

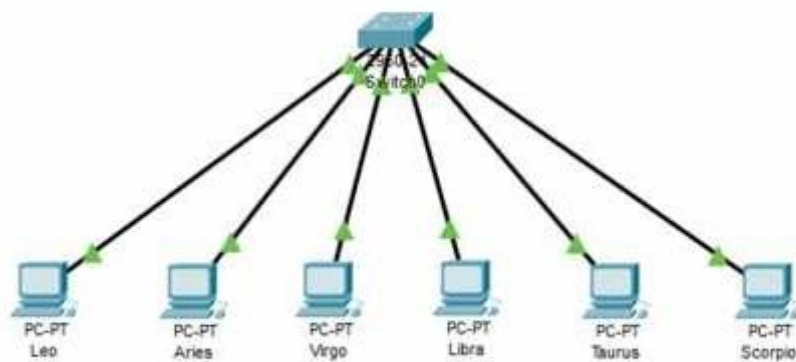
L200160067  
Alfarez Syahputra Kuri  
A

## MODUL 4

### VIRTUAL LAN DAN TRUNKING

#### Kegiatan 1. Topologi 1

Pembuatan Topologi



Konfigurasi VLAN

```
Switch0
Physical Config CLI Attributes
IOS Command Line Interface

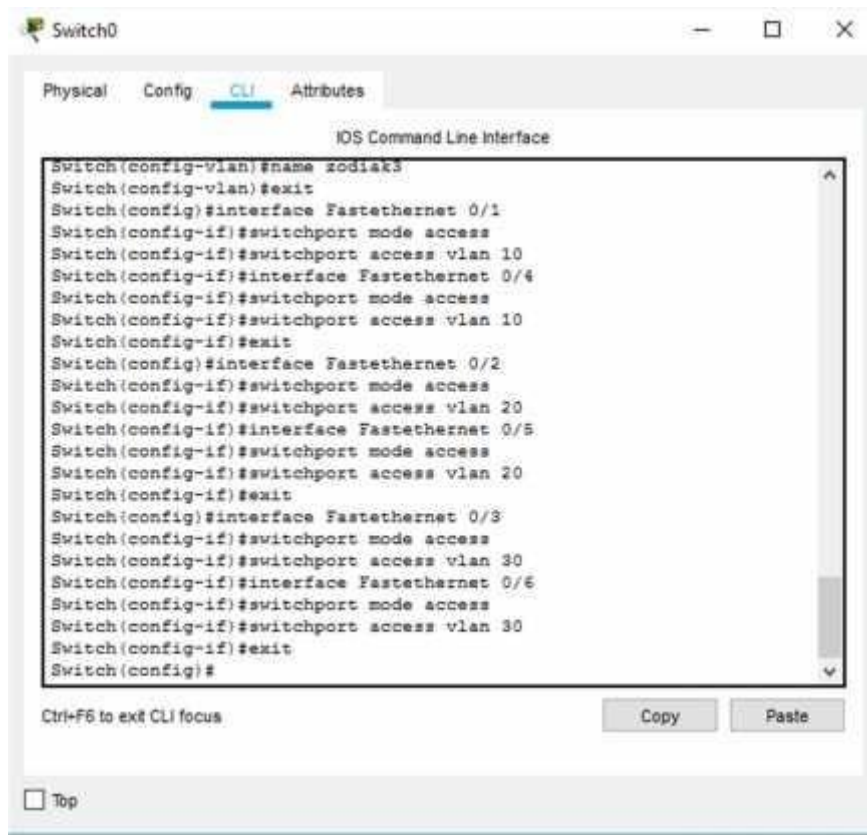
%LINK-3-CHANGED: Interface FastEthernet0/5, changed state to up
%LINEPROTO-3-UPDOWN: Line protocol on Interface FastEthernet0/5,
changed state to up

%LINK-3-CHANGED: Interface FastEthernet0/6, changed state to up
%LINEPROTO-3-UPDOWN: Line protocol on Interface FastEthernet0/6,
changed state to up

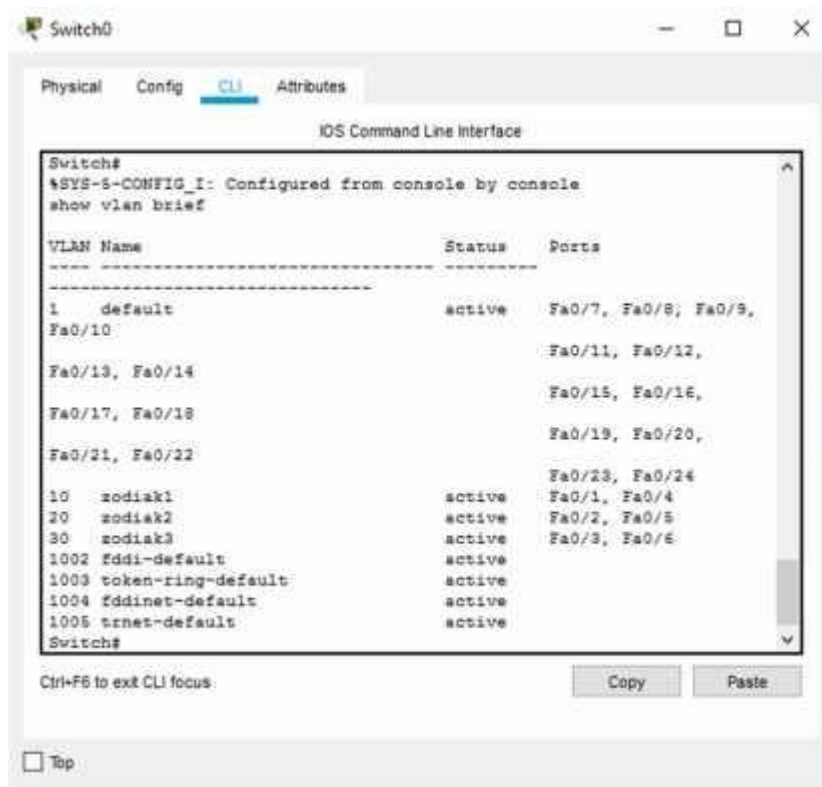
Switch>enable
Switch#conf term
Enter configuration commands, one per line. End with CTRL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name zodiak1
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name zodiak2
Switch(config-vlan)#exit
Switch(config)#vlan 30
Switch(config-vlan)#name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

Ctrl+F5 to exit CLI focus
```

## Konfigurasi port-port ke VLAN



## Melihat konfigurasi VLAN



Show VLAN id 10, show VLAN id 20, show VLAN id 30

Switch0

Physical Config **CLI** Attributes

IOS Command Line Interface

```
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#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

Switch0

Physical

Config

CLI

Attributes

IOS Command Line Interface

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#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. Jawab:

| No. | Variabel   | Nilai          |
|-----|------------|----------------|
| 1.  | Nomor VLAN | 10             |
| 2.  | Nama VLAN  | zodiak1        |
| 3.  | Port       | fa 0/1, fa 0/4 |
| 4.  | Status     | Active         |

| No. | Variabel   | Nilai          |
|-----|------------|----------------|
| 1.  | Nomor VLAN | 20             |
| 2.  | Nama VLAN  | zodiak2        |
| 3.  | Port       | fa 0/2, fa 0/5 |
| 4.  | Status     | Active         |

| No. | Variabel   | Nilai          |
|-----|------------|----------------|
| 1.  | Nomor VLAN | 30             |
| 2.  | Nama VLAN  | zodiak3        |
| 3.  | Port       | fa 0/3, fa 0/6 |
| 4.  | Status     | active         |

## Tugas 6B

Jelaskan secara singkat hasil yang anda peroleh dari tugas 6 A.

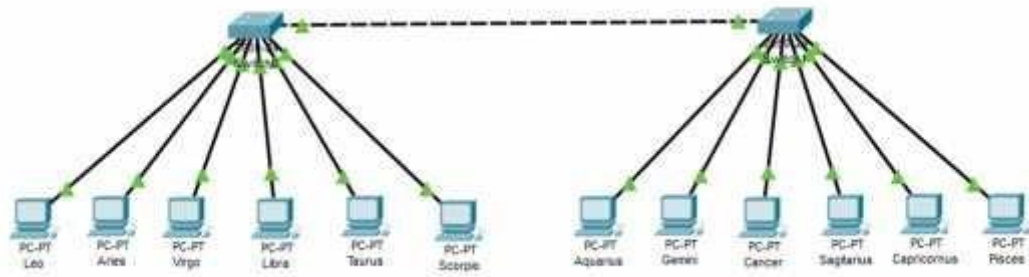
Jawab:

Nomor VLAN 10 dengan nama VLAN zodiak1 memiliki port fa 0/1 dan fa 0/4 status VLAN nya active.

Nomor VLAN 20 dengan nama VLAN zodiak2 memiliki port fa 0/2 dan fa 0/5 status VLAN nya active.

Nomor VLAN 30 dengan nama VLAN zodiak3 memiliki port fa 0/3 dan fa 0/6 status VLAN nya active.

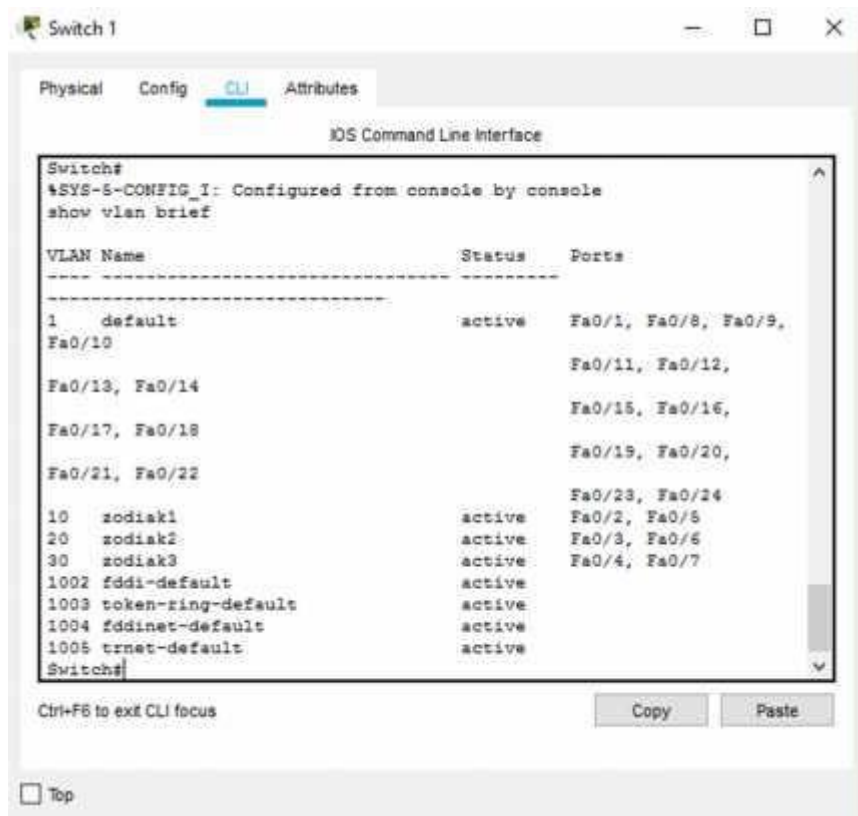
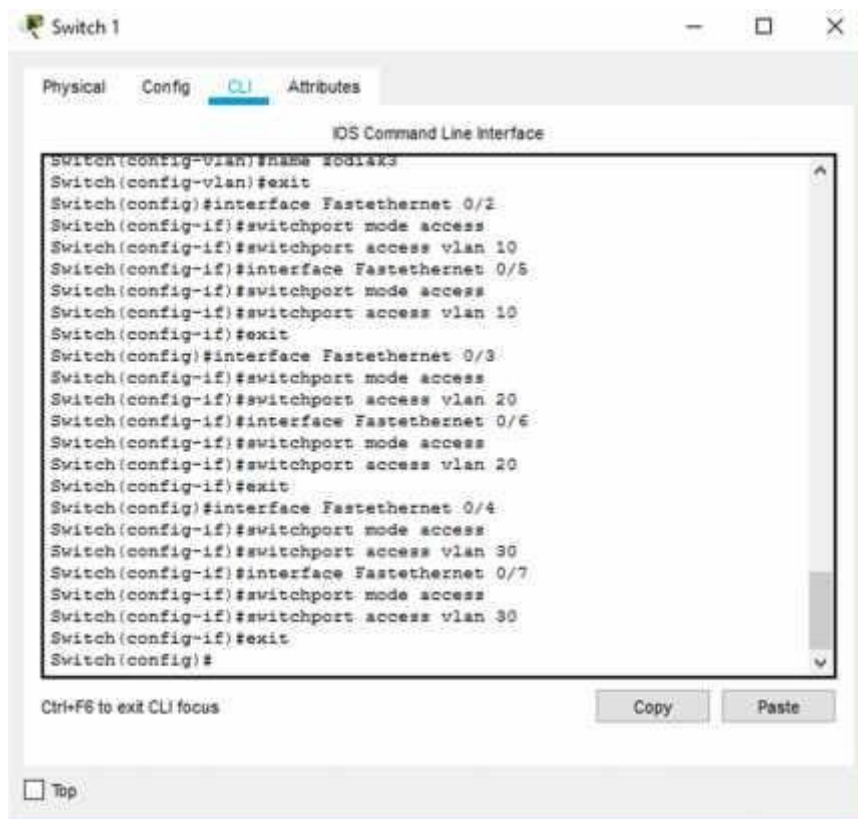
## Kegiatan 2. Topologi 2



## Konfigurasi VLAN



## Konfigurasi port-port VLAN



Switch 1

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Switch#show vlan id 10
```

| VLAN Name  | Status | Ports        |
|------------|--------|--------------|
| 10 zodiak1 | active | Fa0/2, Fa0/5 |

| 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 | Fa0/3, Fa0/6 |

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

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

Switch 1

Physical Config **CLI** Attributes

IOS Command Line Interface

| VLAN Name  | Status | Ports        |
|------------|--------|--------------|
| 20 zodiak2 | active | Fa0/3, Fa0/6 |

| 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 | Fa0/4, Fa0/7 |

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

```
Switch#
```

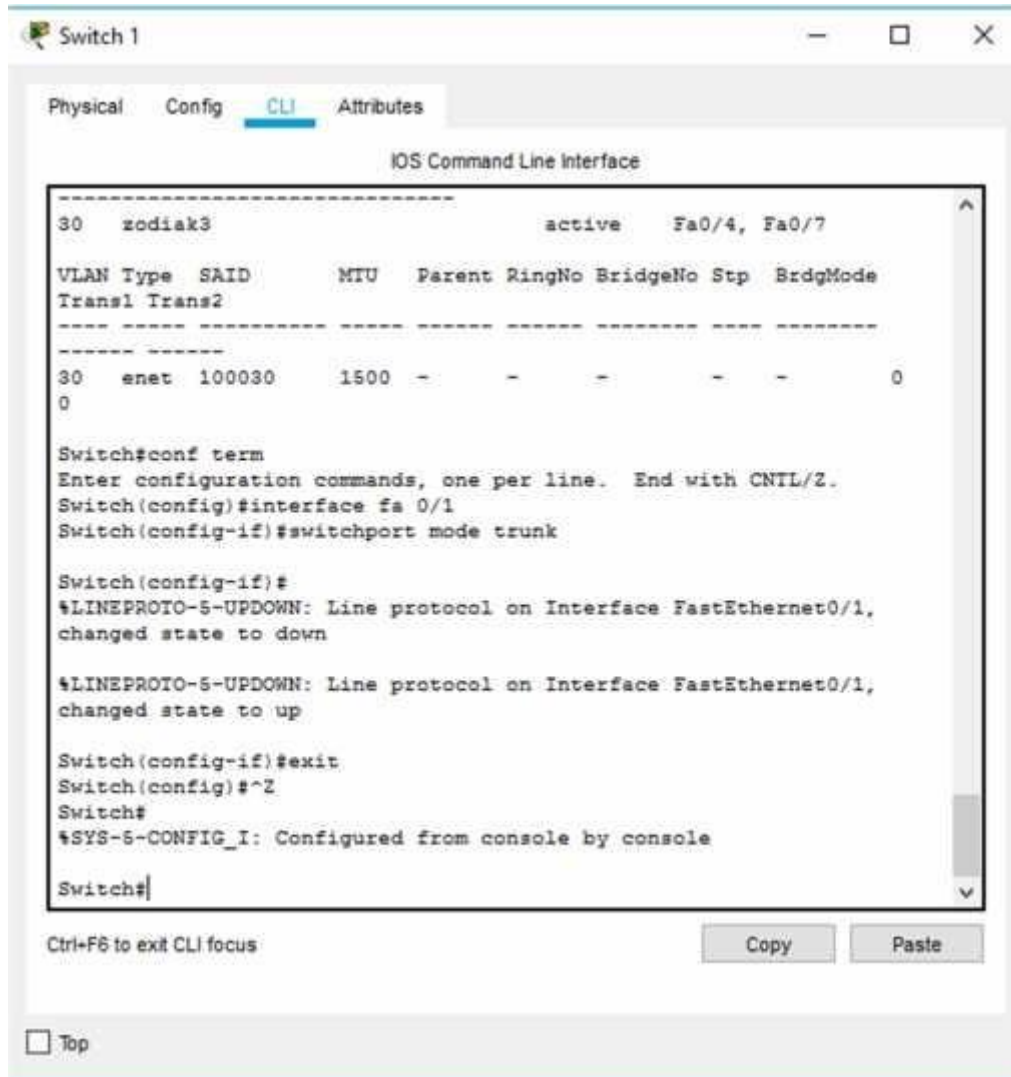
Ctrl+F6 to exit CLI focus

Copy Paste

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## Langkah 6. Konfigurasi VLAN Trunking pada Switch 1



Switch 1

Physical Config **CLI** Attributes

IOS Command Line Interface

```
30    zodiak3                                active    Fa0/4, Fa0/7

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

Switch#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#interface fa 0/1
Switch(config-if)#switchport 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)#^Z
Switch#
%SYS-5-CONFIG_I: Configured from console by console

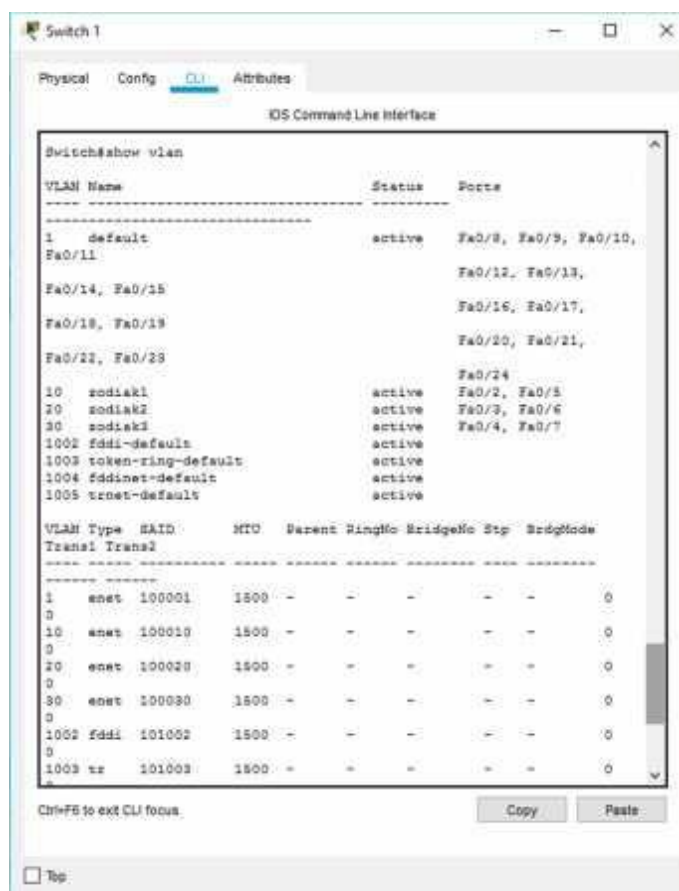
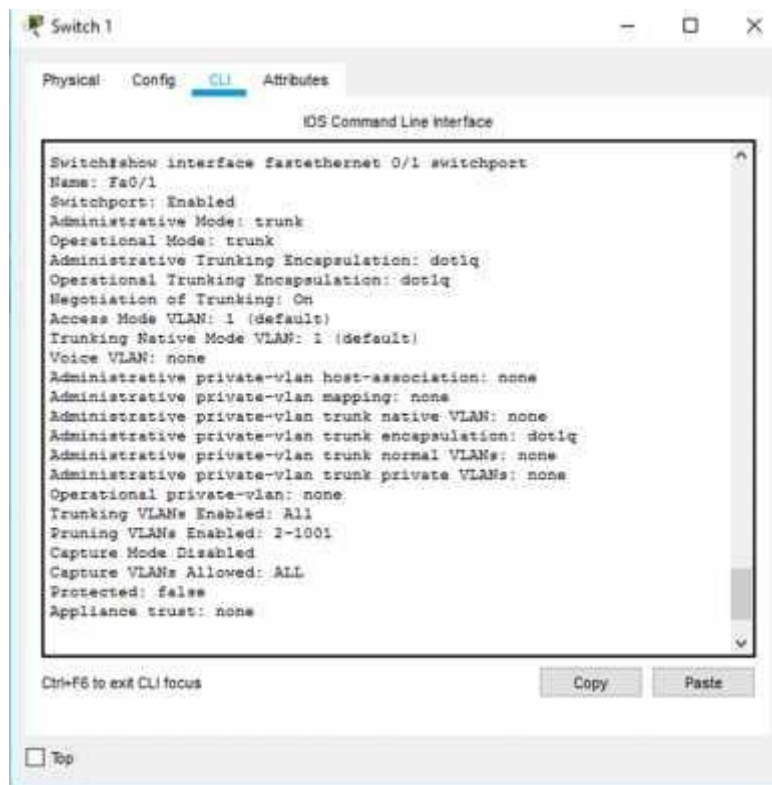
Switch#
```

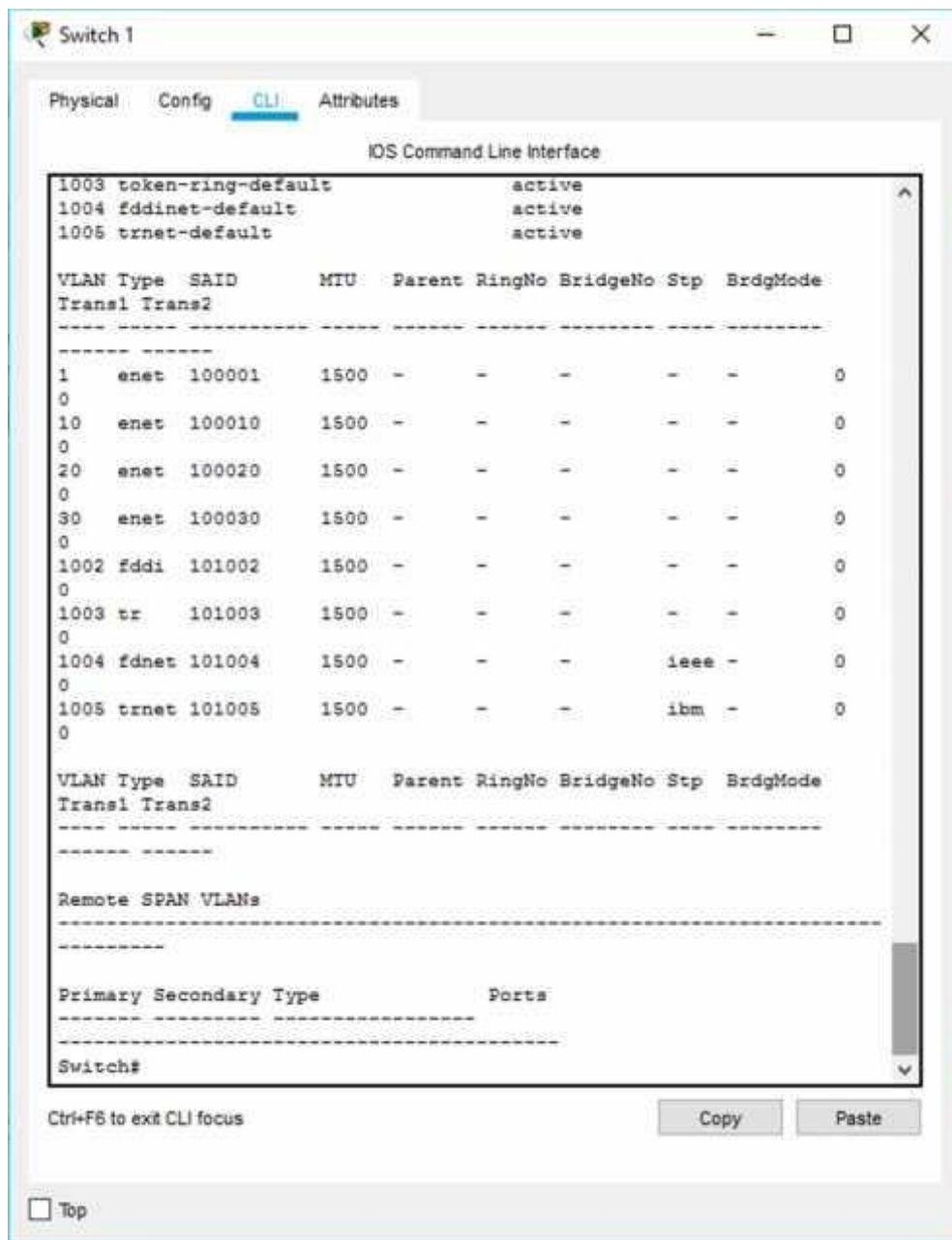
Ctrl+F6 to exit CLI focus

Copy Paste

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## Langkah 7. Melihat konfigurasi Trunking





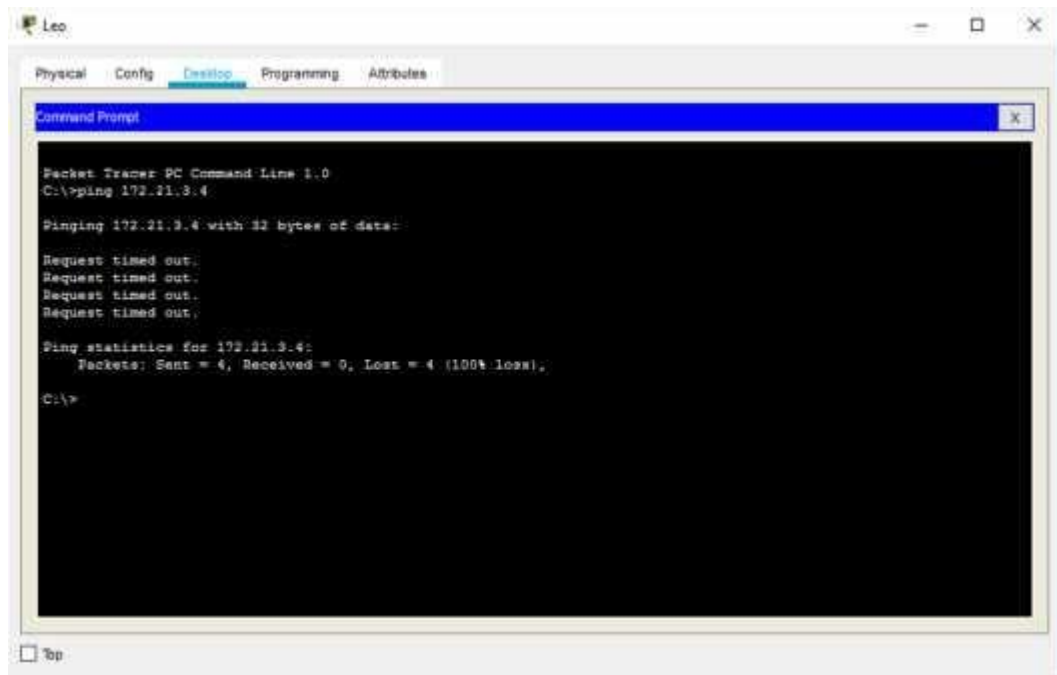
## Tugas 7A

Jelaskan secara singkat hasil yang anda peroleh dari langkah 7

Jawab:

Hasil yang diperoleh dari langkah 7 berupa informasi mengenai konfigurasi trunking pada Switch 1.

Langkah 8. Ping PC Leo ke PC Pisces



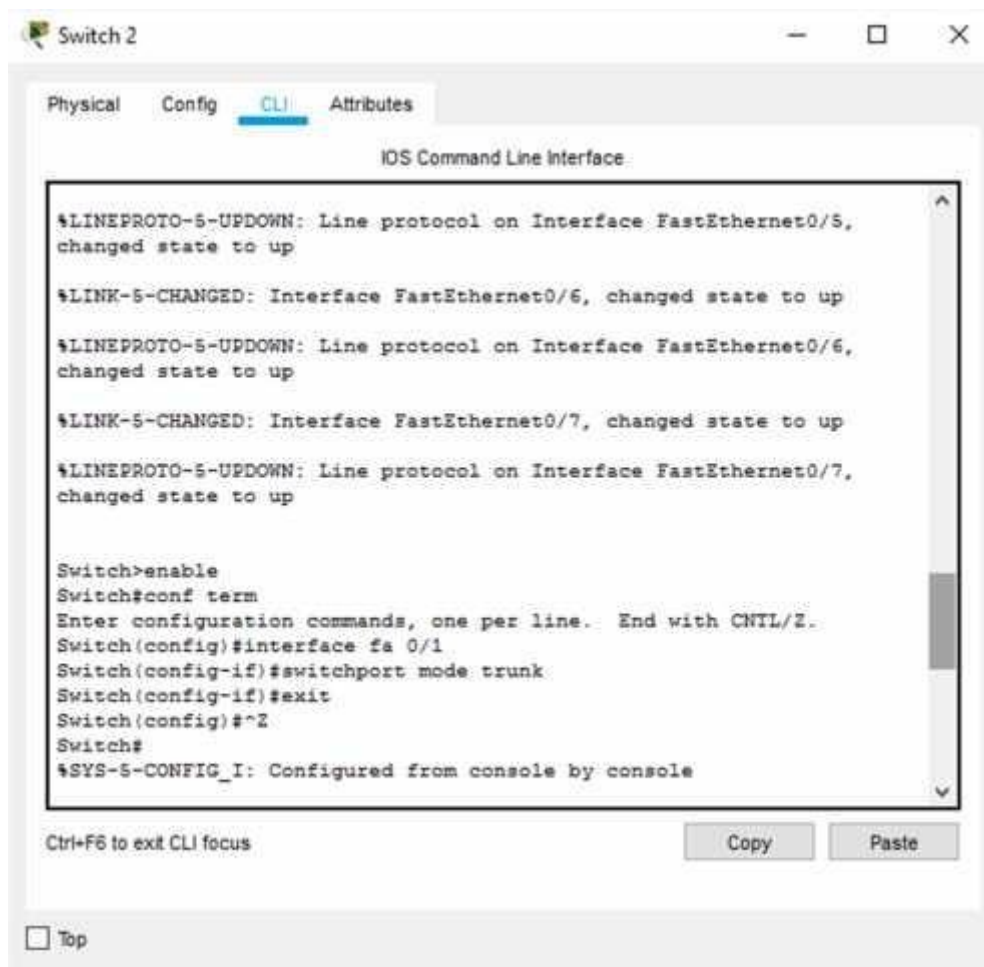
Tugas 8A

Jelaskan secara singkat mengapa hasil yang anda peroleh dari langkah 8 mendapatkan status “reply”?

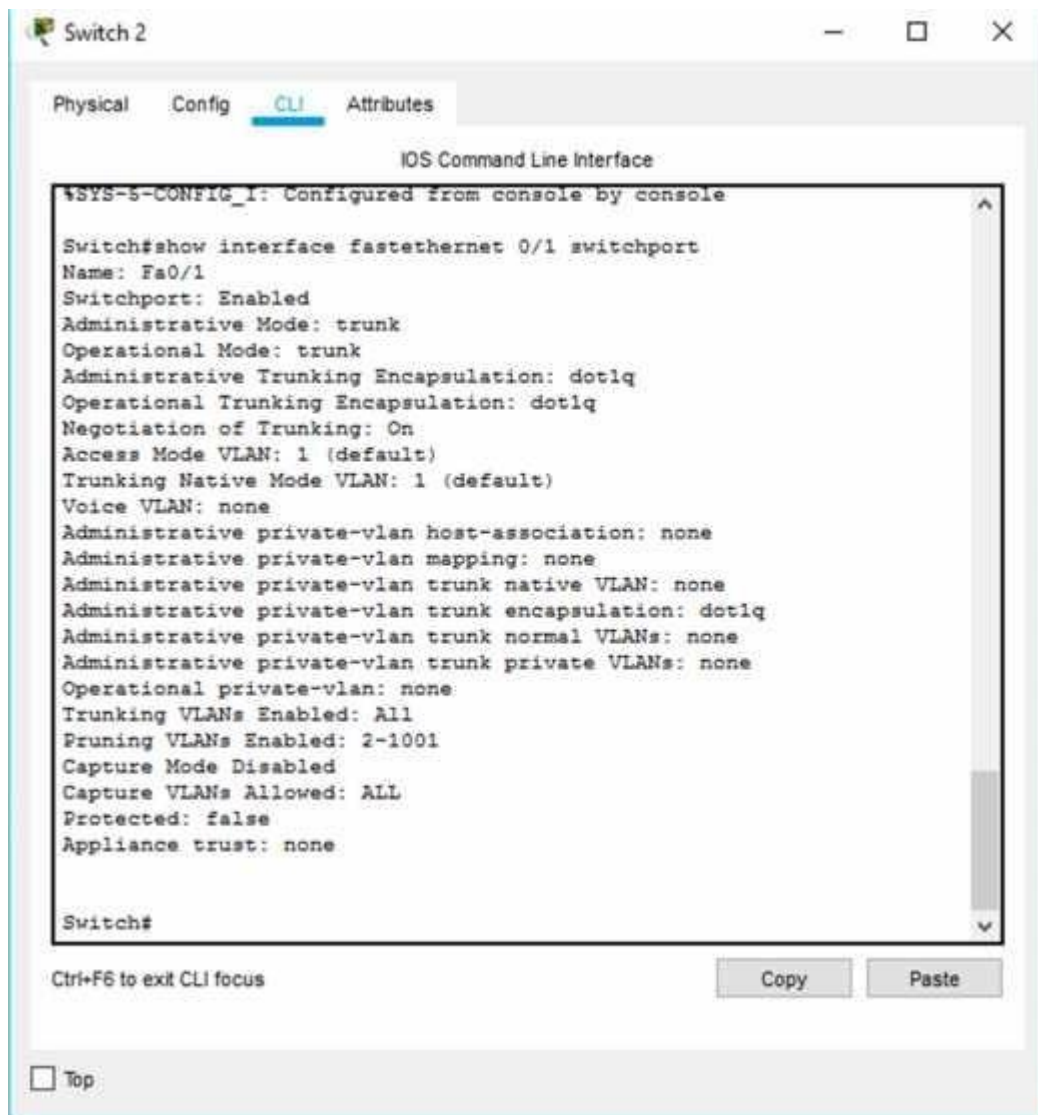
Jawab:

Hasil dari ping PC Leo ke PC Pisces adalah “Request timed out” karena PC Leo dan PC Pisces tidak satu VLAN.

## Langkah 9. Konfigurasi Trunking pada Switch 2



Langkah 10. Melihat konfigurasi VLAN pada Switch 2



Switch 2

Physical
Config
CLI
Attributes

IOS Command Line Interface

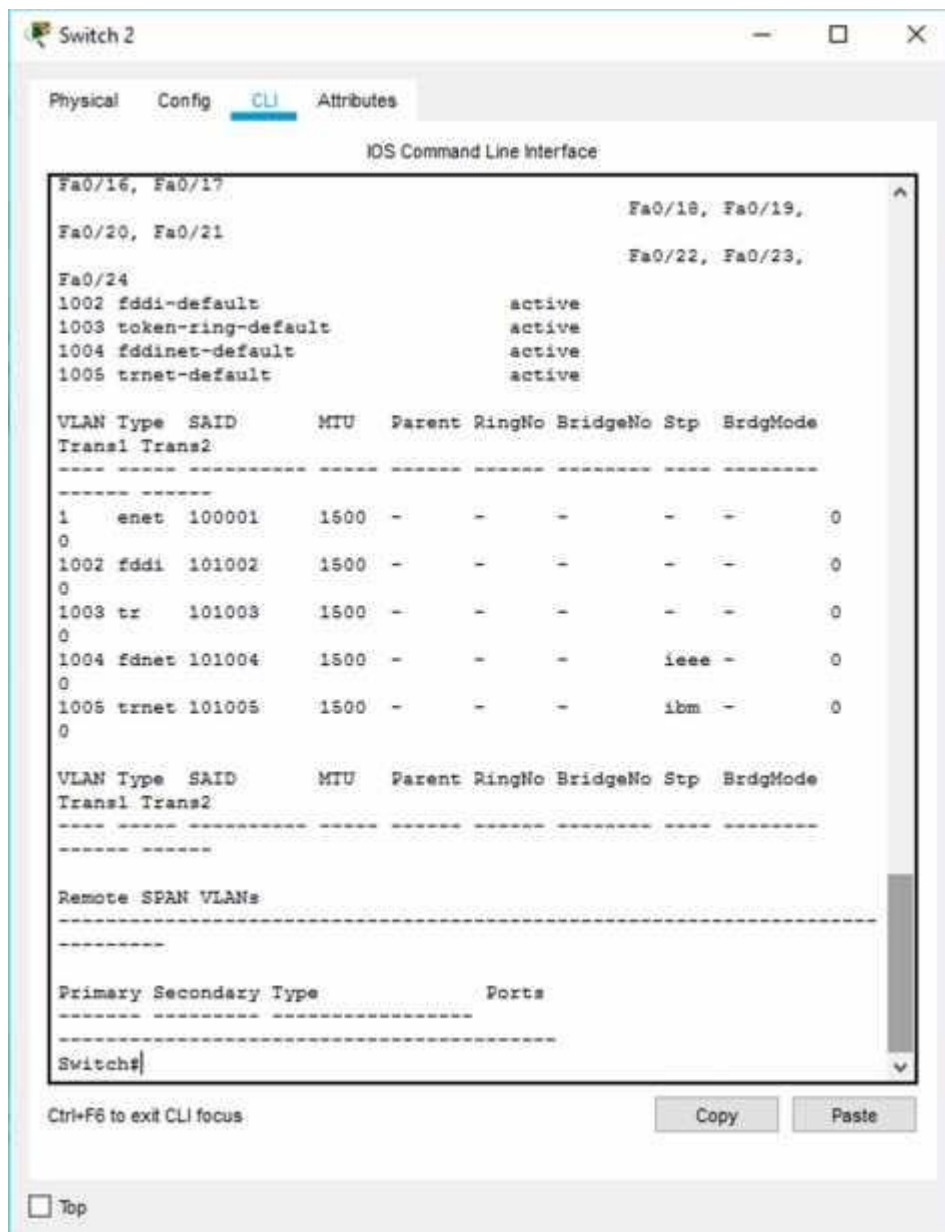
```
Switch#show vlan
```

| VLAN Name               | Status | Ports  |
|-------------------------|--------|--|
| 1 default               | active | Fa0/2, Fa0/3, Fa0/4, Fa0/5, Fa0/6, 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 |
| 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        |
| 1002      | fddi   | 101002 | 1500   | -      | -        | -    | 0        |
| 1003      | tr     | 101003 | 1500   | -      | -        | -    | 0        |
| 1004      | fdnet  | 101004 | 1500   | -      | -        | ieee | 0        |
| 1005      | trnet  | 101005 | 1500   | -      | -        | ibm  | 0        |

Ctrl+F6 to exit CLI focus
Copy
Paste

☐ Top



## Tugas 10A

Jelaskan secara singkat hasil yang anda peroleh dari langkah 10.

Jawab:

Hasil yang diperoleh berupa informasi mengenai konfigurasi VLAN Trunking pada Switch 2.



## Langkah 11. Konfigurasi port-port switch ke VLAN



The screenshot shows a window titled "Switch 2" with tabs for "Physical", "Config", "CLI", and "Attributes". The "CLI" tab is active, displaying the "IOS Command Line Interface". The terminal output shows the following commands and their results:

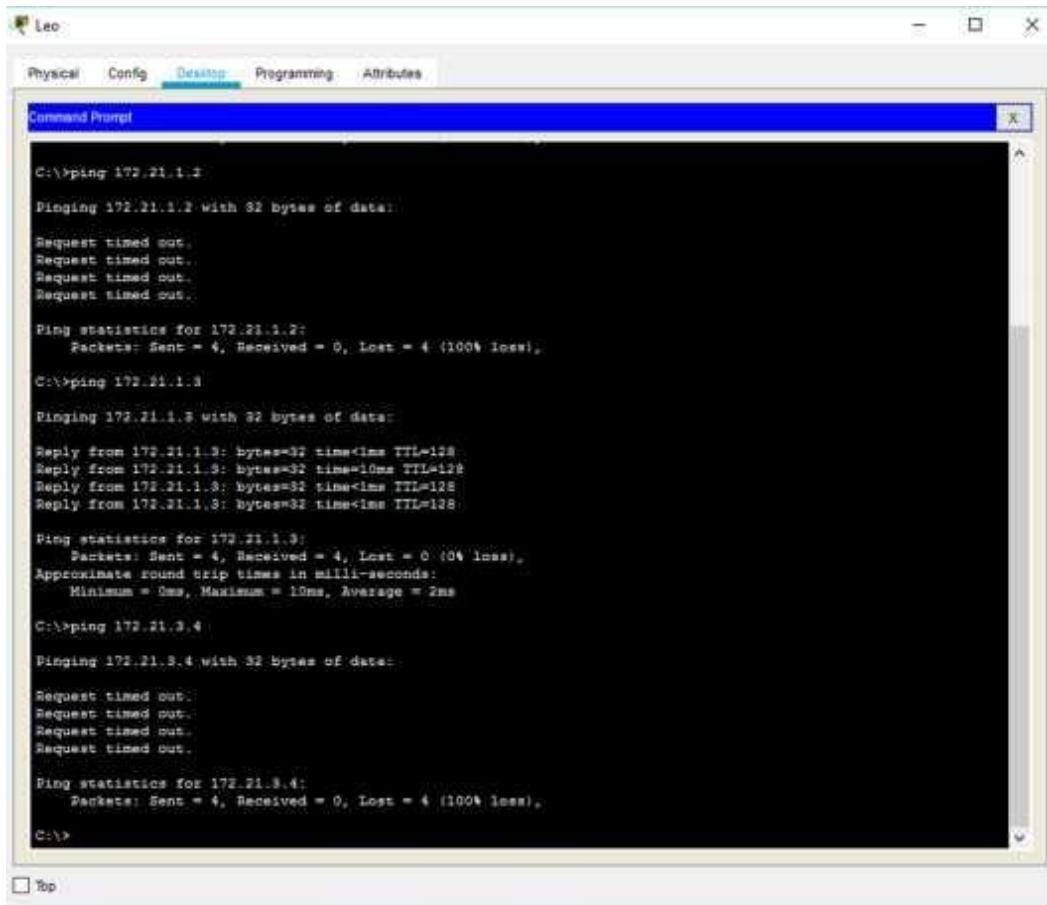
```
Switch(config-if)#
Switch(config-if)#^Z
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name sdiak1
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name sdiak2
Switch(config-vlan)#exit
Switch(config)#vlan 30
Switch(config-vlan)#name sdiak3
Switch(config-vlan)#exit
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)#exit
Switch(config)#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)#exit
Switch(config)#interface FastEthernet 0/6
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#interface FastEthernet 0/7
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#exit
Switch(config)#
```

At the bottom of the CLI window, there is a status bar that says "Ctrl+F6 to exit CLI focus" and two buttons: "Copy" and "Paste". Below the CLI window, there is a "Top" button with a small square icon next to it.

## Langkah 12

Ping PC Leo ke PC Aries, PC Leo ke PC Aquarius, PC Leo ke PC Pisces



```
Leo
Physical Config Desktop Programming Attributes
Command Prompt

C:\>ping 172.21.1.2

Pinging 172.21.1.2 with 32 bytes of data:

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

Ping statistics for 172.21.1.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>ping 172.21.1.3

Pinging 172.21.1.3 with 32 bytes of data:

Reply from 172.21.1.3: bytes=32 time<1ms TTL=128
Reply from 172.21.1.3: bytes=32 time=10ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128

Ping statistics for 172.21.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 10ms, Average = 2ms

C:\>ping 172.21.3.4

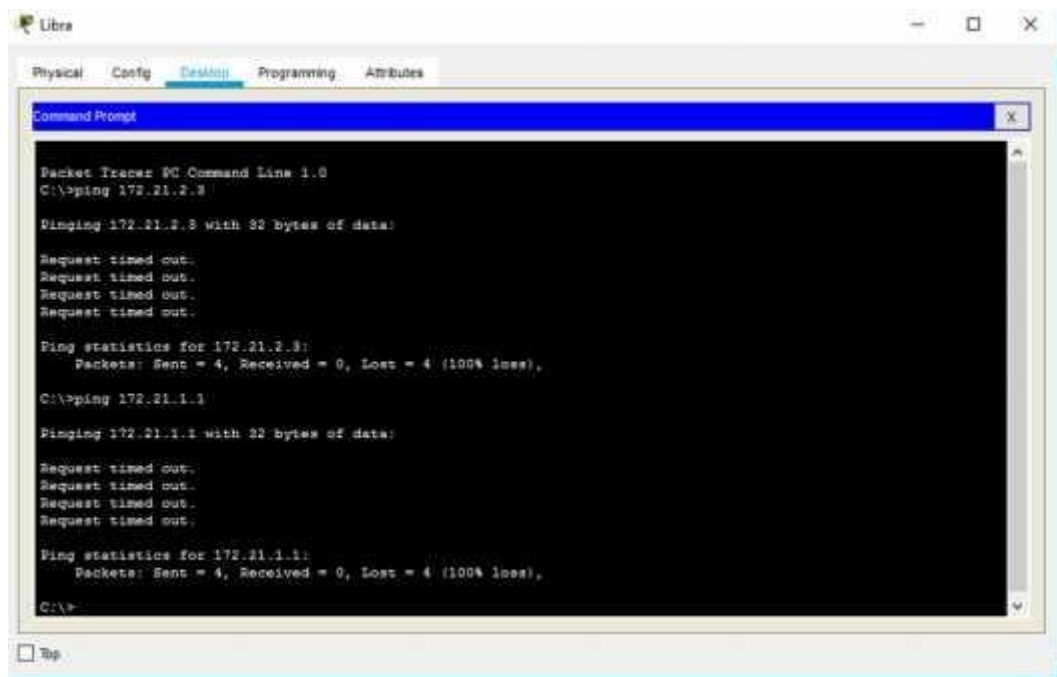
Pinging 172.21.3.4 with 32 Bytes of data:

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

Ping statistics for 172.21.3.4:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>
```

Ping PC Libra ke PC Cancer, dan ping PC Libra ke PC Leo



Tugas 12A

Jelaskan secara singkat hasil yang anda peroleh dari langkah

8. Jawab:

Hasil yang diperoleh dari langkah 8 adalah "Request timed out".