

Nama : Hesti Sefria Nurfitri

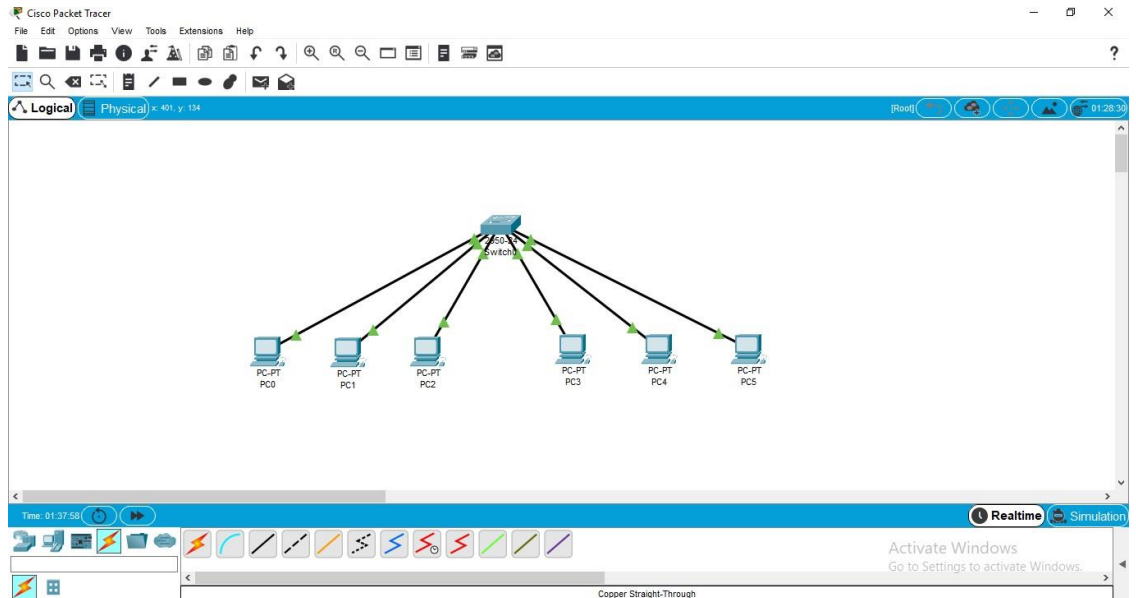
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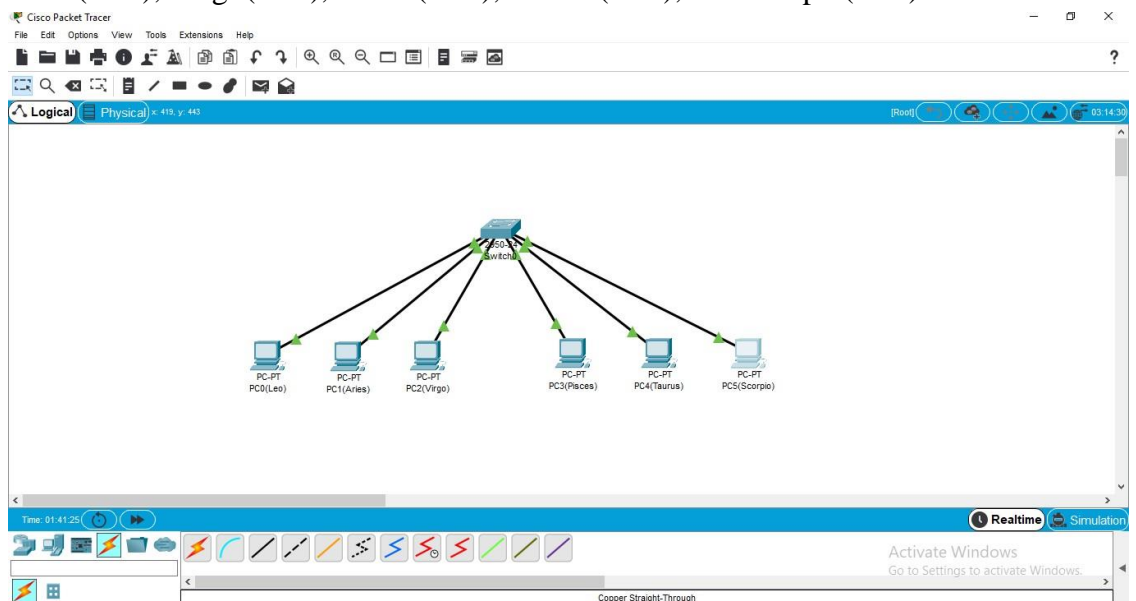
Modul 4

1. Kegiatan 1. Topologi 1

- a. Menggunakan packet tracer buat topologi berikut ini dengan menggunakan swith.

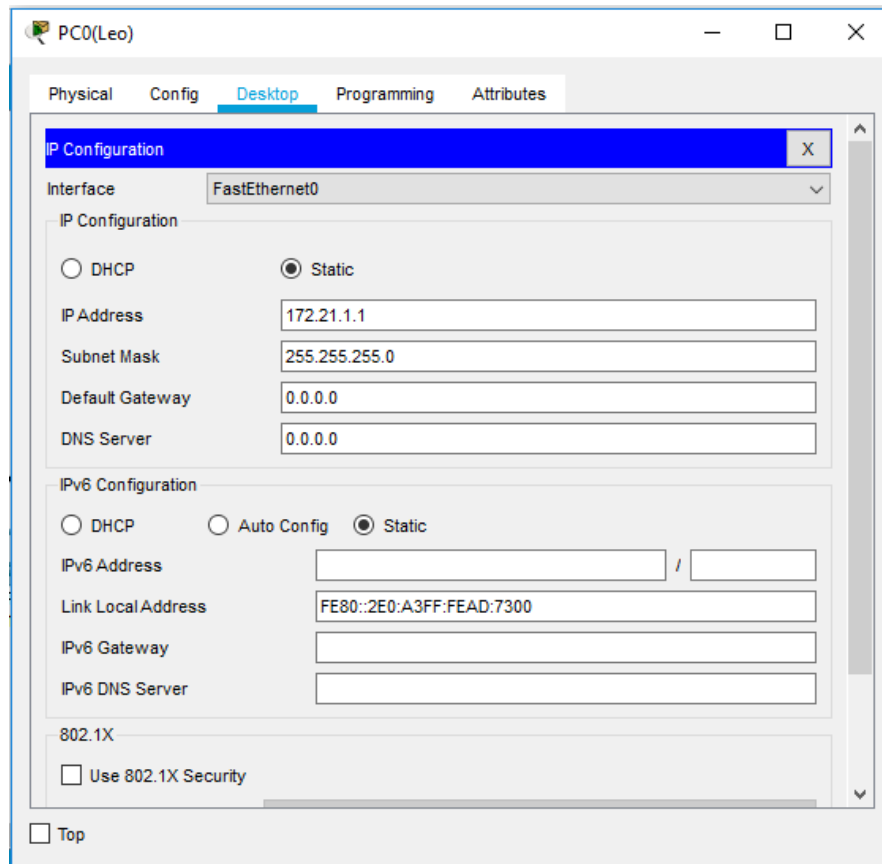


- b. Beri nama masing_masing perangkat dengan SW1(Switch), Leo (PC0), Aries(PC1), Virgo(PC2), Pisces(PC3), Taurus(PC4), dan Scorpio(PC5)



c. Konfigurasi masing-masing PC dengan nama dan alamat IP berikut ini:

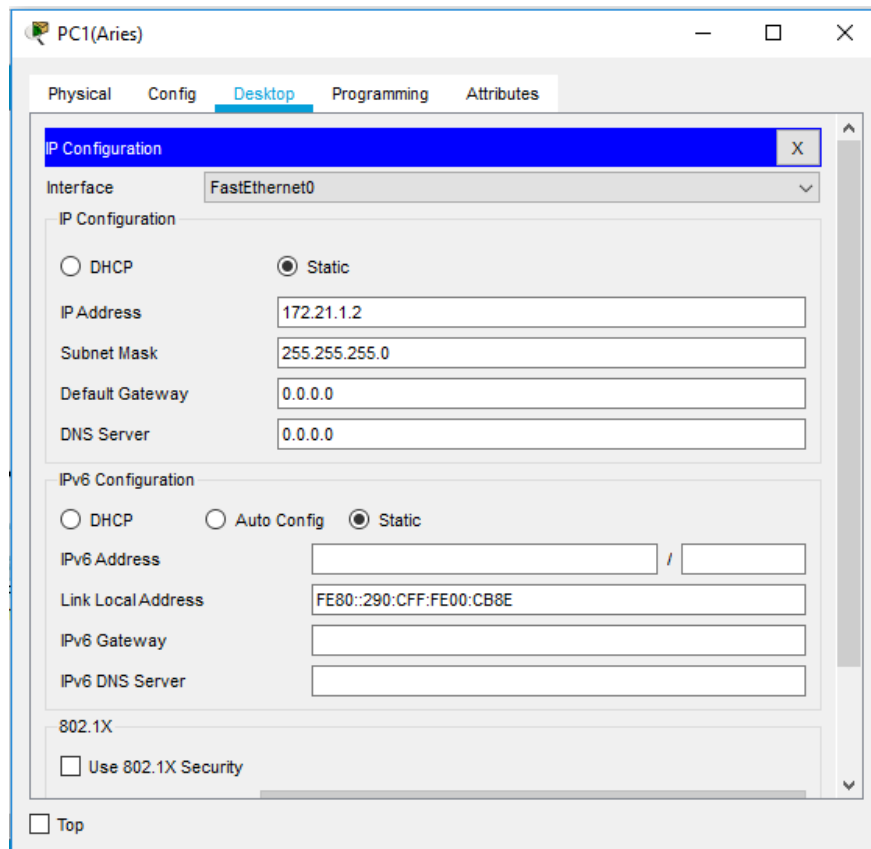
- Leo



The screenshot shows the configuration window for PC0(Leo). The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected for IP Configuration. The IP Address is set to 172.21.1.1, Subnet Mask to 255.255.255.0, Default Gateway to 0.0.0.0, and DNS Server to 0.0.0.0. The 'IPv6 Configuration' section is also expanded, showing 'Static' selected for IPv6 Address, with a Link Local Address of FE80::2E0:A3FF:FEAD:7300. The '802.1X' section is collapsed, and 'Use 802.1X Security' is unchecked. A 'Top' button is at the bottom left.

Interface	IP Configuration	IPv6 Configuration	802.1X
FastEthernet0	<input checked="" type="radio"/> Static IP Address: 172.21.1.1 Subnet Mask: 255.255.255.0 Default Gateway: 0.0.0.0 DNS Server: 0.0.0.0	<input checked="" type="radio"/> Static IPv6 Address: / Link Local Address: FE80::2E0:A3FF:FEAD:7300 IPv6 Gateway: IPv6 DNS Server:	<input type="checkbox"/> Use 802.1X Security

- Aries



The screenshot shows the configuration window for PC1(Aries). The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected for IP Configuration. The IP Address is set to 172.21.1.2, Subnet Mask to 255.255.255.0, Default Gateway to 0.0.0.0, and DNS Server to 0.0.0.0. The 'IPv6 Configuration' section is also expanded, showing 'Static' selected for IPv6 Address, with a Link Local Address of FE80::290:CFF:FE00:CB8E. The '802.1X' section is collapsed, and 'Use 802.1X Security' is unchecked. A 'Top' button is at the bottom left.

Interface	IP Configuration	IPv6 Configuration	802.1X
FastEthernet0	<input checked="" type="radio"/> Static IP Address: 172.21.1.2 Subnet Mask: 255.255.255.0 Default Gateway: 0.0.0.0 DNS Server: 0.0.0.0	<input checked="" type="radio"/> Static IPv6 Address: / Link Local Address: FE80::290:CFF:FE00:CB8E IPv6 Gateway: IPv6 DNS Server:	<input type="checkbox"/> Use 802.1X Security

- Virgo

The screenshot shows the configuration window for PC2(Virgo). The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected for IP Configuration. The IP Address is 172.21.1.3, Subnet Mask is 255.255.255.0, Default Gateway is 0.0.0.0, and DNS Server is 0.0.0.0. The 'IPv6 Configuration' section is also expanded, showing 'Static' selected. The IPv6 Address is empty, Link Local Address is FE80::201:63FF:FE6B:8BA0, IPv6 Gateway is empty, and IPv6 DNS Server is empty. The '802.1X' section is expanded, showing 'Use 802.1X Security' unchecked. A 'Top' button is at the bottom left.

PC2(Virgo)

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.1.3

Subnet Mask 255.255.255.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::201:63FF:FE6B:8BA0

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

☐ Top

- Libra

The screenshot shows the configuration window for PC3(Libra). The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected for IP Configuration. The IP Address is 172.21.1.4, Subnet Mask is 255.255.255.0, Default Gateway is 0.0.0.0, and DNS Server is 0.0.0.0. The 'IPv6 Configuration' section is also expanded, showing 'Static' selected. The IPv6 Address is empty, Link Local Address is FE80::201:63FF:FE33:E939, IPv6 Gateway is empty, and IPv6 DNS Server is empty. The '802.1X' section is expanded, showing 'Use 802.1X Security' unchecked. A 'Top' button is at the bottom left.

PC3(Libra)

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address 172.21.1.4

Subnet Mask 255.255.255.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::201:63FF:FE33:E939

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

☐ Top

- Taurus

PC4(Taurus)

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.1.5

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::202:17FF:FE9D:4361

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Scorpio

PC5(Scorpio)

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.1.6

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::2D0:BAFF:FECC:2079

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- d. Konfigurasi pada switch dengan mode user atau mode privilege, buat 3 VLAN dengan nama zodiak1, zodiak2, dan zodiak3. Dengan cara klik pada switch 2 kali, kemudian pilih cli.

```
Switch0
Physical Config CLI Attributes
IOS Command Line Interface
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 zodiak1
^
% Invalid input detected at '^' marker.

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)#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

- e. Pada mode configuration, konfigurasi port-port switch ke dalam vlan zodiak1, zodiak2, dan zodiak3 dengan anggota sebagai berikut.
- Zodiak1 = leo dan libra
 - Leo

Switch0

Physical **Config** CLI Attributes

GLOBAL

- Settings
- Algorithm Settings
- SWITCHING**
- VLAN Database
- INTERFACE**
- FastEthernet0/1
- FastEthernet0/2
- FastEthernet0/3
- FastEthernet0/4
- FastEthernet0/5
- FastEthernet0/6
- FastEthernet0/7
- FastEthernet0/8
- FastEthernet0/9

FastEthernet0/1

Status ☒ On

Speed ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

Access VLAN

Port Security Limit

☐ 1:default

☒ 10:zodiak1

☐ 20:zodiak2

Equivalent IOS Commands

```
Switch(config)#interface FastEthernet0/1
Switch(config-if)#
Switch(config-if)#
Switch(config-if)#switchport access vlan 10
Switch(config-if)#
```

☐ Top

➤ Libra

Switch0

Physical **Config** CLI Attributes

GLOBAL

- Settings
- Algorithm Settings
- SWITCHING**
- VLAN Database
- INTERFACE**
- FastEthernet0/1
- FastEthernet0/2
- FastEthernet0/3
- FastEthernet0/4
- FastEthernet0/5
- FastEthernet0/6
- FastEthernet0/7
- FastEthernet0/8
- FastEthernet0/9

FastEthernet0/4

Status ☒ On

Speed ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

Access VLAN

Port Security Limit

☐ 1:default

☒ 10:zodiak1

☐ 20:zodiak2

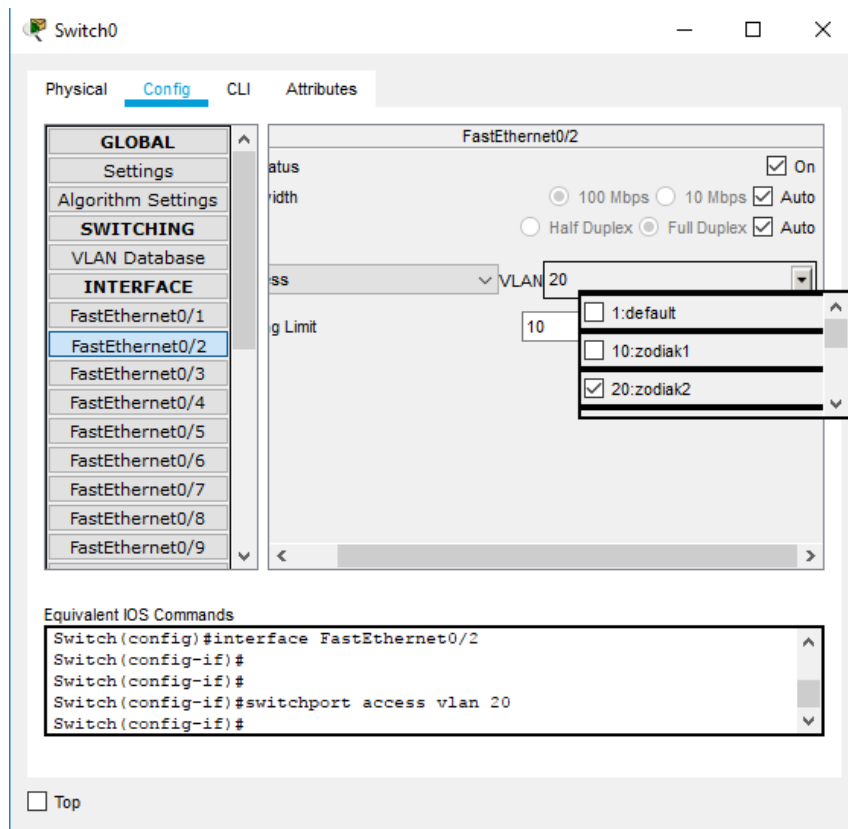
Equivalent IOS Commands

```
Switch(config)#interface FastEthernet0/4
Switch(config-if)#
Switch(config-if)#
Switch(config-if)#switchport access vlan 10
Switch(config-if)#
```

☐ Top

- Zodiak2 = aries dan Taurus

➤ Aries



Switch0

Physical **Config** CLI Attributes

GLOBAL

- Settings
- Algorithm Settings
- SWITCHING**
- VLAN Database
- INTERFACE**
- FastEthernet0/1
- FastEthernet0/2**
- FastEthernet0/3
- FastEthernet0/4
- FastEthernet0/5
- FastEthernet0/6
- FastEthernet0/7
- FastEthernet0/8
- FastEthernet0/9

FastEthernet0/2

Status ☒ On

Speed ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

VLAN

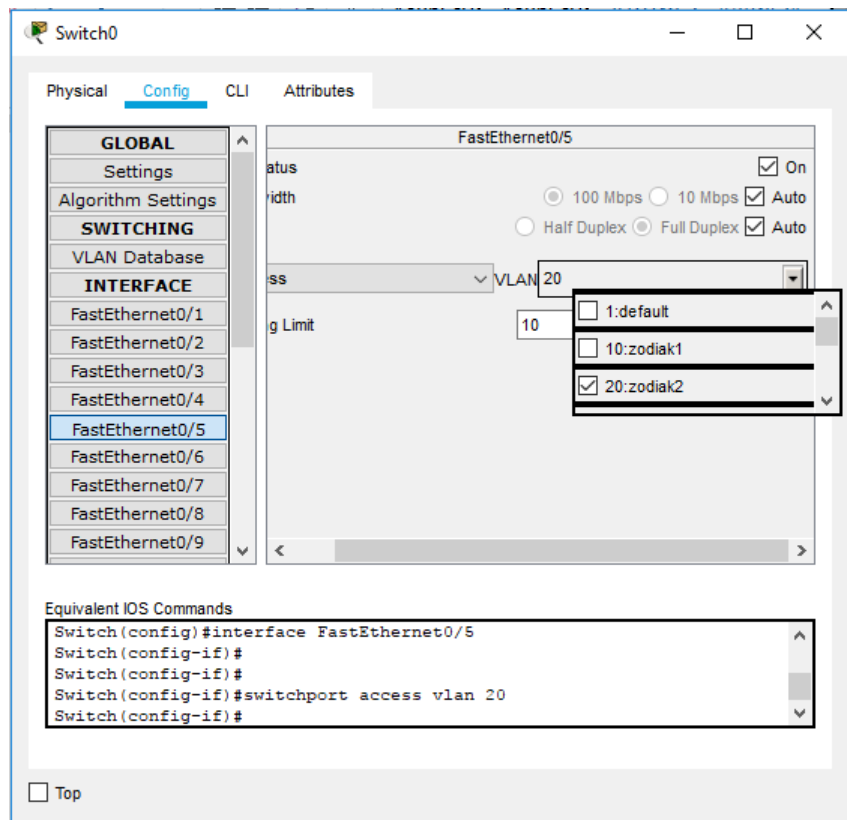
Port Limit 10

Equivalent IOS Commands

```
Switch(config)#interface FastEthernet0/2
Switch(config-if)#
Switch(config-if)#
Switch(config-if)#switchport access vlan 20
Switch(config-if)#
```

☐ Top

➤ Taurus



Switch0

Physical **Config** CLI Attributes

GLOBAL

- Settings
- Algorithm Settings
- SWITCHING**
- VLAN Database
- INTERFACE**
- FastEthernet0/1
- FastEthernet0/2
- FastEthernet0/3
- FastEthernet0/4
- FastEthernet0/5**
- FastEthernet0/6
- FastEthernet0/7
- FastEthernet0/8
- FastEthernet0/9

FastEthernet0/5

Status ☒ On

Speed ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

VLAN

Port Limit 10

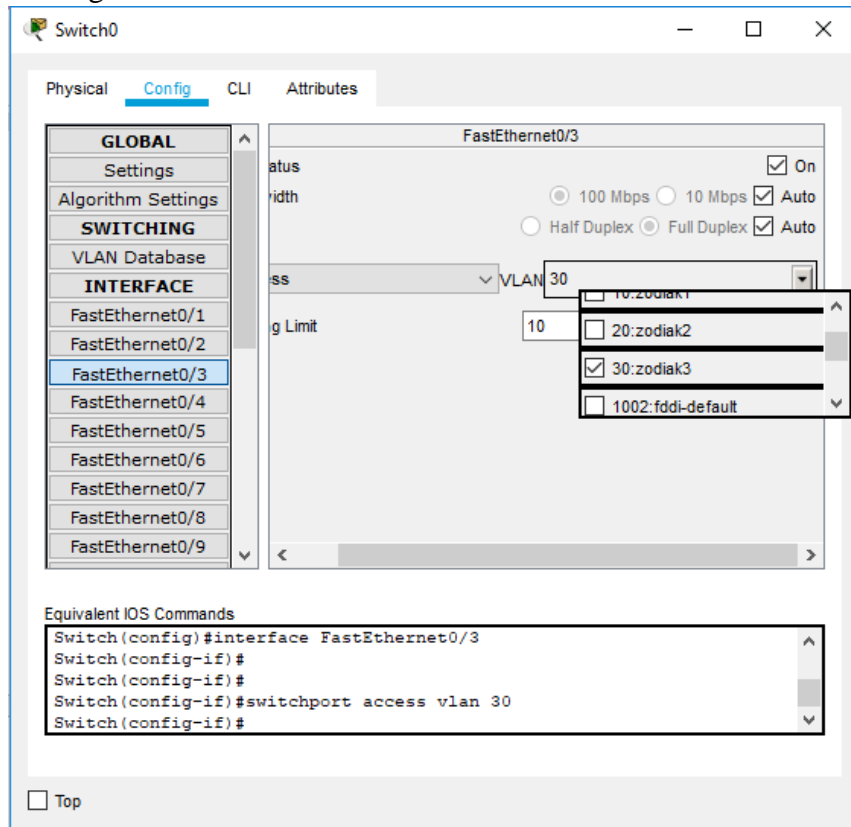
Equivalent IOS Commands

```
Switch(config)#interface FastEthernet0/5
Switch(config-if)#
Switch(config-if)#
Switch(config-if)#switchport access vlan 20
Switch(config-if)#
```

☐ Top

- Zodiak3 = virgo dan scorio

➤ Virgo



Switch0

Physical **Config** CLI Attributes

GLOBAL

- Settings
- Algorithm Settings
- SWITCHING**
- VLAN Database
- INTERFACE**
- FastEthernet0/1
- FastEthernet0/2
- FastEthernet0/3**
- FastEthernet0/4
- FastEthernet0/5
- FastEthernet0/6
- FastEthernet0/7
- FastEthernet0/8
- FastEthernet0/9

FastEthernet0/3

Status ☒ On

Width ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

☐ Half Duplex ☒ Full Duplex ☒ Auto

Access VLAN

Speed Limit 10

☐ 10:zodiak1

☐ 20:zodiak2

☒ 30:zodiak3

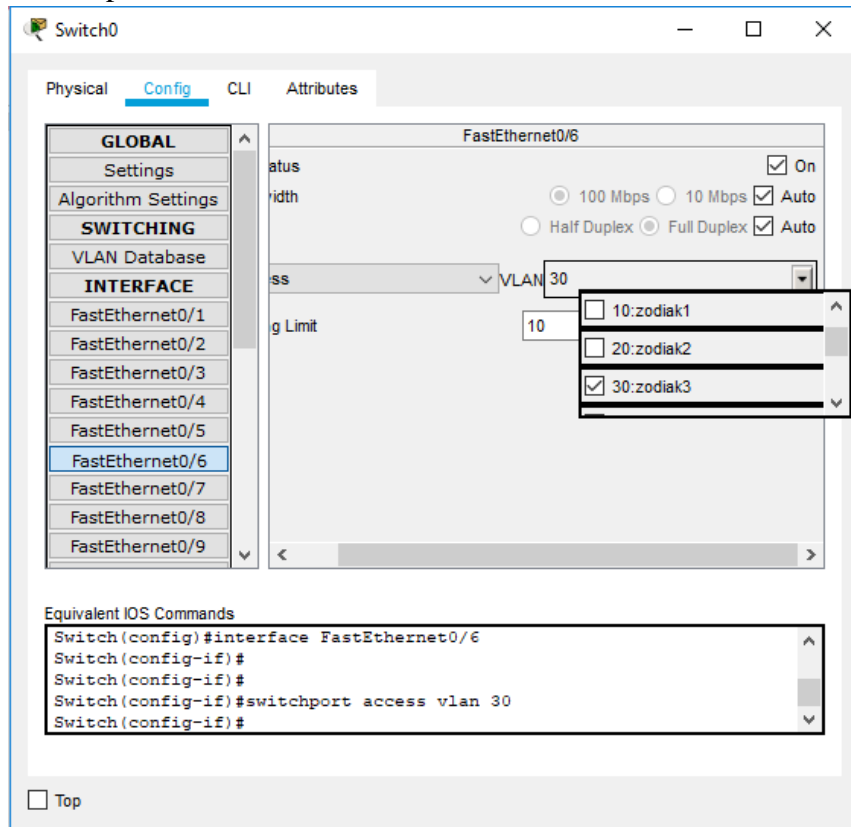
☐ 1002:fdi-default

Equivalent IOS Commands

```
Switch(config)#interface FastEthernet0/3
Switch(config-if)#
Switch(config-if)#
Switch(config-if)#switchport access vlan 30
Switch(config-if)#
```

☐ Top

➤ Scorio



Switch0

Physical **Config** CLI Attributes

GLOBAL

- Settings
- Algorithm Settings
- SWITCHING**
- VLAN Database
- INTERFACE**
- FastEthernet0/1
- FastEthernet0/2
- FastEthernet0/3
- FastEthernet0/4
- FastEthernet0/5
- FastEthernet0/6**
- FastEthernet0/7
- FastEthernet0/8
- FastEthernet0/9

FastEthernet0/6

Status ☒ On

Width ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

☐ Half Duplex ☒ Full Duplex ☒ Auto

Access VLAN

Speed Limit 10

☐ 10:zodiak1

☐ 20:zodiak2

☒ 30:zodiak3

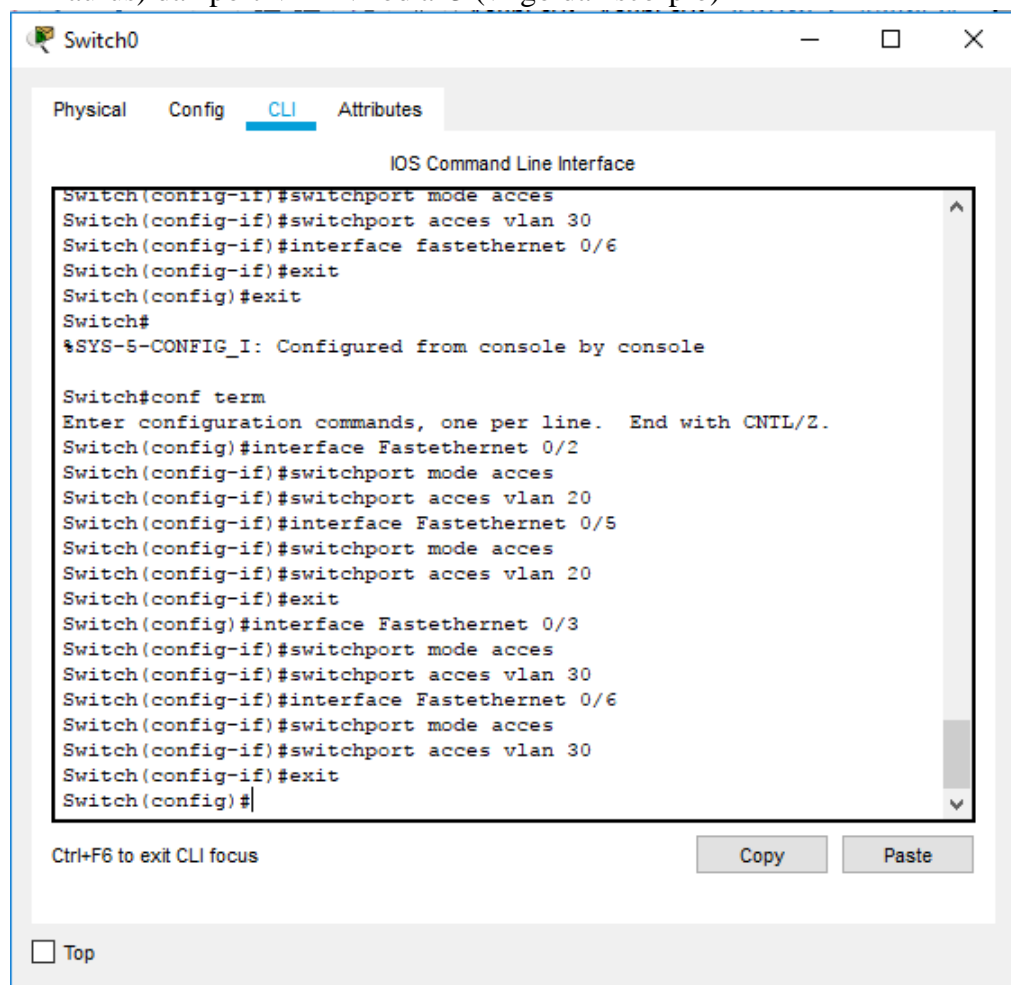
Equivalent IOS Commands

```
Switch(config)#interface FastEthernet0/6
Switch(config-if)#
Switch(config-if)#
Switch(config-if)#switchport access vlan 30
Switch(config-if)#
```

☐ Top

Langkah pengoperasian

- Masukan mode konfigurasi
- Ketik **interface Fastethernet 0/1**; (jika PC leo dihubungkan dengan switch port 1)
- Ketik **switchport mode acces**
- Ketik **switch port acces vlan 10**
- Ketik **interface Fastethernet 0/4**; (jika PC libra dihubungkan dengan switch port 1)
- Ketik **switchport mode acces**
- Ketik **switchport acces vlan 10**
- Ketik **exit**
- Lakukan langkah-langkah diatas untuk port VLAN zodiak2 (aries dan Taurus) dan port VLAN zodiak3 (virgo dan scorpio)

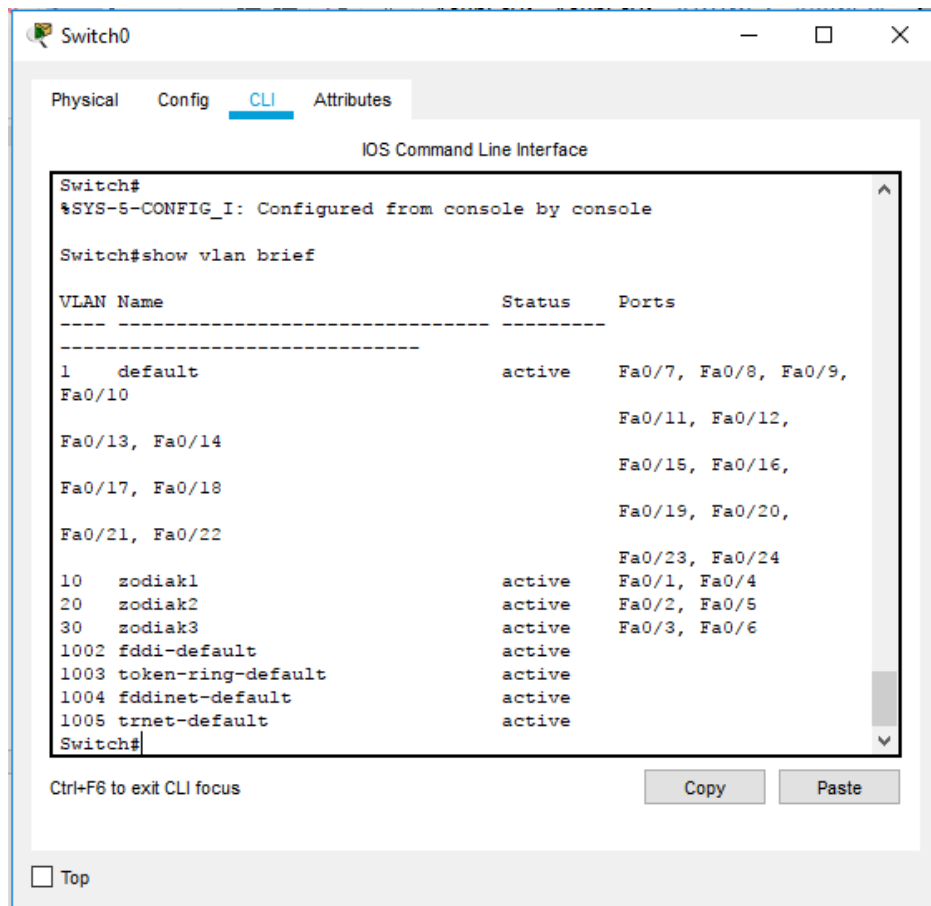


```
Switch0
Physical Config CLI Attributes
IOS Command Line Interface
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 30
Switch(config-if)#interface fastethernet 0/6
Switch(config-if)#exit
Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console

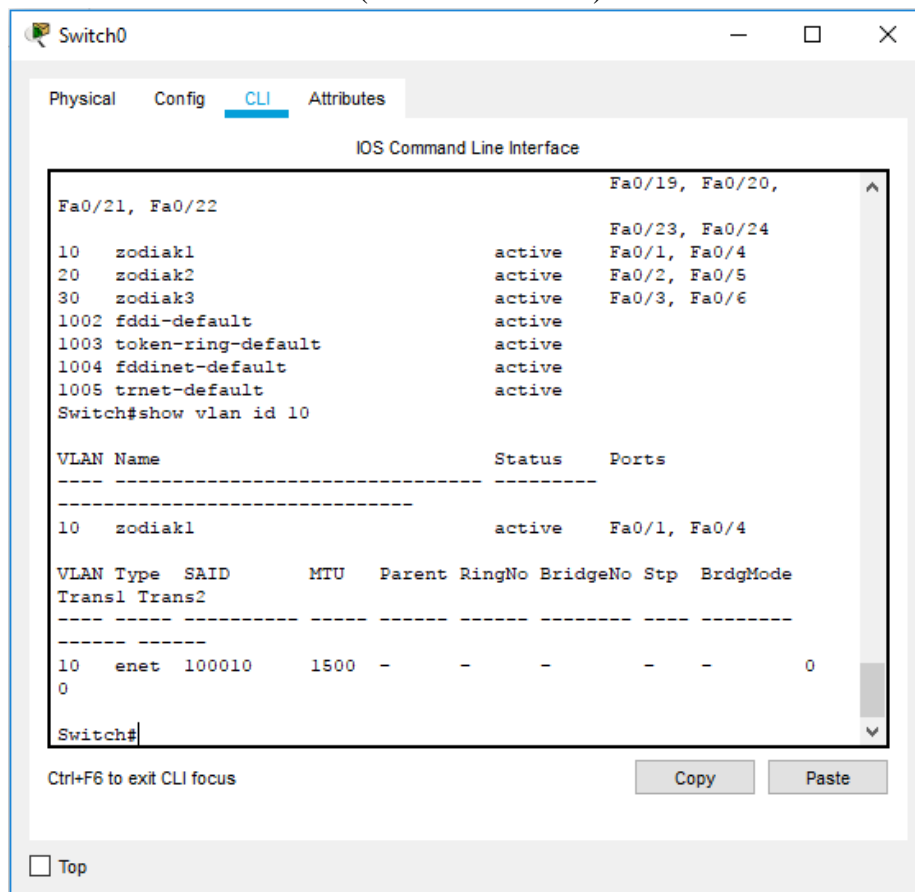
Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface Fastethernet 0/2
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 20
Switch(config-if)#interface Fastethernet 0/5
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 20
Switch(config-if)#exit
Switch(config)#interface Fastethernet 0/3
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 30
Switch(config-if)#interface Fastethernet 0/6
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 30
Switch(config-if)#exit
Switch(config)#|

Ctrl+F6 to exit CLI focus
Copy Paste
Top
```

- f. Pada mode user atau mode previligid, lihat konfigurasi VLAN yang telah dibuat. Langkah pengoperasian untuk melihat konfigurasi
- Tekan enter
 - Masuk mode privileged
 - Ketik **show vlan brief** (informasi vlan keseluruhan)



- Ketik **show vlan id 10** (informasi vlan 10)



- Ketik **show vlan id 20** (informasi vlan 20)

The screenshot shows a network switch CLI window titled "Switch0". The "CLI" tab is selected. The window displays the output of the command "show vlan id 20".

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

- Ketik **show vlan id 30** (informasi vlan 30)

The screenshot shows a network switch CLI window titled "Switch0". The "CLI" tab is selected. The window displays the output of the command "show vlan id 30".

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

Copy Paste

☐ Top

Tugas 6A : Capture masing-masing tampilan informasi vlan dan isi tabel berikut.

- Zodiak1

No	Variabel	Nilai
1	Nomor VLAN	10
2	Nama VLAN	zodiak1
3	Port	Fa0/1, Fa0/4
4	Status	Active

- Zodiak2

No	Variabel	Nilai
1	Nomor VLAN	20
2	Nama VLAN	zodiak2
3	Port	Fa0/2, Fa0/5
4	Status	Active

- Zodiak3

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.

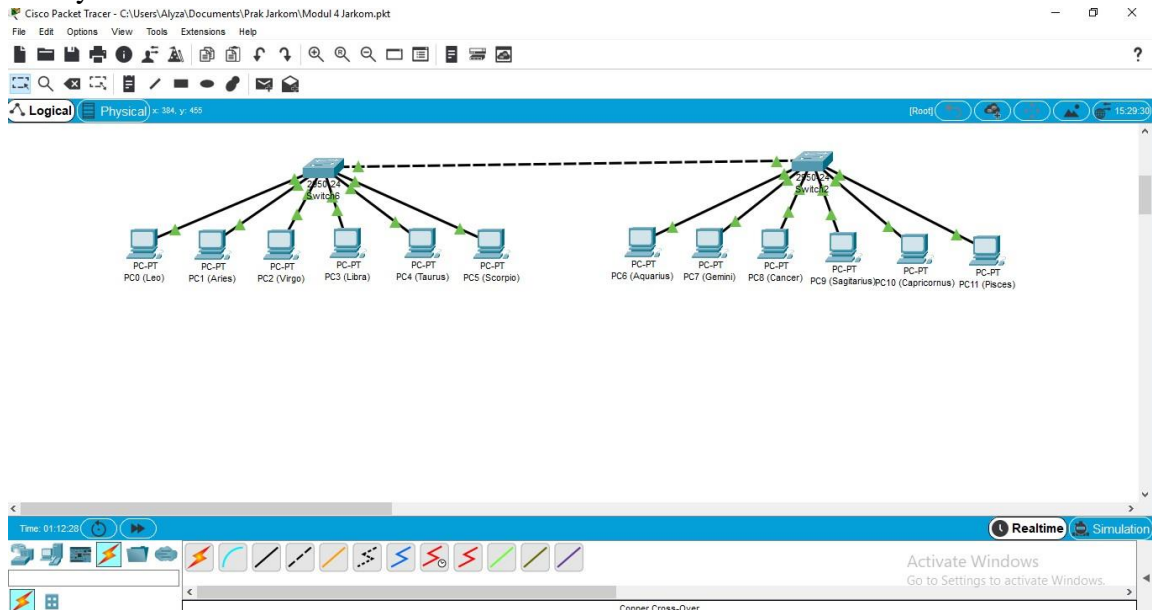
Jawab :

- Fa0/1 yg merupakan PC1(leo) dan Fa0/4 yg merupakan PC4(libra) berada pada VLAN yang sama yaitu zodiak1 dengan nomer VLAN 10 berstatus active.
- Fa0/2 yg merupakan PC2(aries) dan Fa0/5 yang merupakan PC5(Taurus) berada pada VLAN yang sama yaitu zodiak2 dengan nomer VLAN 20 berstatus active.
- Fa0/3 yg merupakan PC3(virgo) dan Fa0/6 yang merupakan PC6(scorpio) berada pada VLAN yang sama yaitu zodiak2 dengan nomer VLAN 30

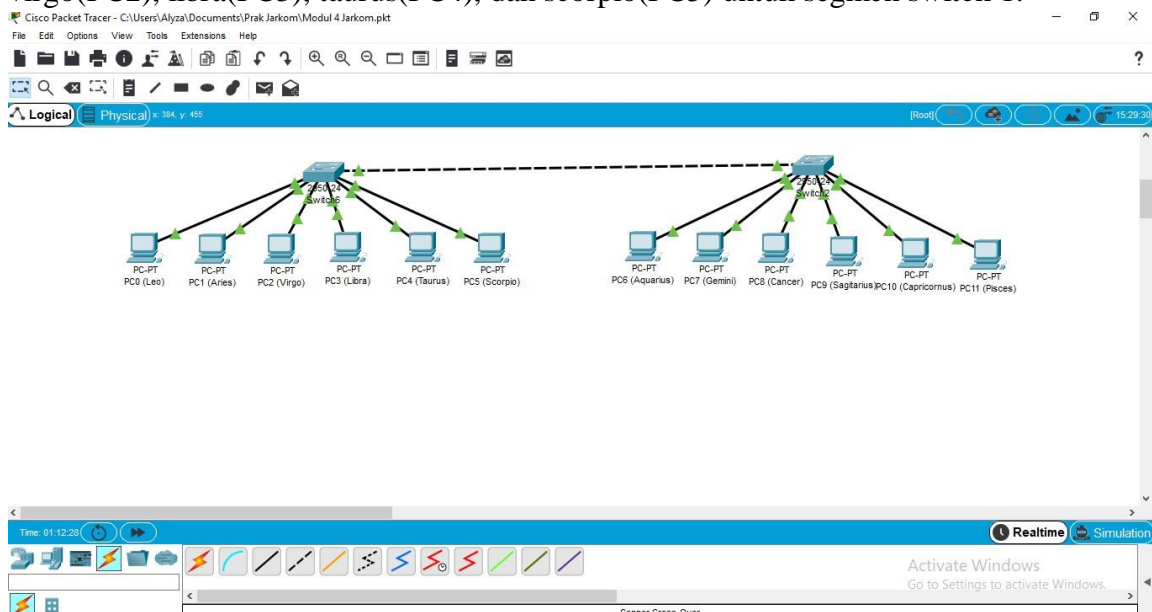
Jika melakukan ping antara port jaringan 1 VLAN yang sama maka statusnya akan sukses dan tidak terjadi kegagalan, lalu jika kita melakukan ping antara port pada VLAN yang berbeda maka statusnya akan terjadi kegagalan

2. Kegiatan 2. Topologi 2

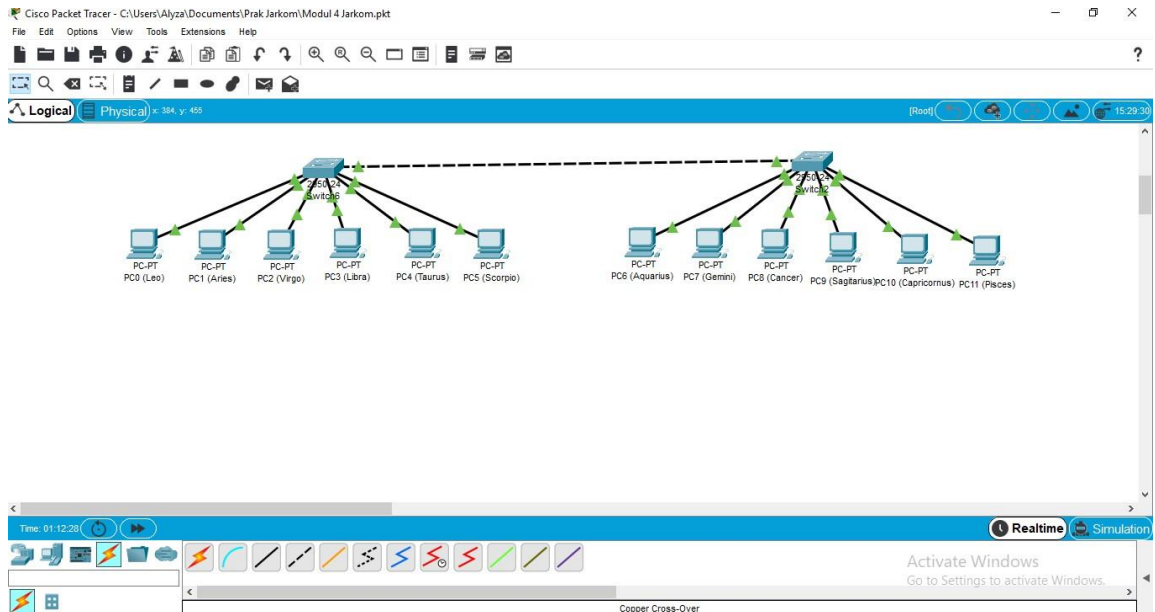
- Menggunakan cisci tracer buat topologi beritkut ini dengan menggunakan switch Catalyst 2950.



- Beri nama masing-masing perangkat dengan SW1(switch 1), leo (PC0), aries(P1), virgo(PC2), libra(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),capricornus(PC10), dan pisces(PC11) untuk segmen switch 2.



- Konfigurasi masing-masing PC dengan nama dan alamat IP berikut:

- Leo

PC0 (Leo)

Physical Config **Desktop** Programming Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.1.1

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::205:5EFF:FE11:BB2A

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Aries

PC1 (Aries)

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.1.2

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::203:E4FF:FE33:CABC

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Virgo

PC2 (Virgo)

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.2.1

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::206:2AFF:FE46:AB8C

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Libra

PC3 (Libra)

Physical Config Desktop Programming Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.2.2

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::230:F2FF:FE96:1A36

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Taurus

PC4 (Taurus)

Physical Config Desktop Programming Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.3.1

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::20C:85FF:FE67:A811

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Scorpio

PC5 (Scorpio)

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.3.2

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::2D0:97FF:FE01:2A05

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Aquarius

PC6 (Aquarius)

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.1.3

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::2D0:BCFF:FE3E:A369

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Gemini

PC7 (Gemini)

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.1.4

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::203:E4FF:FE33:3BAA

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Cancer

PC8 (Cancer)

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.2.3

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::204:9AFF:FEA8:E123

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Sagitarius

PC9 (Sagitarius)

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.2.4

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::260:5CFF:FE8C:8376

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

☐ Top

- Capricornus

PC10 (Capricornus)

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.3.3

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::290:CFF:FEAC:4764

IPv6 Gateway:

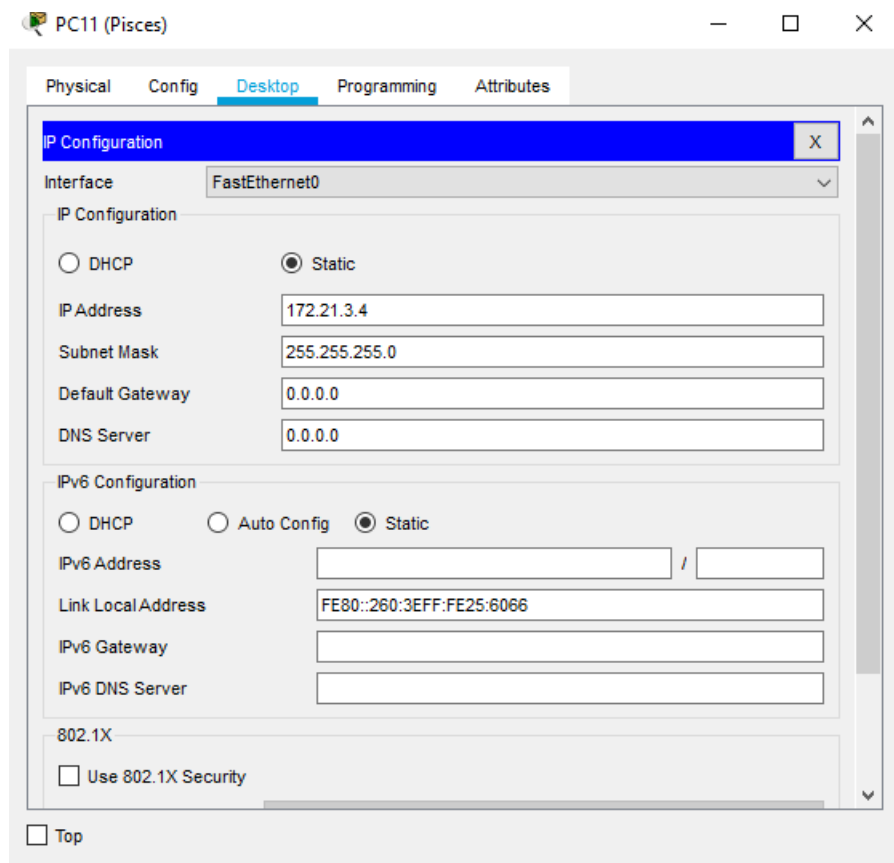
IPv6 DNS Server:

802.1X

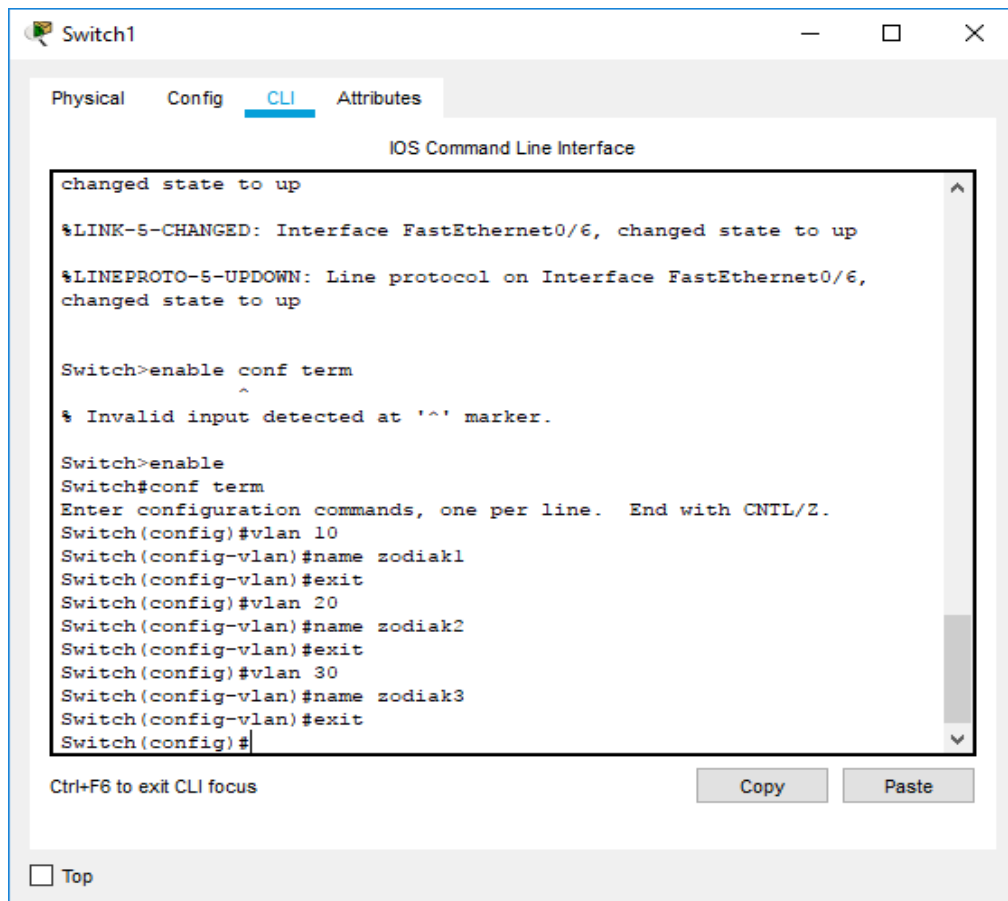
☐ Use 802.1X Security

☐ Top

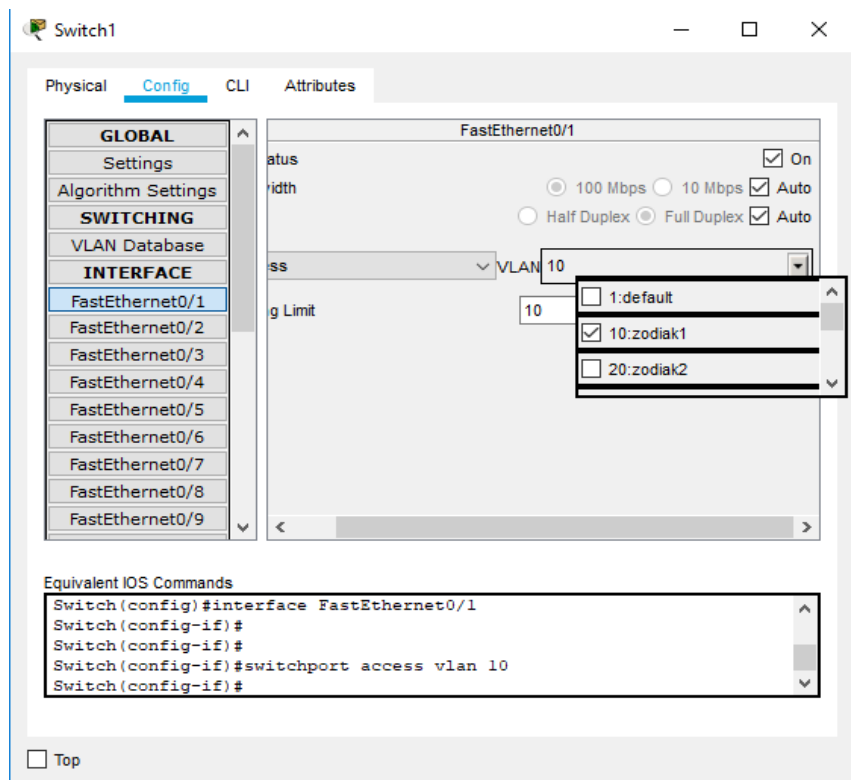
- Pisces



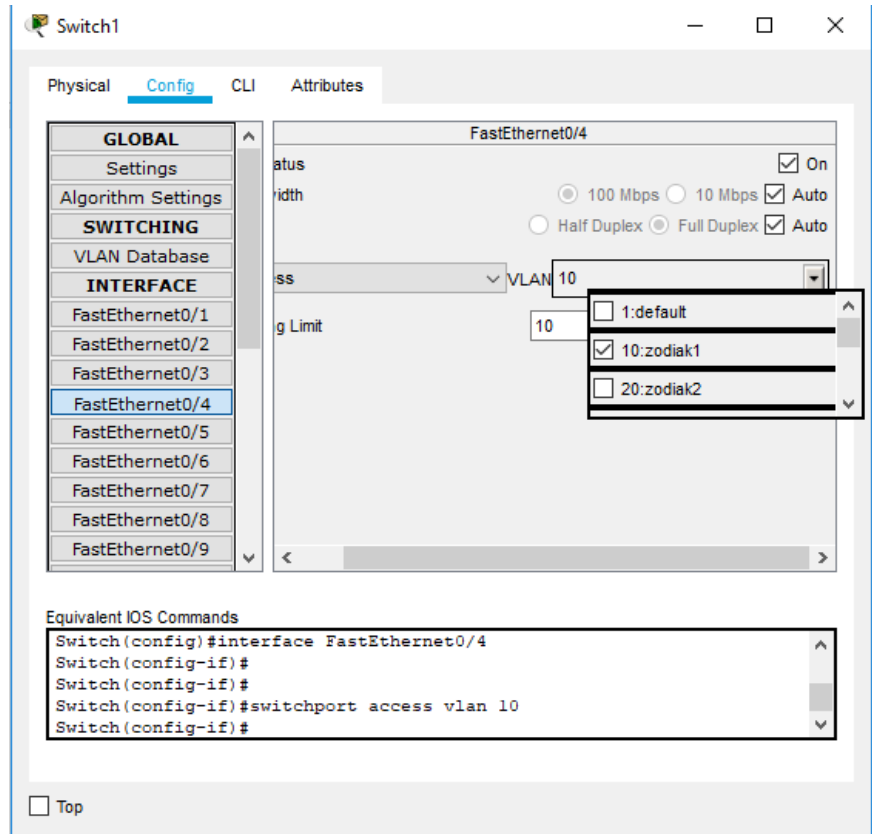
- Lakukan langkah 4 dan 5 kegiatan 1 untuk switch 1
 - Langkah 4 : Konfigurasi pada switch dengan mode user atau mode privilege, buat 3 VLAN dengan nama zodiak1, zodiak2, dan zodiak3. Dengan cara klik pada switch 2 kali, kemudian pilih cli.



- Langkah 5 : Pada mode configuration, konfigurasi port-port switch ke dalam vlan zodiak1, zodiak2, dan zodiak3 dengan anggota sebagai berikut.
 - Zodiak1 = leo dan libra
 - leo

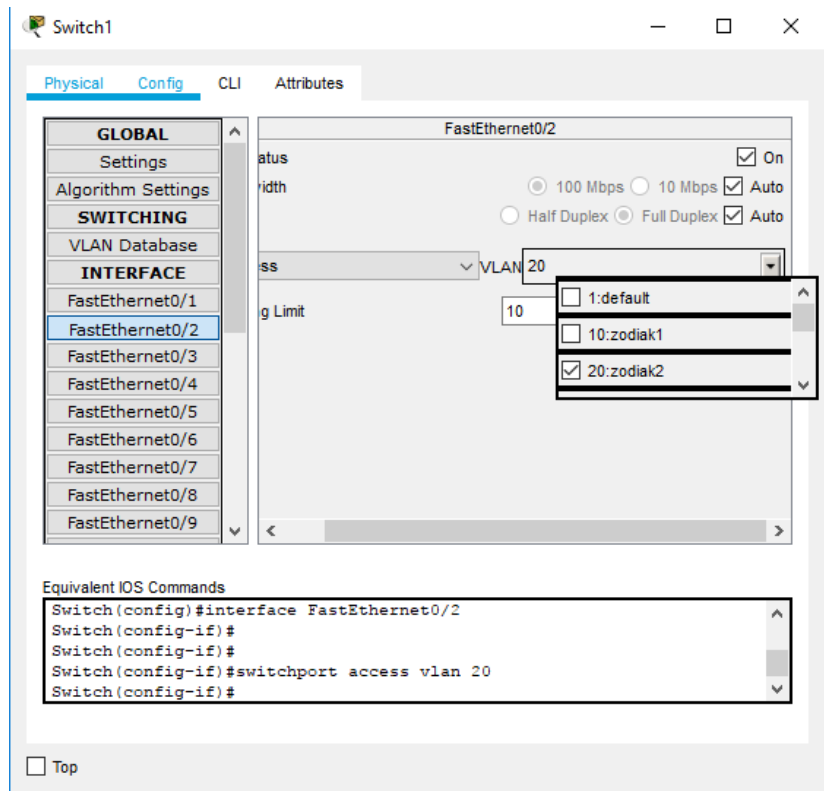


➤ libra

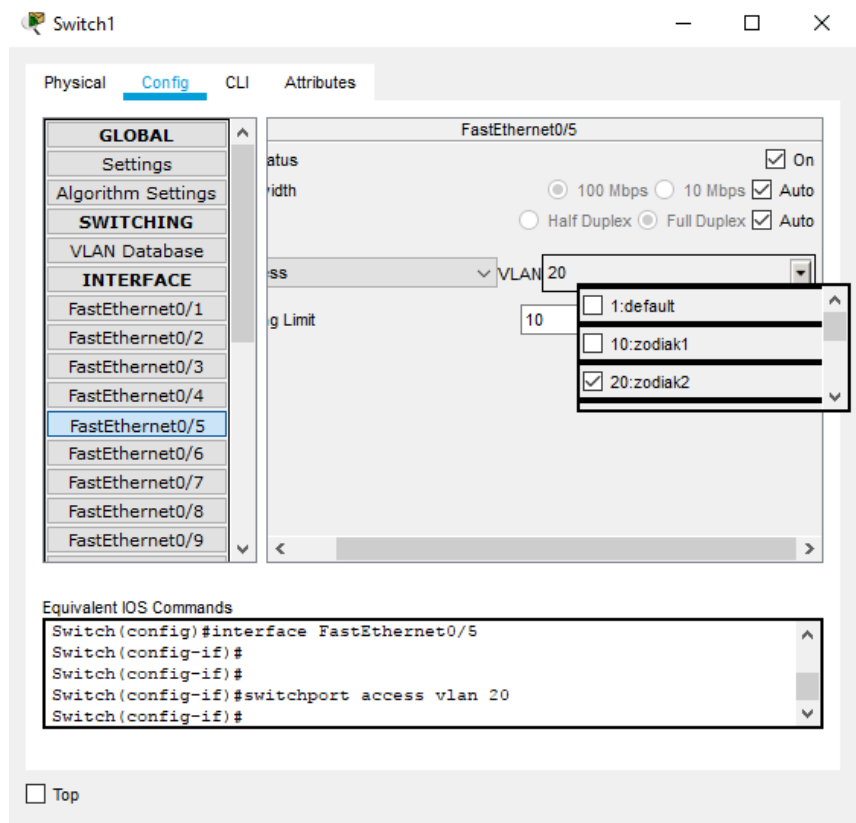


➤ Zodiak2 = aries dan taurus

➤ aries

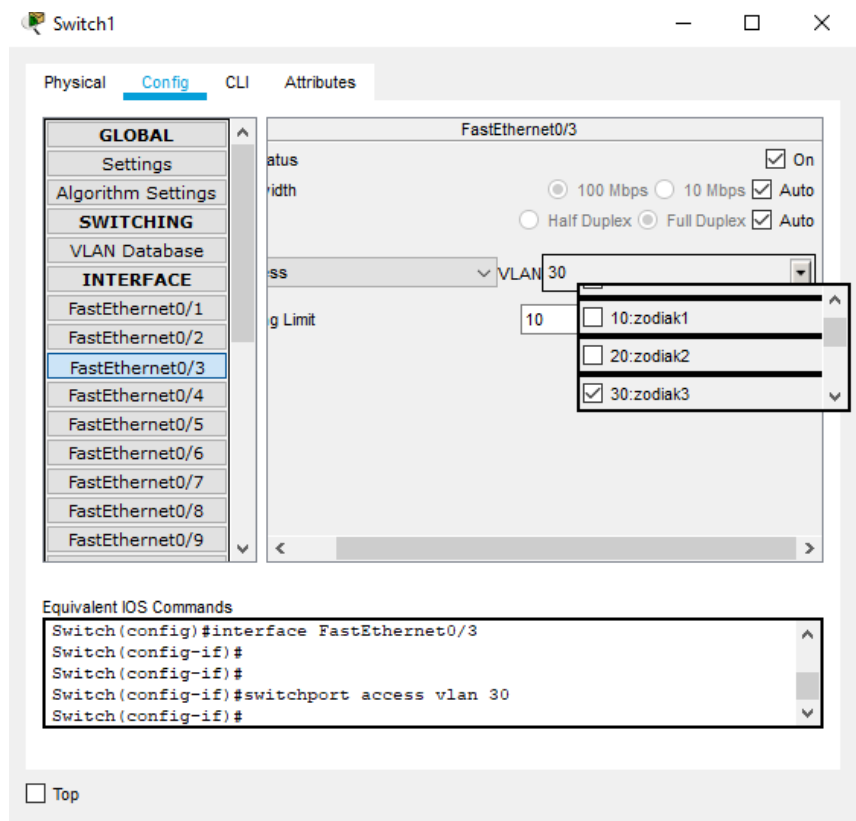


➤ taurus

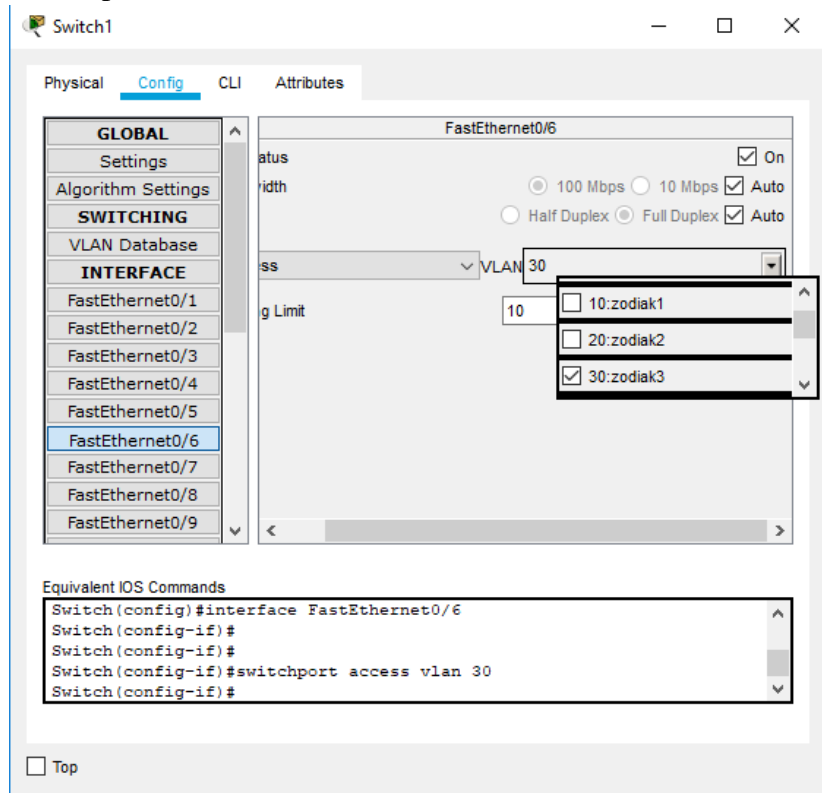


➤ Zodiak3 = virgo dan scorpio

➤ virgo

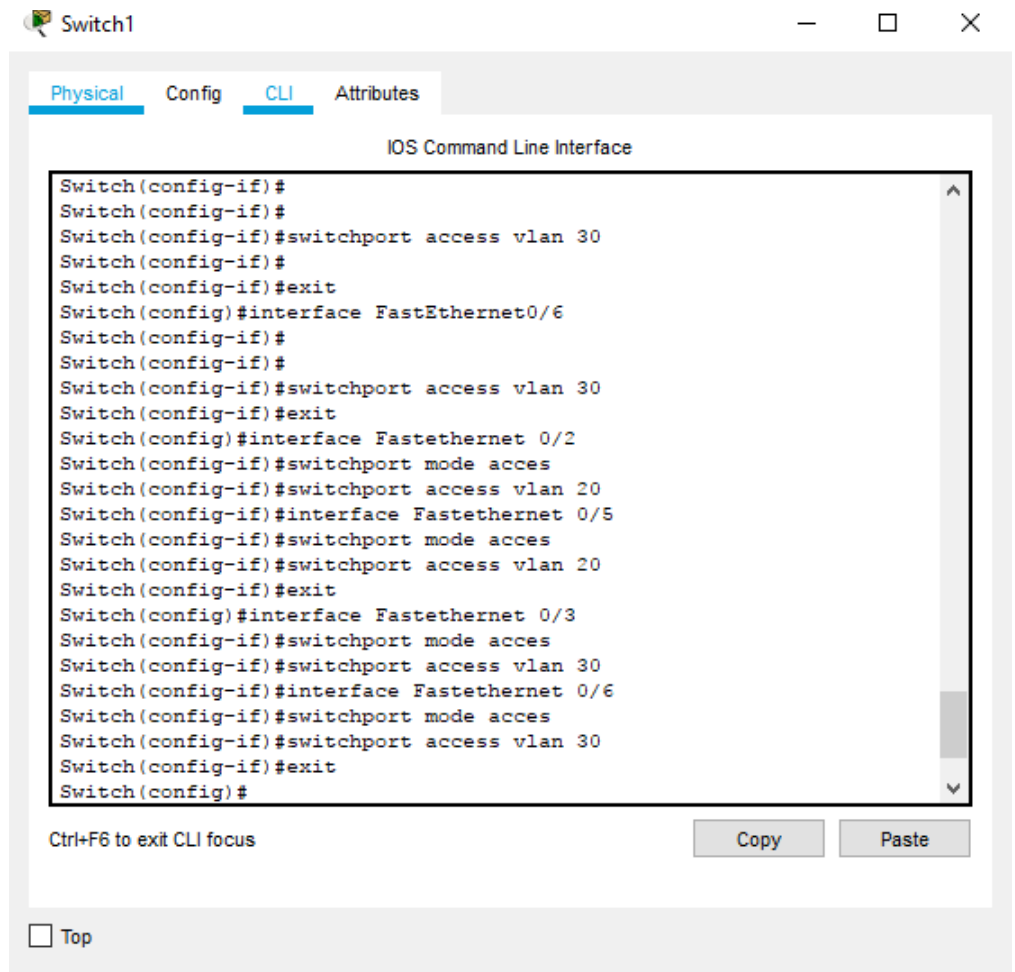


➤ scorpio

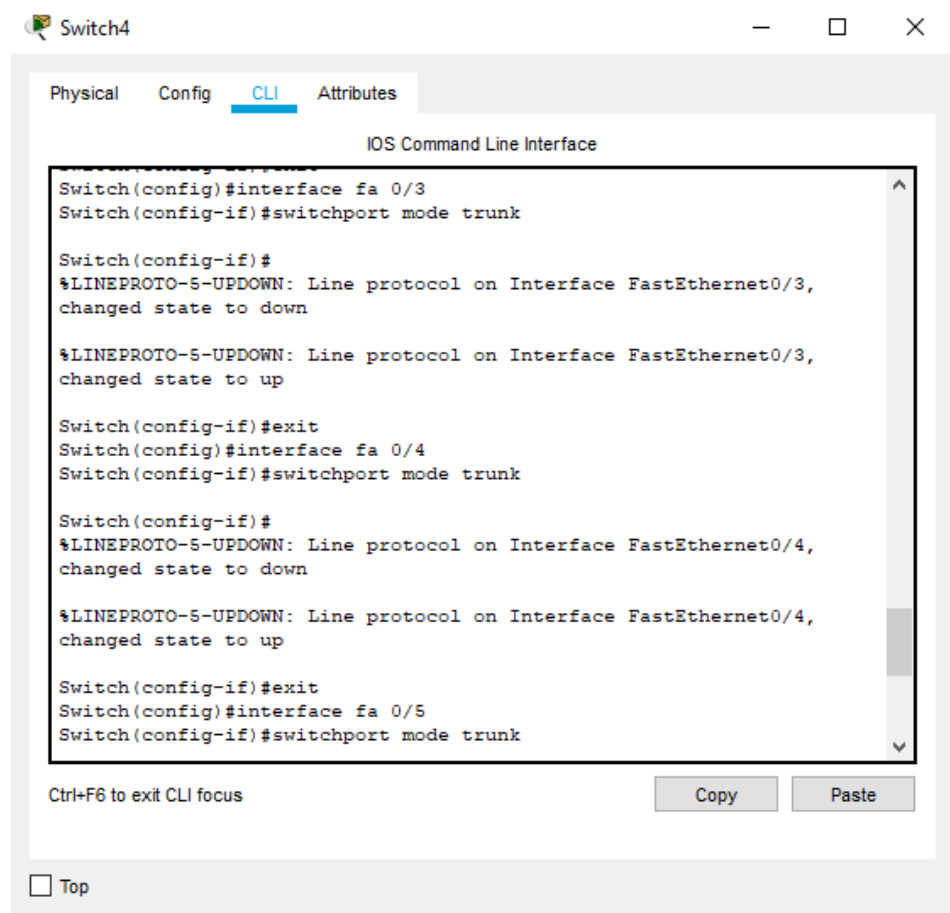
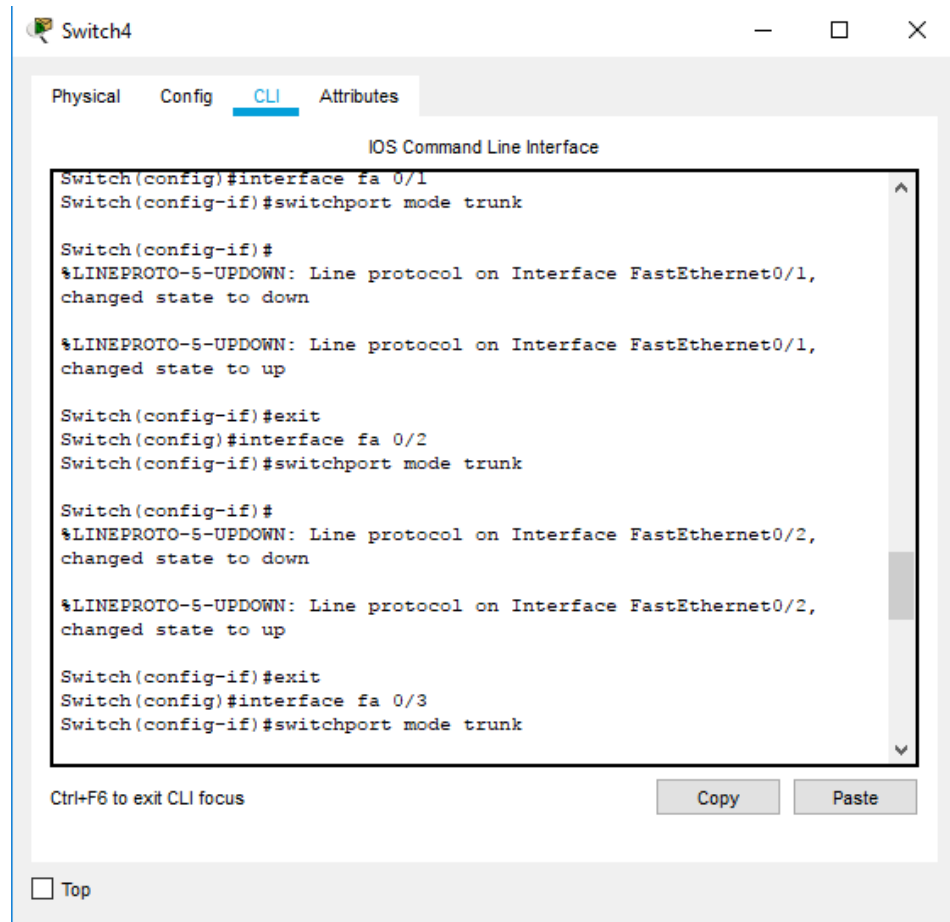


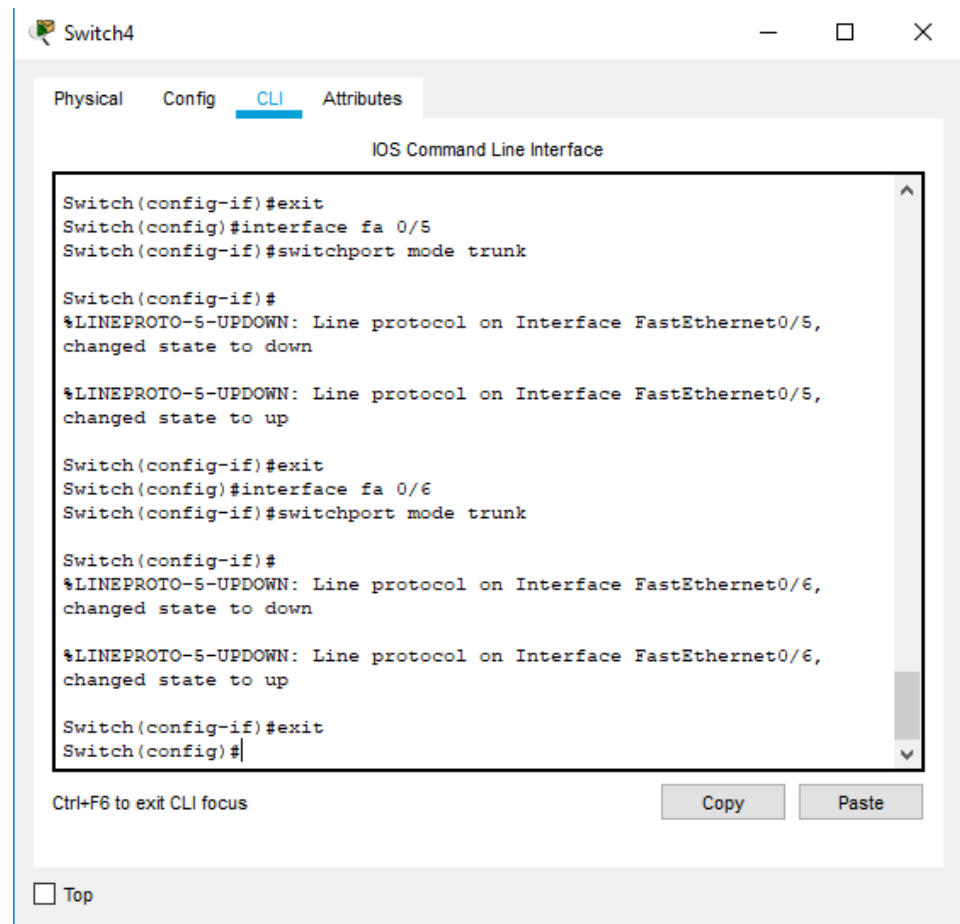
Langkah pengoperasian

- Masukan mode konfigurasi
- Ketik **interface Fastethernet 0/1**; (jika PC leo dihubungkan dengan switch port 1)
- Ketik **switchport mode acces**
- Ketik **switch port acces vlan 10**
- Ketik **interface Fastethernet 0/4**; (jika PC libra dihunbungkan dengan switch port 1)
- Ketik **switchport mode acces**
- Ketik **switchport acces vlan 10**
- Ketik **exit**
- Lakukan langkah-langkah diatas untuk port VLAN zodiak2 (aries dan Taurus) dan port VLAN zodiak3 (virgo dan scorpio)



- Lakukan konfigurasi VLAN trunking pada switch 1. Langkah pengoperasian
 - Tekan ente
 - Masukkan mode konfigurasi
 - Masukkan mode interface yang dipakai untuk trunking
 - Ketik **switchport mode** seperti contoh dibawah ini
 - **Switchport(config)#interface fa0/1**
 - **Switch(config-if)#switch mode trunk**
 - **Switch(config-if)#exit**
 - **Switch(config)#**
 - Switch
 - Melakukan konfigurasi VLAN trunking pada switch 1.(Fa 0/1, Fa 0/2, Fa 0/3, Fa 0/4, Fa0/5, dan Fa0/6)





- Pada mode user atau mode privileged, lihat konfigurasi trunking yang telah dibuat. Langkah pengoperasian untuk melihat konfigurasi
 - Tekan enter
 - Masukkan mode privileged
 - Ketik *show interface fastethernet0/??switchport* (?? Nomer port untuk trunking)
 - Ketik *show interface trunk*
 - Ketik *show vlan*
 - Melihat konfigurasi trunking pada fa 0/1, fa 0/2, fa 0/3, fa 0/4, fa 0/5, dan fa 0/6

IOS Command Line Interface

```
Switch#show interface fastethernet 0/2 switchport
Name: Fa0/2
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: Off
Access Mode VLAN: 20 (zodiak2)
Trunking Native Mode VLAN: 1 (default)
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk private VLANs: none
Operational private-vlan: none
Trunking VLANs Enabled: All
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL
Protected: false
```

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top

IOS Command Line Interface

```
Switch#show interface trunk
Port      Mode      Encapsulation  Status      Native vlan
Fa0/1     on        802.1q         trunking    1
Fa0/2     on        802.1q         trunking    1
Fa0/3     on        802.1q         trunking    1
Fa0/4     on        802.1q         trunking    1
Fa0/5     on        802.1q         trunking    1
Fa0/6     on        802.1q         trunking    1

Port      Vlans allowed on trunk
Fa0/1     1-1005
Fa0/2     1-1005
Fa0/3     1-1005
Fa0/4     1-1005
Fa0/5     1-1005
Fa0/6     1-1005

Port      Vlans allowed and active in management domain
Fa0/1     1,10,20,30
Fa0/2     1,10,20,30
Fa0/3     1,10,20,30
Fa0/4     1,10,20,30
Fa0/5     1,10,20,30

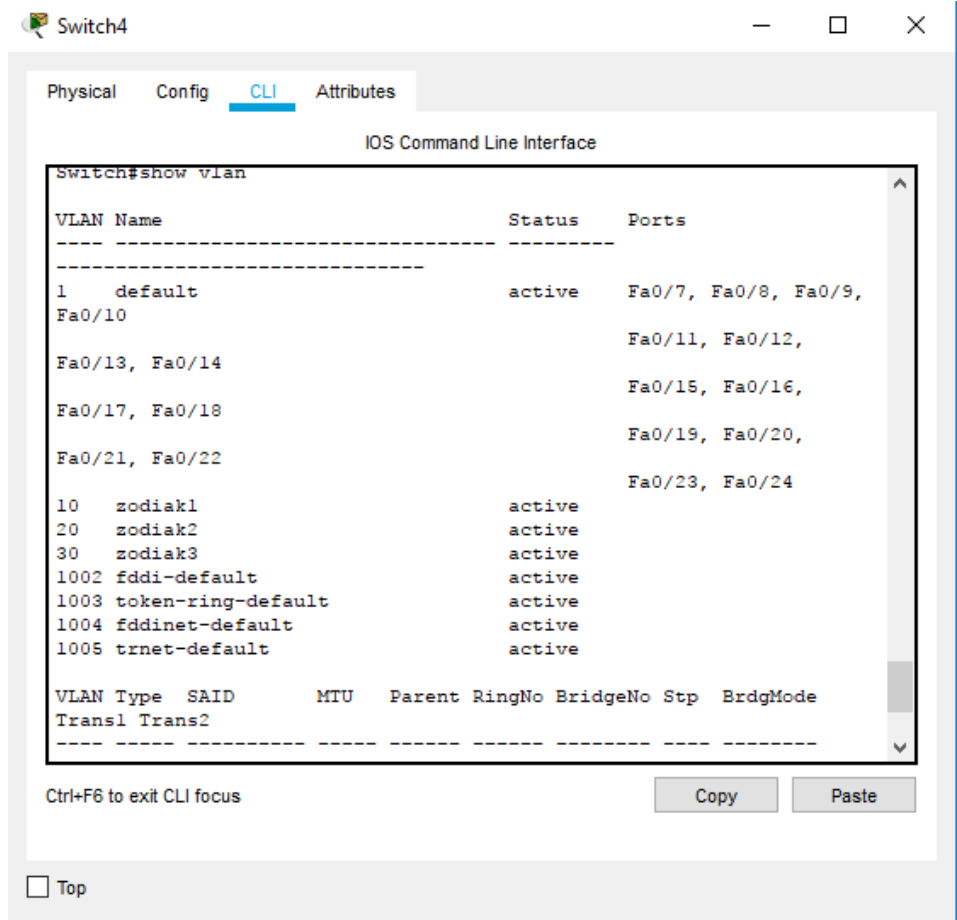
Switch#show vlan
```

Ctrl+F6 to exit CLI focus

Copy

Paste

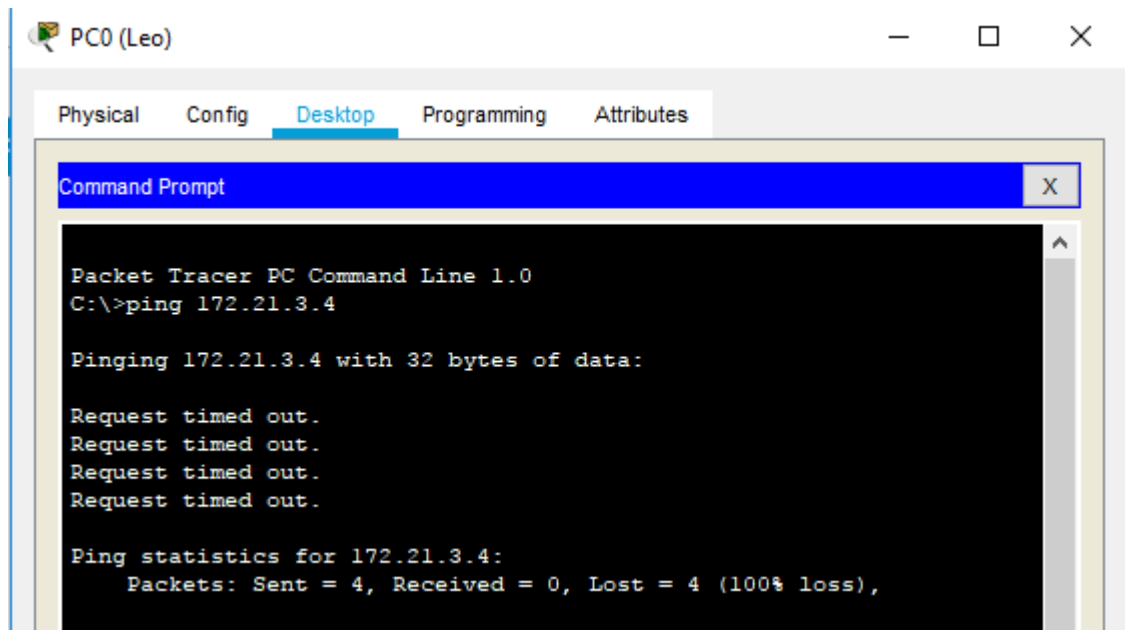
☐ Top



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

Jawab :

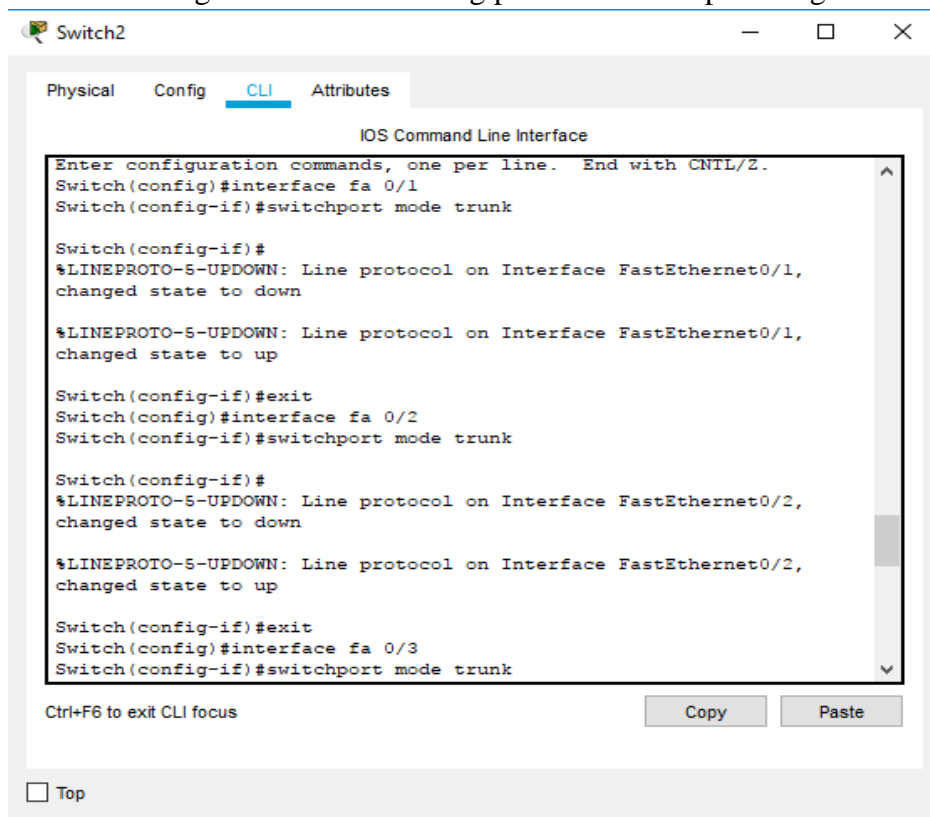
- Saat kita mengetikkan ***show interface fasthethernet 0/??(?? nomer port trunking)*** akan muncul status switchport trunk pada interface:
 - Administrative Mode. Merupakan switchport default yaitu trunk
 - Administrative Trunking Encapsulation. Merupakan enkapsulasi default yaitu dot1q.
 - Trunking 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

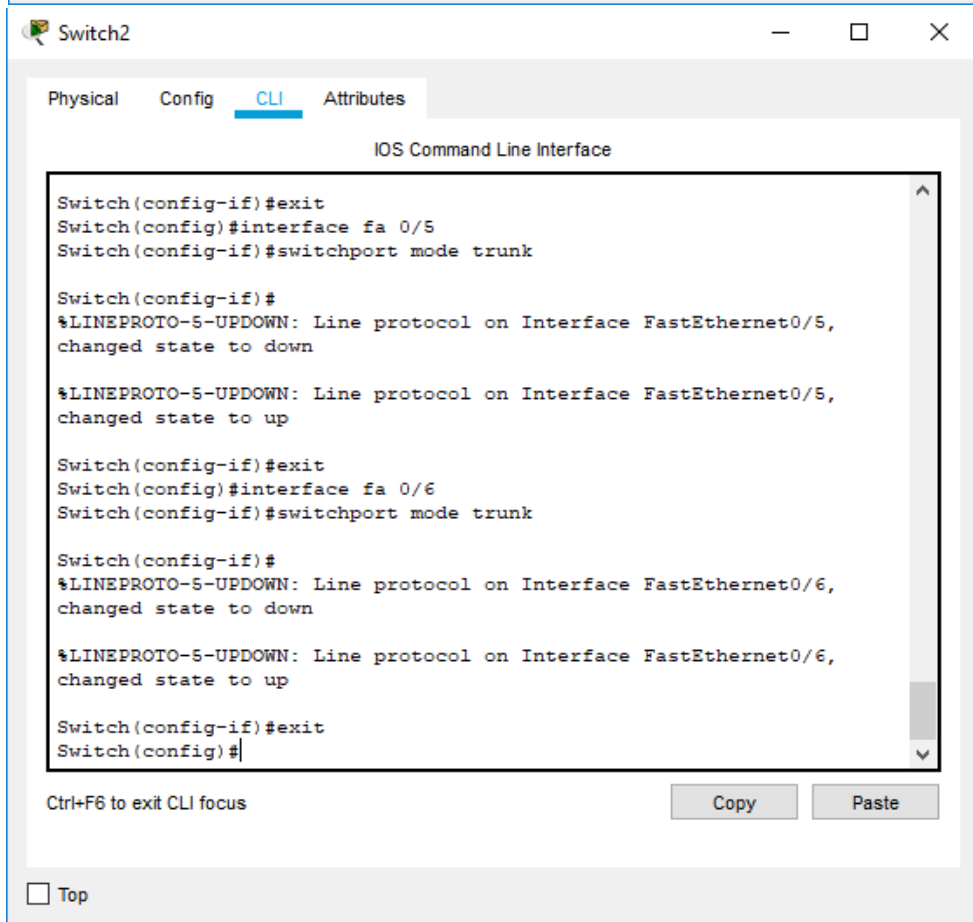
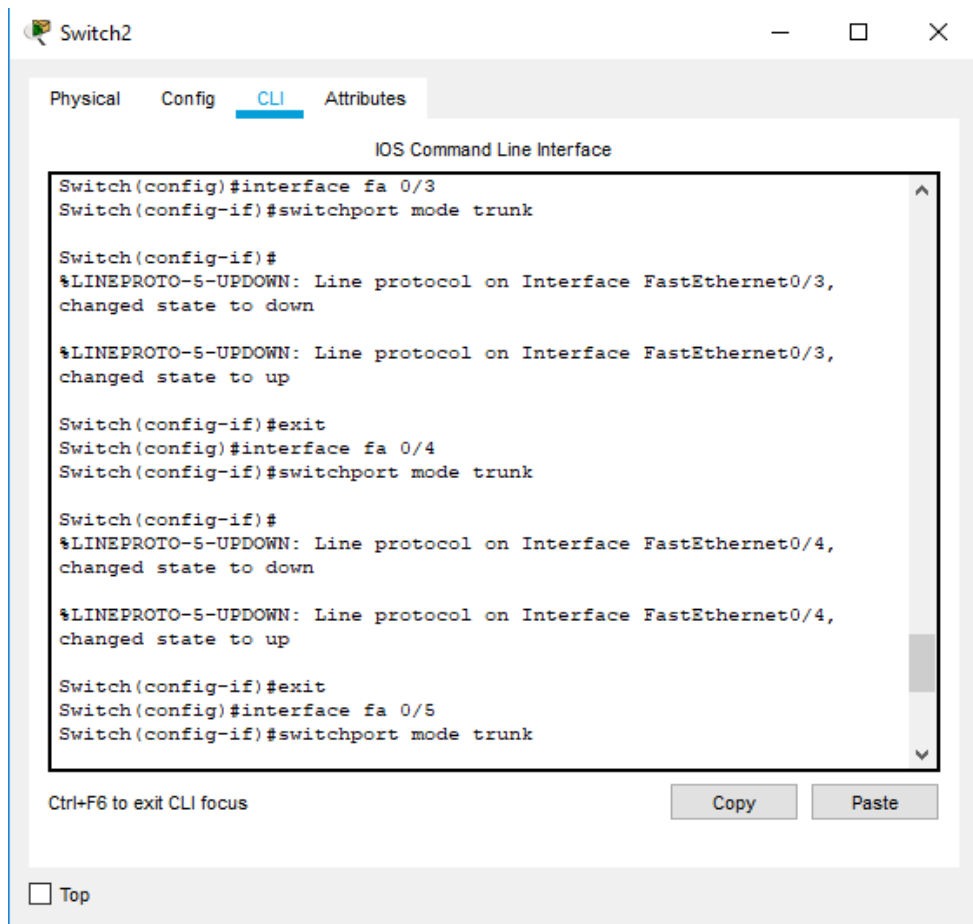


Tugas 8A : Jelaskan secara singkat mengapa hasil yang anda peroleh dari langkah 8 mendapatkan status “rto”?

Jawab : Karena PC(leo) dan PC(pisces) berada pada VLAN dan jaringan yang berbeda.

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





- Pada mode user atau mode previligid, lihat konfigurasi vlan pada switch 2
 - Langkah pengoperasian untuk melihat konfigurasi
 - Tekan enter
 - Masuk mode previligid
 - Ketik *show vlan*

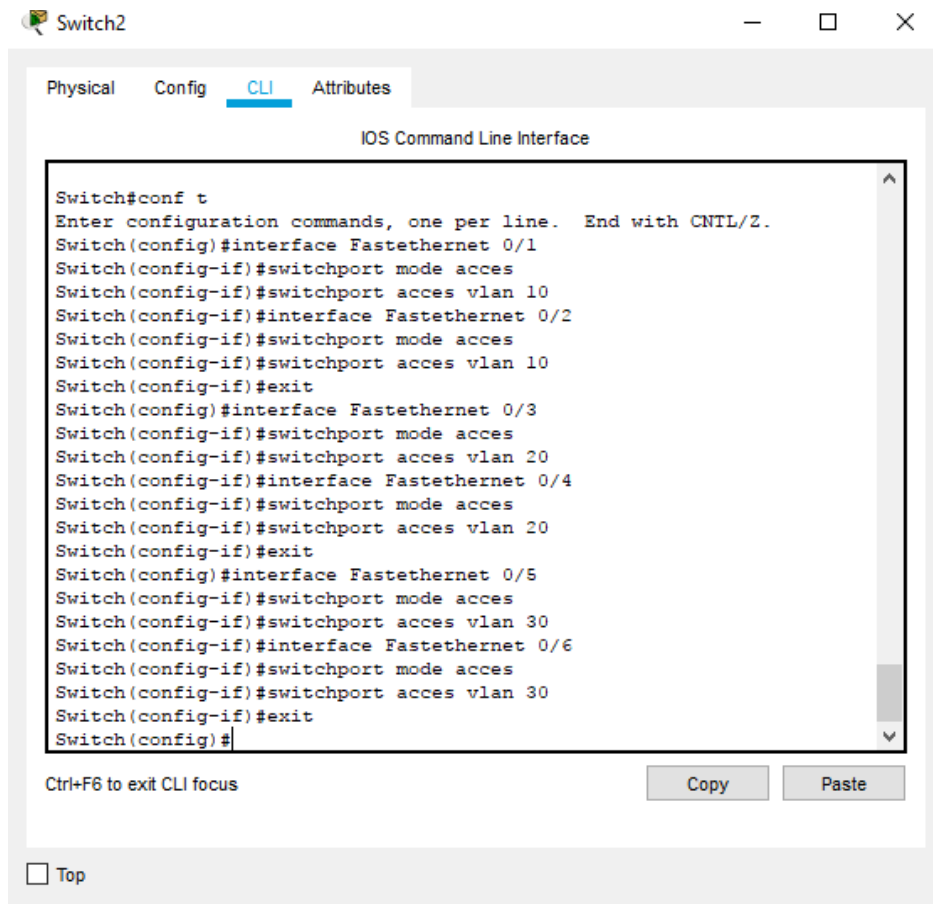
```
Switch2
Physical Config CLI Attributes
IOS Command Line Interface
Switch#show vlan
VLAN Name                Status    Ports
-----
1    default                active    Fa0/7, Fa0/8, Fa0/9,
Fa0/10                    Fa0/11, Fa0/12,
Fa0/13, Fa0/14            Fa0/15, Fa0/16,
Fa0/17, Fa0/18            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
Trans1 Trans2
-----
1    enet     100001   1500   -      -      -      -      -      0
10   enet     100010   1500   -      -      -      -      -      0
20   enet     100020   1500   -      -      -      -      -      0
30   enet     100030   1500   -      -      -      -      -      0
--More--
```

```
Switch2
Physical Config CLI Attributes
IOS Command Line Interface
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
Trans1 Trans2
-----
1    enet     100001   1500   -      -      -      -      -      0
10   enet     100010   1500   -      -      -      -      -      0
20   enet     100020   1500   -      -      -      -      -      0
30   enet     100030   1500   -      -      -      -      -      0
--More--
```


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

Jawab : Berfungsi untuk mengecek status pada VLAN

- k. Pada mode configuration, konfigurasi port-port switch ke dalam VLAN zodiak1, zodiak2, dan zodiak3 dengan anggota sebagai berikut:
- zodiak1 = aquarius dan Gemini
 - zodiak2 = cancer dan sagitarius
 - zodiak3 = capricornus dan pisces



```
Switch2
Physical Config CLI Attributes
IOS Command Line Interface

Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface FastEthernet 0/1
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 10
Switch(config-if)#interface FastEthernet 0/2
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 10
Switch(config-if)#exit
Switch(config)#interface FastEthernet 0/3
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 20
Switch(config-if)#interface FastEthernet 0/4
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 20
Switch(config-if)#exit
Switch(config)#interface FastEthernet 0/5
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 30
Switch(config-if)#interface FastEthernet 0/6
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport acces vlan 30
Switch(config-if)#exit
Switch(config)#
```

- i. Lakukan ping dari PC leo ke PC aries, PC leo ke PC aquarius, PC leo ke PC pisces, PC libra ke PC cancer, dan PC libra ke PC leo.
- PC leo ke PC aries

The screenshot shows a virtual machine window titled "PC0 (Leo)" with tabs for Physical, Config, Desktop, Programming, and Attributes. The "Desktop" tab is active, displaying a "Command Prompt" window. The command prompt shows the execution of a ping command to 172.21.1.2, which is successful. The output includes the number of packets sent, received, and lost, as well as the round trip times.

```
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

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=12ms 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 = 12ms, Average = 3ms
```

- PC leo ke PC aquarius

The screenshot shows the same virtual machine window "PC0 (Leo)" with the "Command Prompt" window. The command prompt shows the execution of a ping command to 172.21.1.3, which fails. The output indicates that all four requests timed out, resulting in a 100% loss of packets.

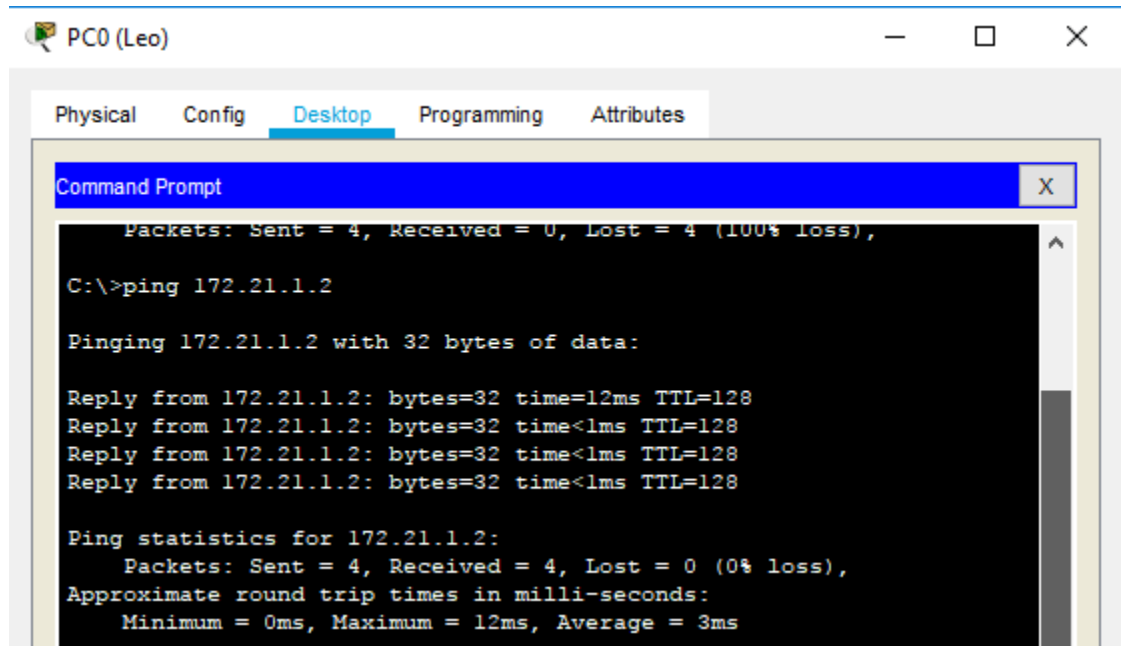
```
C:\>ping 172.21.1.3

Pinging 172.21.1.3 with 32 bytes of data:

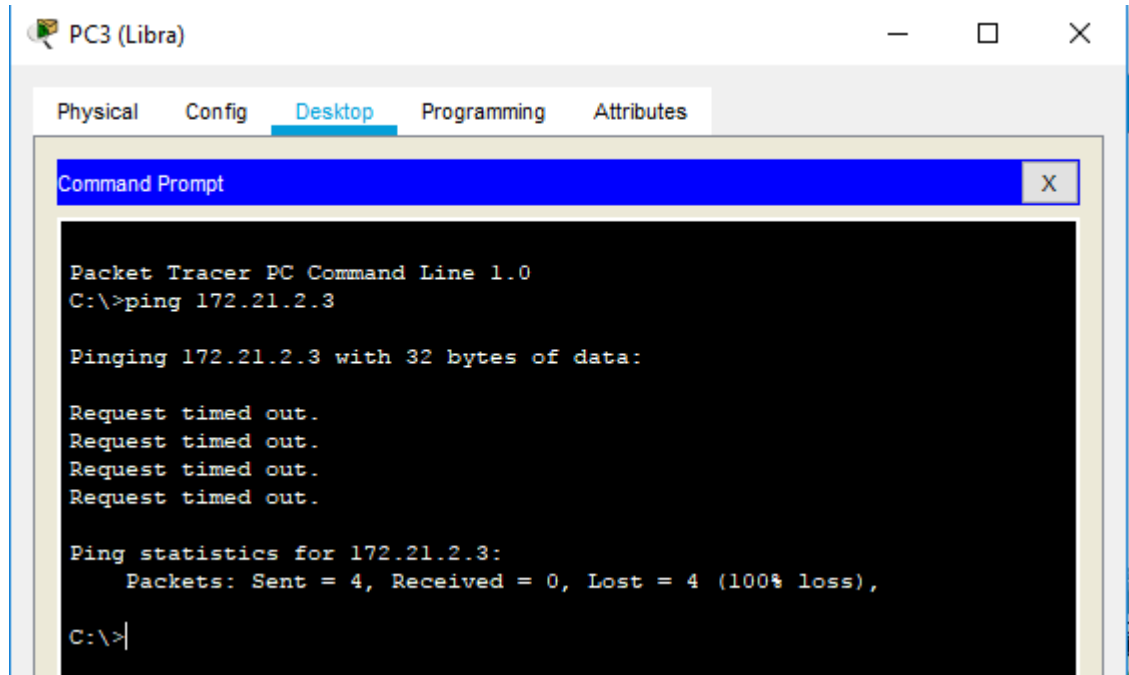
Request timed out.
Request timed out.
Request timed out.
Request timed out.

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

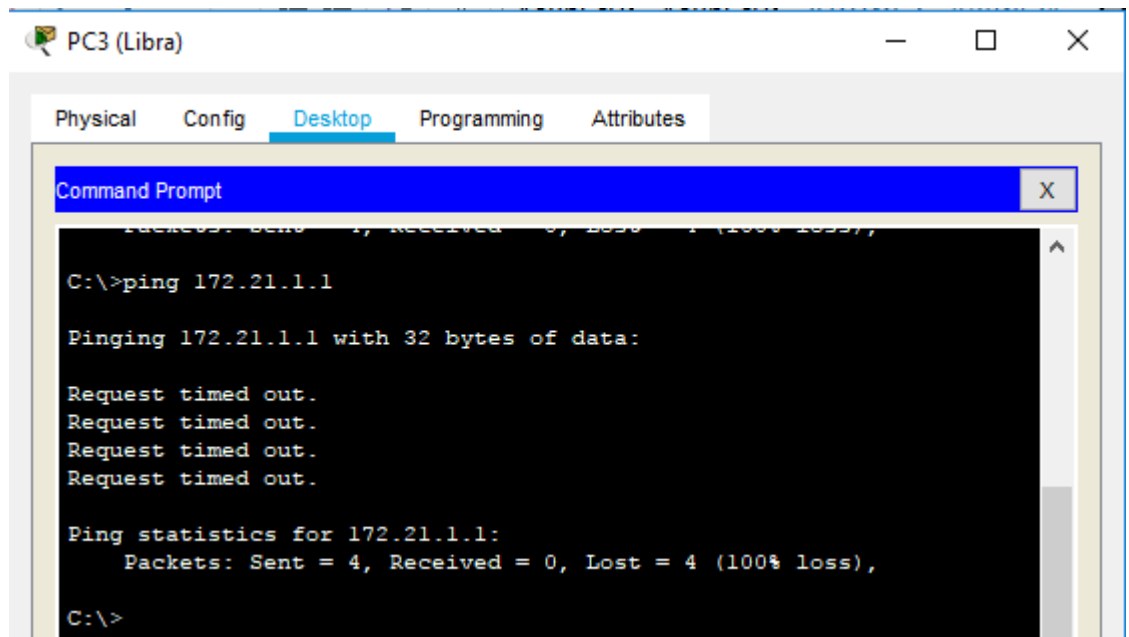
- PC lo eke PC pisces



- PC libra ke PC cnacer



- PC libra ke PC leo



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

Jawab : Bahwa akan mendapat hasil reply apabila pc berada pada jaringan dan VLAN yang sama. Apabila hanya sama dari salah satu VLAN atau jaringan maka hasilnya juga akan rto.