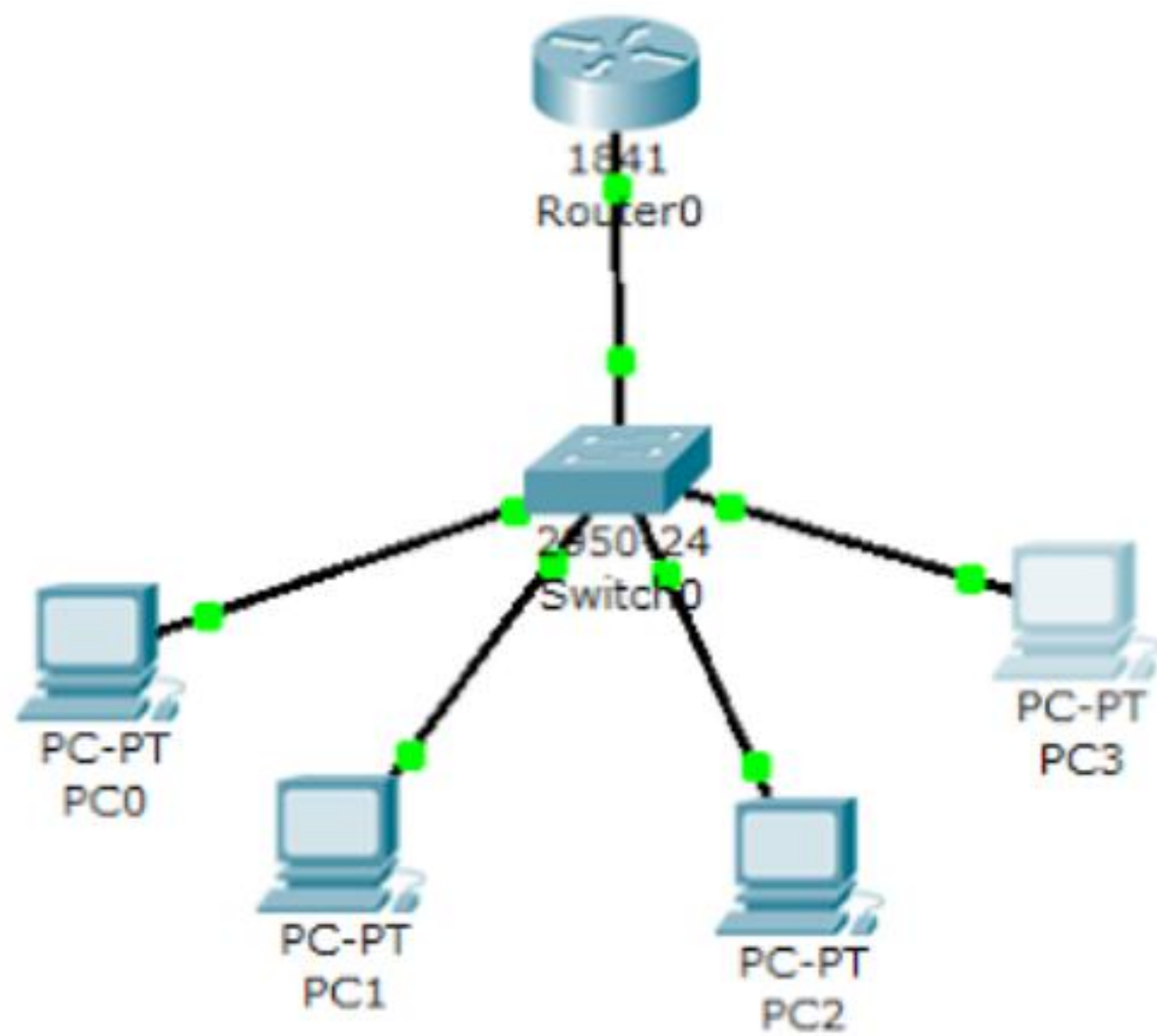


# **Konfigurasi VLAN menggunakan Switch dan Router pada Packet Tracer**

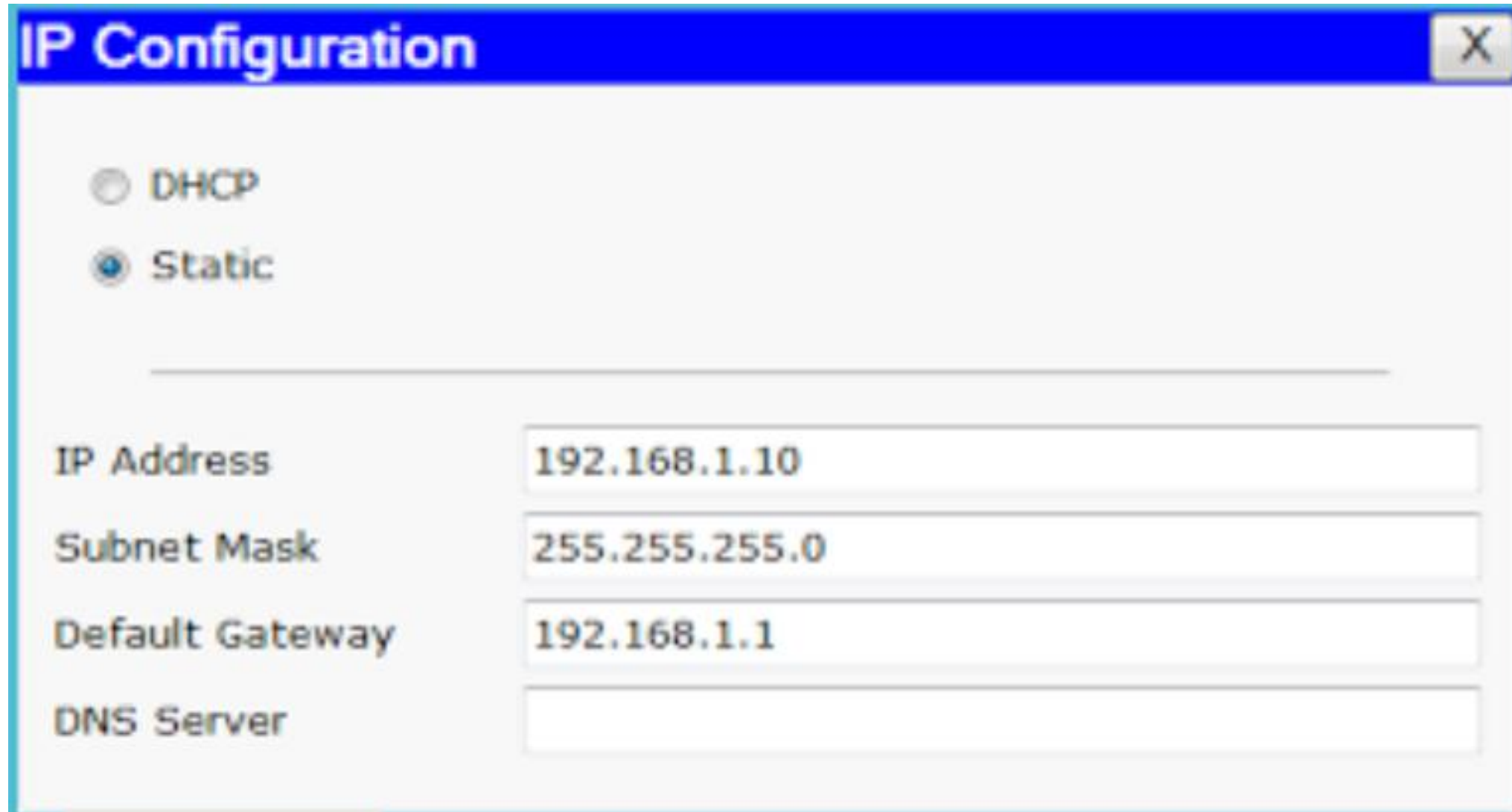


- Masuk ke aplikasi Paket Tracer.
- Ikuti langkah -langkah berikut ini!

- 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

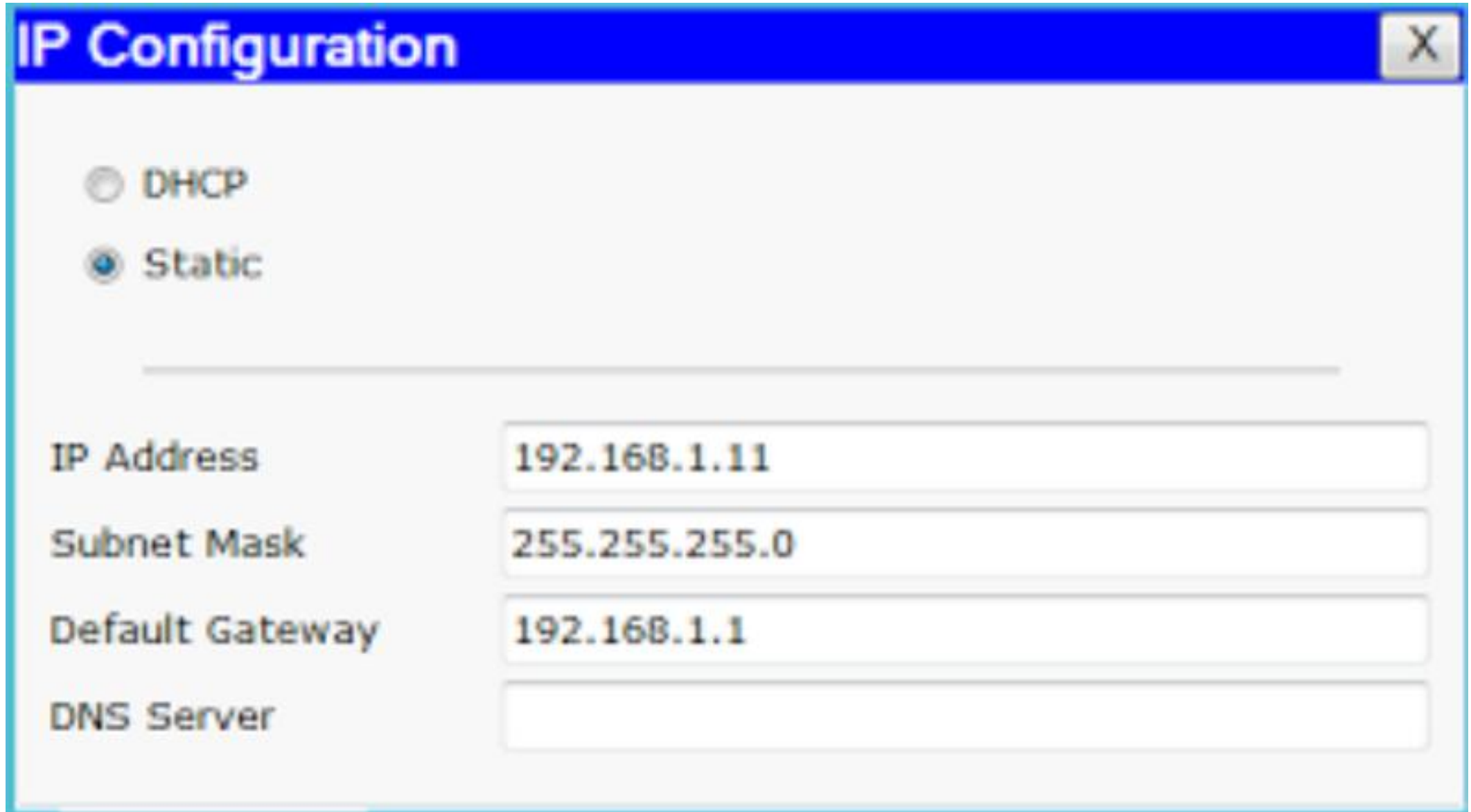
# Konfigurasi IP Address pada PC0 (klik PC0 > Desktop > IP Configuration)



The image shows a screenshot of a network configuration window titled "IP Configuration". The window has a blue title bar with a close button (X) in the top right corner. Inside the window, there are two radio buttons: "DHCP" and "Static". The "Static" radio button is selected, indicated by a blue dot. Below the radio buttons, there is a horizontal line. Underneath the line, there are four input fields with labels to their left: "IP Address", "Subnet Mask", "Default Gateway", and "DNS Server". The "IP Address" field contains the text "192.168.1.10". The "Subnet Mask" field contains the text "255.255.255.0". The "Default Gateway" field contains the text "192.168.1.1". The "DNS Server" field is empty.

Field	Value
IP Address	192.168.1.10
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.1
DNS Server	

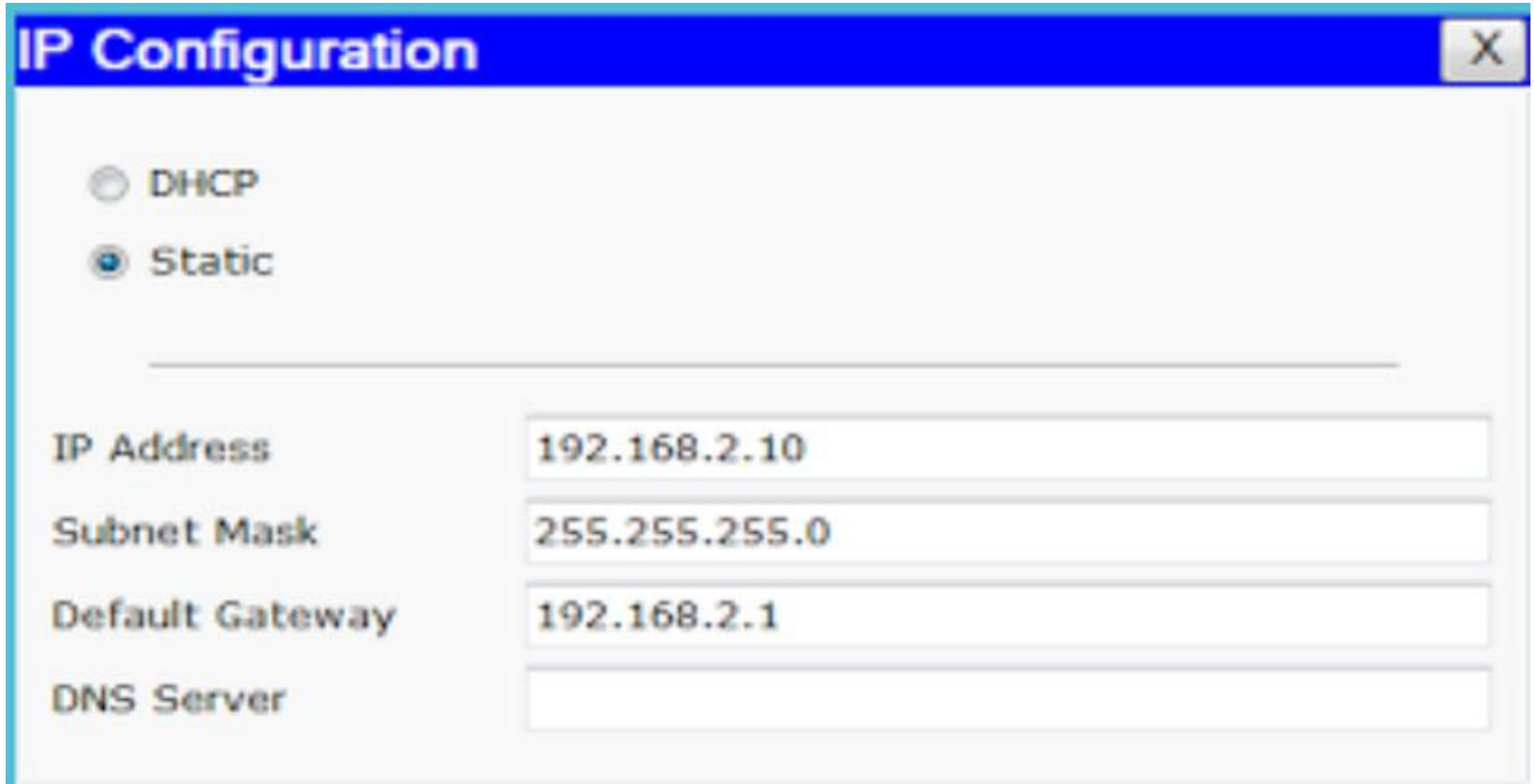
Konfigurasi IP Address pada PC1 ( klik PC1 > Desktop > IP Configuration )



The image shows a screenshot of a network configuration window titled "IP Configuration". The window has a blue title bar with a close button (X) in the top right corner. Inside the window, there are two radio buttons: "DHCP" and "Static". The "Static" radio button is selected, indicated by a blue dot. Below the radio buttons, there is a horizontal line. Underneath the line, there are four input fields with labels to their left: "IP Address", "Subnet Mask", "Default Gateway", and "DNS Server". The "IP Address" field contains the text "192.168.1.11". The "Subnet Mask" field contains the text "255.255.255.0". The "Default Gateway" field contains the text "192.168.1.1". The "DNS Server" field is empty.

Field	Value
IP Address	192.168.1.11
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.1
DNS Server	

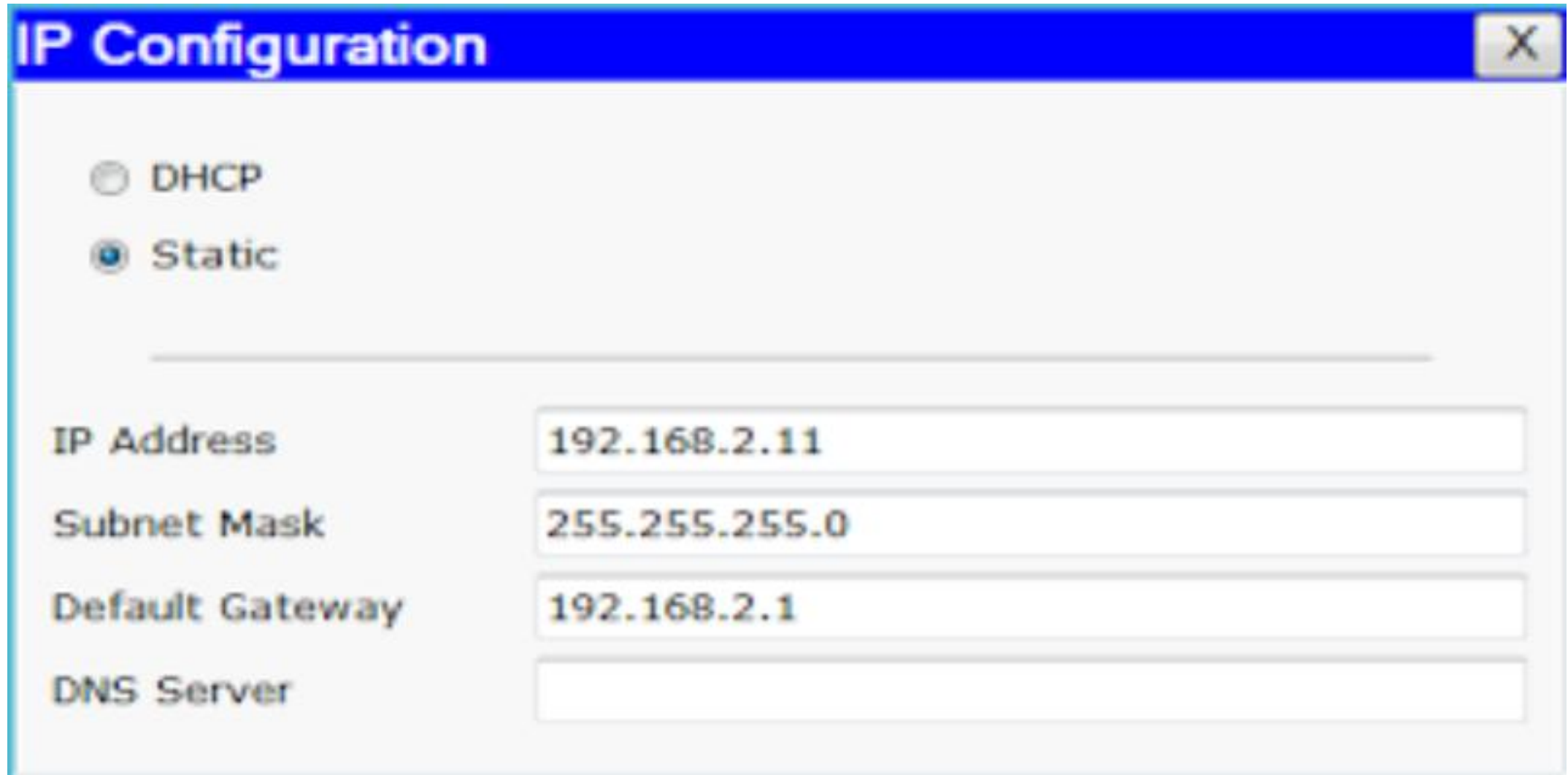
Konfigurasi IP Address pada PC2(klik PC2>Desktop>IP Configuration)



The image shows a screenshot of a Windows 'IP Configuration' dialog box. The title bar is blue with the text 'IP Configuration' and a close button (X) on the right. Inside the window, there are two radio buttons: 'DHCP' and 'Static'. The 'Static' radio button is selected, indicated by a blue dot. Below the radio buttons, there is a horizontal line. Underneath the line, there are four text input fields arranged in a list. The first field is labeled 'IP Address' and contains the text '192.168.2.10'. The second field is labeled 'Subnet Mask' and contains the text '255.255.255.0'. The third field is labeled 'Default Gateway' and contains the text '192.168.2.1'. The fourth field is labeled 'DNS Server' and is currently empty.

Field	Value
IP Address	192.168.2.10
Subnet Mask	255.255.255.0
Default Gateway	192.168.2.1
DNS Server	

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



The image shows a screenshot of a network configuration window titled "IP Configuration". The window has a blue title bar with a close button (X) in the top right corner. Inside the window, there are two radio buttons: "DHCP" and "Static". The "Static" radio button is selected, indicated by a blue dot. Below the radio buttons, there is a horizontal line. Underneath the line, there are four input fields with labels to their left: "IP Address", "Subnet Mask", "Default Gateway", and "DNS Server". The "IP Address" field contains the text "192.168.2.11", the "Subnet Mask" field contains "255.255.255.0", and the "Default Gateway" field contains "192.168.2.1". The "DNS Server" field is empty.

Field	Value
IP Address	192.168.2.11
Subnet Mask	255.255.255.0
Default Gateway	192.168.2.1
DNS Server	

**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
```

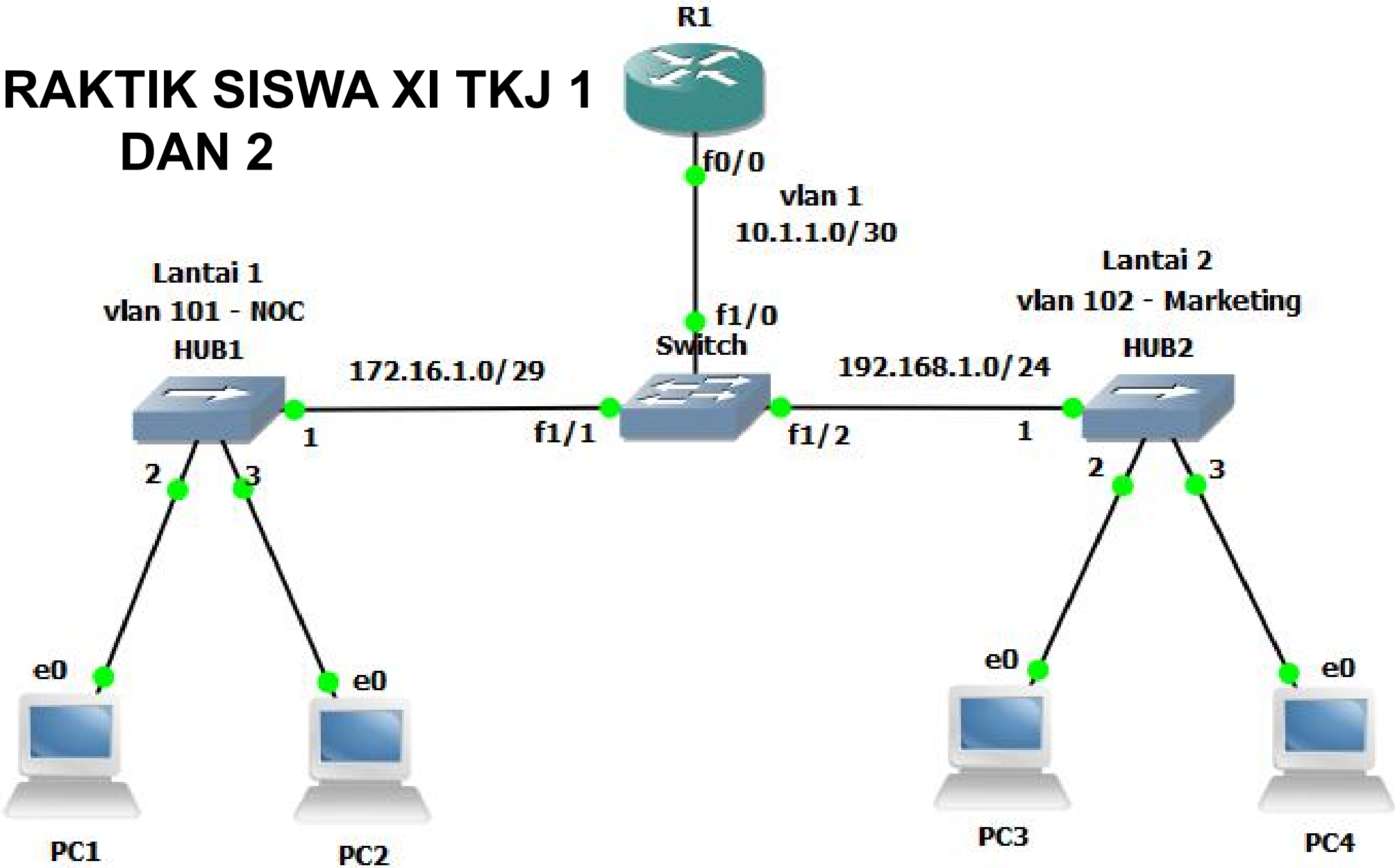
```
Ping statistics for 192.168.2.10:
```

```
    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*