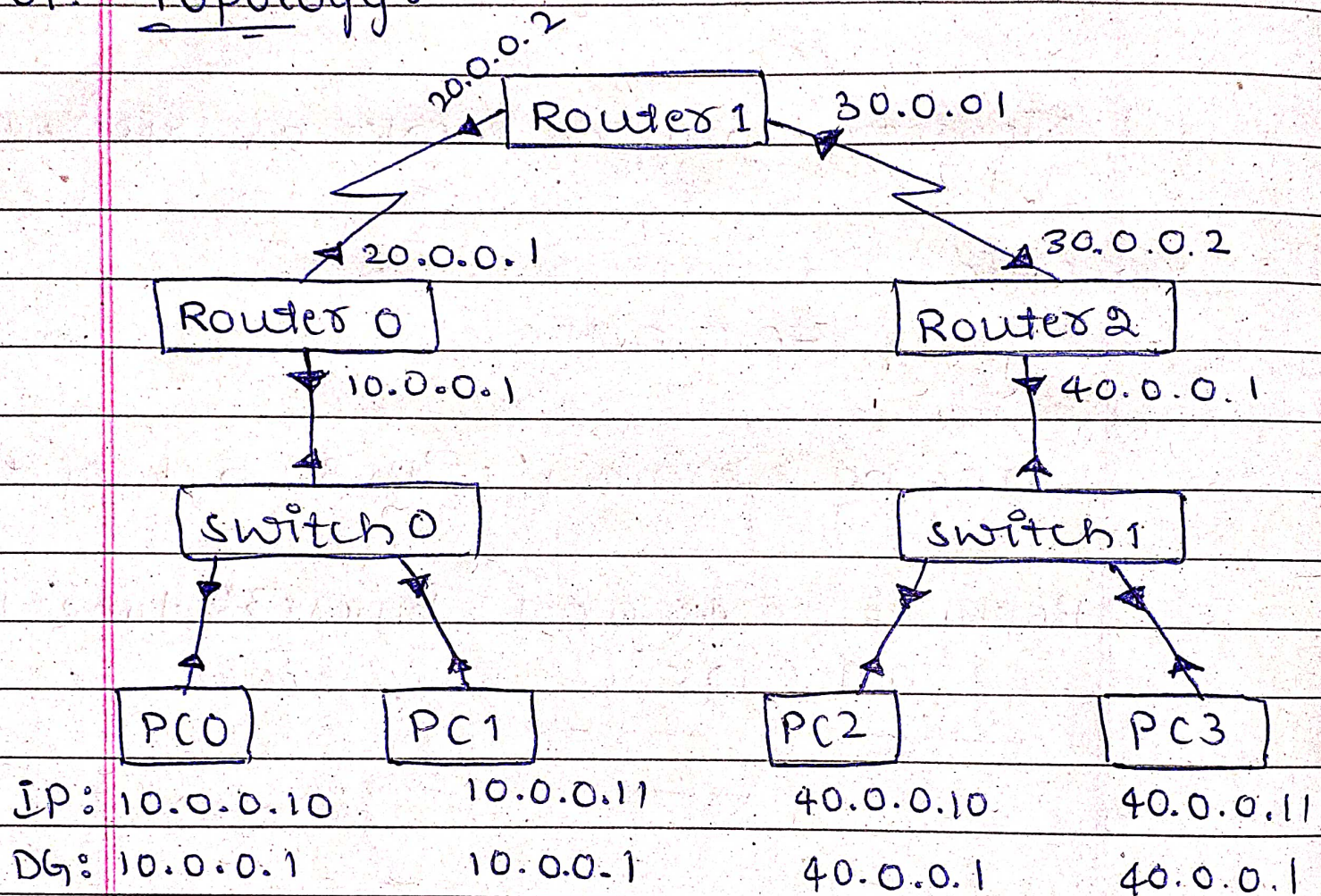


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Lab-04:

MD YASEEN AHMED
1BM19CS404

01. Topology:



Steps: 1 place 3 Routers & 2 switches & 4 pc's as shown in the topology above & connect them via the appropriate cables.

Observation:

- * Each router knows only about its immediate neighbours & is connected directly
- * In the above topology the Router1 is not directly interfaced with the 10.0.0.0 & 40.0.0.0 networks
- * So, we can add a Static Route to those networks via the Router0 & Router1. using the ip route command as,

```
ip route 10.0.0.0 255.0.0.0 20.0.0.1
```

```
ip route 40.0.0.0 255.0.0.0 30.0.0.2
```

- * Similarly, we will add the Static Route for the Router0 & Router2 in such a way that, if it receives a packet then it will transmit it to the next immediate interface

* CLI for the router0 :

```
ip route 0.0.0.0 0.0.0.0 20.0.0.2
```

* Similarly for router2 :

```
ip route 0.0.0.0 0.0.0.0 30.0.0.1
```

- Before interfacing i.e., adding the static route to the routers router0 & router2, if we ping PC2 from PC0 we get,

Destination host unreachable

- After interfacing :

```
> ping 40.0.0.10
```

pinging 40.0.0.10 with 32 bytes of data

Reply from 40.0.0.10 : bytes=32 time=18ms
TTL=255

ping statistics for 40.0.0.10

packets sent ≈ 4 , received ≈ 4 , lost ≈ 0 (0%)

Approx round trip time

Mn ≈ 2 ms, Max ≈ 20 ms, Avg ≈ 10 ms