Experiment No: 01

Name of the Experiment: To configure local area Network (wired).

Procedure:

Step-1: Start

Step-2: Open Cisco Packet Tracer.

Step-3:

(i) Take [end device]: PC0, PC1, Laptop0, Laptop2.

(ii) Take [Network device]: Switch and use connection wires to connect the devices (copper straight through).

(iii) First we setup a cisco packet tracer according with this figure-1.1.

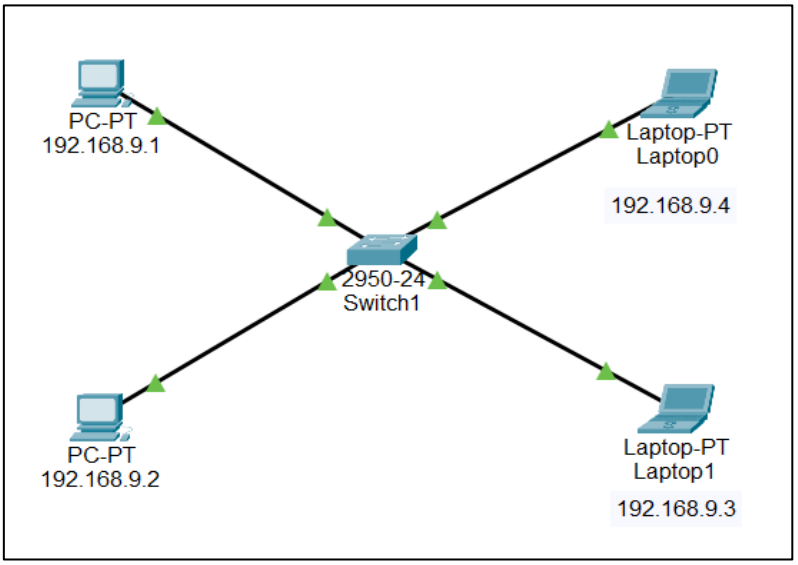

Figure-1.1: Setup Layout

Step-4: IP Configuration for PC-0, PC1, Laptop0, Laptop1**.**

Click PC0 » Desktop » IP Configuration, and so on.

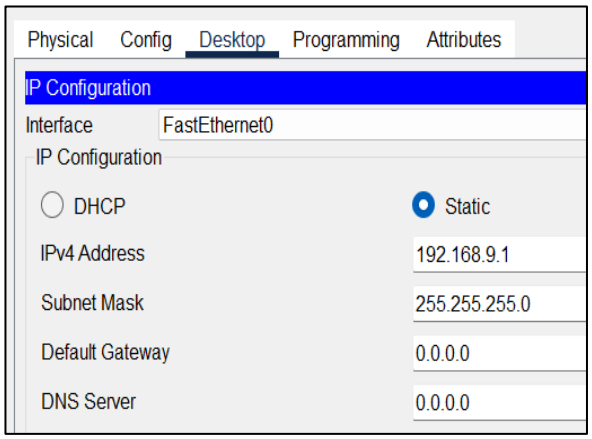

Figure-1.2: PC0 IP address and gateway setup.

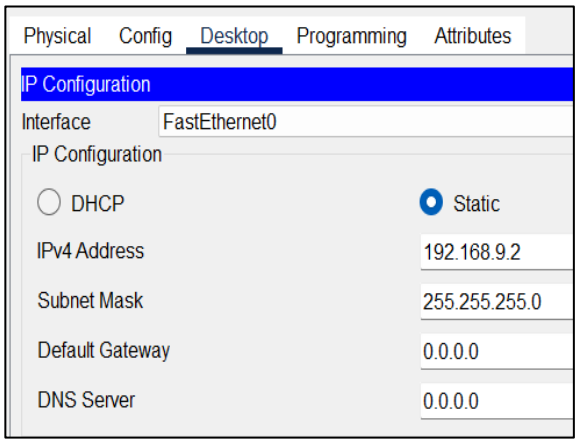

Figure-1.3: PC1 IP address and gateway setup.

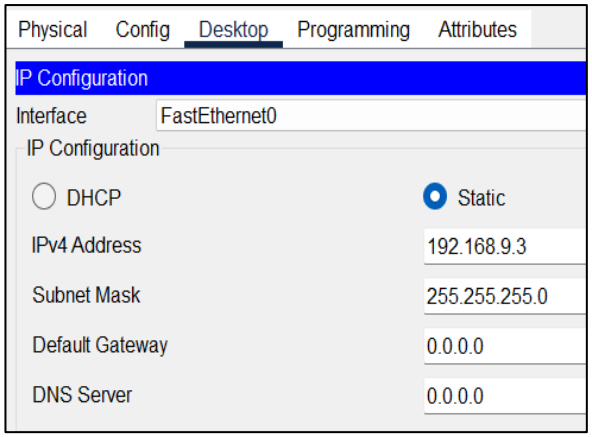

Figure-1.4: Laptop1 IP address and gateway setup.

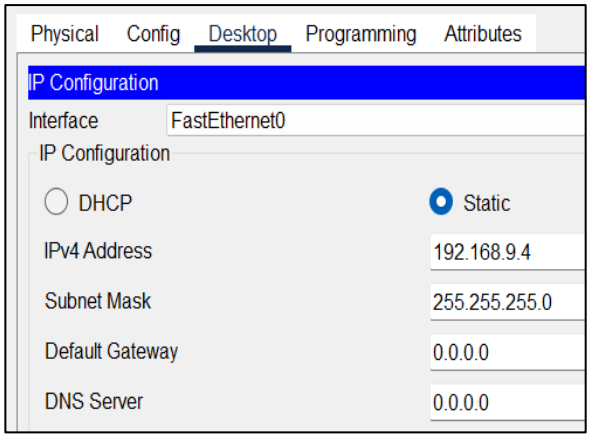

Figure-1.5: Laptop0 IP address and gateway setup.

Step-5: Open Command Prompt of PC0 and Sent Ping to Laptop1.

Output:

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.9.3

Pinging 192.168.9.3 with 32 bytes of data:

Reply from 192.168.9.3: bytes=32 time<1ms TTL=128
Reply from 192.168.9.3: bytes=32 time<1ms TTL=128
Reply from 192.168.9.3: bytes=32 time=1ms TTL=128
Reply from 192.168.9.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.9.3:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

Experiment No: 02

Name of the Experiment: To transfer packet through different network (static routing).

Procedure:

Step-1: Start
Step-2: Open Cisco Packet Tracer.
Step-3:

(i) Take [end device]: PC1, PC2, Laptop0, Laptop1.
(ii) Take [Network device]: Switch, router and use connection wires to connect the devices (copper straight through)
(iii) First we setup a cisco packet tracer according with this figure-2.1.

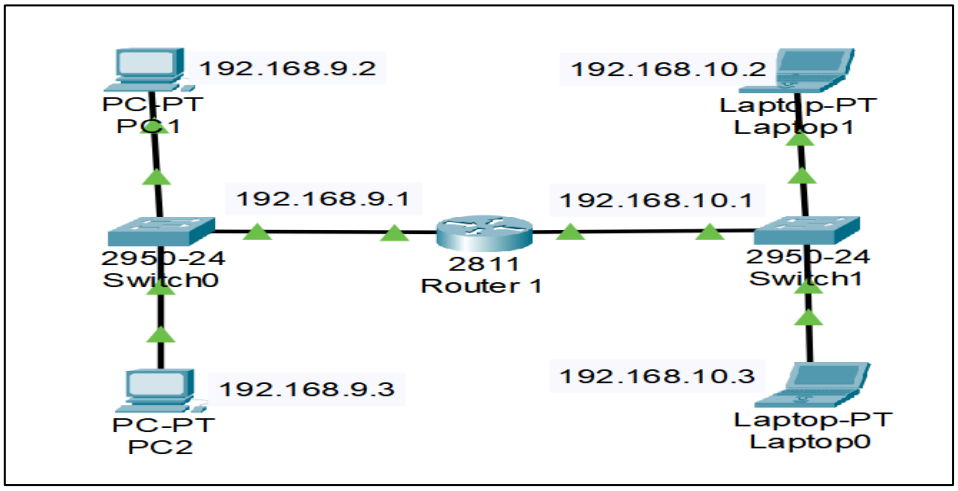

Figure-2.1: Setup Layout.

Step-4: IP Configuration for PC1 & PC2.

Click PC1 » Desktop » IP Configuration, and so on.

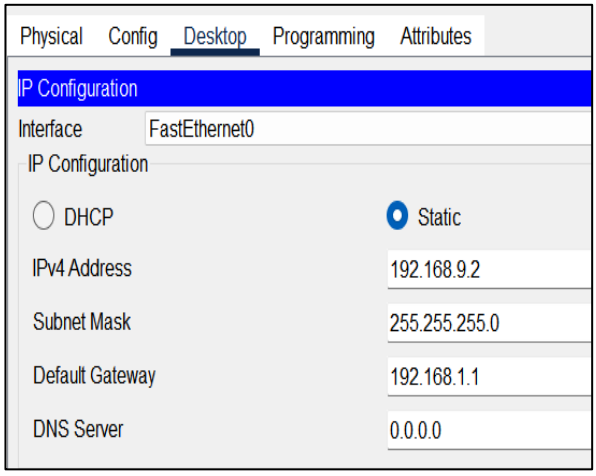

Figure-2.2: PC1 IP address and gateway setup.

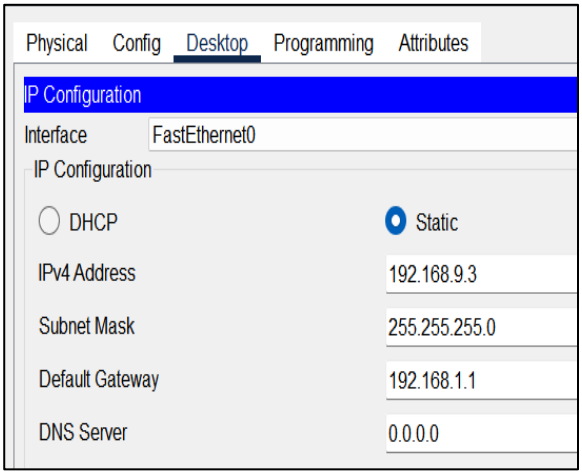

Figure-2.3: PC2 IP address and gateway setup.

Step-5: Router Configuration

Click Router>CLI>now write command in Configuration dialog.

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 192.165.9.1 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#ip address 192.165.10.1 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#exit
Router(config)#exit
```

Step-6: Open Command Prompt of PC1 and Sent Ping to PC2**.**

Output:

```
C:\>ping 192.168.9.3

Pinging 192.168.9.3 with 32 bytes of data:

Reply from 192.168.9.3: bytes=32 time<1ms TTL=128
Reply from 192.168.9.3: bytes=32 time=1ms TTL=128
Reply from 192.168.9.3: bytes=32 time=1ms TTL=128
Reply from 192.168.9.3: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.9.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

Experiment No: 03

Name of the Experiment: To configure dynamic IP routing through DHCP (Dynamic Host Configuration Protocol (DHCP).

Procedure:

Step-1: Start
Step-2: Open Cisco Packet Tracer.
Step-3:

(i) Take [end device]: PC1, PC2, Laptop1.
(ii) Take [Network device]: Switch, router and use connection wires to connect the devices (copper straight through)
(iii) First we setup a cisco packet tracer according with this figure-3.1.

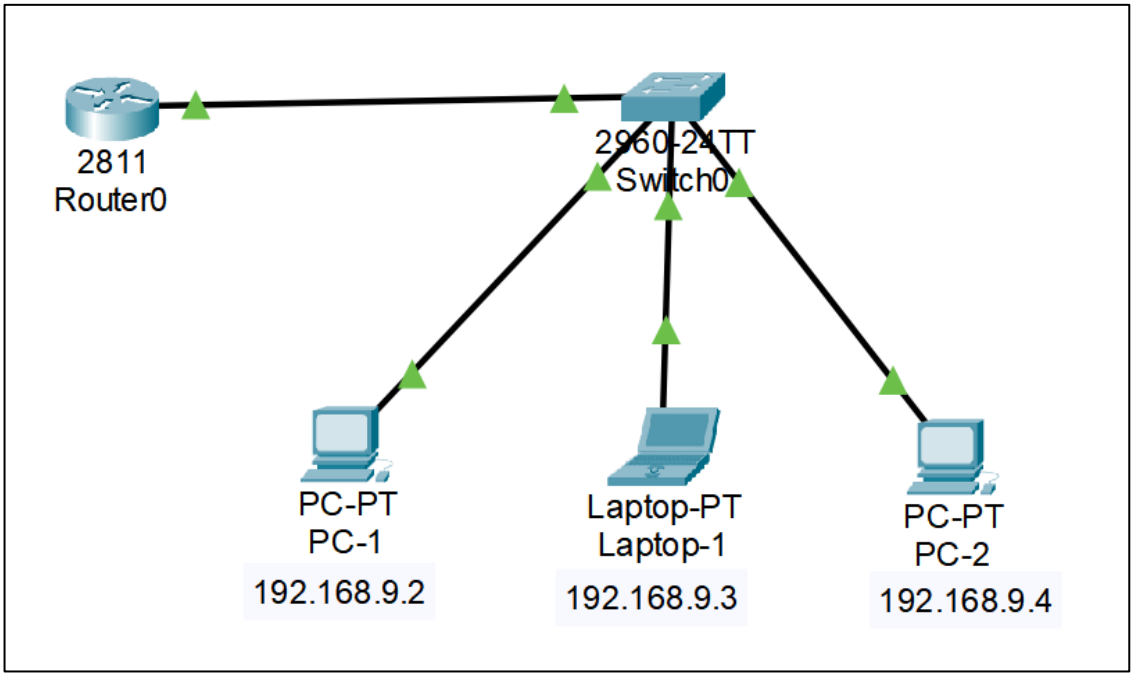

Figure-3.1: Setup Configuration**.**

Step-2: Router0 configuration -

Click Router1 » CLI » now write command in Configuration dialog.

CLI Procedure:

```
Continue with configuration dialog? [yes/no]: no
Press RETURN to get started!
Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
```

```
Router(config)#interface fastEthernet 0/0
Router(config-if)#ip address 192.168.9.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#ip dhcp pool rahatul
Router(dhcp-config)#network 192.168.9.0 255.255.255.0
Router(dhcp-config)#default-router 192.168.9.1
Router(dhcp-config)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#wr
Building configuration...
[OK]
Router#
```

Step-3: Open PC1 IP-Configuration and click DHCP. It automatically take IP address from DHCP server.

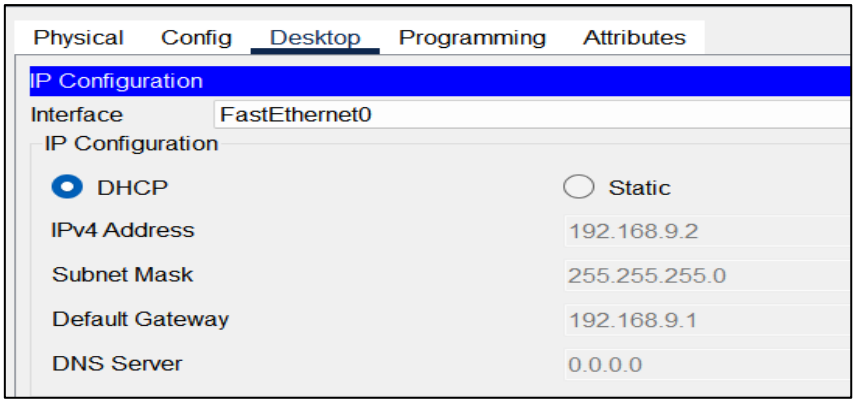

Figure-3.2: PC1 IP address and gateway setup.

The other PC's (Laptop1, PC2) also take IP address dynamically from DHCP server.

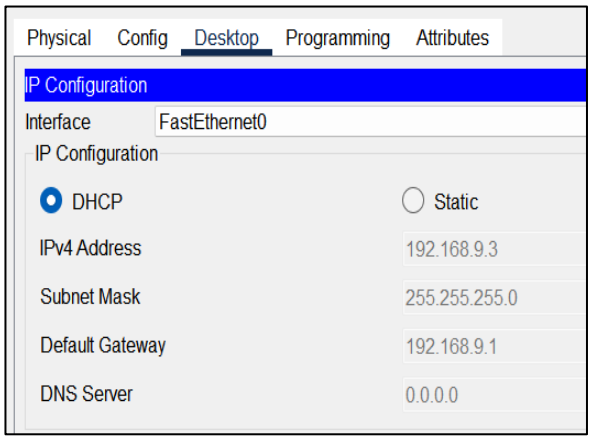

Figure-3.3: Laptop1 IP address and gateway setup.

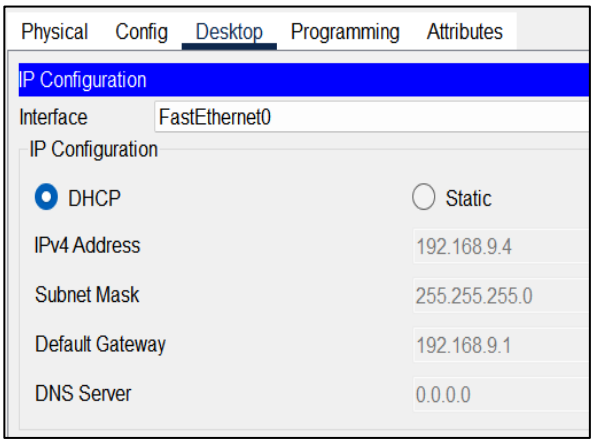

Figure-3.4: PC2 IP address and gateway setup.

Step-4: Open Command Prompt of PC0 and Sent Ping to PC1.

Output:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.9.2

Pinging 192.168.26.2 with 32 bytes of data:
Reply from 192.168.26.2: bytes=32 time=26ms TTL=128
Reply from 192.168.26.2: bytes=32 time<1ms TTL=128
Reply from 192.168.26.2: bytes=32 time=10ms TTL=128
Reply from 192.168.26.2: bytes=32 time=20ms TTL=128

Ping statistics for 192.168.9.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 26ms, Average = 14ms
```