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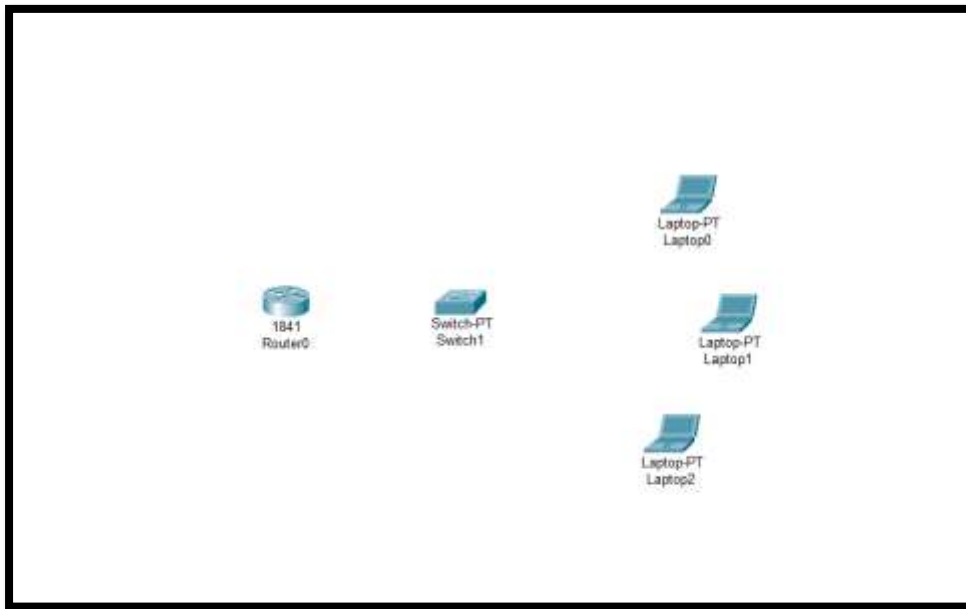
**Course: Computer Networking**

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**Lab task#2**

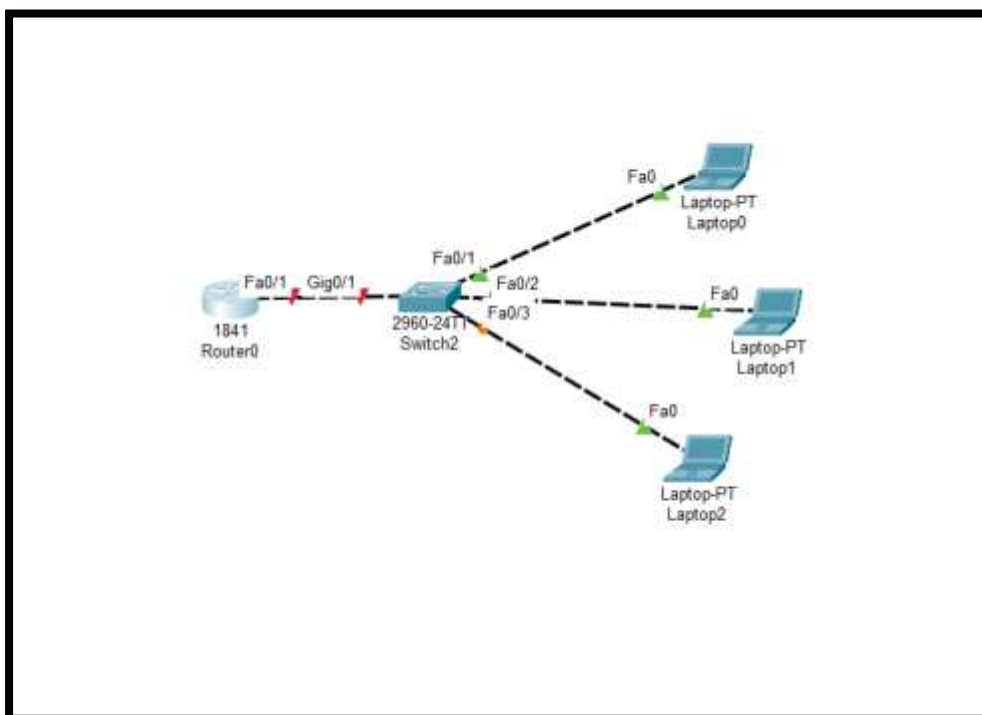
## Task-1

Drag & Drop All the END devices & Intermediary devices.



## Task-2

Connect these Devices with Copper Cross over cable.



## Task-3

Write down the cable name which is use to connect same devices and which port you use to connect devices.

**Cable Name for Connecting Similar Devices:** Straight-Through Ethernet Cable or Patch Cable.

**Port to Use for the Connection:** When connecting similar devices with a straight-through Ethernet cable, you should use the standard Ethernet (RJ-45) port on the devices. These ports are commonly located on the back or sides of the devices and have an RJ-45 connector interface. Plug one end of the cable into the Ethernet port of the first device and the other end into the Ethernet port of the second device.

## Task-4

Suppose you have two devices and they are connected with each other. How do you check the connectivity between them. Explain with working.

Solution:

### 1. Open a Command Prompt or Terminal:

On one of the devices (let's call it Device A), open a command prompt (for Windows) or terminal (for Unix-like systems).

### 2. Identify the Target Device:

You need to know the IP address or hostname of the other device (Device B) to which you want to check connectivity. You can obtain this information from Device B or from your network configuration.

### 3. Use the Ping Command:

In the command prompt or terminal, type the following command and replace "target-IP" with the IP address or hostname of Device B:

...

```
C:\>ping 192.166.1.1

Pinging 192.166.1.1 with 32 bytes of data:

Reply from 192.166.1.1: bytes=32 time<1ms TTL=128
Reply from 192.166.1.1: bytes=32 time=6ms TTL=128
Reply from 192.166.1.1: bytes=32 time<1ms TTL=128
Reply from 192.166.1.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.166.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 6ms, Average = 1ms
```

#### 4. Press Enter:

Press the Enter key. Device A will start sending ICMP echo requests to Device B.

#### 5. Observe the Results:

If there is connectivity between Device A and Device B, you will receive responses. Each response will include the following information:

- Round-trip time: The time it took for the packet to travel from Device A to Device B and back.
- TTL (Time to Live): The number of hops the packet can take before it times out.
- If Device B responds to the ICMP echo requests, it will acknowledge the receipt of each packet.

If there's a problem with connectivity, you may see "Request Timed Out" messages. This can happen for various reasons, including network configuration issues or firewall settings.

## Task-5

After establishing the connectivity between all the devices check that all devices must be Showing GREEN signal.

