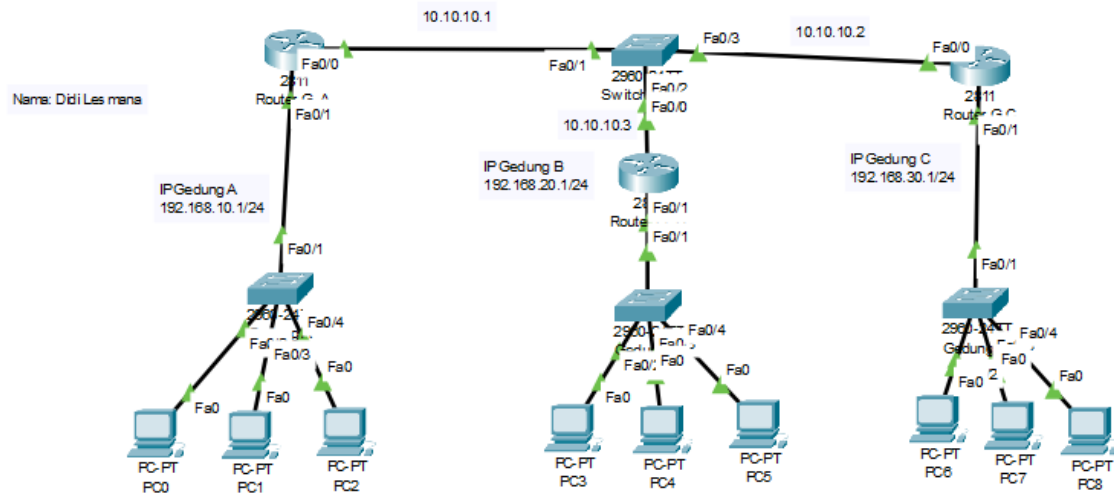**Soal Bonus (15 poin): Boleh dikerjakan dan boleh tidak dikerjakan (untuk perbaikan jika nilai kurang maksimal)**

Topology

Konfigurasi Router Gedung A

Menambahkan IP Address Untuk PC

```
Router>
Router>en
Router#conf t
Enter configuration commands, one per line.  End with CNTL,
Router(config)#int fa0/1
Router(config-if)#ip add
Router(config-if)#ip address 192.168.10.0 255.255.255.0
Bad mask /24 for address 192.168.10.0
Router(config-if)#ip address 192.168.10.1 255.255.255.0
Router(config-if)#no sh
```

Menambahkan IP Address Untuk Switch Antar Gedung

```
Router(config)#int fa0/0
Router(config-if)#ip ad
Router(config-if)#ip address 10.10.10.1 255.255.255.0
Router(config-if)#no sh
```

Konfigurasi Routing OSPF

```
Router(config)#router ospf 1
Router(config-router)#network 192.168.10.0 0.0.0.255 area 0
Router(config-router)#network 192.168.20.0 0.0.0.255 area 0
Router(config-router)#network 192.168.30.0 0.0.0.255 area 0
Router(config-router)#no sh
                       ^
% Invalid input detected at '^' marker.

Router(config-router)#ex
Router(config)#
Router(config)#router ospf 1
Router(config-router)#network 10.10.10.0 0.0.0.255 area 0
Router(config-router)#exit
```

Konfigurasi Router Gedung B

Menambahkan IP Address Untuk PC

```
Router(config)#int fa0/1
Router(config-if)#ip address 192.168.20.1 255.255.255.0
Router(config-if)#no sh
```

Menambahkan IP Address Untuk Switch Antar Gedung

```
Router(config-if)#
Router(config-if)#int fa0/0
Router(config-if)#ip address 10.10.10.3 255.255.255.0
Router(config-if)#no sh
```

Konfigurasi Routing OSPF

```
Router(config)#router ospf 1
Router(config-router)#network 192.168.10.0 0.0.0.255 area 0
Router(config-router)#network 192.168.20.0 0.0.0.255 area 0
Router(config-router)#network 192.168.30.0 0.0.0.255 area 0
Router(config-router)#network 10.10.10.0 0.0.0.255 area 0
Router(config-router)#exit
```

Konfigurasi Router Gedung C

Menambahkan IP Address Untuk PC

```
Router(config-if)#
Router(config-if)#int fa0/1
Router(config-if)#ip address 192.168.30.1 255.255.255.0
Router(config-if)#
Router(config-if)#no sh
```

Menambahkan IP Address Untuk Switch Antar Gedung

```
Router(config)#int fa0/0
Router(config-if)#ip address 10.10.10.2 255.255.255.0
Router(config-if)#no sh
```

Konfigurasi Routing OSPF

```
Router(config)#router ospf 1
Router(config-router)#network 192.168.10.0 0.0.0.255 area 0
Router(config-router)#network 192.168.20.0 0.0.0.255 area 0
Router(config-router)#network 192.168.30.0 0.0.0.255 area 0
Router(config-router)#network 10.10.10.0 0.0.0.255 area 0
Router(config-router)#exit
Router(config)#
00:21:12: %OSPF-5-ADJCHG: Process 1, Nbr 192.168.20.1 on FastEthernet0/0 from LOADING to
FULL, Loading Done

00:21:12: %OSPF-5-ADJCHG: Process 1, Nbr 192.168.10.1 on FastEthernet0/0 from LOADING to
FULL, Loading Done
```

Testing Ping PC Antar Gedung

PC-1A -> PC 1B

```
C:\>ipconfig

FastEthernet0 Connection:(default port)

   Connection-specific DNS Suffix..:
   Link-local IPv6 Address.........: FE80::200:CFF:FEDC:E614
   IPv6 Address....................: ::
   IPv4 Address....................: 192.168.10.2
   Subnet Mask.....................: 255.255.255.0
   Default Gateway.................: ::
                                     192.168.10.1

Bluetooth Connection:

   Connection-specific DNS Suffix..:
   Link-local IPv6 Address.........: ::
   IPv6 Address....................: ::
   IPv4 Address....................: 0.0.0.0
   Subnet Mask.....................: 0.0.0.0
   Default Gateway.................: ::
                                     0.0.0.0

C:\>ping 192.168.20.2

Pinging 192.168.20.2 with 32 bytes of data:

Request timed out.
Reply from 192.168.20.2: bytes=32 time=13ms TTL=126
Reply from 192.168.20.2: bytes=32 time=11ms TTL=126
Reply from 192.168.20.2: bytes=32 time=11ms TTL=126

Ping statistics for 192.168.20.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 11ms, Maximum = 13ms, Average = 11ms

C:\>
```

PC-1A -> PC 1C

```
C:\>ping 192.168.30.2

Pinging 192.168.30.2 with 32 bytes of data:

Request timed out.
Reply from 192.168.30.2: bytes=32 time=12ms TTL=126
Reply from 192.168.30.2: bytes=32 time=11ms TTL=126
Reply from 192.168.30.2: bytes=32 time=11ms TTL=126

Ping statistics for 192.168.30.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 11ms, Maximum = 12ms, Average = 11ms

C:\>
```

PC-1B -> PC-1A

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

FastEthernet0 Connection:(default port)

   Connection-specific DNS Suffix..:
   Link-local IPv6 Address.........: FE80::2E0:F7FF:FE67:2885
   IPv6 Address....................: ::
   IPv4 Address....................: 192.168.20.2
   Subnet Mask.....................: 255.255.255.0
   Default Gateway.................: ::
                                     192.168.20.1

Bluetooth Connection:

   Connection-specific DNS Suffix..:
   Link-local IPv6 Address.........: ::
   IPv6 Address....................: ::
   IPv4 Address....................: 0.0.0.0
   Subnet Mask.....................: 0.0.0.0
   Default Gateway.................: ::
                                     0.0.0.0

C:\>ping 192.168.10.2

Pinging 192.168.10.2 with 32 bytes of data:

Reply from 192.168.10.2: bytes=32 time<1ms TTL=126
Reply from 192.168.10.2: bytes=32 time=13ms TTL=126
Reply from 192.168.10.2: bytes=32 time=11ms TTL=126
Reply from 192.168.10.2: bytes=32 time=11ms TTL=126

Ping statistics for 192.168.10.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 13ms, Average = 8ms
```

PC-1B -> PC-1C

```
C:\>ping 192.168.30.2

Pinging 192.168.30.2 with 32 bytes of data:

Reply from 192.168.30.2: bytes=32 time<1ms TTL=126
Reply from 192.168.30.2: bytes=32 time=12ms TTL=126
Reply from 192.168.30.2: bytes=32 time<1ms TTL=126
Reply from 192.168.30.2: bytes=32 time<1ms TTL=126

Ping statistics for 192.168.30.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 12ms, Average = 3ms

C:\>
```

PC-1C -> PC-1A

```
C:\>ipconfig

FastEthernet0 Connection:(default port)

   Connection-specific DNS Suffix..:
   Link-local IPv6 Address.........: FE80::290:2BFF:FE0A:489A
   IPv6 Address....................: ::
   IPv4 Address....................: 192.168.30.2
   Subnet Mask.....................: 255.255.255.0
   Default Gateway.................: ::
                                     192.168.30.1

Bluetooth Connection:

   Connection-specific DNS Suffix..:
   Link-local IPv6 Address.........: ::
   IPv6 Address....................: ::
   IPv4 Address....................: 0.0.0.0
   Subnet Mask.....................: 0.0.0.0
   Default Gateway.................: ::
                                     0.0.0.0

C:\>ping 192.168.10.2

Pinging 192.168.10.2 with 32 bytes of data:

Reply from 192.168.10.2: bytes=32 time=11ms TTL=126
Reply from 192.168.10.2: bytes=32 time=11ms TTL=126
Reply from 192.168.10.2: bytes=32 time=12ms TTL=126
Reply from 192.168.10.2: bytes=32 time=16ms TTL=126

Ping statistics for 192.168.10.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 11ms, Maximum = 16ms, Average = 12ms
```

PC-1C->PC-1B

```
C:\>ping 192.168.20.2

Pinging 192.168.20.2 with 32 bytes of data:

Reply from 192.168.20.2: bytes=32 time<1ms TTL=126
Reply from 192.168.20.2: bytes=32 time=12ms TTL=126
Reply from 192.168.20.2: bytes=32 time=1ms TTL=126
Reply from 192.168.20.2: bytes=32 time=12ms TTL=126

Ping statistics for 192.168.20.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 12ms, Average = 6ms
```