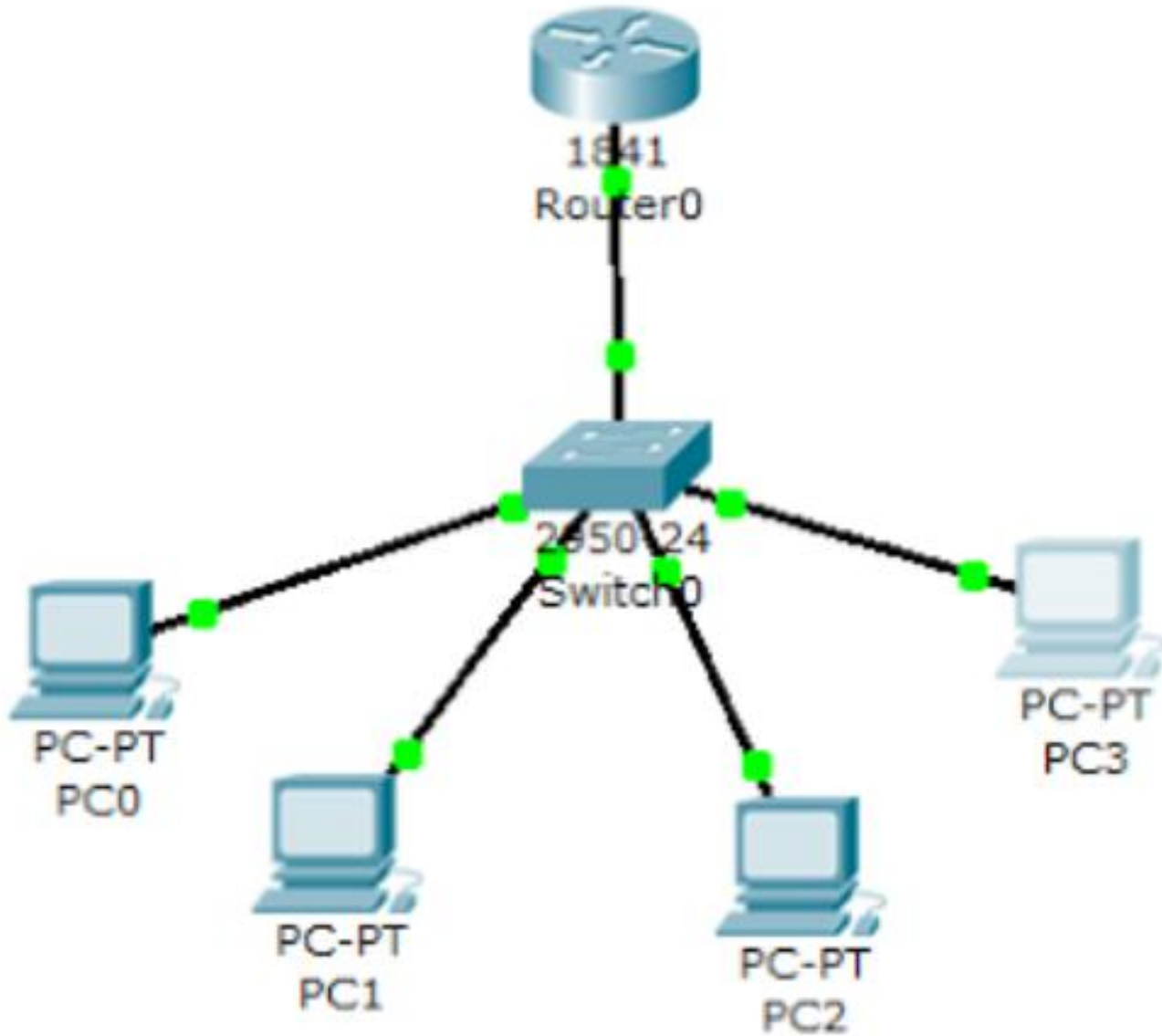
Konfigurasi VLAN menggunakan Switch dan Router pada Packet Tracer

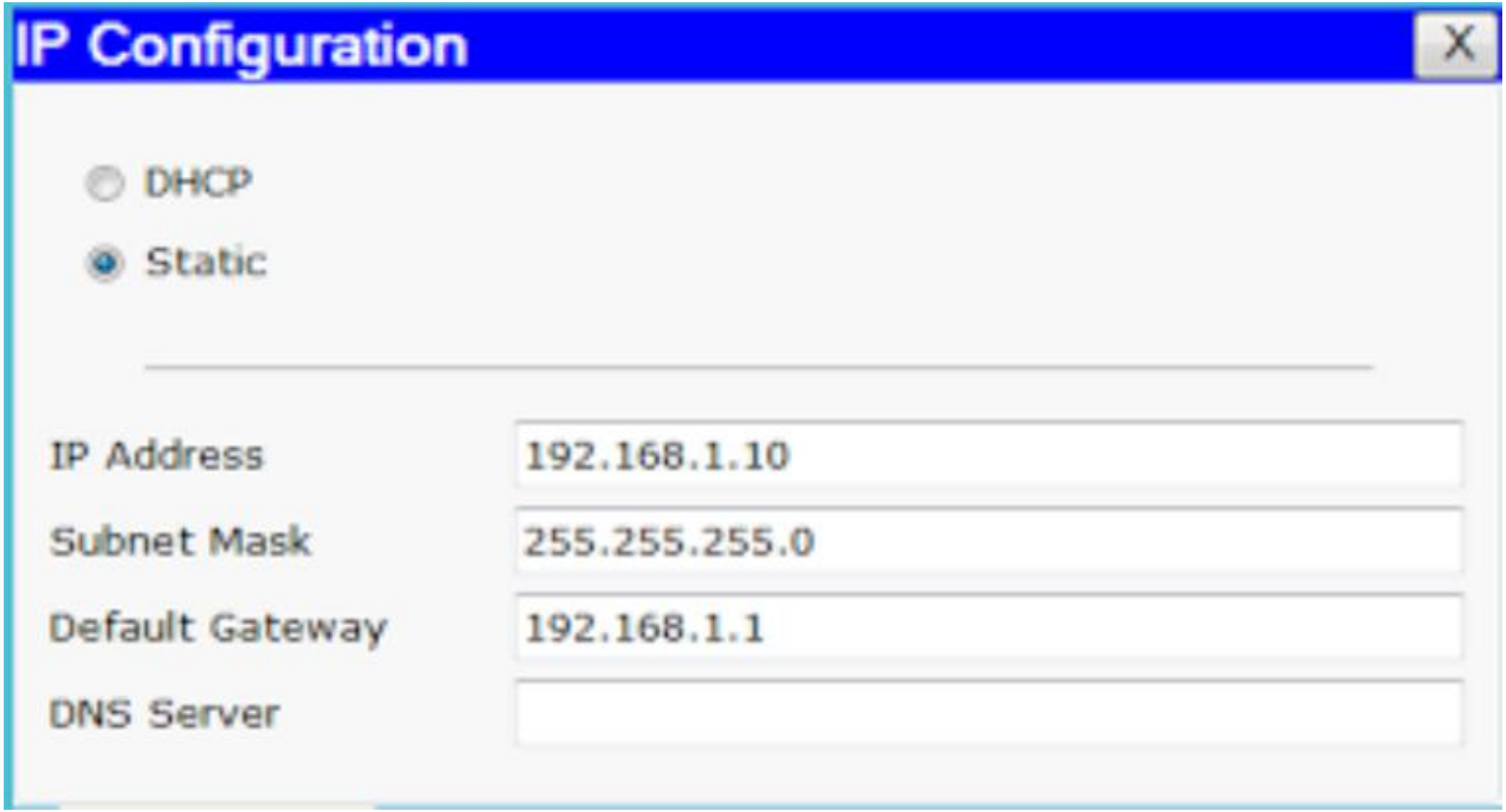

1841
Router0
2950-24
Switch0
PC-PT
PC0
PC-PT
PC1
PC-PT
PC2
PC-PT
PC3

- Masuk ke aplikasi Paket Tracer.
- Ikuti langkah -langkah berikut ini!

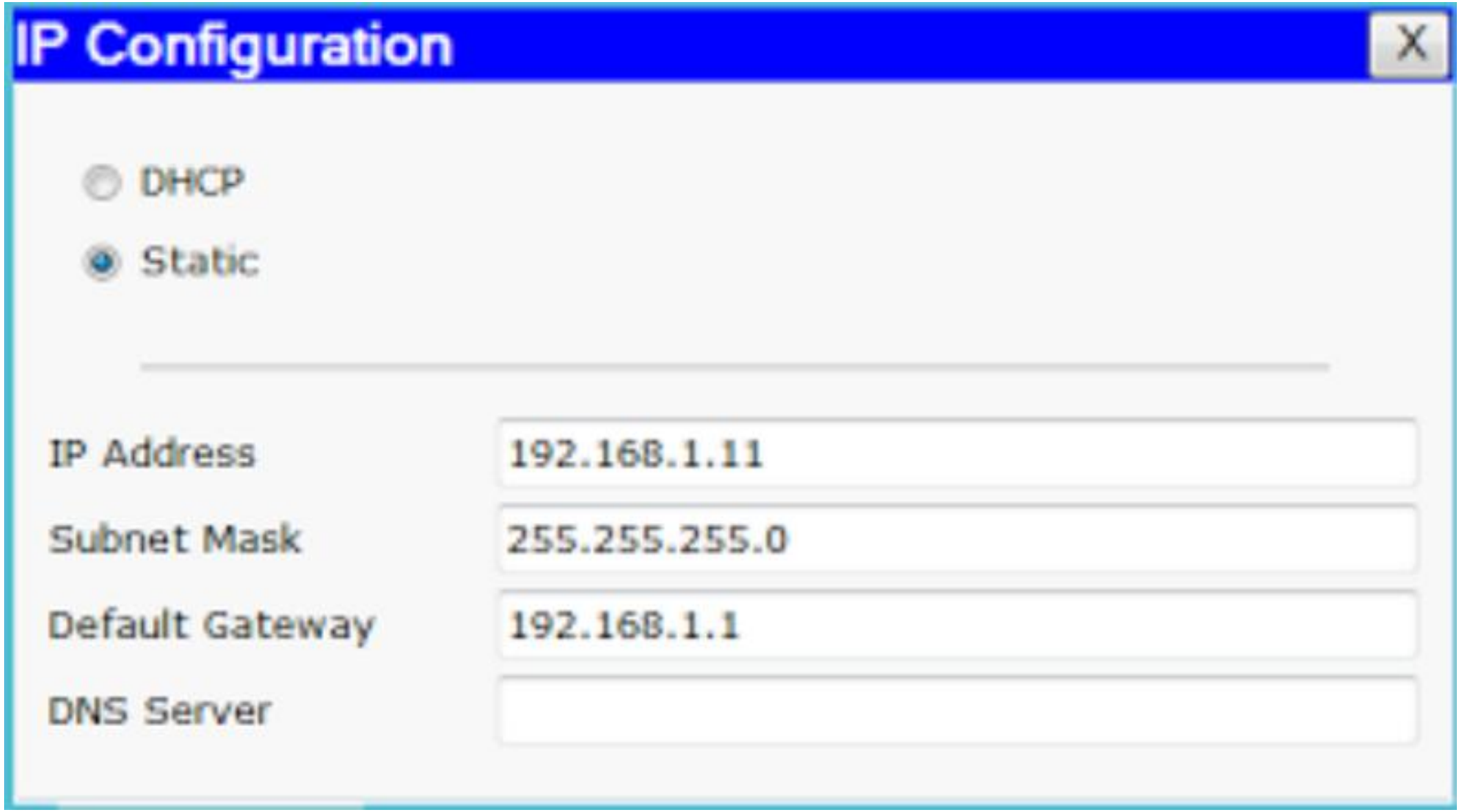
- Konfigurasi IP Address

No	PC	IP Address	Port	ID VLAN
1	PC0	192.168.1.10	Fa 0/2	VLAN 10
2	PC1	192.168.1.11	Fa 0/3	VLAN 10
3	PC2	192.168.2.10	Fa 0/4	VLAN 20
4	PC3	192.168.2.11	Fa 0/5	VLAN 20

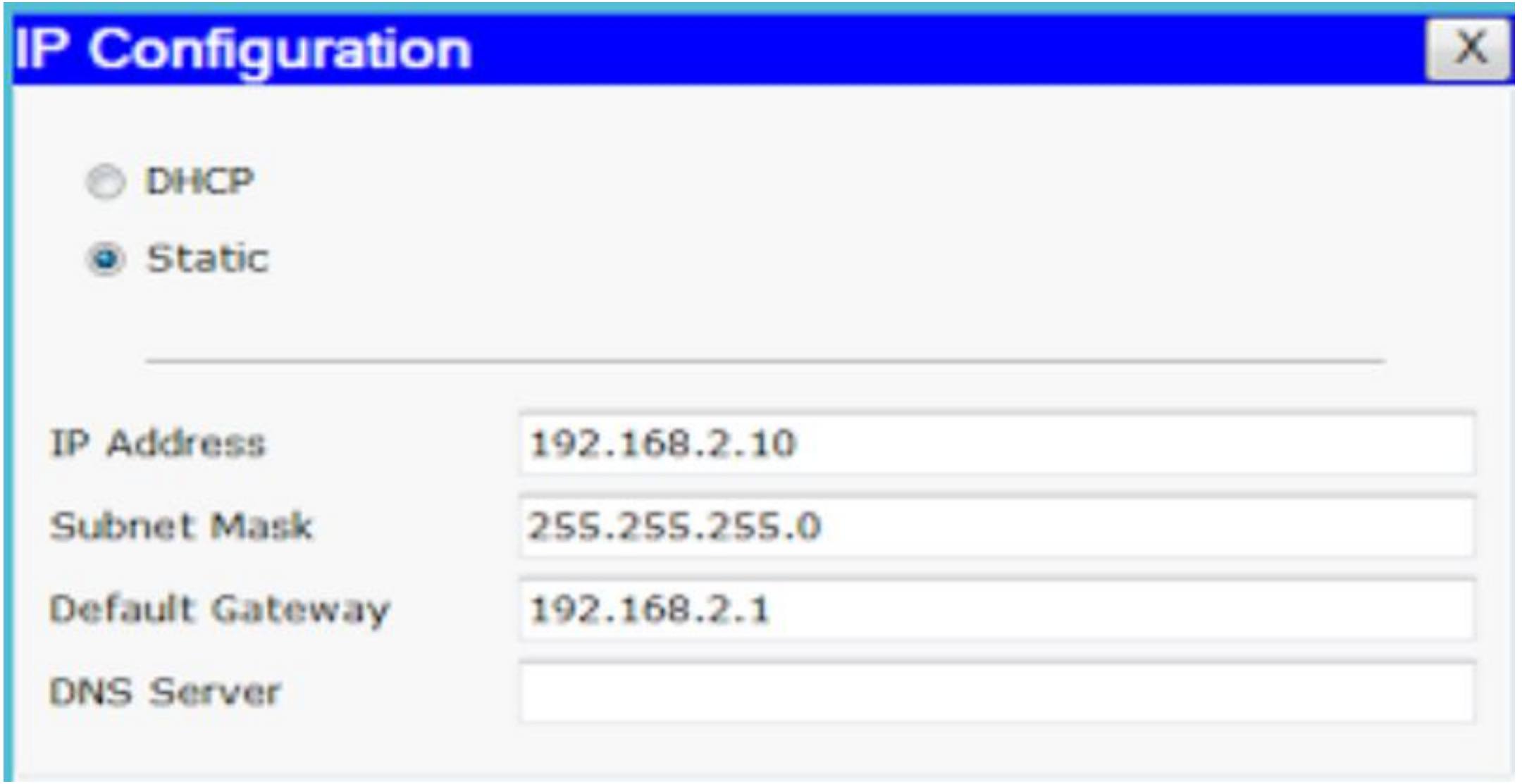
Konfigurasi IP Address pada PC0 (klik PC0 > Desktop > IP Configuration)



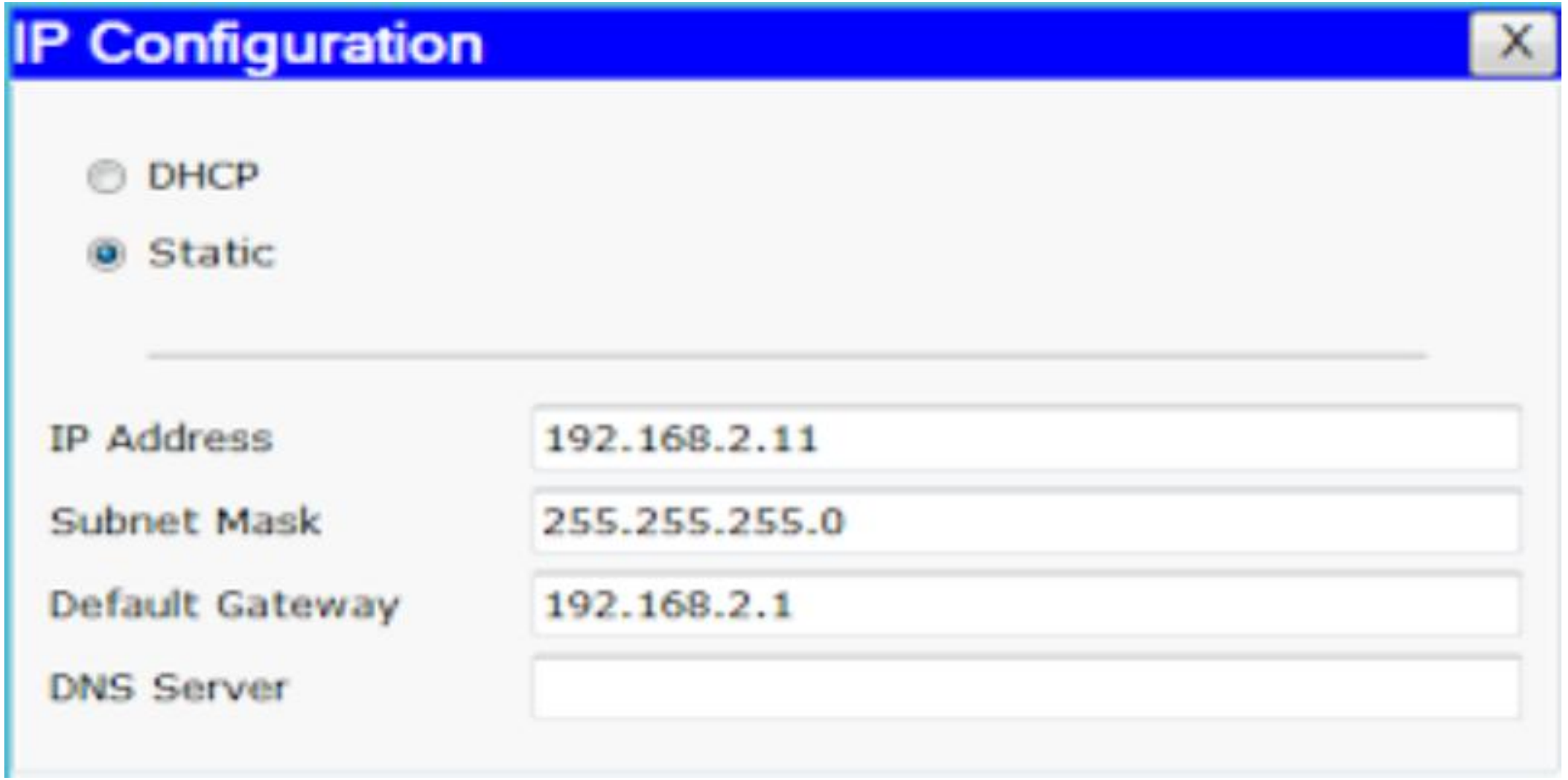
Konfigurasi IP Address pada PC1 (klik PC1 > Desktop > IP Configuration)



Konfigurasi IP Address pada PC2(klik PC2>Desktop>IP Configuration)



Konfigurasi IP Address pada PC3 (klik PC3>Desktop>IP Configuration)



Konfigurasi pada Switch. Klik switch, pilih tab CLI. Tuliskan perintah berikut :

```
Switch>enable
Switch#vlan database
Switch(vlan)#vlan 10 name A
Switch(vlan)#vlan 20 name B
Switch(vlan)#exit
Switch#configure terminal
Switch(config)#interface fastethernet 0/2
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#interface fastethernet 0/3
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#interface fastethernet 0/4
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#interface fastethernet 0/5
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#end
Switch#configure terminal
Switch(config)#interface fastethernet 0/1
Switch(config-if)#switchport mode trunk
Switch(config-if)#end
```

Konfigurasi pada Router. Klik router, pilih tab CLI.
Tuliskan perintah berikut :

```
Router>enable
Router#configure t
Router(config)#interface fastethernet 0/0
Router(config-if)#no shutdown
Router(config-if)#interface fastethernet 0/0.1
Router(config-subif)#encapsulation dot1Q 1
Router(config-subif)#ip address 192.168.10.1 255.255.255.0
Router(config-subif)#interface fastethernet 0/0.2
Router(config-subif)#encapsulation dot1Q 10
Router(config-subif)#ip address 192.168.1.1 255.255.255.0
Router(config-subif)#interface fastethernet 0/0.3
Router(config-subif)#encapsulation dot1Q 20
Router(config-subif)#ip address 192.168.2.1 255.255.255.0
Router(config-subif)#end
```

Ping dari PC0 ke PC1 (sesama VLAN)

```
Pinging 192.168.1.11 with 32 bytes of data:

Reply from 192.168.1.11: bytes=32 time=27ms TTL=128
Reply from 192.168.1.11: bytes=32 time=12ms TTL=128
Reply from 192.168.1.11: bytes=32 time=7ms TTL=128
Reply from 192.168.1.11: bytes=32 time=6ms TTL=128

Ping statistics for 192.168.1.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 6ms, Maximum = 27ms, Average = 13ms
```

Ping dari PC1 ke PC2 (berbeda VLAN)

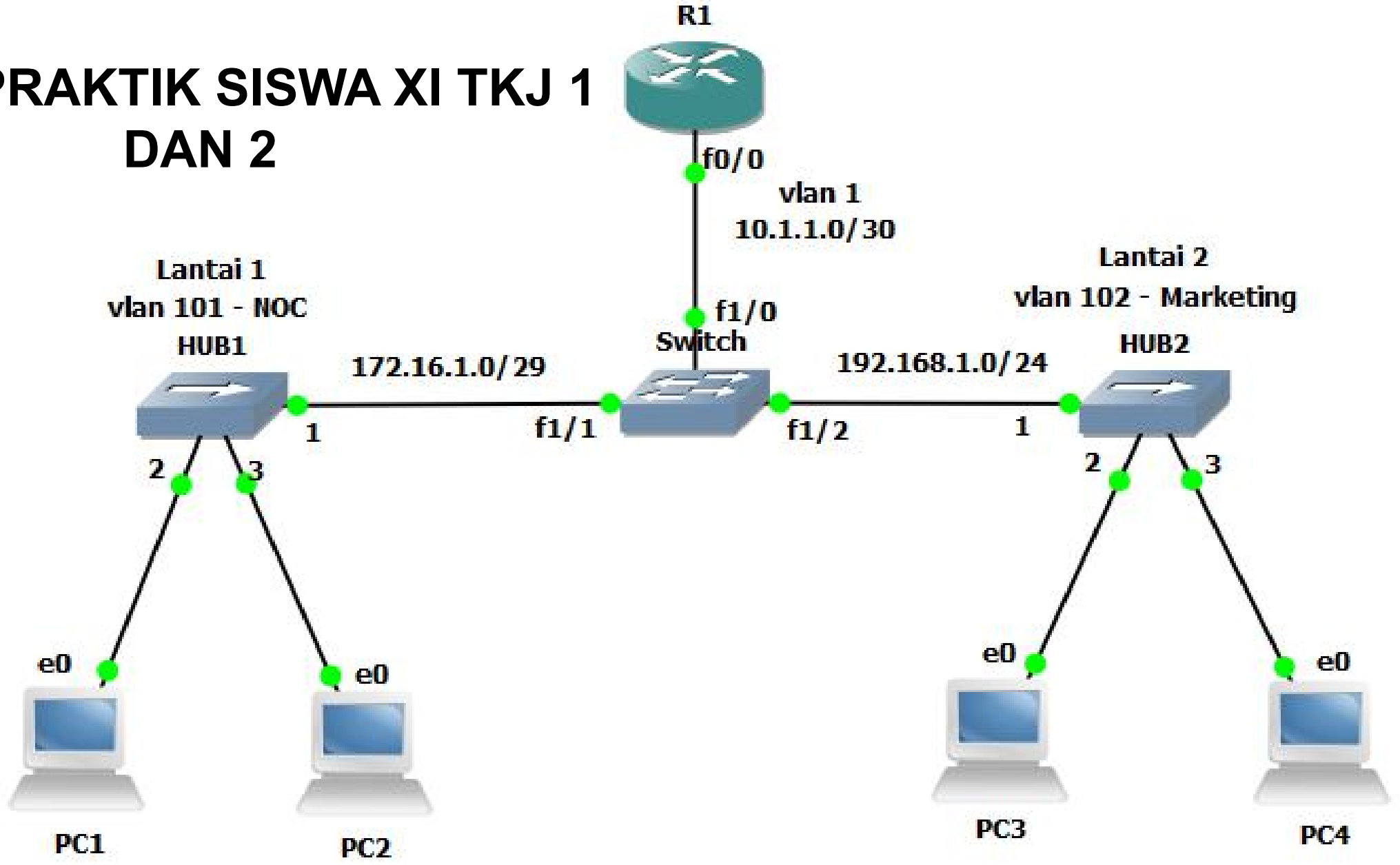
```
PC>ping 192.168.2.10

Pinging 192.168.2.10 with 32 bytes of data:

Reply from 192.168.2.10: bytes=32 time=31ms TTL=127
Reply from 192.168.2.10: bytes=32 time=27ms TTL=127
Reply from 192.168.2.10: bytes=32 time=18ms TTL=127
Reply from 192.168.2.10: bytes=32 time=16ms TTL=127

Ping statistics for 192.168.2.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 16ms, Maximum = 31ms, Average = 23ms
```

UJIAN PRAKTIK SISWA XI TKJ 1 DAN 2



Konfigurasi R1

== Set IP Router ==
R1#conf t
R1(config)#int f0/0
R1(config-if)#ip add 10.1.1.1 255.255.255.252
R1(config-if)#no shut

== Membuat Vlan 101 ==
R1(config)#int f0/0.101
R1(config-subif)#encapsulation dot1Q 101
R1(config-subif)#ip address 172.16.1.1 255.255.255.248
R1(config-subif)#desc Noc
R1(config-subif)#no shut
R1(config-subif)#exit

== Membuat Vlan 102 ==
R1(config)#int f0/0.102
R1(config-subif)#encapsulation dot1Q 102
R1(config-subif)#ip address 192.168.1.1 255.255.255.0
R1(config-subif)#desc Marketing
R1(config-subif)#no shut
R1(config-subif)#exit

Konfigurasi Switch

== Set ip Trunk dan Default gateway ==
Switch#conf t
Switch(config)#int vlan 1
Switch(config-if)#ip add 10.1.1.2 255.255.255.252
Switch(config-if)#no shut
Switch(config-if)#desc TRUNK
Switch(config-if)#exit
Switch(config)#ip default-gateway 10.1.1.1

== Vlan Id ==
Switch#vlan database
Switch(vlan)#vlan 101 name Noc
Switch(vlan)#vlan 102 name Marketing

== Set Vlan ==
Switch(config)#int f1/0
Switch(config-if)#switchport mode trunk
Switch(config-if)#exit

Switch#conf t
Switch(config)#int f1/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 101
Switch(config-if)#exit
Switch(config)#

Switch(config)#int f1/2
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 102
Switch(config-if)#exit
Switch(config)#exit
Switch#

Ping Switch ke Router

Switch#ping 10.1.1.1 rep 50

Type escape sequence to abort.
Sending 50, 100-byte ICMP Echos to 10.1.1.1, timeout is 2 seconds:
!!
Success rate is 100 percent (50/50), round-trip min/avg/max = 20/32/80 ms
Switch#

Ping PC 1 ke PC 3

PC1> ping 192.168.1.2
84 bytes from 192.168.1.2 icmp_seq=1 ttl=63 time=31.442 ms
84 bytes from 192.168.1.2 icmp_seq=2 ttl=63 time=31.509 ms
84 bytes from 192.168.1.2 icmp_seq=3 ttl=63 time=62.623 ms
84 bytes from 192.168.1.2 icmp_seq=4 ttl=63 time=20.293 ms
84 bytes from 192.168.1.2 icmp_seq=5 ttl=63 time=31.474 ms