IP Schema for Your Network: xxx. Roll_Number .yyy.zzz
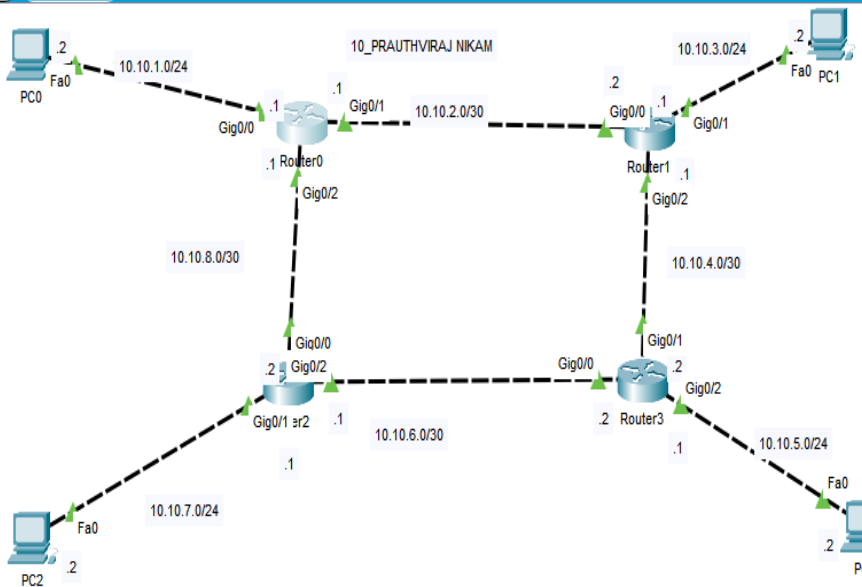
Example: If your roll No. ends with 25, then the IP you can use as follows.

Edit   Options   View   Tools   Extensions   Help

Logical   Physical   x: 396, y: 385

PC0
.2
Fa0
10.10.1.0/24
10_PRAUTHVIRAJ NIKAM
10.10.3.0/24
.2
Fa0   PC1

.1
Gig0/1
.1
Gig0/1   10.10.2.0/30
.2
Gig0/0   .1
Gig0/1

Gig0/0
.1 Router0   Router1   .1

Gig0/2   Gig0/2

10.10.8.0/30   10.10.4.0/30

Giq0/0   Gig0/1
.2   Gig0/2   Gig0/0   .2
Gig0/2

Gig0/1 er2   .1   .2 Router3   .1
10.10.6.0/30   10.10.5.0/24
.1   Fa0
Fa0
10.10.7.0/24
.2   PC
PC2
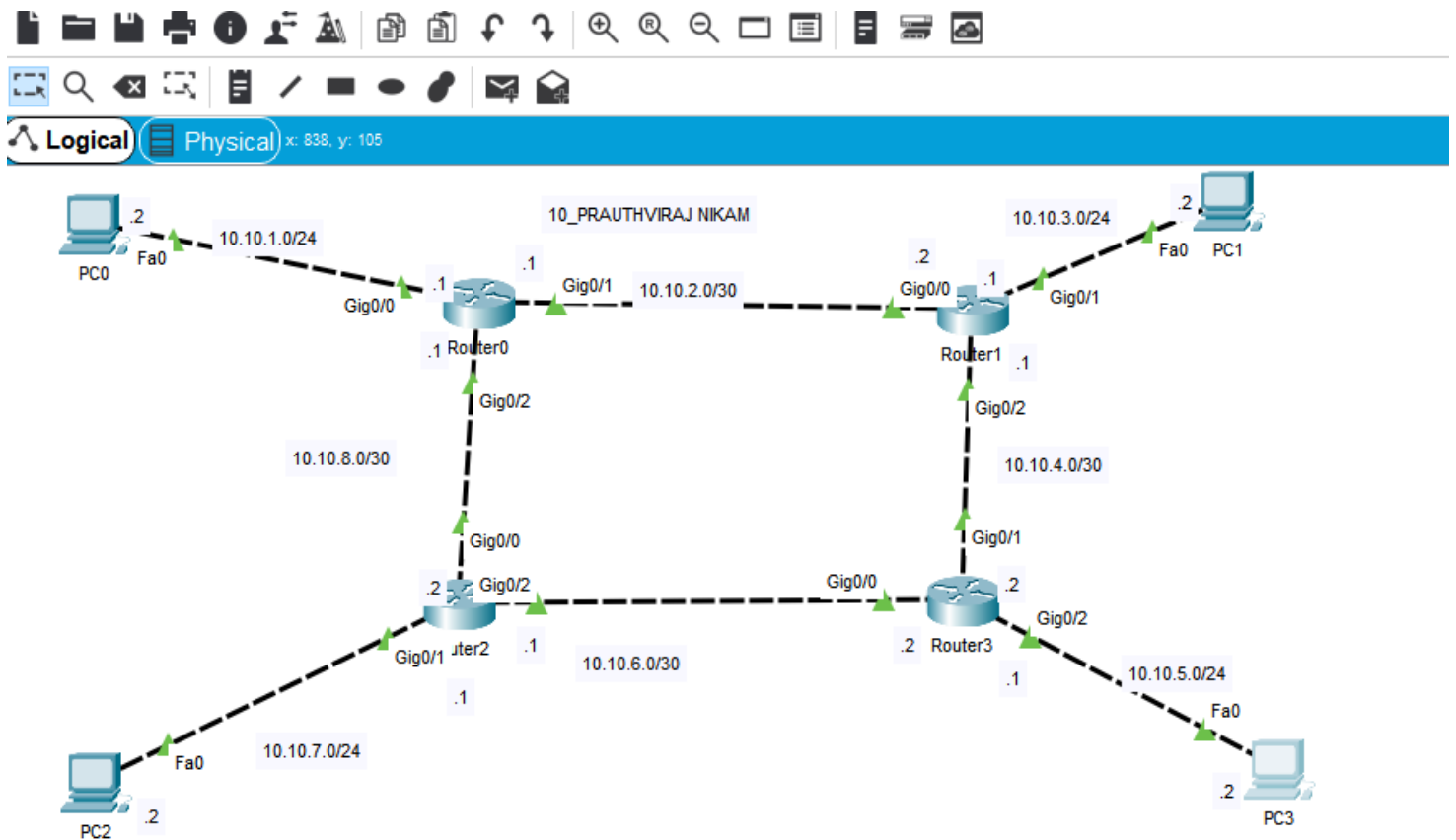
Router0

Physical   Config   **CLI**   Attributes
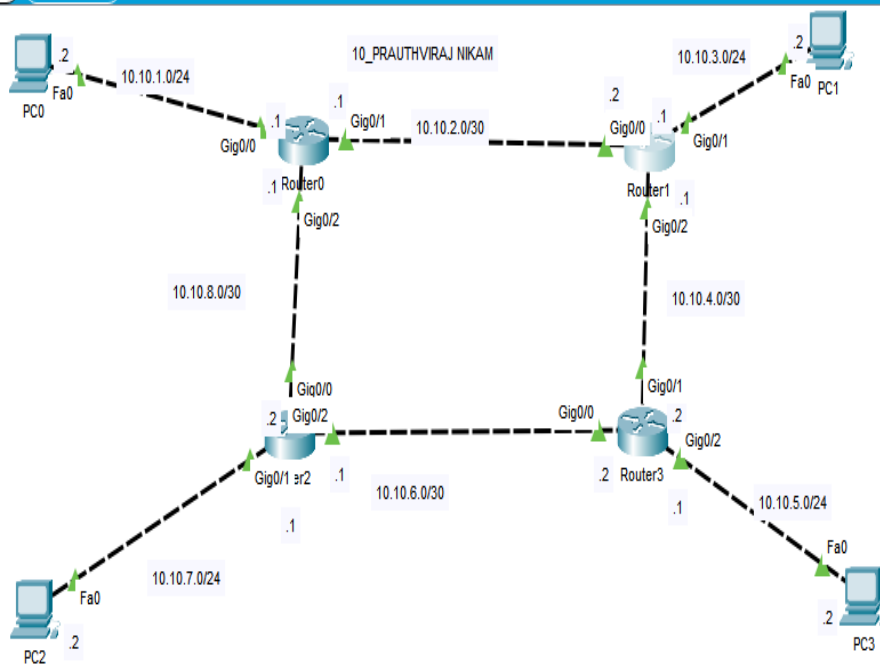
IOS Command Line Interface

```
R1(config)#router ospf 100
R1(config-router)#network 10.0.0.0 0.0.0.255 area 0
R1(config-router)#network 10.0.0.0 0.0.0.3 area 0
R1(config-router)#network 10.0.0.0 0.0.0.3 area 0
R1(config-router)#exit
R1(config)#exit
R1#
%SYS-5-CONFIG_I: Configured from console by console
show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B -
BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS
inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

     10.0.0.0/8 is variably subnetted, 10 subnets, 3 masks
C       10.10.1.0/24 is directly connected, GigabitEthernet0/0
L       10.10.1.1/32 is directly connected, GigabitEthernet0/0
C       10.10.2.0/30 is directly connected, GigabitEthernet0/1
L       10.10.2.1/32 is directly connected, GigabitEthernet0/1
S       10.10.3.0/24 [1/0] via 10.10.2.2
S       10.10.4.0/24 [1/0] via 10.10.2.2
S       10.10.4.0/30 [1/0] via 10.10.2.2
S       10.10.5.0/24 [1/0] via 10.10.2.2
C       10.10.8.0/30 is directly connected, GigabitEthernet0/2
L       10.10.8.1/32 is directly connected, GigabitEthernet0/2
```
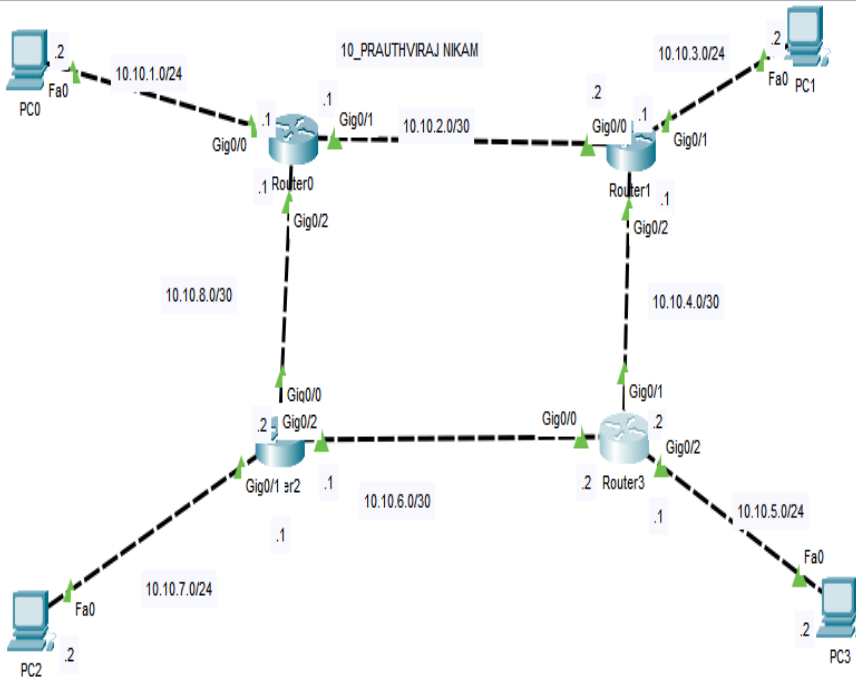
10_PRAUTHVIRAJ NIKAM

```
Router(config)#hostname R2
R2(config)#router ospf 200
R2(config-router)#network 10.0.0.0 0.0.0.255 area 0
R2(config-router)#network 10.0.0.0 0.0.0.3 area 0
R2(config-router)#network 10.0.0.0 0.0.0.3 area 0
R2(config-router)#exit
R2(config)#exit
R2#
%SYS-5-CONFIG_I: Configured from console by console
show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B -
BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS
inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

     10.0.0.0/8 is variably subnetted, 8 subnets, 3 masks
S       10.10.1.0/24 [1/0] via 10.10.2.1
C       10.10.2.0/30 is directly connected, GigabitEthernet0/0
L       10.10.2.2/32 is directly connected, GigabitEthernet0/0
C       10.10.3.0/24 is directly connected, GigabitEthernet0/1
L       10.10.3.1/32 is directly connected, GigabitEthernet0/1
C       10.10.4.0/30 is directly connected, GigabitEthernet0/2
L       10.10.4.1/32 is directly connected, GigabitEthernet0/2
S       10.10.5.0/24 [1/0] via 10.10.4.2
```

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Router0 — PC0 (10.10.1.0/24, .2 Fa0)
Gig0/0 .1 / Gig0/1 .1 / Gig0/2 .1 Router0
10.10.2.0/30
10.10.8.0/30

Router1 — PC1 (10.10.3.0/24, .2 Fa0)
Gig0/0 .2 / Gig0/1 .1 / Gig0/2 .1
10.10.4.0/30

Router2 — PC2 (10.10.7.0/24, Fa0 .2)
Giq0/0 .2 / Gig0/2 / Gig0/1 er2 .1
10.10.6.0/30

Router3 — PC3 (10.10.5.0/24, Fa0, .2)
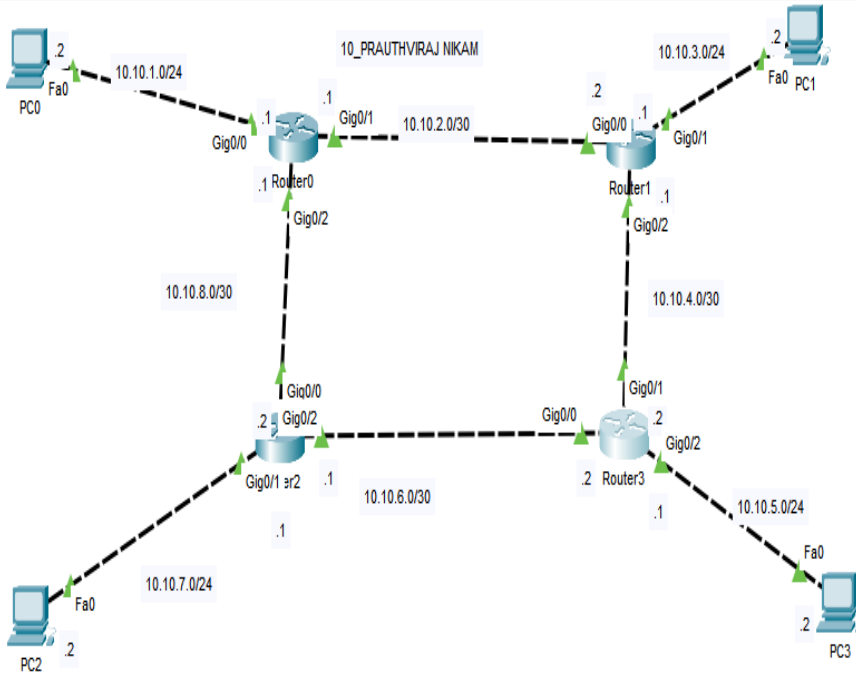Gig0/1 / Gig0/0 .2 / Gig0/2 .2

Router3 — IOS Command Line Interface

```
R3(config)#router ospf 300
R3(config-router)#network 10.0.0.0 0.0.0.255 area 0
R3(config-router)#network 10.0.0.0 0.0.0.3 area 0
R3(config-router)#network 10.0.0.0 0.0.0.3 area 0
R3(config-router)#exit
R3(config)#exit
R3#
%SYS-5-CONFIG_I: Configured from console by console
show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B -
BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS
inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

     10.0.0.0/8 is variably subnetted, 9 subnets, 3 masks
S       10.10.1.0/24 [1/0] via 10.10.4.1
S       10.10.2.0/30 [1/0] via 10.10.4.1
S       10.10.3.0/24 [1/0] via 10.10.4.1
C       10.10.4.0/30 is directly connected, GigabitEthernet0/1
L       10.10.4.2/32 is directly connected, GigabitEthernet0/1
C       10.10.5.0/24 is directly connected, GigabitEthernet0/2
L       10.10.5.1/32 is directly connected, GigabitEthernet0/2
C       10.10.6.0/30 is directly connected, GigabitEthernet0/0
L       10.10.6.2/32 is directly connected, GigabitEthernet0/0
```

Network topology diagram (Logical/Physical view) showing routers Router0, Router1, Router2, Router3 connected to PC0, PC1, PC2, PC3.

10_PRAUTHVIRAJ NIKAM

PC0 — .2 Fa0 — 10.10.1.0/24 — .1 Gig0/0 Router0 .1 Gig0/1 — 10.10.2.0/30 — Gig0/0 .2 Router1 .1 Gig0/1 — 10.10.3.0/24 — .2 Fa0 PC1

.1 Router0 — Gig0/2 — 10.10.8.0/30 — Gig0/0 Router1 .1 Gig0/2 — 10.10.4.0/30

Gig0/0 .2 Gig0/2 Router2 — Gig0/0 Router3 .2 Gig0/2 Gig0/1

Gig0/1 er2 .1 — 10.10.6.0/30 — .2 Router3 .1

PC2 .2 Fa0 — 10.10.7.0/24 — .1
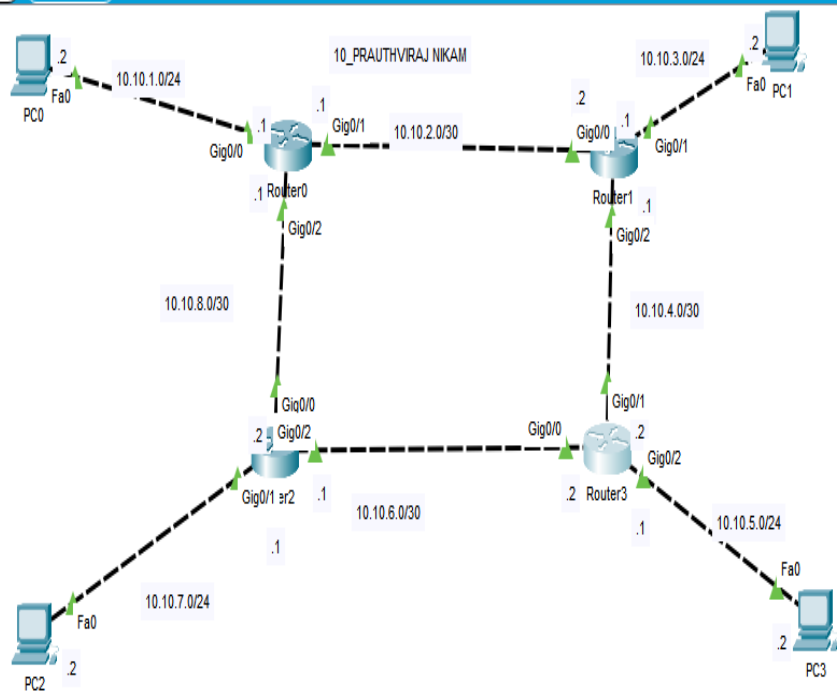
10.10.5.0/24 — .1 Fa0 .2 PC3

Router3 — IOS Command Line Interface (CLI tab)

```
R3(config)#router ospf 300
R3(config-router)#network 10.0.0.0 0.0.0.255 area 0
R3(config-router)#network 10.0.0.0 0.0.0.3 area 0
R3(config-router)#network 10.0.0.0 0.0.0.3 area 0
R3(config-router)#exit
R3(config)#exit
R3#
%SYS-5-CONFIG_I: Configured from console by console
show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B -
BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS
inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

     10.0.0.0/8 is variably subnetted, 9 subnets, 3 masks
S       10.10.1.0/24 [1/0] via 10.10.4.1
S       10.10.2.0/30 [1/0] via 10.10.4.1
S       10.10.3.0/24 [1/0] via 10.10.4.1
C       10.10.4.0/30 is directly connected, GigabitEthernet0/1
L       10.10.4.2/32 is directly connected, GigabitEthernet0/1
C       10.10.5.0/24 is directly connected, GigabitEthernet0/2
L       10.10.5.1/32 is directly connected, GigabitEthernet0/2
C       10.10.6.0/30 is directly connected, GigabitEthernet0/0
L       10.10.6.2/32 is directly connected, GigabitEthernet0/0
```

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10.10.1.0/24   10.10.3.0/24

.2 Fa0 PC0

.1 Gig0/1   10.10.2.0/30   Gig0/0 .1 Gig0/1

Gig0/0 .1 Router0   Router1 .1

Gig0/2 .1   Gig0/2

10.10.8.0/30   10.10.4.0/30

.2 Fa0 PC1

Giq0/0   Gig0/1

.2 Gig0/2   Gig0/0 .2

Gig0/1 er2 .1   .2 Router3   Gig0/2 .1

10.10.6.0/30   .1   10.10.5.0/24

.1

10.10.7.0/24   Fa0

Fa0   .2 PC2   .2 PC3

PC3

Physical   Config   Desktop   Programming   Attributes

Command Prompt

```
Pinging 10.10.3.2 with 32 bytes of data:

Request timed out.
Reply from 10.10.3.2: bytes=32 time<1ms TTL=126
Reply from 10.10.3.2: bytes=32 time<1ms TTL=126
Reply from 10.10.3.2: bytes=32 time<1ms TTL=126

Ping statistics for 10.10.3.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 10.10.1.2

Pinging 10.10.1.2 with 32 bytes of data:

Reply from 10.10.1.2: bytes=32 time=1ms TTL=125
Reply from 10.10.1.2: bytes=32 time=11ms TTL=125
Reply from 10.10.1.2: bytes=32 time=12ms TTL=125
Reply from 10.10.1.2: bytes=32 time=13ms TTL=125

Ping statistics for 10.10.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 13ms, Average = 9ms

C:\>
```
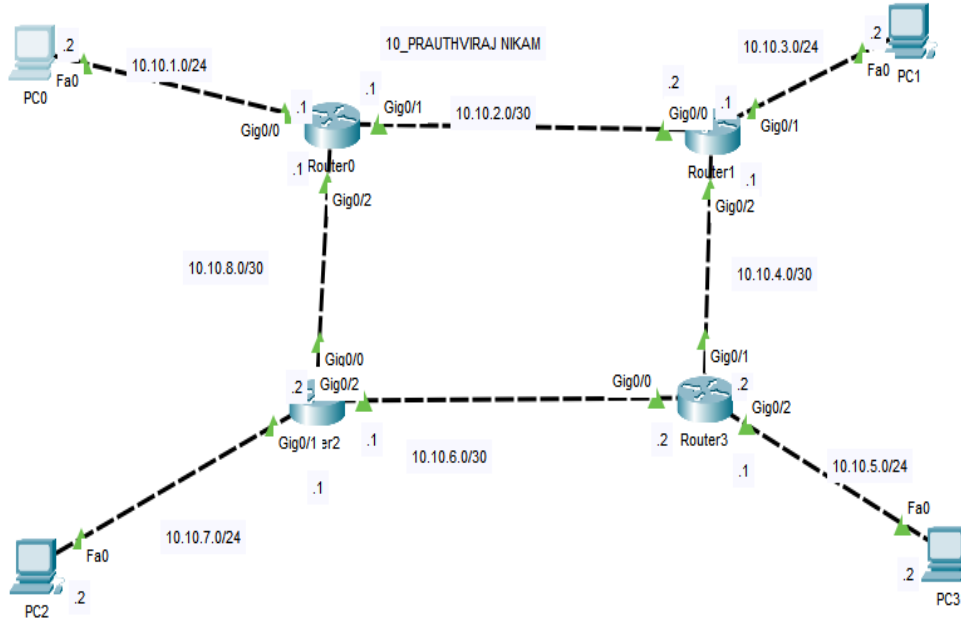
Logical   Physical   x: 446, y: 393

10_PRAUTHVIRAJ NIKAM

.2
PC0
Fa0
.2
10.10.1.0/24
.1
Gig0/0
.1
Gig0/1
.1 Router0
10.10.2.0/30
Gig0/2
.1

10.10.8.0/30

.2
Gig0/0
.2
Gig0/2
.2 Gig0/2
er2
Gig0/1
.1
10.10.6.0/30
.1
.1
10.10.7.0/24
PC2
Fa0
.2

10.10.3.0/24
.2
Fa0 PC1
.2
Gig0/0
.1
Gig0/1
Router1
.1
Gig0/2
10.10.4.0/30

Gig0/1
.2
Router3
Gig0/2
.2   .2
.1
10.10.5.0/24
Fa0
.2
PC3

PC0

Physical   Config   **Desktop**   Programming   Attributes

Command Prompt

```
C:\>ping 10.10.5.2

Pinging 10.10.5.2 with 32 bytes of data:

Reply from 10.10.5.2: bytes=32 time=1ms TTL=125
Reply from 10.10.5.2: bytes=32 time=12ms TTL=125
Reply from 10.10.5.2: bytes=32 time=6ms TTL=125
Reply from 10.10.5.2: bytes=32 time=11ms TTL=125

Ping statistics for 10.10.5.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 12ms, Average = 7ms

C:\>ping 10.10.7.2

Pinging 10.10.7.2 with 32 bytes of data:

Reply from 10.10.1.1: Destination host unreachable.
Reply from 10.10.1.1: Destination host unreachable.
Reply from 10.10.1.1: Destination host unreachable.
Reply from 10.10.1.1: Destination host unreachable.

Ping statistics for 10.10.7.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>
```