ping between PCs. Then save the workspace.

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