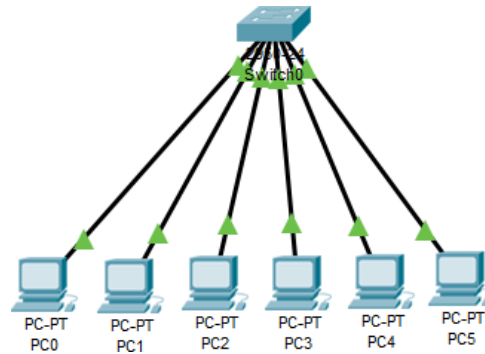


**NAMA** : Farid Aziz Priyo  
**NIM** : L200180117  
**KELAS** : C

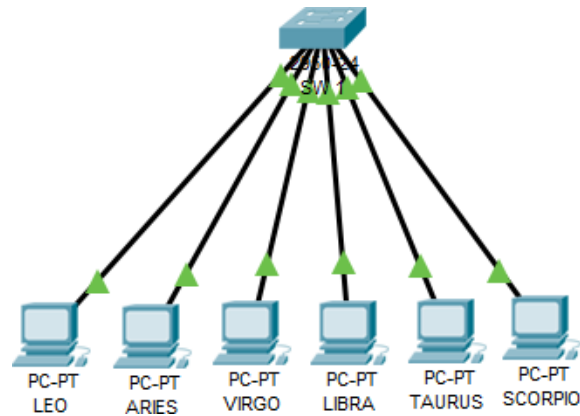
## MODUL 4

### KEGIATAN 1.TOPOLOGI 1

- A. Menggunakan packet tracker buat topologi berikut ini dengan menggunakan switch



- B. Beri nama masing-masing perangkat dengan SW1(switch), Leo(PC0), Aries(PC1), Virgo(PC2), Pisces(PC3), Taurus(PC4), dan scorpio(PC5)



C. Konfigurasi masing-masing PC dengan nama dan alamat IP

➤ Leo = 172.21.1.1/24

The screenshot shows the configuration window for a PC named 'LEO'. The 'Desktop' tab is selected. Under the 'Config' section, 'Static' is chosen for IP configuration. The IP Address is set to 172.21.1.1, Subnet Mask to 255.255.0.0, Default Gateway to 0.0.0.0, and DNS Server to 0.0.0.0. The 'IPv6 Configuration' section has 'Static' selected, with empty fields for IPv6 Address, Link Local Address (FE80::250:FFF:FE7E:923B), IPv6 Gateway, and IPv6 DNS Server. The '802.1X' section has 'Use 802.1X Security' unchecked, with 'MD5' selected for Authentication and empty fields for Username and Password. A 'Top' button is at the bottom left.

Field	Value
IP Address	172.21.1.1
Subnet Mask	255.255.0.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0
IPv6 Address	
Link Local Address	FE80::250:FFF:FE7E:923B
IPv6 Gateway	
IPv6 DNS Server	
Authentication	MD5
Username	
Password	

➤ Aries = 172.21.1.2/24

The screenshot shows the configuration window for a PC named 'ARIES'. The 'Desktop' tab is selected. Under the 'Config' section, 'Static' is chosen for IP configuration. The IP Address is set to 172.21.1.2, Subnet Mask to 255.255.0.0, Default Gateway to 0.0.0.0, and DNS Server to 0.0.0.0. The 'IPv6 Configuration' section has 'Static' selected, with empty fields for IPv6 Address, Link Local Address (FE80::2D0:BAFF:FE4B:327C), IPv6 Gateway, and IPv6 DNS Server. The '802.1X' section has 'Use 802.1X Security' unchecked, with 'MD5' selected for Authentication and empty fields for Username and Password. A 'Top' button is at the bottom left.

Field	Value
IP Address	172.21.1.2
Subnet Mask	255.255.0.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0
IPv6 Address	
Link Local Address	FE80::2D0:BAFF:FE4B:327C
IPv6 Gateway	
IPv6 DNS Server	
Authentication	MD5
Username	
Password	

➤ Virgo = 172.21.1.3/24

The screenshot shows the VIRGO configuration window with the 'Desktop' tab selected. The 'Static' radio button is chosen for IP configuration. The IP Address is 172.21.1.3, Subnet Mask is 255.255.0.0, Default Gateway is 0.0.0.0, and DNS Server is 0.0.0.0. For IPv6, the 'Static' radio button is also selected, with an empty IPv6 Address field, a Link Local Address of FE80::20A:F3FF:FE52:B32A, and empty fields for IPv6 Gateway and IPv6 DNS Server. The 802.1X section has 'Use 802.1X Security' unchecked, 'Authentication' set to MDS, and empty fields for Username and Password. A 'Top' button is at the bottom left.

Physical	Config	Desktop	Programming	Attributes
<input type="radio"/> DHCP <input checked="" type="radio"/> Static				
IP Address		172.21.1.3		
Subnet Mask		255.255.0.0		
Default Gateway		0.0.0.0		
DNS Server		0.0.0.0		
IPv6 Configuration				
<input type="radio"/> DHCP <input type="radio"/> Auto Config <input checked="" type="radio"/> Static				
IPv6 Address		/		
Link Local Address		FE80::20A:F3FF:FE52:B32A		
IPv6 Gateway				
IPv6 DNS Server				
802.1X				
<input type="checkbox"/> Use 802.1X Security				
Authentication		MDS		
Username				
Password				

☐ Top

➤ Libra = 172.21.1.4/24

The screenshot shows the LIBRA configuration window with the 'Desktop' tab selected. The 'Static' radio button is chosen for IP configuration. The IP Address is 172.21.1.4, Subnet Mask is 255.255.0.0, Default Gateway is 0.0.0.0, and DNS Server is 0.0.0.0. For IPv6, the 'Static' radio button is also selected, with an empty IPv6 Address field, a Link Local Address of FE80::210:11FF:FE14:BE8E, and empty fields for IPv6 Gateway and IPv6 DNS Server. The 802.1X section has 'Use 802.1X Security' unchecked, 'Authentication' set to MDS, and empty fields for Username and Password. A 'Top' button is at the bottom left.

Physical	Config	Desktop	Programming	Attributes
<input type="radio"/> DHCP <input checked="" type="radio"/> Static				
IP Address		172.21.1.4		
Subnet Mask		255.255.0.0		
Default Gateway		0.0.0.0		
DNS Server		0.0.0.0		
IPv6 Configuration				
<input type="radio"/> DHCP <input type="radio"/> Auto Config <input checked="" type="radio"/> Static				
IPv6 Address		/		
Link Local Address		FE80::210:11FF:FE14:BE8E		
IPv6 Gateway				
IPv6 DNS Server				
802.1X				
<input type="checkbox"/> Use 802.1X Security				
Authentication		MDS		
Username				
Password				

☐ Top

➤ Taurus = 172.21.1.5/24

The screenshot shows the TAURUS configuration window with the 'Desktop' tab selected. The 'Static' radio button is chosen for IP configuration. The IP Address is 172.21.1.5, Subnet Mask is 255.255.0.0, Default Gateway is 0.0.0.0, and DNS Server is 0.0.0.0. For IPv6, the 'Static' radio button is also selected, with an empty IPv6 Address field, a Link Local Address of FE80::2E0:A3FF:FED0:C712, and empty fields for IPv6 Gateway and IPv6 DNS Server. The 802.1X section has 'Use 802.1X Security' unchecked, 'Authentication' set to MDS, and empty fields for Username and Password. A 'Top' button is at the bottom left.

Physical	Config	Desktop	Programming	Attributes
<input type="radio"/> DHCP <input checked="" type="radio"/> Static				
IP Address		172.21.1.5		
Subnet Mask		255.255.0.0		
Default Gateway		0.0.0.0		
DNS Server		0.0.0.0		
IPv6 Configuration				
<input type="radio"/> DHCP <input type="radio"/> Auto Config <input checked="" type="radio"/> Static				
IPv6 Address		/		
Link Local Address		FE80::2E0:A3FF:FED0:C712		
IPv6 Gateway				
IPv6 DNS Server				
802.1X				
<input type="checkbox"/> Use 802.1X Security				
Authentication		MDS		
Username				
Password				

☐ Top

➤ Scorpio = 172.21.1.6/24

The screenshot shows the SCORPIO network configuration window with the 'Desktop' tab selected. It contains fields for IP Address (172.21.1.6), Subnet Mask (255.255.0.0), Default Gateway (0.0.0.0), and DNS Server (0.0.0.0). The IPv6 Configuration section has 'Static' selected, with fields for IPv6 Address, Link Local Address (FE80::20C:CFFF:FE11:6175), IPv6 Gateway, and IPv6 DNS Server. The 802.1X section has 'Use 802.1X Security' unchecked, and the Authentication dropdown is set to 'MD5'.

D. Konfigurasi pada switch dengan mode user atau mode privileged, buat 3 VLAN dengan nama zodiak1, zodiak2, dan zodiak3.

The screenshot shows the SW 1 CLI window with the 'CLI' tab selected. The window displays the IOS Command Line Interface with the following commands and output:

```
%LINK-5-CHANGED: Interface FastEthernet0/5, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/5,
changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/6, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/6,
changed state to up

Switch>enable
Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name zodiak1
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name zodiak2
Switch(config-vlan)#exit
Switch(config)#vlan 30
Switch(config-vlan)#name zodiak3
Switch(config-vlan)#exit
Switch(config)#
```

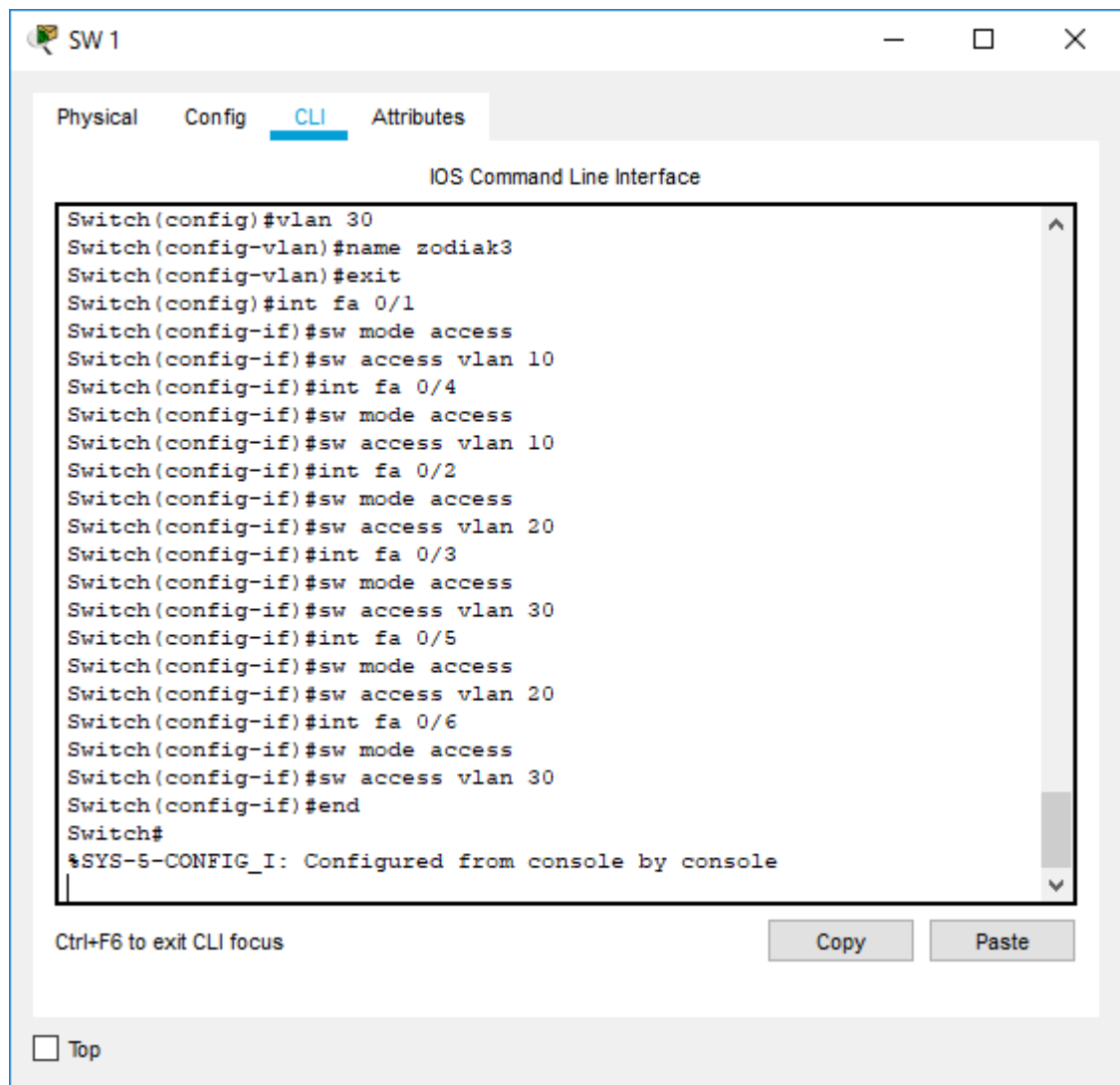
At the bottom of the window, there is a 'Ctrl+F6 to exit CLI focus' message and 'Copy' and 'Paste' buttons.

- E. Pada mode configuration, konfigurasi port-port switch ke dalam VLAN zodiak1, zodiak2, dan zodiak3.

Zodiak 1 = leo dan libra

Zodiak 2 = aries dan taurus

Zodiak 3 = virgo dan scorpio

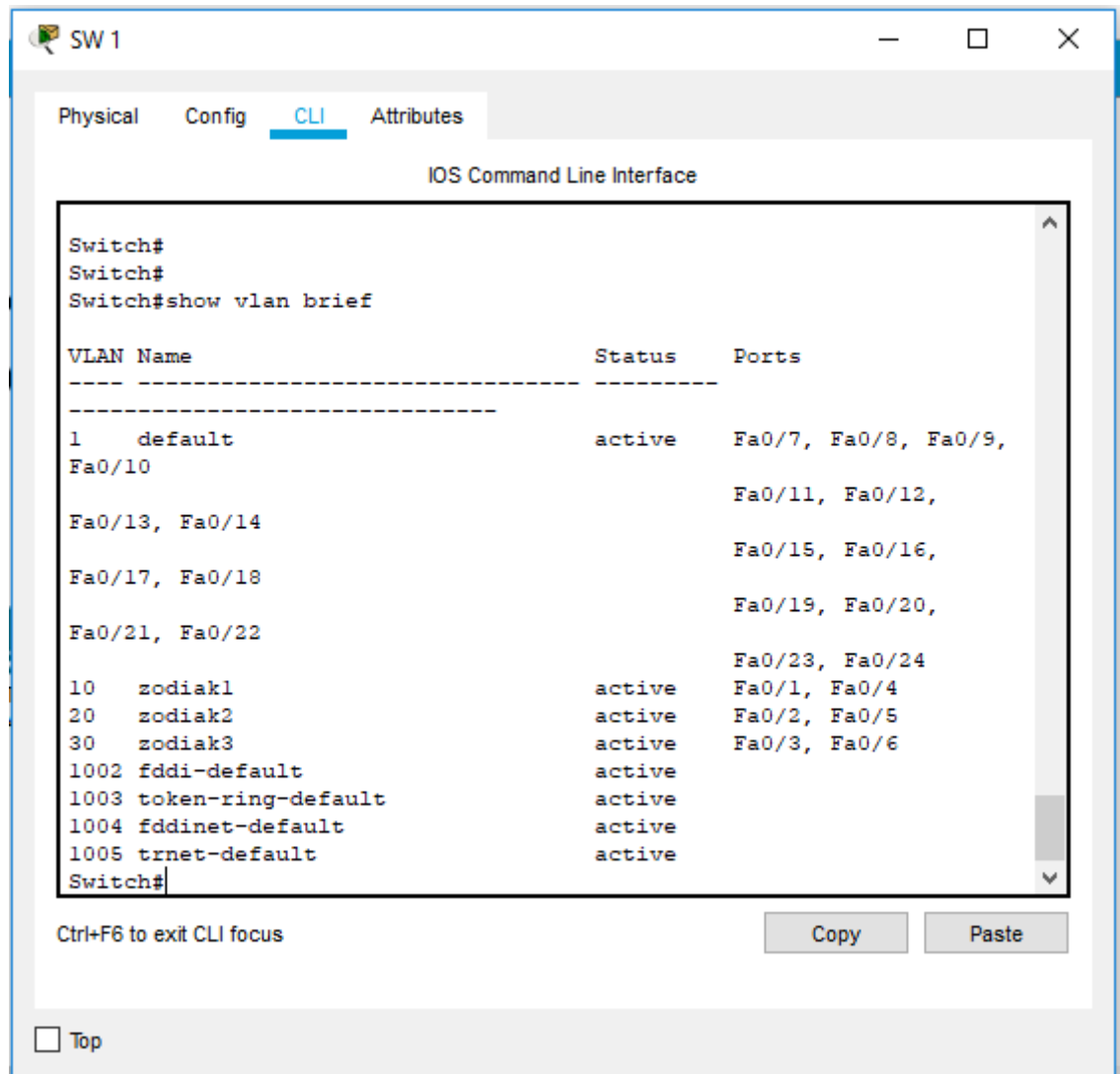


The screenshot shows a window titled "SW 1" with tabs for "Physical", "Config", "CLI", and "Attributes". The "CLI" tab is active, displaying the "IOS Command Line Interface". The configuration commands entered are as follows:

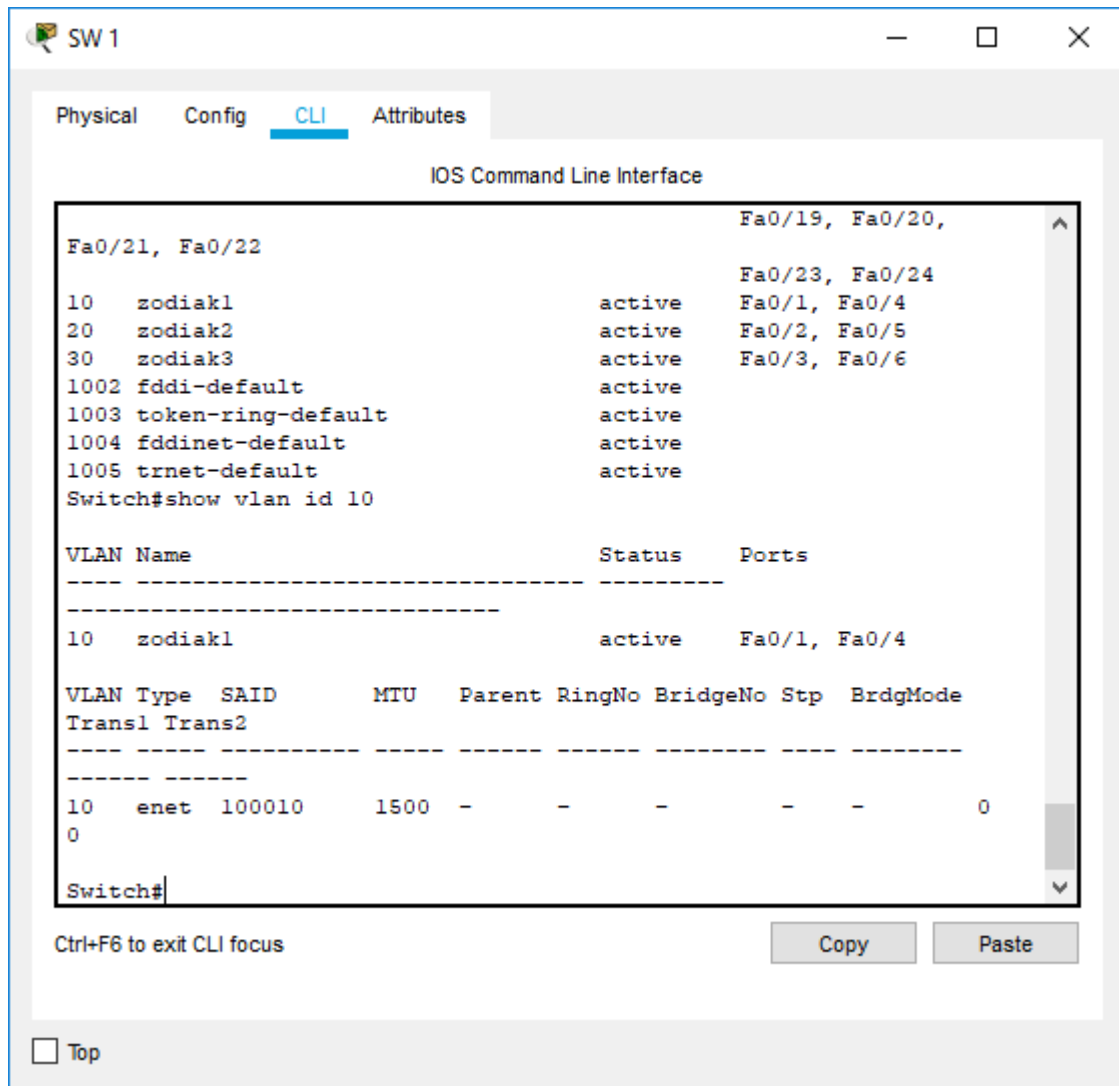
```
Switch(config)#vlan 30
Switch(config-vlan)#name zodiak3
Switch(config-vlan)#exit
Switch(config)#int fa 0/1
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#int fa 0/4
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#int fa 0/2
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#int fa 0/3
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#int fa 0/5
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#int fa 0/6
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#end
Switch#
```

Below the CLI window, the text "%SYS-5-CONFIG\_I: Configured from console by console" is visible. At the bottom of the window, there is a "Top" button and a "Copy" button.

- F. Pada mode user atau mode privileged, lihat konfigurasi VLAN yang telah dibuat.  
Informasi VLAN keseluruhan



➤ Informasi VLAN 10



The screenshot shows a network switch window titled "SW 1" with tabs for Physical, Config, CLI, and Attributes. The CLI tab is active, displaying the "IOS Command Line Interface". The command "Switch#show vlan id 10" has been entered, resulting in two output sections. The first section lists the ports assigned to VLAN 10: Fa0/21, Fa0/22, Fa0/19, Fa0/20, Fa0/23, Fa0/24, Fa0/1, Fa0/4, Fa0/2, Fa0/5, and Fa0/3, Fa0/6. The second section shows the status of VLAN 10 as "active" and lists the ports Fa0/1, Fa0/4. Below this, a table provides detailed information about VLAN 10, including its type (enet), SAID (100010), MTU (1500), and other parameters.

```

Fa0/21, Fa0/22
10    zodiak1          active
20    zodiak2          active
30    zodiak3          active
1002  fddi-default     active
1003  token-ring-default active
1004  fddinet-default  active
1005  trnet-default    active
Switch#show vlan id 10

VLAN Name                Status    Ports
----
10    zodiak1                active    Fa0/1, Fa0/4

VLAN Type  SAID      MTU   Parent RingNo BridgeNo Stp  BrdgMode
Trans1 Trans2
-----
10    enet    100010   1500  -     -     -     -     -     0
0
Switch#
  
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

### Tugas 6A

No	Variabel	Nilai
1.	Nomor VLAN	10
2.	Nama VLAN	Zodiak1
3.	Port	Fa0/1, Fa0/4
4.	Status	Active

➤ Informasi VLAN 20

SW 1

Physical Config **CLI** Attributes

IOS Command Line Interface

```

10    zodiak1                active    Fa0/1, Fa0/4

VLAN Type  SAID      MTU    Parent RingNo BridgeNo Stp  BrdgMode
Trans1 Trans2
-----
10    enet   100010    1500   -      -      -      -      -      0
0

Switch#show vlan id 20

VLAN Name                Status    Ports
-----
20    zodiak2                active    Fa0/2, Fa0/5

VLAN Type  SAID      MTU    Parent RingNo BridgeNo Stp  BrdgMode
Trans1 Trans2
-----
20    enet   100020    1500   -      -      -      -      -      0
0

Switch#
  
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

No	Variabel	Nilai
1.	Nomor VLAN	20
2.	Nama VLAN	Zodiak2
3.	Port	Fa0/2, Fa0/5
4.	Status	Active



➤ Informasi VLAN 30

SW 1
—
□
×

Physical
Config
**CLI**
Attributes

IOS Command Line Interface

```

-----
20    zodiak2                                active    Fa0/2, Fa0/5

VLAN Type  SAID      MTU   Parent RingNo BridgeNo Stp   BrdgMode
Trans1 Trans2
-----
20    enet  100020    1500   -     -     -     -     -     0
0

Switch#show vlan id 30

VLAN Name                Status      Ports
-----
30    zodiak3                                active    Fa0/3, Fa0/6

VLAN Type  SAID      MTU   Parent RingNo BridgeNo Stp   BrdgMode
Trans1 Trans2
-----
30    enet  100030    1500   -     -     -     -     -     0
0

Switch#

```

Ctrl+F6 to exit CLI focus

CopyPaste

☐ Top

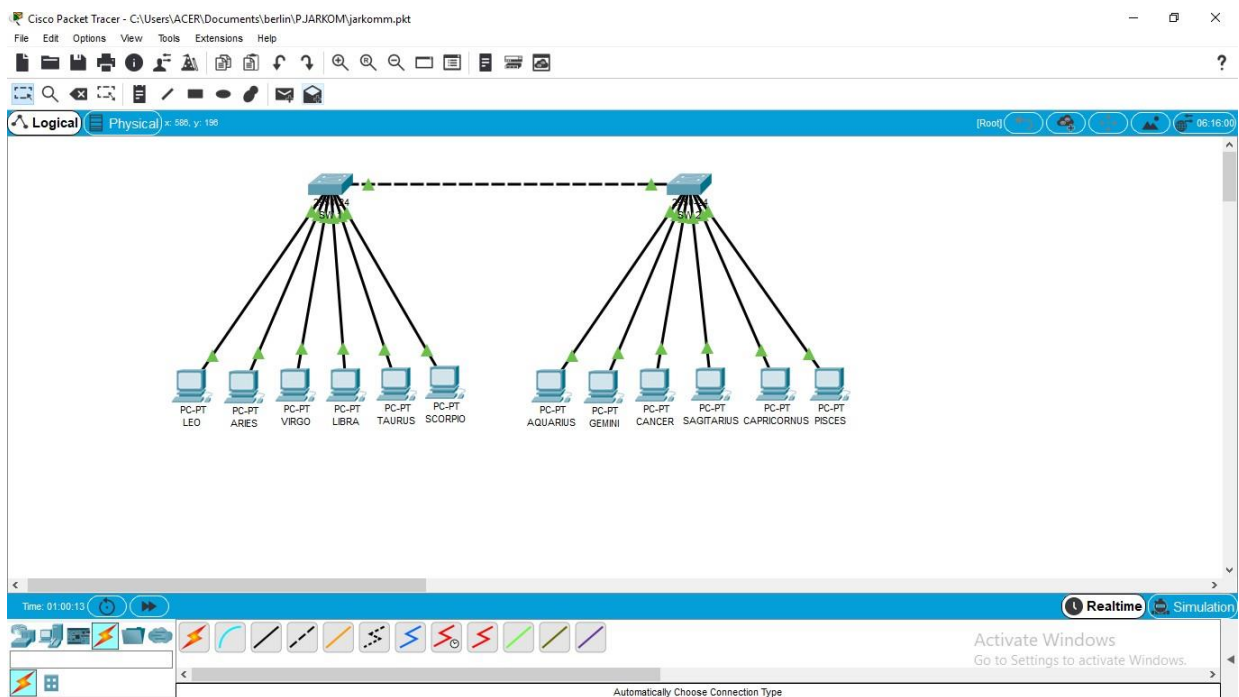
No	Variabel	Nilai
1.	Nomor VLAN	30
2.	Nama VLAN	Zodiak3
3.	Port	Fa0/3, Fa0/6
4.	Status	Active

**Tugas 6B:** Jelaskan secara singkat hasil yang anda peroleh dari **tugas 6A**.

- Fa0/1 (Leo) dan Fa0/4 (Libra) berada pada VLAN yang sama yaitu zodiak 1. Dengan nomer VLAN 10 berstatus active
- Fa0/2 (Aries) dan Fa0/5(Taurus) berada pada VLAN 20, zodiak 2, dan berstatus active
- Fa0/3 (Virgo) dan Fa0/6(Scorpio) berada pada VLAN 30, zodiak 3, dan berstatus active
- Port yang terdaftar dalam VLAN sesuai dengan konfigurasi yang telah dilakukan sebelumnya.

## KEGIATAN 2. TOPOLOGI 2

Menggunakan packet tracker buat topologi berikut ini dengan menggunakan switch catalystr2950. Beri nama masing-masing perangkat dengan SW1(switch 1), Leo(PC0), Aries(PC1), Virgo(PC2), Pisces(PC3), Taurus(PC4), dan scorpio(PC5) untuk segmen switch 1. Beri nama masing-masing perangkat dengan SW2(switch 2), Aquarius(PC6), Gemini(PC7), Cancer(PC8), Sagitarius(PC9), Carpiconus(PC10), dan Pisces(PC11) untuk segmen switch 2.



A. Konfigurasi masing-masing PC dengan nama dan alamat IP

➤ Leo = 172.21.1.1/24

The screenshot shows the configuration window for a PC named 'Leo'. The 'Desktop' tab is selected, displaying the following settings:

- Physical**: (tab)
- Config**: (tab)
- Desktop**: (selected tab)
- Programming**: (tab)
- Attributes**: (tab)

Configuration details:

- DHCP**: ☐ (unselected)
- Static**: ☒ (selected)
- IP Address**: 172.21.1.1
- Subnet Mask**: 255.255.0.0
- Default Gateway**: 0.0.0.0
- DNS Server**: 0.0.0.0

**IPv6 Configuration**

- DHCP**: ☐ (unselected)
- Auto Config**: ☐ (unselected)
- Static**: ☒ (selected)
- IPv6 Address**: [empty field]
- Link Local Address**: FE80::260:3EFF:FE8B:723B
- IPv6 Gateway**: [empty field]
- IPv6 DNS Server**: [empty field]

**802.1X**

- Use 802.1X Security**: ☐ (unselected)
- Authentication**: MD5 (dropdown menu)
- Username**: [empty field]
- Password**: [empty field]

☐ Top

➤ Aries = 172.21.1.2/24

The screenshot shows the 'Aries' configuration window with the 'Desktop' tab selected. The 'Static' radio button is chosen for the IP configuration. The IP Address is set to 172.21.1.2, Subnet Mask to 255.255.0.0, Default Gateway to 0.0.0.0, and DNS Server to 0.0.0.0. The IPv6 Configuration section has 'Static' selected, with an empty IPv6 Address field, Link Local Address set to FE80::260:2FFF:FEA6:6632, and empty fields for IPv6 Gateway and IPv6 DNS Server. The 802.1X section has 'Use 802.1X Security' unchecked, Authentication set to MD5, and empty fields for Username and Password. A 'Top' button is at the bottom left.

Field	Value
IP Address	172.21.1.2
Subnet Mask	255.255.0.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0
IPv6 Address	
Link Local Address	FE80::260:2FFF:FEA6:6632
IPv6 Gateway	
IPv6 DNS Server	
Use 802.1X Security	<input type="checkbox"/>
Authentication	MD5
Username	
Password	

➤ Virgo = 172.21.2.1/24

The screenshot shows the 'Virgo' configuration window with the 'Desktop' tab selected. The 'Static' radio button is chosen for the IP configuration. The IP Address is set to 172.21.2.1, Subnet Mask to 255.255.0.0, Default Gateway to 0.0.0.0, and DNS Server to 0.0.0.0. The IPv6 Configuration section has 'Static' selected, with an empty IPv6 Address field, Link Local Address set to FE80::260:2FFF:FE4C:938B, and empty fields for IPv6 Gateway and IPv6 DNS Server. The 802.1X section has 'Use 802.1X Security' unchecked, Authentication set to MD5, and empty fields for Username and Password. A 'Top' button is at the bottom left.

Field	Value
IP Address	172.21.2.1
Subnet Mask	255.255.0.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0
IPv6 Address	
Link Local Address	FE80::260:2FFF:FE4C:938B
IPv6 Gateway	
IPv6 DNS Server	
Use 802.1X Security	<input type="checkbox"/>
Authentication	MD5
Username	
Password	

- Libra = 172.21.2.2/24

The screenshot shows the 'Libra' configuration window with the 'Desktop' tab selected. The 'Physical' section has 'Static' selected. The 'IP Address' is 172.21.2.2, 'Subnet Mask' is 255.255.0.0, 'Default Gateway' is 0.0.0.0, and 'DNS Server' is 0.0.0.0. The 'IPv6 Configuration' section has 'Static' selected, with 'IPv6 Address' empty, 'Link Local Address' as FE80::201:C9FF:FE7A:8750, 'IPv6 Gateway' empty, and 'IPv6 DNS Server' empty. The '802.1X' section has 'Use 802.1X Security' unchecked, 'Authentication' set to MD5, and 'Username' and 'Password' fields empty. A 'Top' button is at the bottom left.

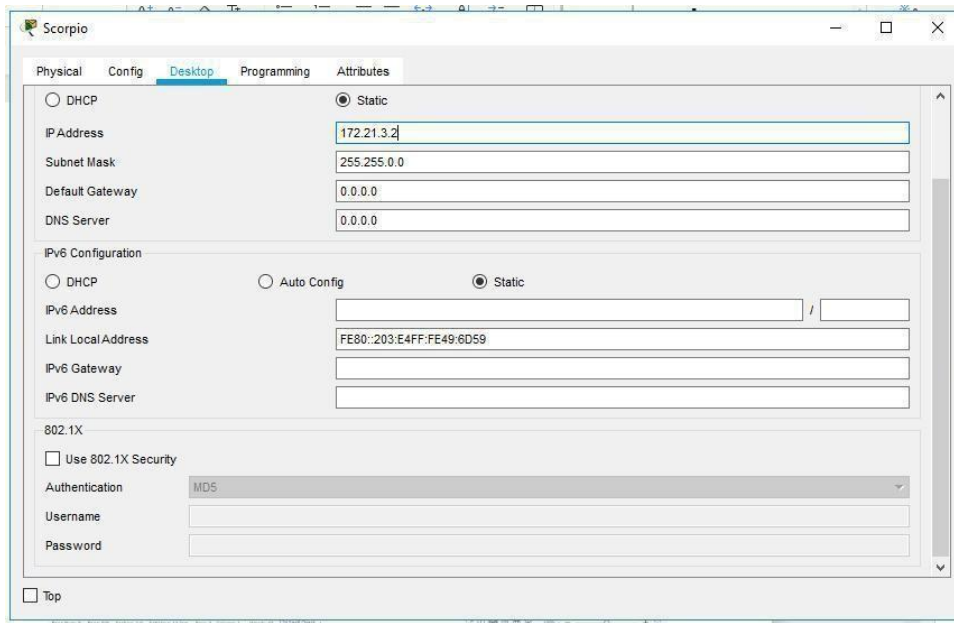
Field	Value
IP Address	172.21.2.2
Subnet Mask	255.255.0.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0
IPv6 Address	
Link Local Address	FE80::201:C9FF:FE7A:8750
IPv6 Gateway	
IPv6 DNS Server	
Use 802.1X Security	<input type="checkbox"/>
Authentication	MD5
Username	
Password	

- Taurus = 172.21.3.1/24

The screenshot shows the 'Taurus' configuration window with the 'Desktop' tab selected. The 'Physical' section has 'Static' selected. The 'IP Address' is 172.21.3.1, 'Subnet Mask' is 255.255.0.0, 'Default Gateway' is 0.0.0.0, and 'DNS Server' is 0.0.0.0. The 'IPv6 Configuration' section has 'Static' selected, with 'IPv6 Address' empty, 'Link Local Address' as FE80::201:42FF:FE5E:C1C4, 'IPv6 Gateway' empty, and 'IPv6 DNS Server' empty. The '802.1X' section has 'Use 802.1X Security' unchecked, 'Authentication' set to MD5, and 'Username' and 'Password' fields empty. A 'Top' button is at the bottom left.

Field	Value
IP Address	172.21.3.1
Subnet Mask	255.255.0.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0
IPv6 Address	
Link Local Address	FE80::201:42FF:FE5E:C1C4
IPv6 Gateway	
IPv6 DNS Server	
Use 802.1X Security	<input type="checkbox"/>
Authentication	MD5
Username	
Password	

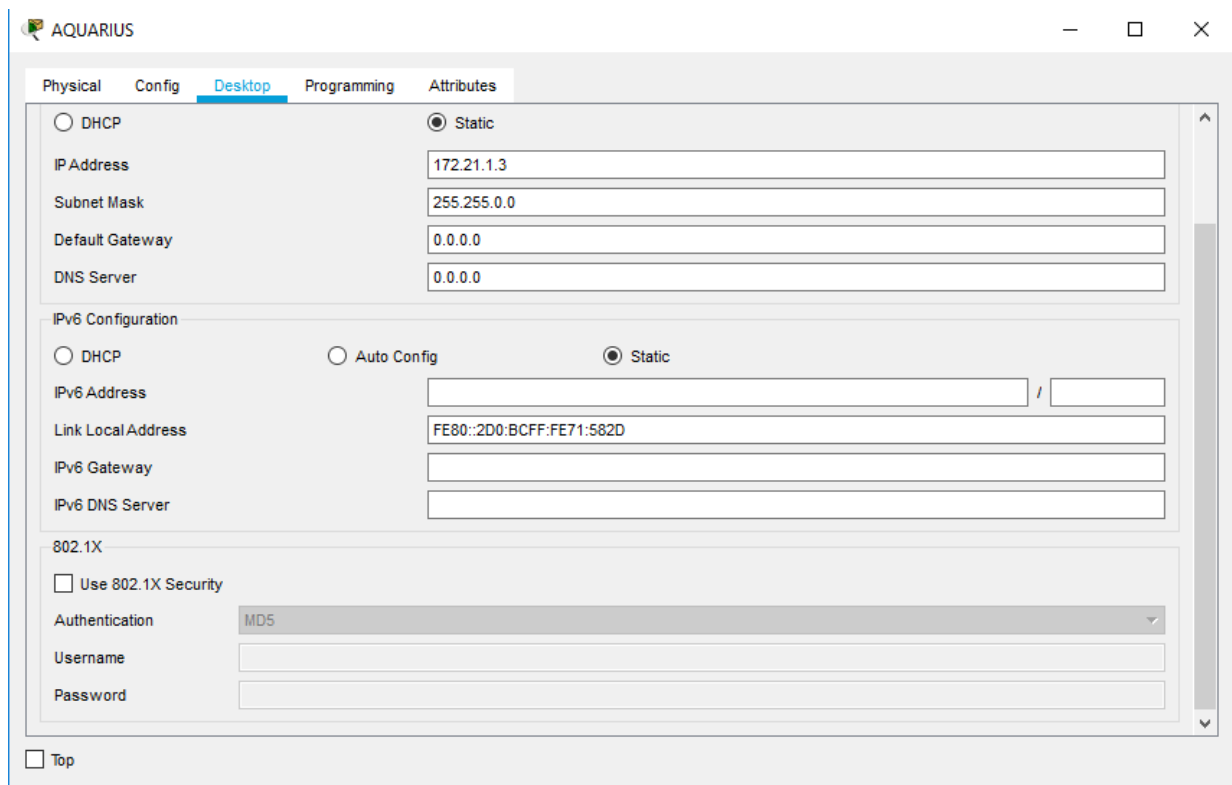
- Scorpio = 172.21.3.2/24



The image shows the 'Scorpio' configuration window with the 'Desktop' tab selected. The 'Static' radio button is chosen for the IP configuration. The IP Address is set to 172.21.3.2, Subnet Mask to 255.255.0.0, Default Gateway to 0.0.0.0, and DNS Server to 0.0.0.0. The IPv6 Configuration section has 'Static' selected, with empty fields for IPv6 Address, Link Local Address (FE80::203:E4FF:FE49:6D59), IPv6 Gateway, and IPv6 DNS Server. The 802.1X section has 'Use 802.1X Security' unchecked, 'Authentication' set to 'MD5', and empty fields for Username and Password. A 'Top' button is at the bottom left.

Field	Value
IP Address	172.21.3.2
Subnet Mask	255.255.0.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0
IPv6 Address	
Link Local Address	FE80::203:E4FF:FE49:6D59
IPv6 Gateway	
IPv6 DNS Server	
Use 802.1X Security	<input type="checkbox"/>
Authentication	MD5
Username	
Password	

- Aquarius = 172.21.1.3/24



The image shows the 'AQUARIUS' configuration window with the 'Desktop' tab selected. The 'Static' radio button is chosen for the IP configuration. The IP Address is set to 172.21.1.3, Subnet Mask to 255.255.0.0, Default Gateway to 0.0.0.0, and DNS Server to 0.0.0.0. The IPv6 Configuration section has 'Static' selected, with empty fields for IPv6 Address, Link Local Address (FE80::2D0:BCFF:FE71:582D), IPv6 Gateway, and IPv6 DNS Server. The 802.1X section has 'Use 802.1X Security' unchecked, 'Authentication' set to 'MD5', and empty fields for Username and Password. A 'Top' button is at the bottom left.

Field	Value
IP Address	172.21.1.3
Subnet Mask	255.255.0.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0
IPv6 Address	
Link Local Address	FE80::2D0:BCFF:FE71:582D
IPv6 Gateway	
IPv6 DNS Server	
Use 802.1X Security	<input type="checkbox"/>
Authentication	MD5
Username	
Password	

➤ Gemini = 172.21.1.4/24

The screenshot shows the 'GEMINI' network configuration window. It has a tabbed interface with 'Physical', 'Config', 'Desktop' (selected), 'Programming', and 'Attributes'. Under the 'Desktop' tab, there are three main sections: DHCP/Static IP configuration, IPv6 Configuration, and 802.1X Security. The DHCP/Static section has 'Static' selected, with IP Address '172.21.1.4', Subnet Mask '255.255.0.0', Default Gateway '0.0.0.0', and DNS Server '0.0.0.0'. The IPv6 Configuration section has 'Static' selected, with IPv6 Address, Link Local Address 'FE80::250:FFF:FE29:6AAD', IPv6 Gateway, and IPv6 DNS Server fields. The 802.1X section has 'Use 802.1X Security' unchecked, Authentication set to 'MD5', and empty Username and Password fields. A 'Top' button is at the bottom left.

Section	Option	Value
DHCP/Static	DHCP	<input type="radio"/>
	Static	<input checked="" type="radio"/>
DHCP/Static	IP Address	172.21.1.4
	Subnet Mask	255.255.0.0
	Default Gateway	0.0.0.0
	DNS Server	0.0.0.0
IPv6 Configuration	DHCP	<input type="radio"/>
	Auto Config	<input type="radio"/>
	Static	<input checked="" type="radio"/>
	IPv6 Address	
	Link Local Address	FE80::250:FFF:FE29:6AAD
IPv6 Configuration	IPv6 Gateway	
	IPv6 DNS Server	
802.1X	Use 802.1X Security	<input type="checkbox"/>
	Authentication	MD5
	Username	
	Password	

☐ Top

➤ Cancer = 172.21.2.3/24

The screenshot shows the 'CANCER' network configuration window, which has the same layout as the GEMINI window. Under the 'Desktop' tab, the DHCP/Static section has 'Static' selected, with IP Address '172.21.2.3', Subnet Mask '255.255.0.0', Default Gateway '0.0.0.0', and DNS Server '0.0.0.0'. The IPv6 Configuration section has 'Static' selected, with IPv6 Address, Link Local Address 'FE80::2D0:97FF:FE17:51EC', IPv6 Gateway, and IPv6 DNS Server fields. The 802.1X section has 'Use 802.1X Security' unchecked, Authentication set to 'MD5', and empty Username and Password fields. A 'Top' button is at the bottom left.

Section	Option	Value
DHCP/Static	DHCP	<input type="radio"/>
	Static	<input checked="" type="radio"/>
DHCP/Static	IP Address	172.21.2.3
	Subnet Mask	255.255.0.0
	Default Gateway	0.0.0.0
	DNS Server	0.0.0.0
IPv6 Configuration	DHCP	<input type="radio"/>
	Auto Config	<input type="radio"/>
	Static	<input checked="" type="radio"/>
	IPv6 Address	
	Link Local Address	FE80::2D0:97FF:FE17:51EC
IPv6 Configuration	IPv6 Gateway	
	IPv6 DNS Server	
802.1X	Use 802.1X Security	<input type="checkbox"/>
	Authentication	MD5
	Username	
	Password	

☐ Top



➤ Sagitarius = 172.21.2.4/24

The SAGITARIUS configuration window is shown with the 'Desktop' tab selected. It features a tabbed interface with 'Physical', 'Config', 'Desktop', 'Programming', and 'Attributes'. The 'Static' radio button is selected for the main configuration. The IP Address is set to 172.21.2.4, Subnet Mask to 255.255.0.0, Default Gateway to 0.0.0.0, and DNS Server to 0.0.0.0. The IPv6 Configuration section has 'Static' selected, with an empty IPv6 Address field, Link Local Address set to FE80::200:CFF:FEC0:C702, and empty fields for IPv6 Gateway and IPv6 DNS Server. The 802.1X section has 'Use 802.1X Security' unchecked, Authentication set to MD5, and empty fields for Username and Password. A 'Top' button is at the bottom left.

Physical	Config	Desktop	Programming	Attributes
<input type="radio"/> DHCP <input checked="" type="radio"/> Static				
IP Address		172.21.2.4		
Subnet Mask		255.255.0.0		
Default Gateway		0.0.0.0		
DNS Server		0.0.0.0		
IPv6 Configuration				
<input type="radio"/> DHCP <input type="radio"/> Auto Config <input checked="" type="radio"/> Static				
IPv6 Address				
Link Local Address		FE80::200:CFF:FEC0:C702		
IPv6 Gateway				
IPv6 DNS Server				
802.1X				
<input type="checkbox"/> Use 802.1X Security				
Authentication		MD5		
Username				
Password				

☐ Top

➤ Carpiconus = 172.21.3.3/24

The CAPRICORNUS configuration window is shown with the 'Desktop' tab selected. It features a tabbed interface with 'Physical', 'Config', 'Desktop', 'Programming', and 'Attributes'. The 'Static' radio button is selected for the main configuration. The IP Address is set to 172.21.3.3, Subnet Mask to 255.255.0.0, Default Gateway to 0.0.0.0, and DNS Server to 0.0.0.0. The IPv6 Configuration section has 'Static' selected, with an empty IPv6 Address field, Link Local Address set to FE80::260:3EFF:FEED:DA6, and empty fields for IPv6 Gateway and IPv6 DNS Server. The 802.1X section has 'Use 802.1X Security' unchecked, Authentication set to MD5, and empty fields for Username and Password. A 'Top' button is at the bottom left.

Physical	Config	Desktop	Programming	Attributes
<input type="radio"/> DHCP <input checked="" type="radio"/> Static				
IP Address		172.21.3.3		
Subnet Mask		255.255.0.0		
Default Gateway		0.0.0.0		
DNS Server		0.0.0.0		
IPv6 Configuration				
<input type="radio"/> DHCP <input type="radio"/> Auto Config <input checked="" type="radio"/> Static				
IPv6 Address				
Link Local Address		FE80::260:3EFF:FEED:DA6		
IPv6 Gateway				
IPv6 DNS Server				
802.1X				
<input type="checkbox"/> Use 802.1X Security				
Authentication		MD5		
Username				
Password				

☐ Top

➤ Pisces = 172.21.3.4/24

The screenshot shows the 'PISCES' network configuration window with the 'Desktop' tab selected. It contains two main sections: 'Static' IP configuration and 'IPv6 Configuration'. The 'Static' section has fields for IP Address (172.21.3.4), Subnet Mask (255.255.0.0), Default Gateway (0.0.0.0), and DNS Server (0.0.0.0). The 'IPv6 Configuration' section has radio buttons for DHCP, Auto Config, and Static (selected), with fields for IPv6 Address, Link Local Address (FE80::2E0:F9FF:FE07:59B7), IPv6 Gateway, and IPv6 DNS Server. Below these is the '802.1X' section with a checkbox for 'Use 802.1X Security', a dropdown for 'Authentication' (MD5), and fields for 'Username' and 'Password'. A 'Top' button is at the bottom left.

<input type="radio"/> DHCP		<input checked="" type="radio"/> Static	
IP Address	172.21.3.4		
Subnet Mask	255.255.0.0		
Default Gateway	0.0.0.0		
DNS Server	0.0.0.0		
IPv6 Configuration			
<input type="radio"/> DHCP		<input type="radio"/> Auto Config	
		<input checked="" type="radio"/> Static	
IPv6 Address			
Link Local Address	FE80::2E0:F9FF:FE07:59B7		
IPv6 Gateway			
IPv6 DNS Server			
802.1X			
<input type="checkbox"/> Use 802.1X Security			
Authentication	MD5		
Username			
Password			

☐ Top

B. Lakukan langkah 4 dan 5 laboratorium 1 untuk switch 1

The screenshot shows the 'SW 1' network configuration window with the 'CLI' tab selected. It displays the 'IOS Command Line Interface' with a series of configuration commands entered. The commands configure three VLANs (10, 20, 30) named 'zodiak1', 'zodiak2', and 'zodiak3', and configure six interfaces (fa 0/1 to fa 0/6) to be in 'sw mode access' and assigned to the respective VLANs. The window also shows a status message '%SYS-5-CONFIG\_I: Configured from console by console' and a 'Ctrl+F6 to exit CLI focus'提示. 'Copy' and 'Paste' buttons are at the bottom right. A 'Top' button is at the bottom left.

```
Switch>enable
Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name zodiak1
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name zodiak2
Switch(config-vlan)#exit
Switch(config)#vlan 30
Switch(config-vlan)#name zodiak3
Switch(config-vlan)#exit
Switch(config)#int fa 0/1
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#int fa 0/4
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#int fa 0/2
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#int fa 0/3
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#int fa 0/5
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#int fa 0/6
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#end
Switch#
%SYS-5-CONFIG_I: Configured from console by console
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

C. Lakukan konfigurasi VLAN trunking pada switch 1

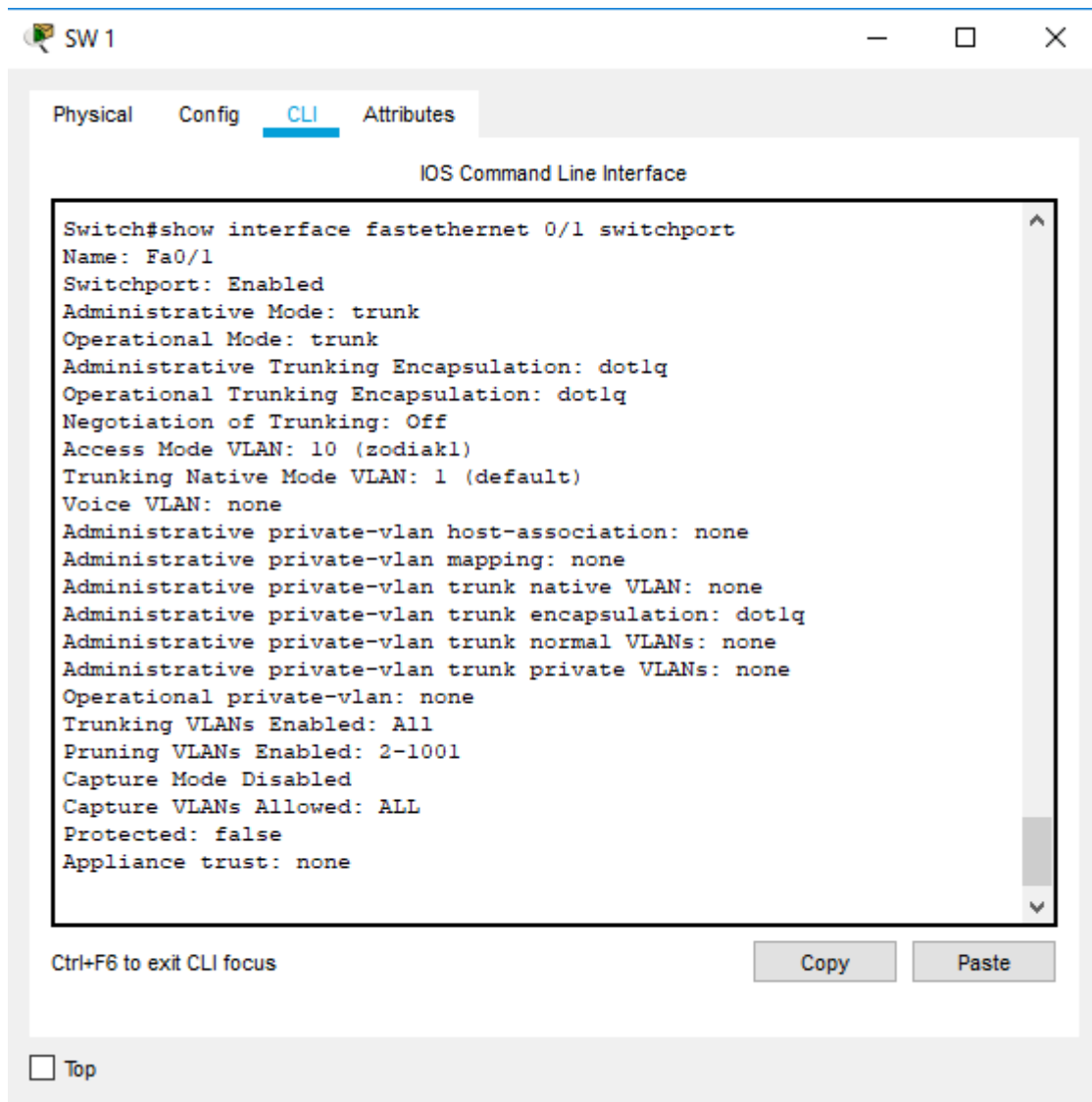
```
Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int fa 0/1
Switch(config-if)#sw mode trunk

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to up

Switch(config-if)#exit
Switch(config)#
```

D. Pada mode user atau mode privileged, lihat konfigurasi trunking yang telah dibuat



The screenshot shows a network switch interface with tabs for Physical, Config, CLI, and Attributes. The CLI tab is active, displaying the output of the command `Switch#show vlan`. The output is divided into two sections: a summary table and a detailed table.

VLAN	Name	Status	Ports
1	default	active	Fa0/7, Fa0/8, Fa0/9, Fa0/10, Fa0/11, Fa0/12, Fa0/13, Fa0/14, Fa0/15, Fa0/16, Fa0/17, Fa0/18, Fa0/19, Fa0/20, Fa0/21, Fa0/22, Fa0/23, Fa0/24
10	zodiak1	active	Fa0/4
20	zodiak2	active	Fa0/2, Fa0/5
30	zodiak3	active	Fa0/3, Fa0/6
1002	fddi-default	active	
1003	token-ring-default	active	
1004	fddinet-default	active	
1005	trnet-default	active	

VLAN	Type	SAID	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode
1	enet	100001	1500	-	-	-	-	0
10	enet	100010	1500	-	-	-	-	0
20	enet	100020	1500	-	-	-	-	0
30	enet	100030	1500	-	-	-	-	0
1002	fddi	101002	1500	-	-	-	-	0
1003	tr	101003	1500	-	-	-	-	0
1004	fdnet	101004	1500	-	-	-	ieee	0

The CLI window also shows a scroll bar on the right and a status bar at the bottom with the text `--More--`.

**Tugas 7A :** Jelaskan secara singkat hasil yang anda peroleh dari langkah 7.

- Mengaktifkan switch port Fa0/1(port yang digunakan untuk trunk), Administrative mode menjadi trunk dan juga Operational Mode trunk.
- Saat kita mengetikkan *show interface fastheternet 0/??*(?? nomer port trunking) akan muncul status switchport trunk pada interface:
  - Administrative Mode. Merupakan switchport default yaitu trunk
  - Administrative Trunking Encapsulation. Merupakan enkapsulasi default yaitu dot1q.
  - Trunking Native Mode VLAN. Native VLAN default menggunakan VLAN1.
  - Capture VLANs Allowed. Secara default, semua VLAN dibolehkan masuk ke trunk port.
- Saat kita mengetikkan *show interface trunk* akan menampilkan status trunking dan semua VLAN dibolehkan masuk trunk.

- Saat kita mengetikkan *show vlan* berfungsi untuk mengecek status pada VLAN
- Lakukan ping dari PC leo ke PC pisces

E. Lakukan ping dari PC leo ke PC Pisces

The screenshot shows a Packet Tracer PC Command Prompt window for PC Leo. The window has tabs for Physical, Config, Desktop, Programming, and Attributes, with Desktop selected. The Command Prompt displays the following text:

```

Packet Tracer PC Command Line 1.0
C:\>ping 172.21.3.4

Pinging 172.21.3.4 with 32 bytes of data:

Reply from 172.21.3.4: bytes=32 time=8ms TTL=128
Reply from 172.21.3.4: bytes=32 time=1ms TTL=128
Reply from 172.21.3.4: bytes=32 time<1ms TTL=128
Reply from 172.21.3.4: bytes=32 time=1ms TTL=128

Ping statistics for 172.21.3.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 8ms, Average = 2ms

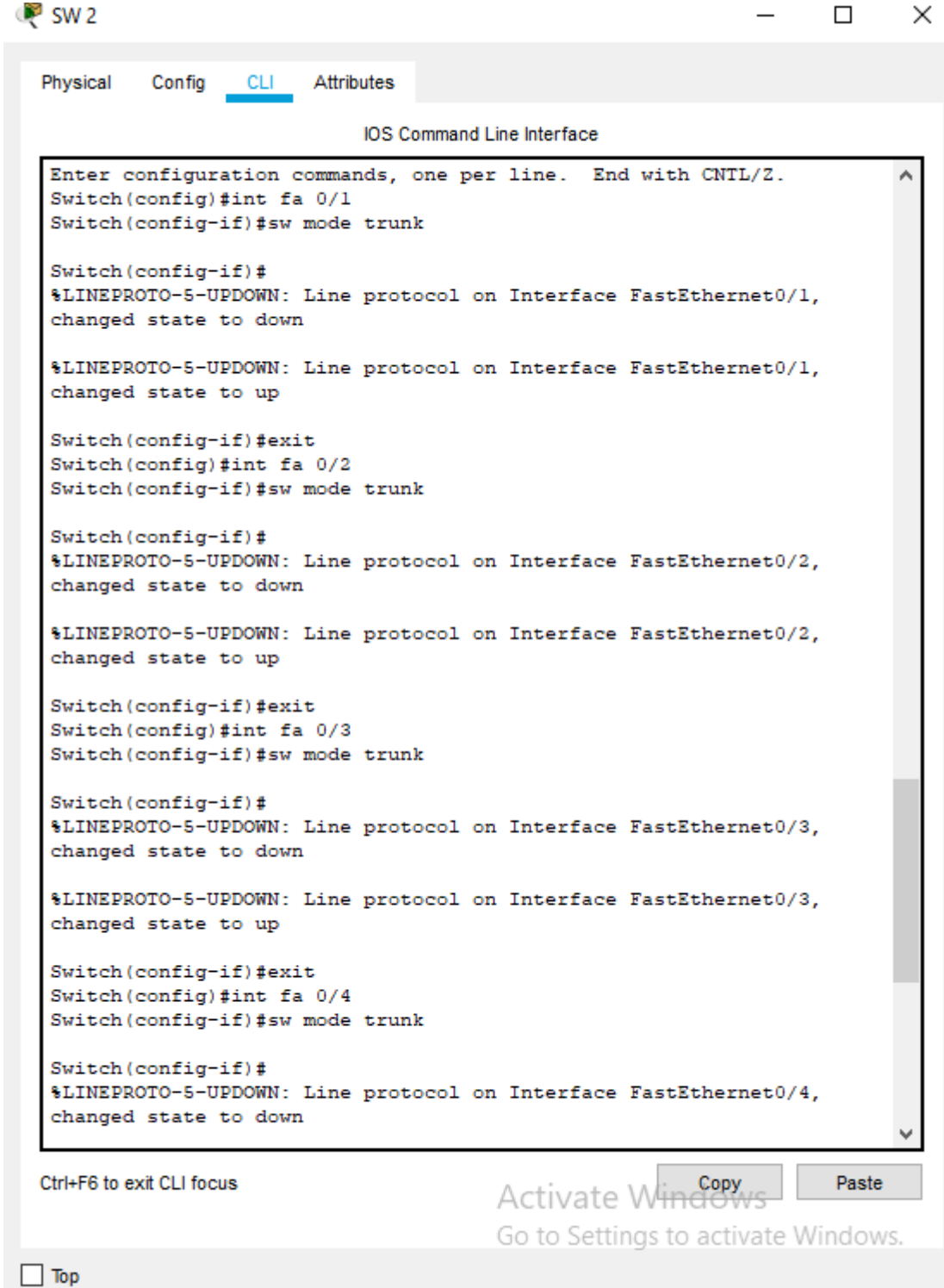
C:\>|
  
```

At the bottom left of the window, there is a checkbox labeled "Top".

**Tugas 8A :** Jelaskan secara singkat mengapa hasil yang anda peroleh dari langkah 8 mendapatkan status “Reply”?

- Ping dari PC leo ke PC Pisces mendapatkan status Reply karena telah di trunking dan menyambungkan sesama VLAN ID

F. Lakukan konfigurasi VLAN trunking pada switch 2 seperti langkah 6



SW 2

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int fa 0/1
Switch(config-if)#sw mode trunk

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to up

Switch(config-if)#exit
Switch(config)#int fa 0/2
Switch(config-if)#sw mode trunk

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2,
changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2,
changed state to up

Switch(config-if)#exit
Switch(config)#int fa 0/3
Switch(config-if)#sw mode trunk

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3,
changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3,
changed state to up

Switch(config-if)#exit
Switch(config)#int fa 0/4
Switch(config-if)#sw mode trunk

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4,
changed state to down
```

Ctrl+F6 to exit CLI focus

Copy Paste

Activate Windows  
Go to Settings to activate Windows.

☐ Top

G. Pada mode user atau mode privileged, lihat konfigurasi VLAN pada switch 2

SW 2

Physical Config **CLI** Attributes

IOS Command Line Interface

```
% Invalid input detected at '^' marker.  
Switch(config)#exit  
Switch#  
%SYS-5-CONFIG_I: Configured from console by console  
Switch#show vlan
```

VLAN Name	Status	Ports
1 default	active	Fa0/7, Fa0/8, Fa0/9, Fa0/10, Fa0/11, Fa0/12, Fa0/13, Fa0/14, Fa0/15, Fa0/16, Fa0/17, Fa0/18, Fa0/19, Fa0/20, Fa0/21, Fa0/22, Fa0/23, Fa0/24
10 zodiak1	active	
20 zodiak2	active	
30 zodiak3	active	
1002 fddi-default	active	
1003 token-ring-default	active	
1004 fddinet-default	active	
1005 trnet-default	active	

VLAN Type	SAID	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode
1	enet	100001	1500	-	-	-	0
10	enet	100010	1500	-	-	-	0
20	enet	100020	1500	-	-	-	0
30	enet	100030	1500	-	-	-	0

--More--

Ctrl+F6 to exit CLI focus

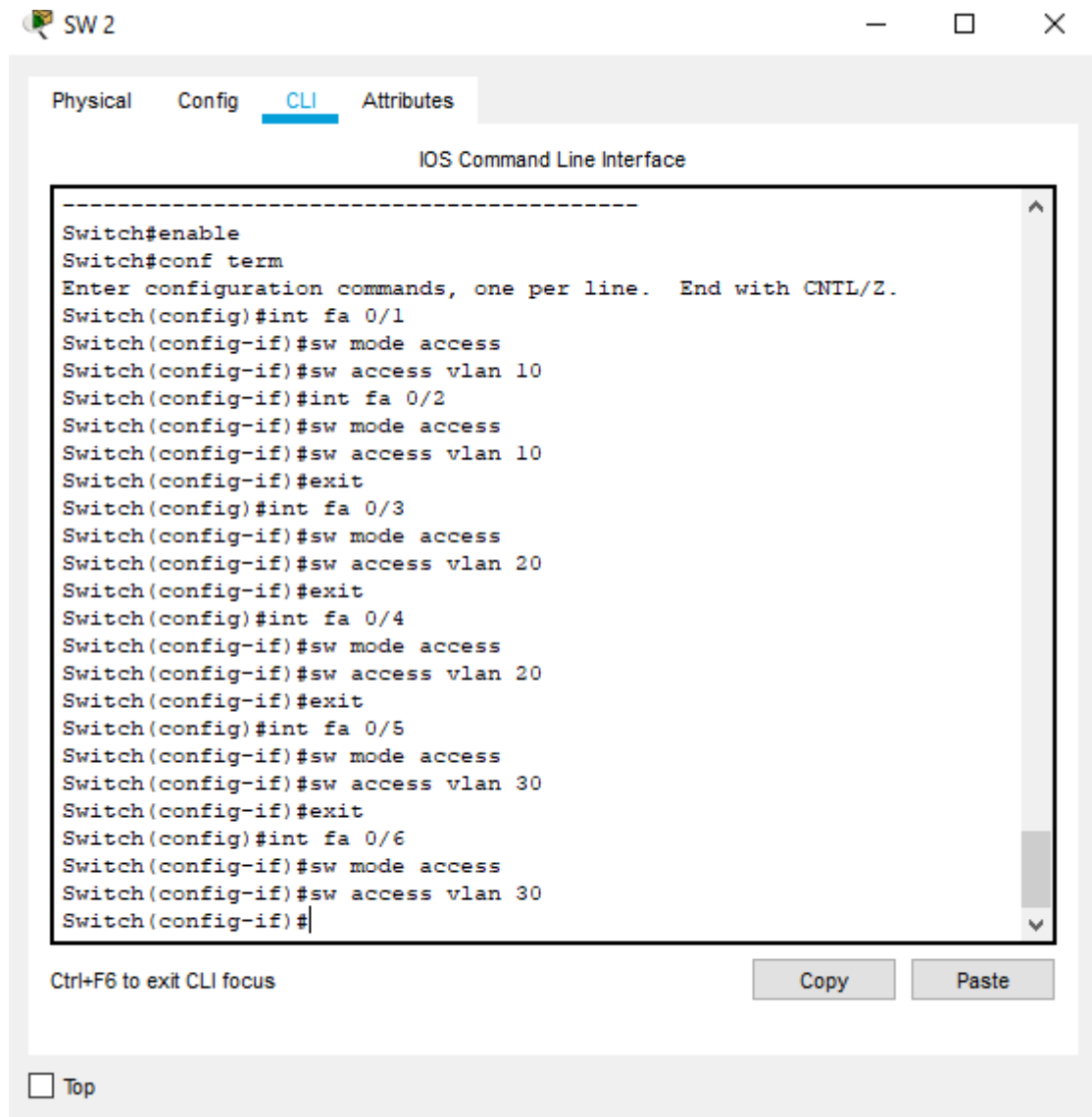
Copy Paste

☐ Top

**Tugas 10A :** Jelaskan secara singkat hasil yang anda peroleh dari langkah 10.

- Dapat disimpulkan bahwa pada konfigurasi trunking sudah dilakukan dan dalam switch menunjukkan konfigurasi trunking sudah berjalan. Port yang telah didaftarkan dalam trunking memiliki kapasitas untuk memanager beberapa hal yang berkaitan dengan domain(1, 10, 20, 30).

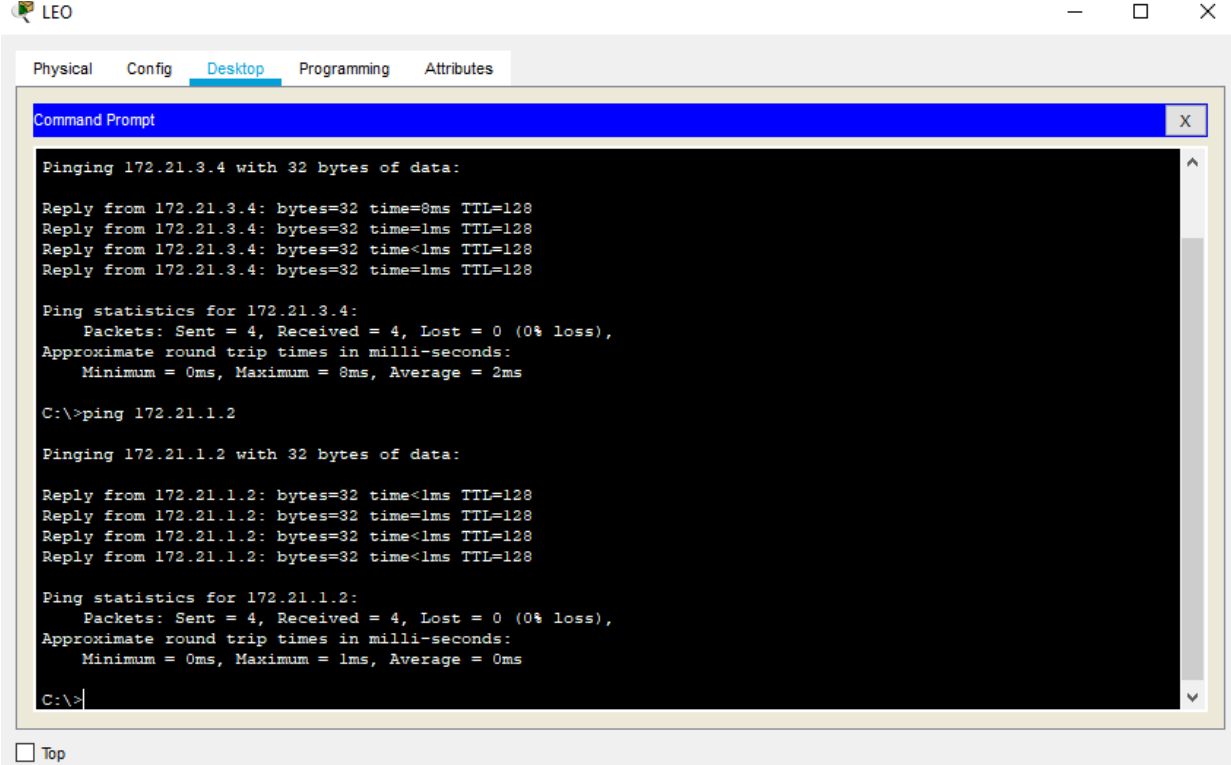
- H. Pada mode configuration, konfigurasi port-port switch ke dalam VLAN zodiak1, zodiak2, dan zodiak3.





## I. Lakukan ping dari:

- Leo ke Aries



The screenshot shows a Leo network simulator window with a 'Command Prompt' tab active. The command prompt displays the results of a ping command from 172.21.3.4 to 172.21.1.2. The output shows four successful replies with 32 bytes of data, a time of 1ms, and a TTL of 128. The ping statistics for 172.21.1.2 show 4 packets sent, 4 received, 0 lost (0% loss), and an average round trip time of 0ms.

```
Physical Config Desktop Programming Attributes
Command Prompt
Pinging 172.21.3.4 with 32 bytes of data:

Reply from 172.21.3.4: bytes=32 time=0ms TTL=128
Reply from 172.21.3.4: bytes=32 time=1ms TTL=128
Reply from 172.21.3.4: bytes=32 time<1ms TTL=128
Reply from 172.21.3.4: bytes=32 time=1ms TTL=128

Ping statistics for 172.21.3.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 8ms, Average = 2ms

C:\>ping 172.21.1.2

Pinging 172.21.1.2 with 32 bytes of data:

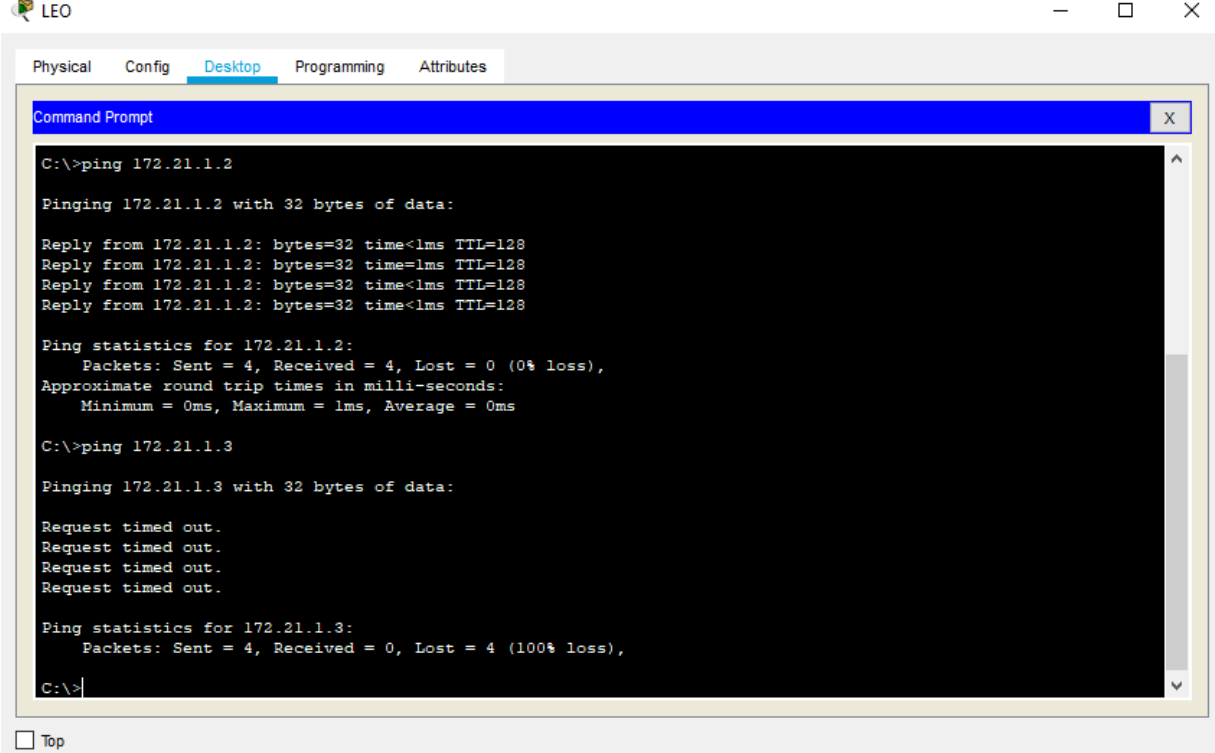
Reply from 172.21.1.2: bytes=32 time<1ms TTL=128
Reply from 172.21.1.2: bytes=32 time=1ms TTL=128
Reply from 172.21.1.2: bytes=32 time<1ms TTL=128
Reply from 172.21.1.2: bytes=32 time<1ms TTL=128

Ping statistics for 172.21.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>|
```

☐ Top

- Leo ke Aquarius



The screenshot shows a Leo network simulator window with a 'Command Prompt' tab active. The command prompt displays the results of a ping command from 172.21.1.2 to 172.21.1.3. The output shows four request timed out messages, indicating a 100% loss of packets. The ping statistics for 172.21.1.3 show 4 packets sent, 0 received, 4 lost (100% loss).

```
Physical Config Desktop Programming Attributes
Command Prompt
C:\>ping 172.21.1.2

Pinging 172.21.1.2 with 32 bytes of data:

Reply from 172.21.1.2: bytes=32 time<1ms TTL=128
Reply from 172.21.1.2: bytes=32 time=1ms TTL=128
Reply from 172.21.1.2: bytes=32 time<1ms TTL=128
Reply from 172.21.1.2: bytes=32 time<1ms TTL=128

Ping statistics for 172.21.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>ping 172.21.1.3

Pinging 172.21.1.3 with 32 bytes of data:

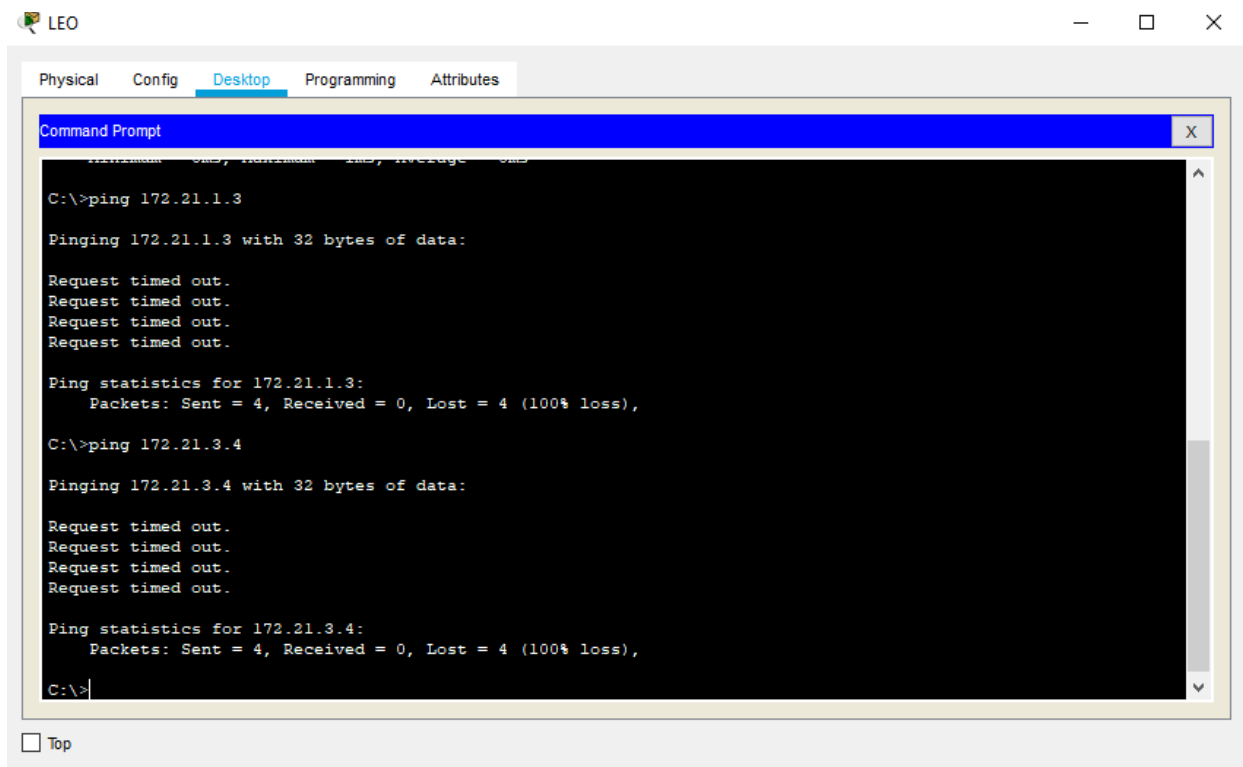
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.21.1.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

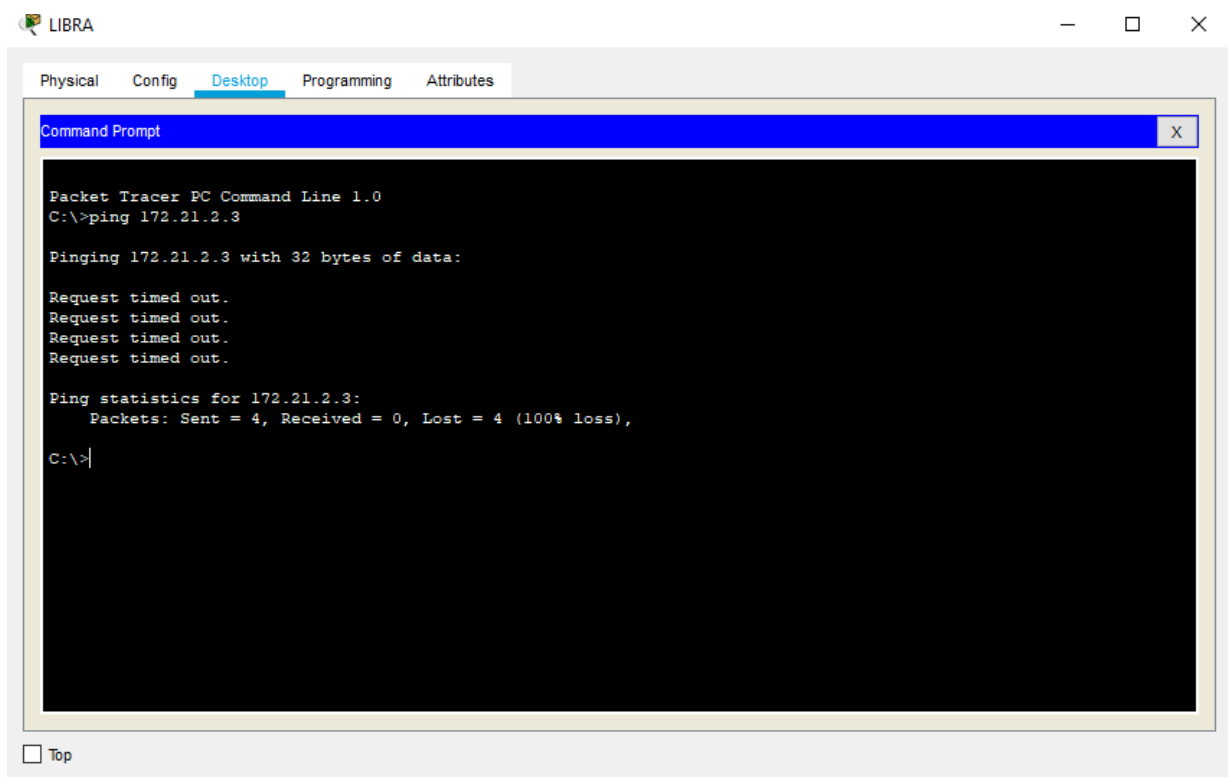
C:\>|
```

☐ Top

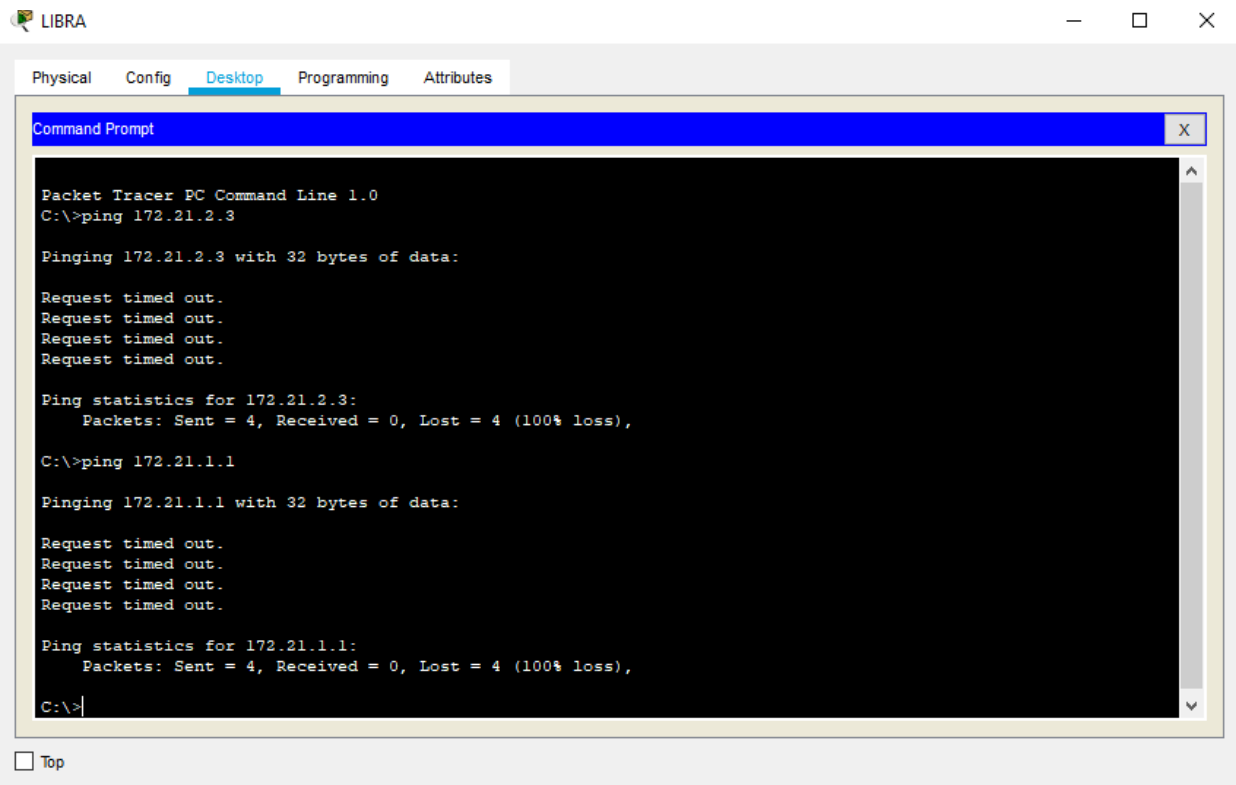
## ➤ Leo ke Pisces



## ➤ Libra ke Cancer



## ➤ Libra ke Leo



**Tugas 12A :** Jelaskan secara singkat hasil yang anda peroleh dari langkah 8.

- Dari langkah 8 dapat disimpulkan bahwa seluruh device yang sudah dikonfigurasi hasil dari pengujian koneksi(ping) menunjukkan bahwa device yang dalam jaringan yang sama namun memiliki perbedaan VLAN menunjukkan hasil RTO, dalam network yang sama namun dalam VLAN yang berbeda juga menunjukkan hasil RTO.
- Untuk hasil pengujian koneksi(ping) yang reply hanyalah dalam device dengan spesifikasi jaringan yang sama dan dalam VLAN yang sama.



