LAPORAN PRAKTIKUM JARINGAN KOMPUTER
MODUL 4

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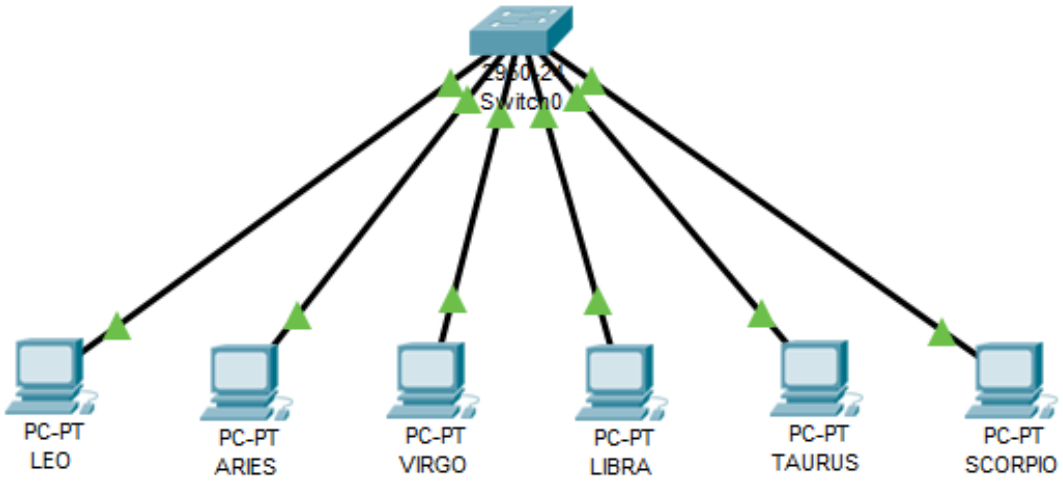
Kelas : **A**

KEGIATAN 1

A. Praktikum 1 Switch Mode VLAN

1. Merancang topologi jaringan yang akan dibangun dan dikonfigurasi dengan simulasi
cisco packet tracer.

- Jaringan terbangun dengan user device yang saling terkoneksi dengan Switch



- Jaringan terdiri dari 1 buah switch dan 6 buah host(PC)

2. Konfigurasi IP

No	***Nama PC***	***IP***
1.	Leo	**172.21.1.1 / 24**
2.	Aries	**172.21.1.2 / 24**
3 .	Virgo	**172.21.1.3 / 24**
4 .	Libra	**172.21.1.4 / 24**
5 .	Taurus	**172.21.1.5 / 24**
6 .	Scorpio	**172.21.1.6 / 24**

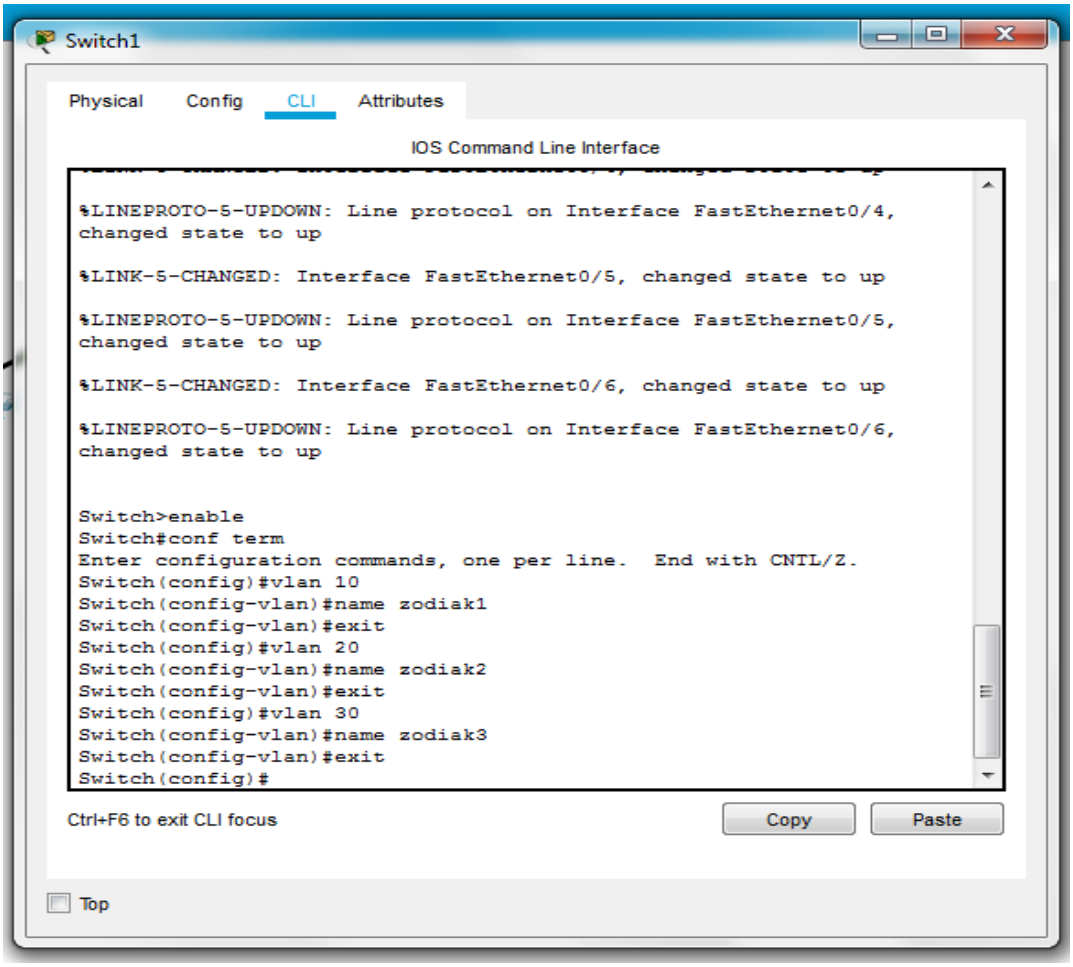
3. Melakukan konfigurasi VLAN pada switch

- VLAN pada dasarnya ialah salah satu teknik yang bisa diterapkan di konsep
switching dalam jaringan. VLAN banyak digunakan karena banyak menguntungkan dibanding teknik routing.

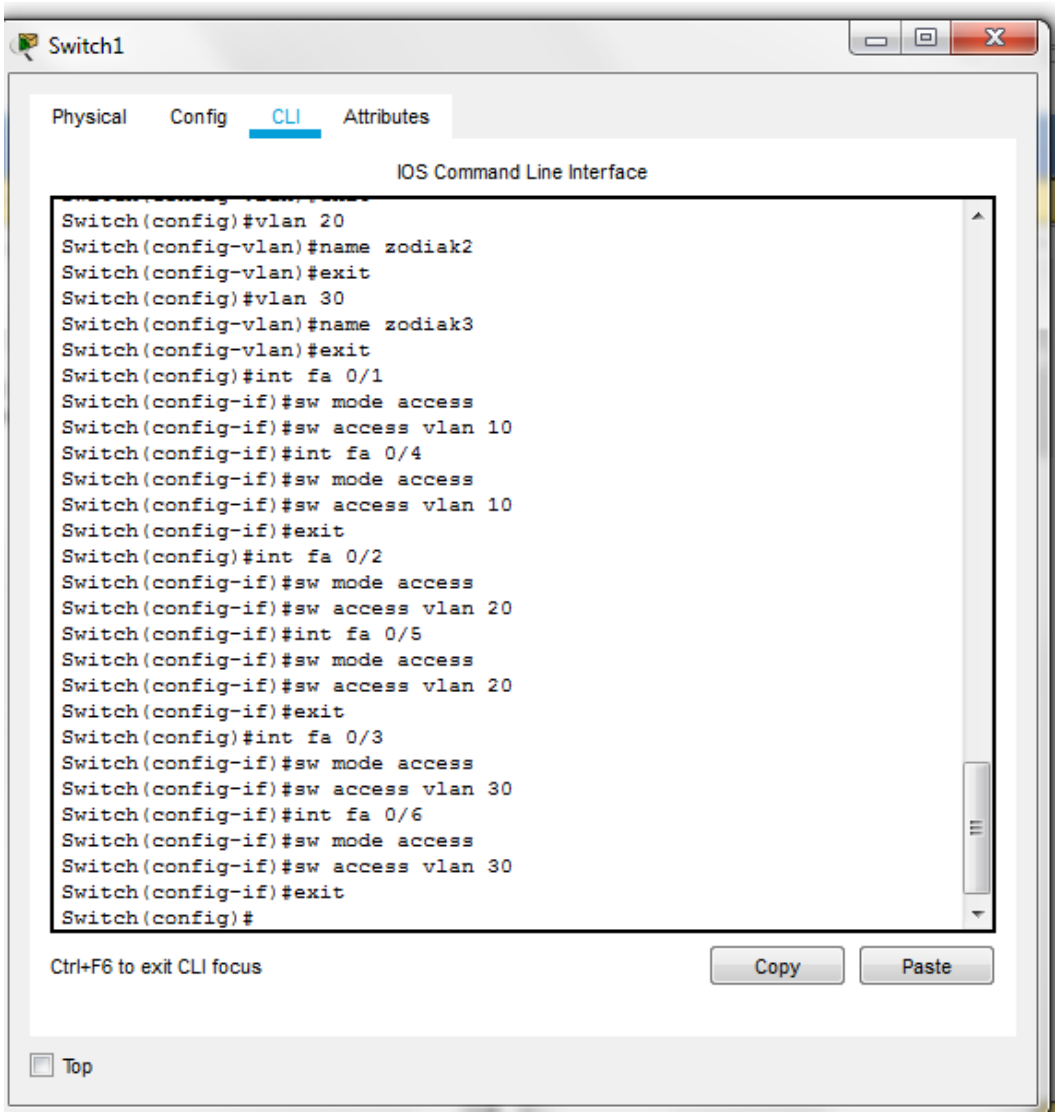
- Cara kerja dari VLAN adalah semua data yang mengandung informasi pengalamatan akan disimpan dalam sebuah tabel/ database. Switch akan
menentukan kemana data akan diforward

- Melakukan konfigurasi sesuai dengan contoh dalam modul praktikum

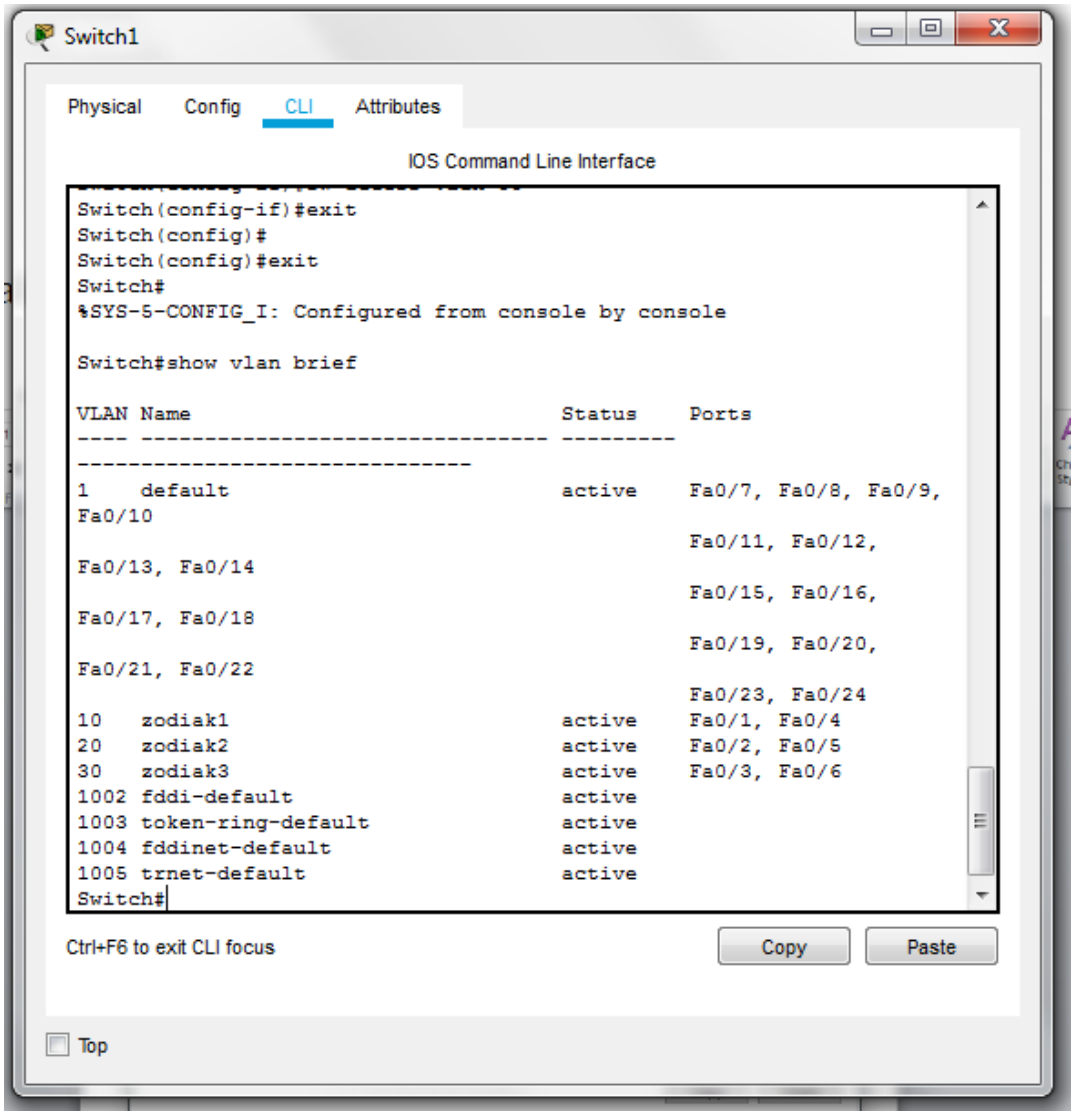
Zodiak1 = Leo dan Libra
Zodiak2 = Aries dan Taurus
Zodiak3 = Virgo dan Scorpio
Membuat VLAN dengan nama Zodiak1, Zodiak2, dan Zodiak 3


Switch1
Physical
Config
CLI
Attributes
IOS Command Line Interface
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4, changed state to up
%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)#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top

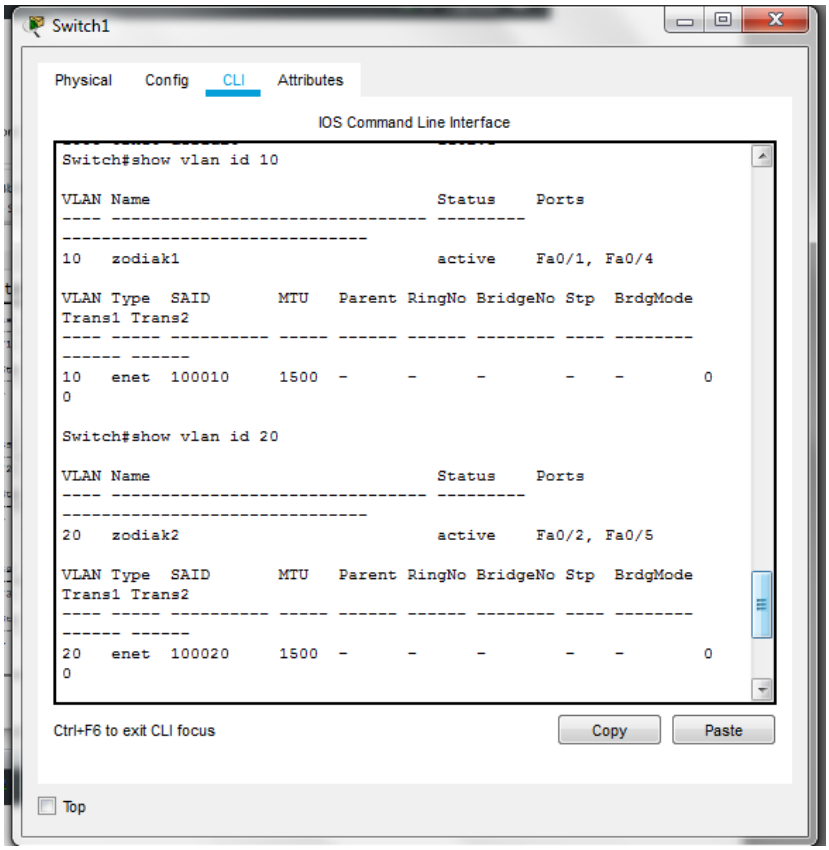
Konfigurasi port-port switch ke dalam VLAN

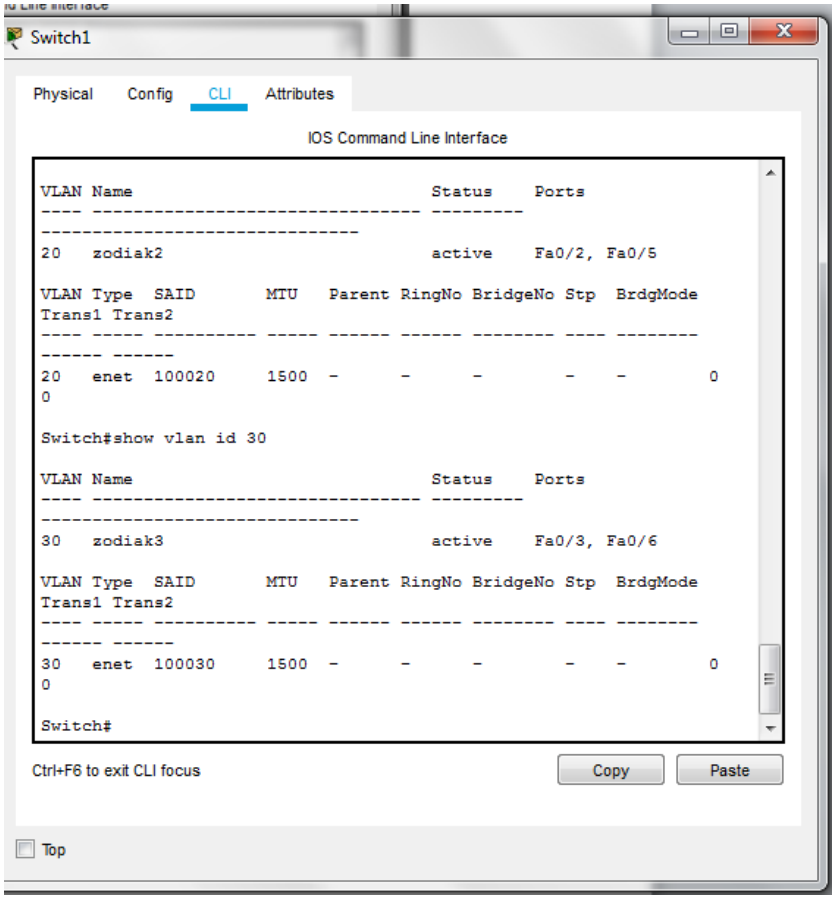


Perintah **show lan brief**



Perintah **show vlan id xx**





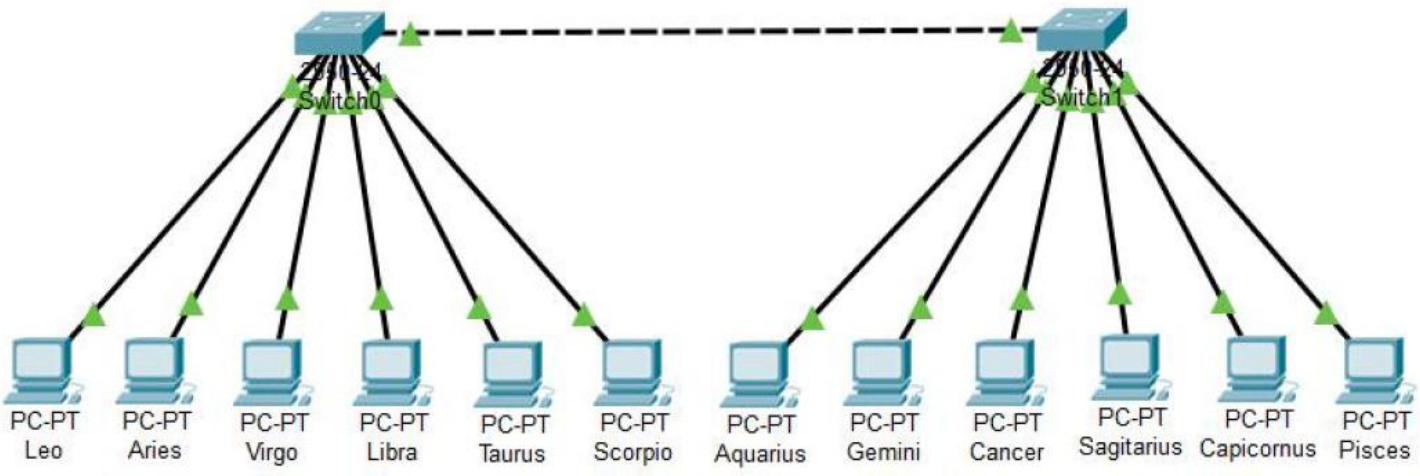
NO	VARIABEL	NILAI
1	Nomor VLAN	10
2	Nama VLAN	Zodiak1
3	Port	Fa 0/1, fa 0/4
4	Status	active

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

Kegiatan 2. Topologi 2

1. Menggunakan cisco packet tracer buat topologi berikut :



2. Beri nama masing-masing perangkat dengan SW1(switch 1), Leo(PC0), Aries(PC1),
Virgo(PC2), Libra(PC3), Taurus(PC4), dan Scorpio(PC5) untuk segmen switch 1.

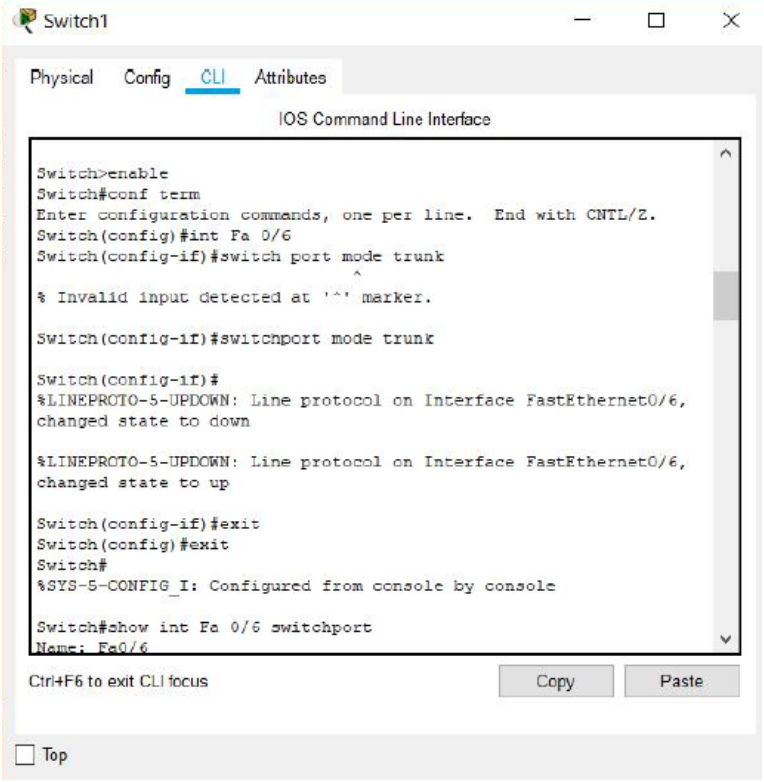
3. Beri nama masing-masing perangkat dengan SW2(switch 2), Aquarius(PC6), Gemini(PC7),
Cancer(PC8), Sagitarius(PC9), Capricornus(PC10), dan Pisces(PC11) untuk segmen switch 2.

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

- Leo = **172.21.1.1/24**
- Aries = **172.21.1.2/24**
- Virgo = **172.21.2.1/24**
- Libra = **172.21.2.2/24**
- Taurus = **172.21.3.1/24**
- Scorpio = **172.21.3.2/24**
- Aquarius = **172.21.1.3/24**
- Gemini = **172.21.1.4/24**
- Cancer = **172.21.2.3/24**
- Sagitarius = **172.21.2.4/24**
- Capriconus = **172.21.3.3/24**
- Pisces = **172.21.3.4/24**

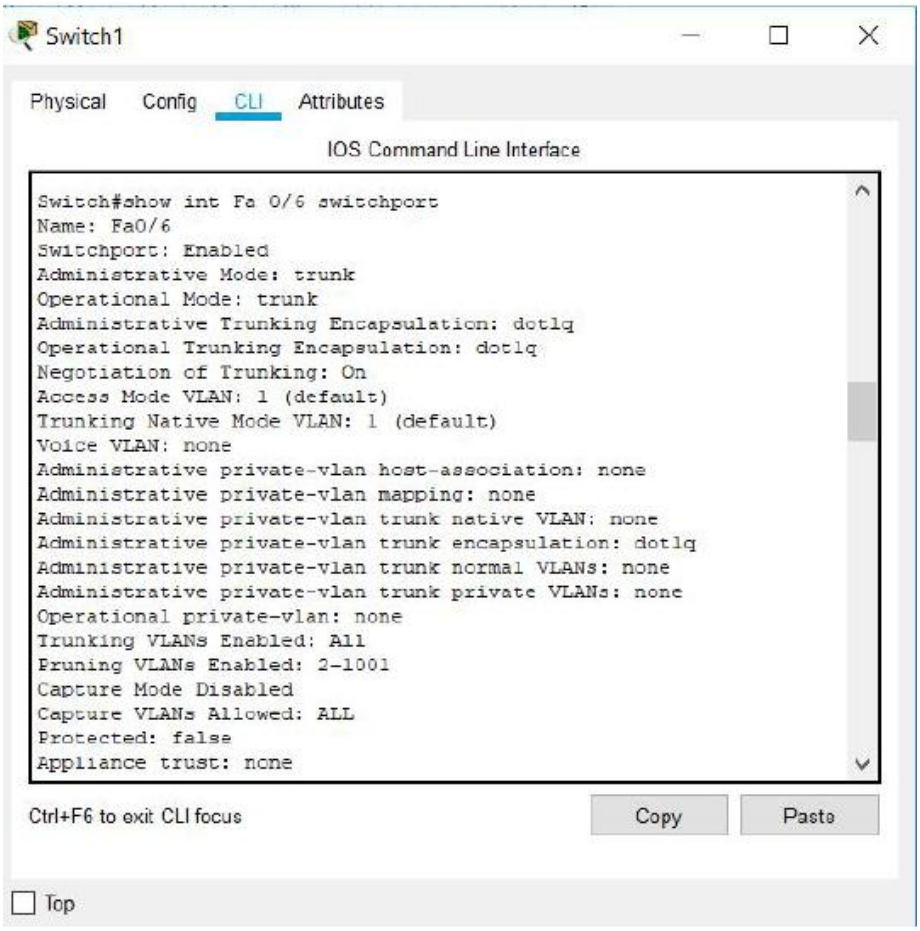
5. Konfigurasi VLAN trunking pada switch 1.
Langkah pengoperasian :

- Switch(config)#interface Fa 0/6
- Switch(config-if)#switchport mode trunk
- Switch(config-if)#exit

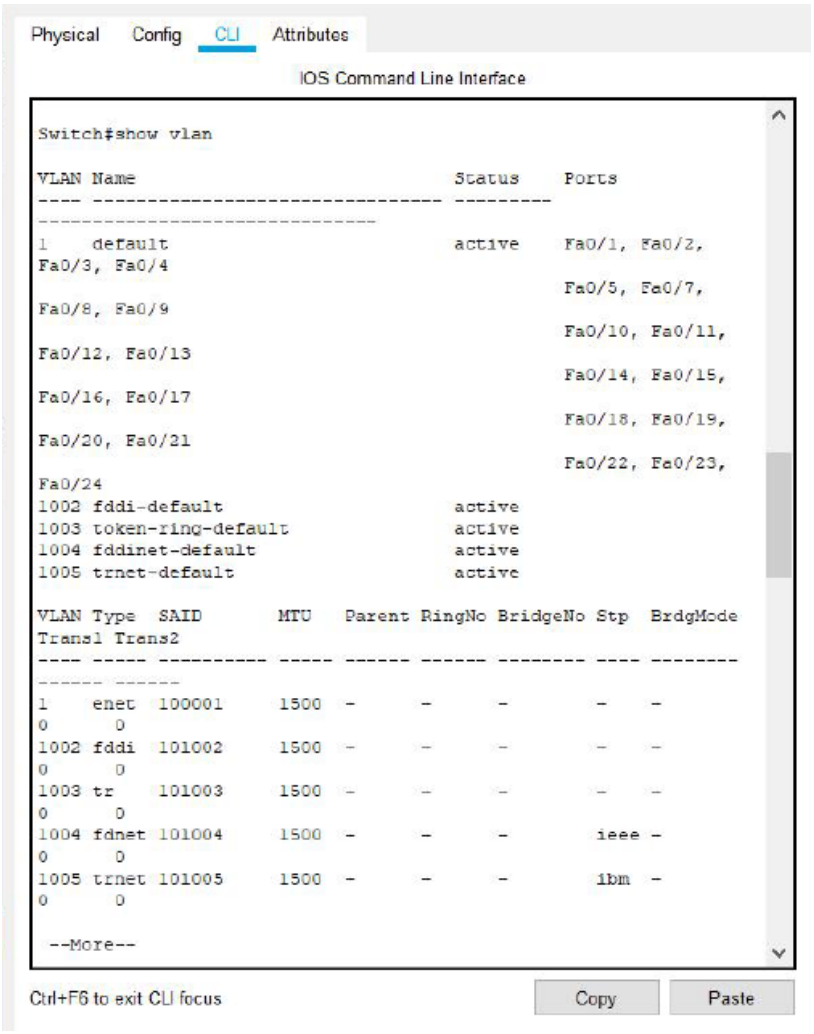


6. Melihat konfugurasi :

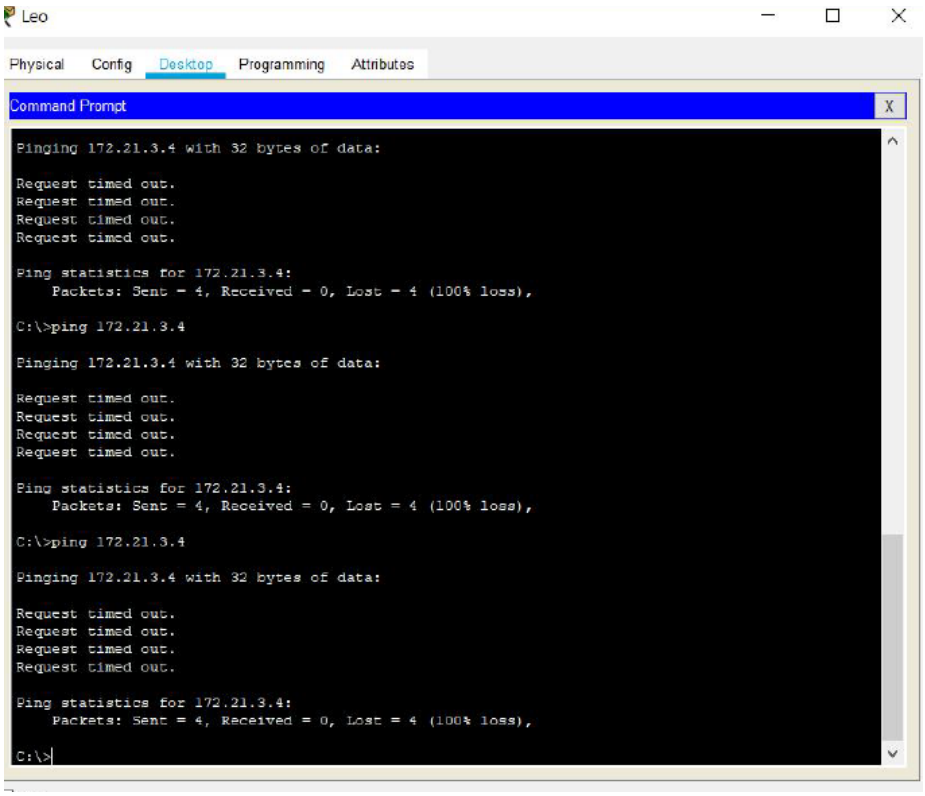
- Ketik show int Fa 0/6 switchport


Switch1
Physical
Config
CLI
Attributes
IOS Command Line Interface
Switch#show int Fa 0/6 switchport
Name: Fa0/6
Switchport: Enabled
Administrative Mode: trunk
Operational Mode: trunk
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: On
Access Mode VLAN: 1 (default)
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
Appliance trust: none
Ctrl+F6 to exit CLI focus
Copy
Paste
Top

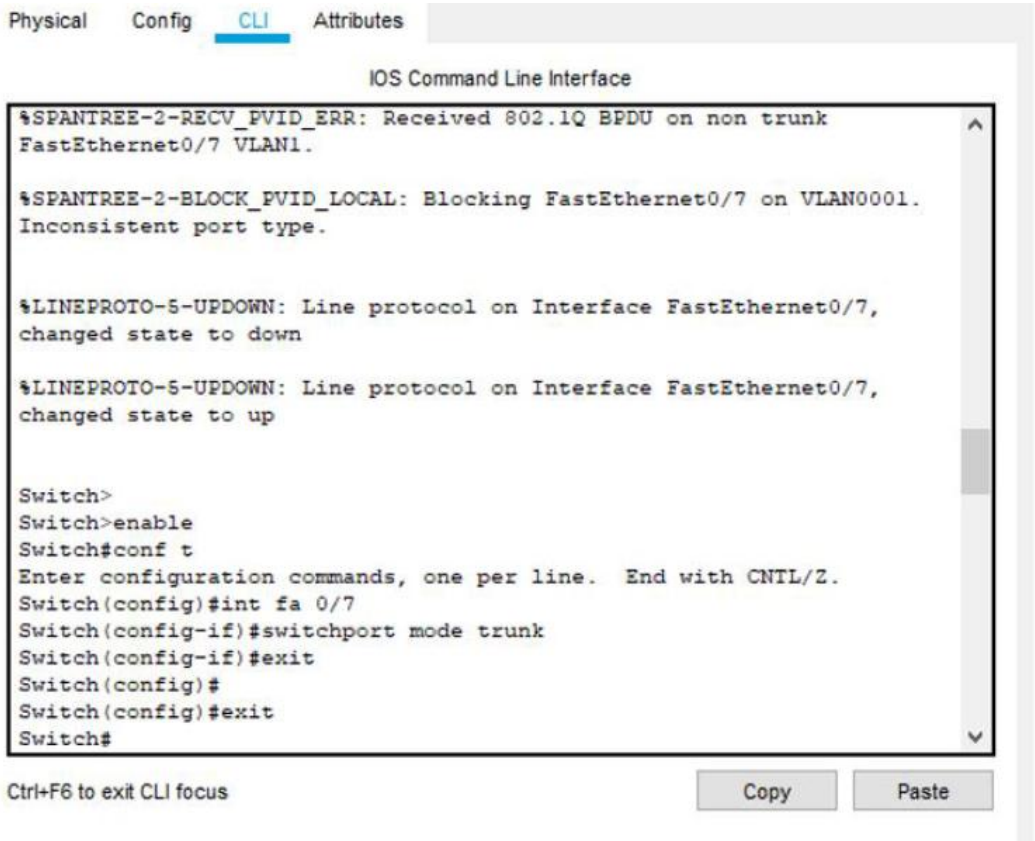
- Ketik show vlan



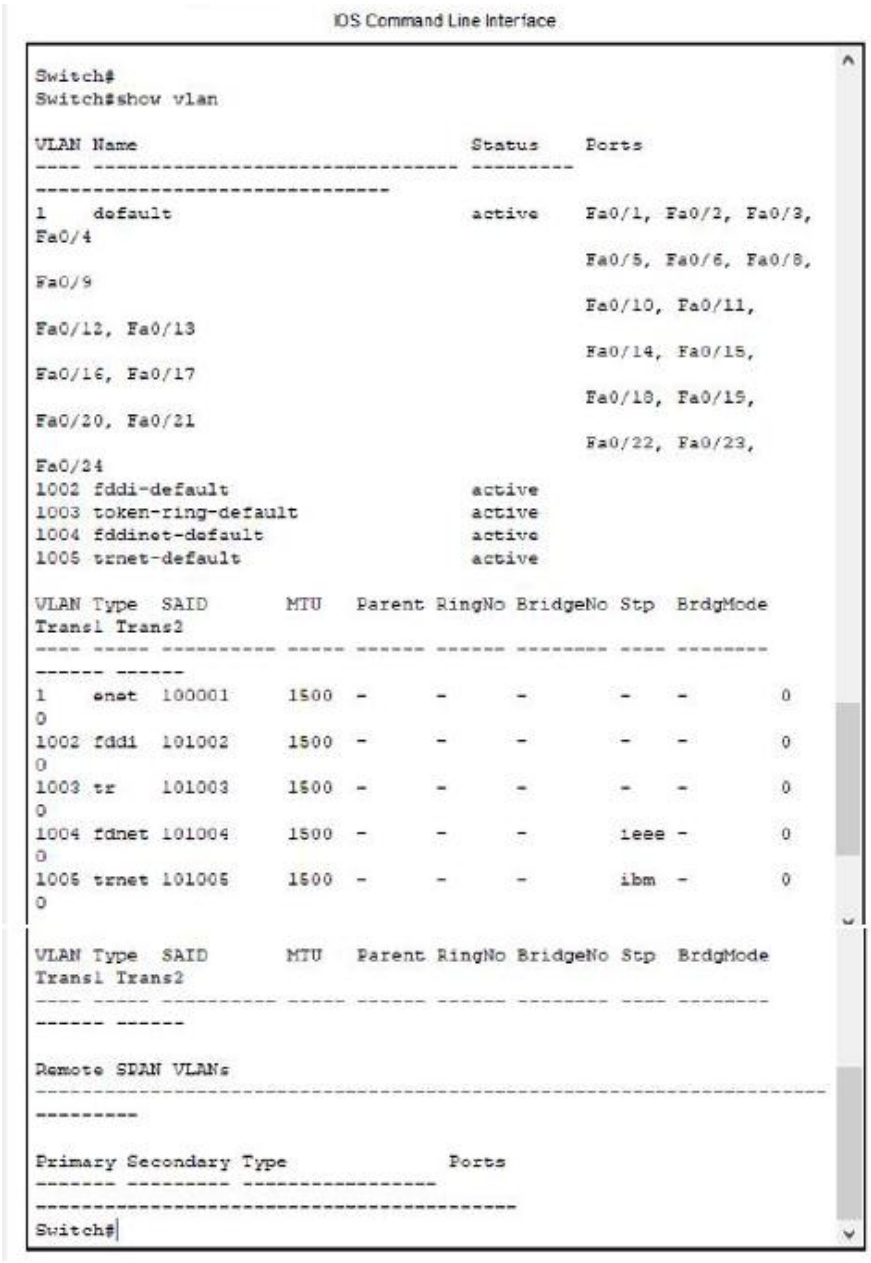
7. Lakukan PC Leoke PC Pisces



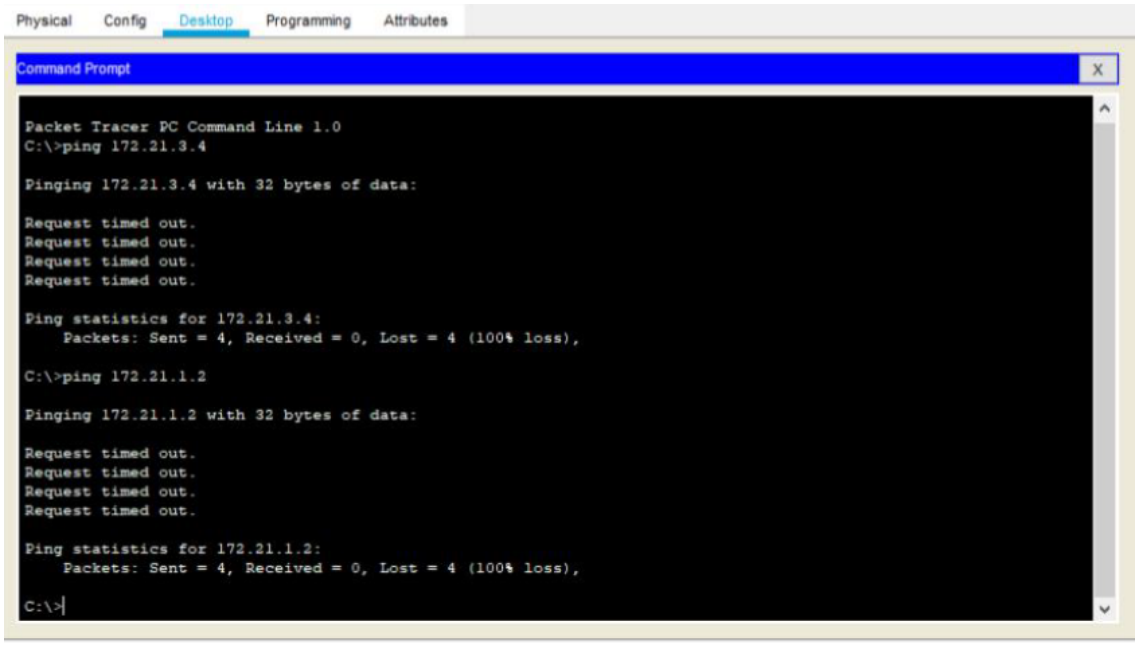
8. Konfigurasi VLAN trunking pada switch 2



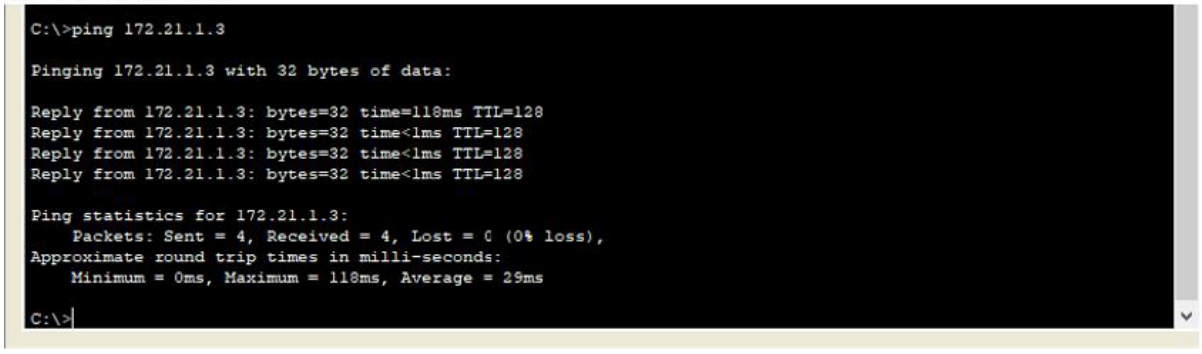
9. Melihat hasil konfigurasi trunking pada switch 2

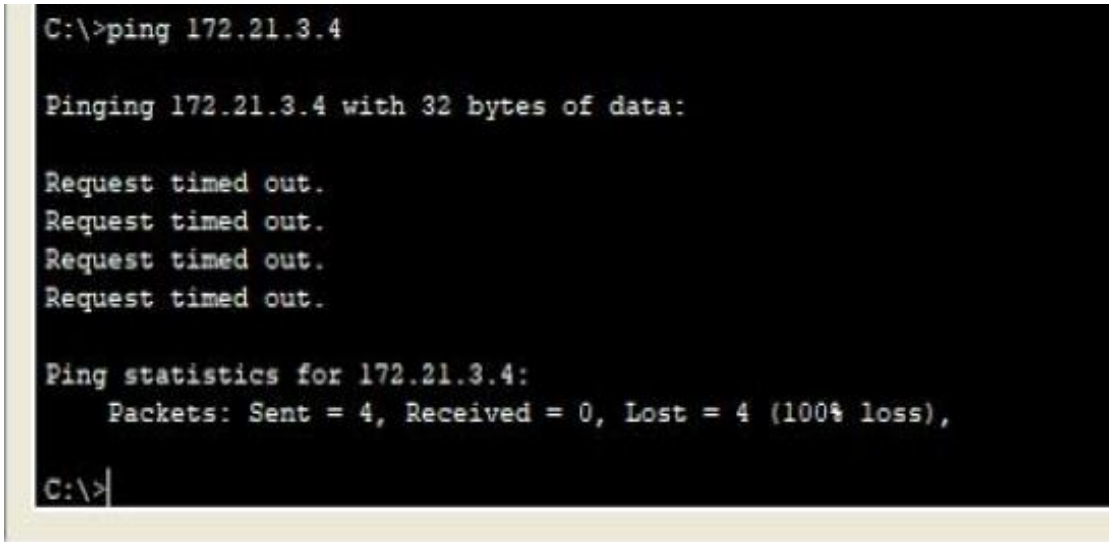


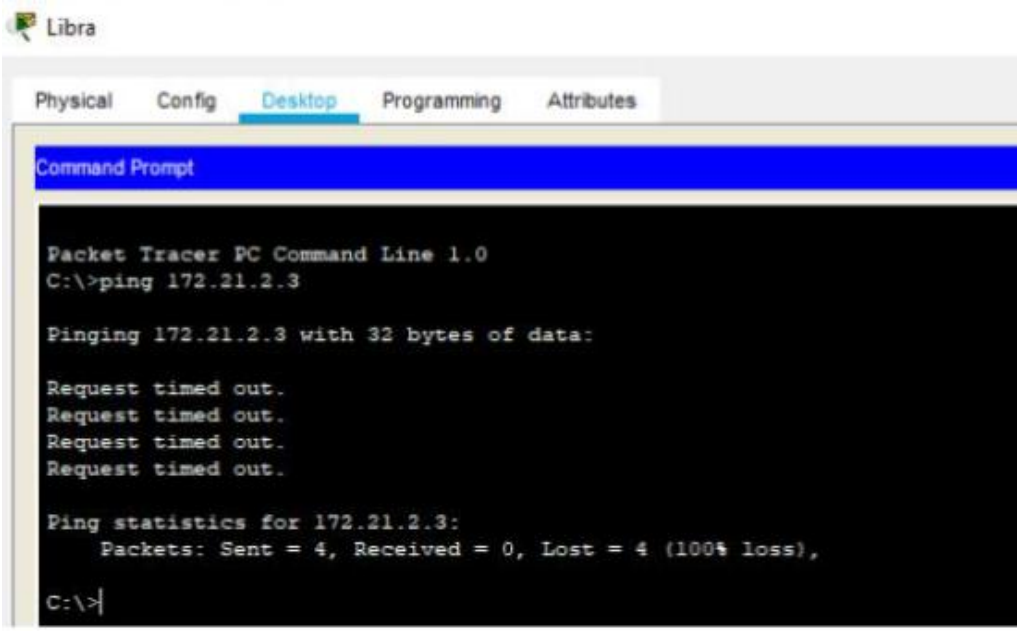
10. Uji coba ping

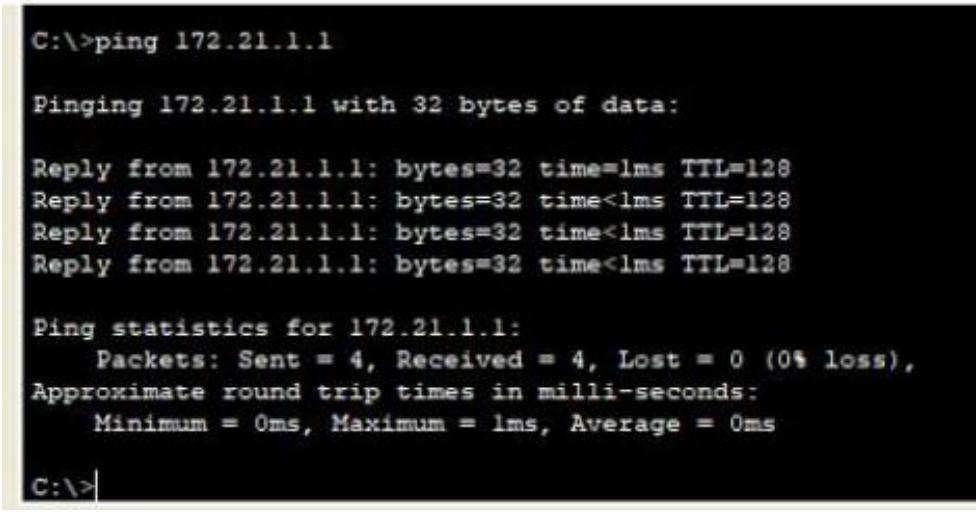


PC LEO KE AQUARIUS









Dari hasil percobaan diatas, dapat disimpulkan apabila PC berada pada VLAN yang
sama, maka akan menghasilkan status Reply. Akan tetapi jika berada pada VLAN yang
berbeda akan menghasilkan status Request Time Out