

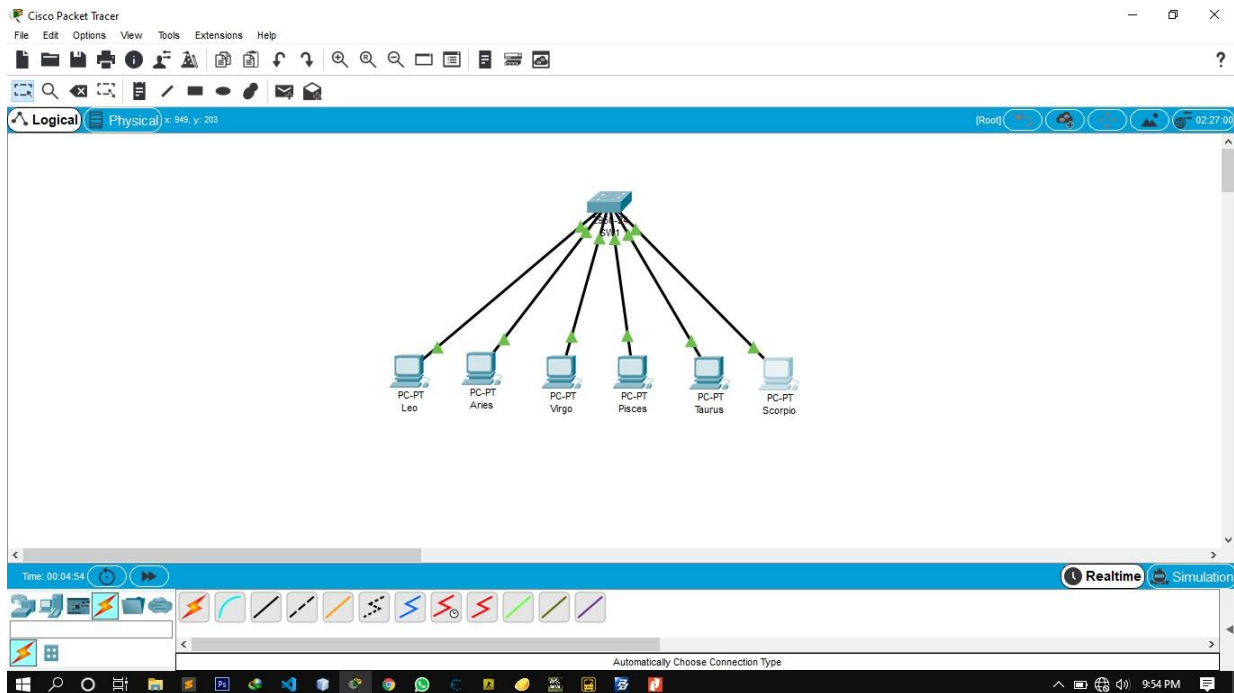
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NIM : L200180075
Kelas : B

Kegiatan Praktikum Modul 4

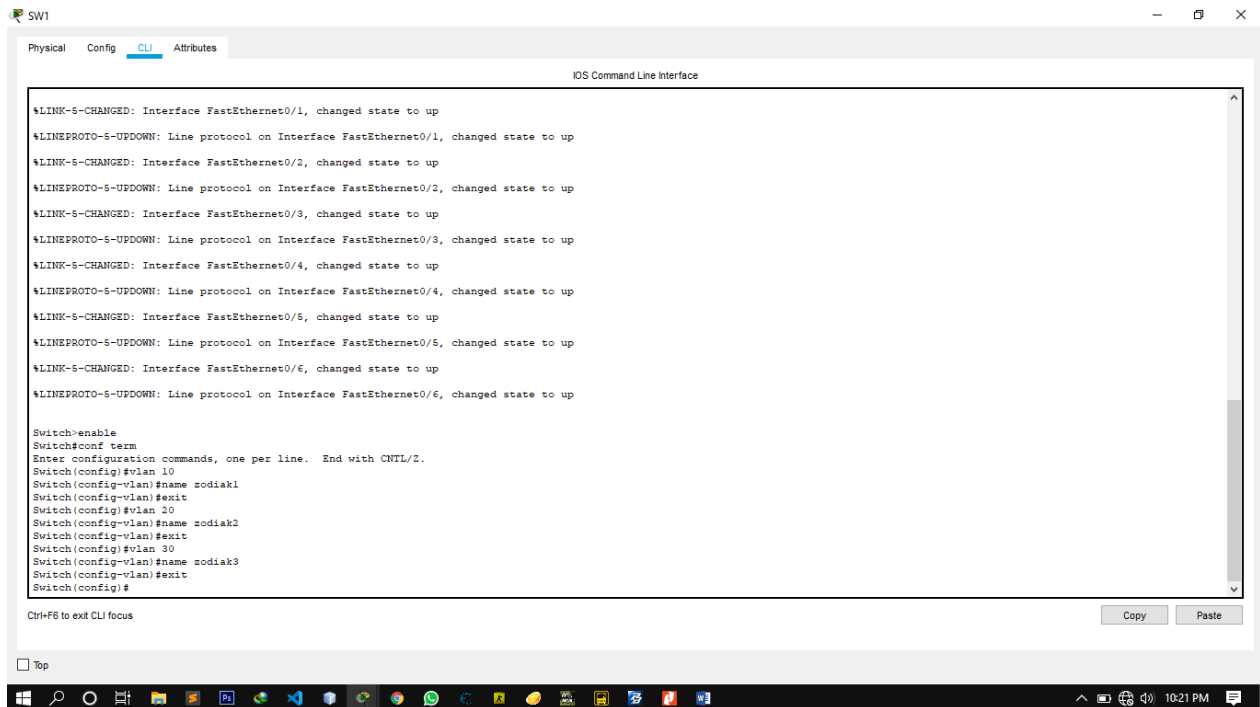
1. Kegiatan 1. Topologi 1

a,b,c Membuat topologi, memberi nama, serta setting IP address masing-masing PC sbb:

- Leo = 172.21.1.1/24
- Aries = 172.21.1.2/24
- Virgo = 172.21.1.3/24
- Pisces = 172.21.1.4/24
- Taurus = 172.21.1.5/24
- Scorpio = 172.21.1.6/24

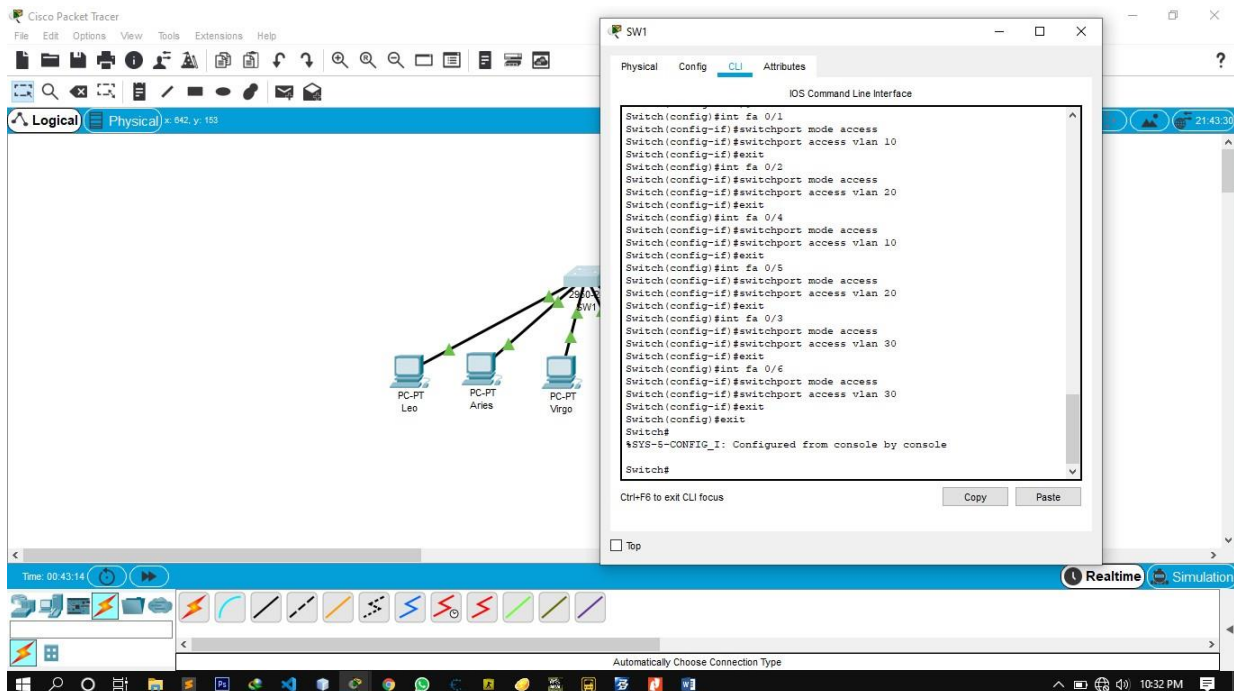


d. Membuat 3 vlan dengan nama zodiak1,zodiak2, dan zodiak3



e. Konfigurasi port-port switch kedalam 3 vlan tadi dengan anggota:

- zodiak1 : leo dan libra
- zodiak2 : aries dan Taurus
- zodiak3 : virgo dan scorpio



f. lihat konfigurasi vlan yang telah dibuat

SW1

Physical Config CLI Attributes

IOS Command Line Interface

```
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#show vlan brief

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    Fa0/1, 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

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#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#
```

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SW1

Physical Config CLI Attributes

IOS Command Line Interface

```
10   zodiak1                 active    Fa0/23, Fa0/24
20   zodiak2                 active    Fa0/1, Fa0/4
30   zodiak3                 active    Fa0/2, Fa0/5
                                           Fa0/3, Fa0/6
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#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#
```

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Tugas 6A

- vlan 10

NO	Variable	Variable
1	Nomor VLAN	10
2	Nama VLAN	zodiak1
3	Port	Fa 0/1, fa 0/4
4	Status	Active

- vlan 20

NO	Variable	Variable
1	Nomor VLAN	20
2	Nama VLAN	Zodiak2
3	Port	Fa 0/2, fa 0/5
4	Status	Active

- vlan 30

NO	Variable	Variable
1	Nomor VLAN	30
2	Nama VLAN	Zodiak3
3	Port	Fa 0/3, fa 0/6
4	Status	Active

Tugas 6B

- VLAN 10

Dengan nomor VLAN, yaitu 10, nama VLAN adalah zodiak1, memiliki port Fa 0/1 dan Fa 0/4 yang merupakan anggota dari zodiak1, yaitu Leo dan Pisces yang berstatus active.

- VLAN 20

Dengan nomor VLAN, yaitu 20, nama VLAN adalah zodiak2, memiliki port Fa 0/2 dan Fa 0/5 yang merupakan anggota dari zodiak2, yaitu Aries dan Taurus yang berstatus active.

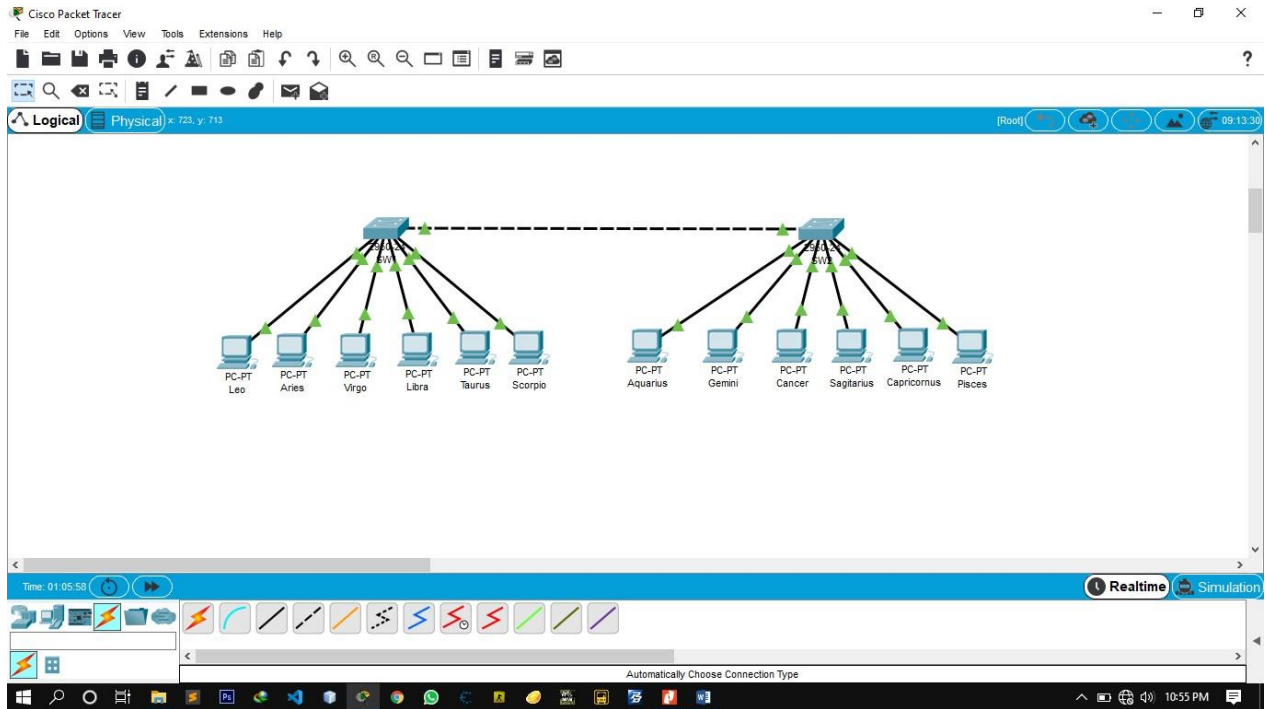
- VLAN 30

Dengan nomor VLAN, yaitu 30, nama VLAN adalah zodiak3, memiliki port Fa 0/3 dan Fa 0/6 yang merupakan anggota dari zodiak3, yaitu Virgo dan Scorpio yang berstatus active.

2. Kegiatan 2. Topologi 2

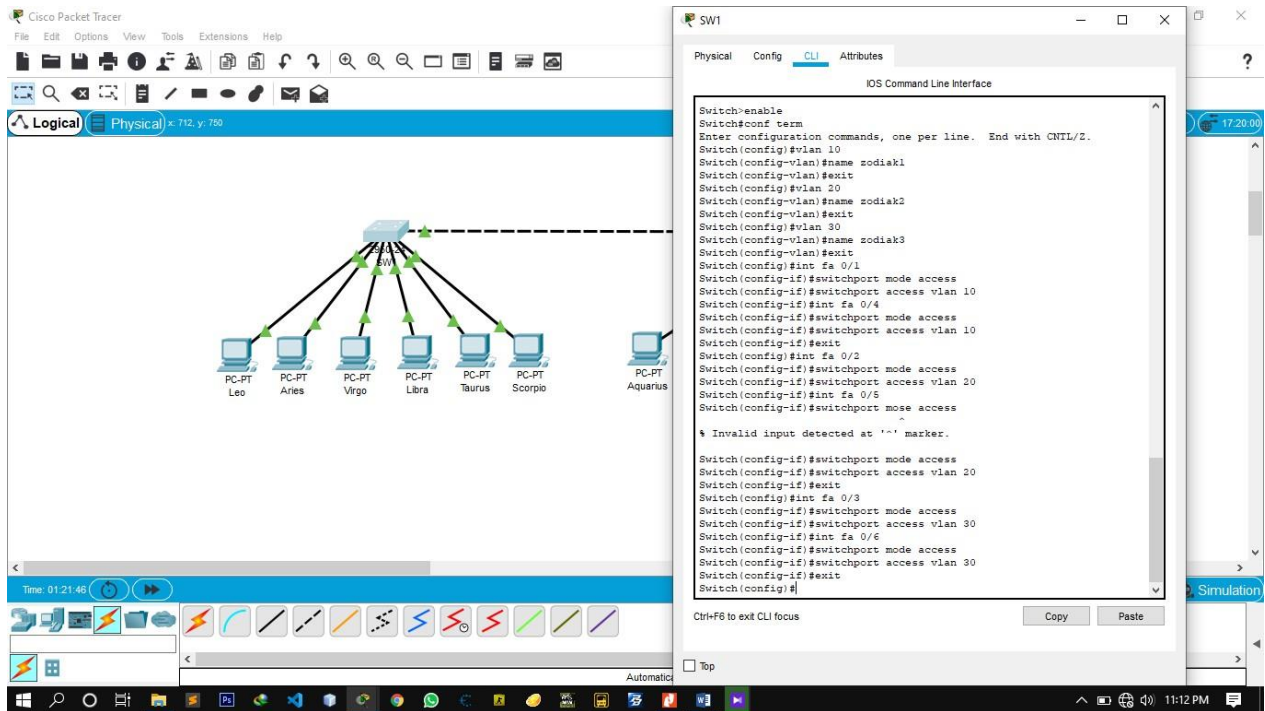
a,b Buat topologi dengan Switch catalyst 2950, Kemudian memberi nama masing – masing perangkat dengan SW1(switch 1), Leo(PC0), Aries(PC1), Virgo(PC2), Libra(PC3), Taurus(PC4), dan Scorpio(PC5) untuk segmen switch 1. Lalu, SW2(switch 2), Aquarius(PC6), Gemini(PC7), Cancer(PC8), Sagitarius(PC9), Capricorn(PC10), dan Pisces(PC11) untuk segmen switch 2, dan 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
- Capricorn = 172.21.3.3/24
- Pisces = 172.21.3.4/24

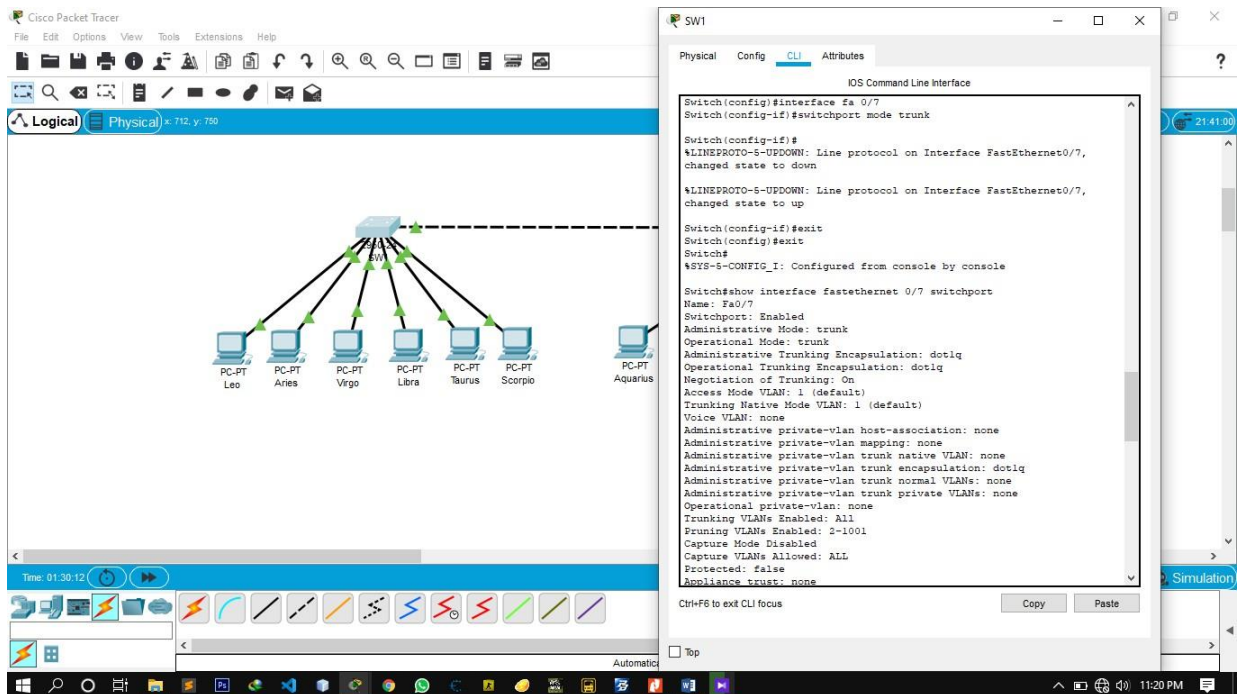


c. Konfigurasi pada switch dengan mode user atau mode privileged, buat 3 VLAN dengan nama zodiak1, zodiak2, dan zodiak3. Dengan cara klik pada switch 2 kali, kemudian pilih cli. Pada mode configuration, konfigurasi port – port switch ke dalam VLAN zodiak1, zodiak2, dan zodiak3 dengan anggota sebagai berikut:

- zodiak1 = Leo dan Pisces
- zodiak2 = Aries dan Taurus
- zodiak3 = Virgo dan Scorpio



d. Konfigurasi vlan trunking



Cisco Packet Tracer

File Edit Options View Tools Extensions Help

Logical Physical x 712, y 780

Time: 01:30:43

SW1

Physical Config CLI Attributes

IOS Command Line Interface

```
Switch#show interface trunk
Port      Mode      Encapsulation  Status      Native vlan
Fa0/7     on        802.1q         trunking    1

Port      Vlans allowed on trunk
Fa0/7     1-1005

Port      Vlans allowed and active in management domain
Fa0/7     1,10,20,30

Port      Vlans in spanning tree forwarding state and not pruned
Fa0/7     1,10,20,30

Switch#show vlan

VLAN Name                Status      Ports
-----
1    default                active      Fa0/8, Fa0/9, Fa0/10,
Fa0/11
Fa0/14, Fa0/15
Fa0/16, Fa0/17,
Fa0/18, Fa0/19
Fa0/20, Fa0/21,
Fa0/22, Fa0/23
10   zodiak1                 active      Fa0/1, 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
Transl Trans2
-----
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
1005 trnet   101005   1500   -     -     -     ibm   0

VLAN Type  SAID      MTU    Parent RingNo BridgeNo Stp    BrdgMode
Transl Trans2
-----
Remote SPAN VLANs
-----
Primary Secondary Type      Ports
-----
Switch#
```

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Cisco Packet Tracer

File Edit Options View Tools Extensions Help

Logical Physical x 712, y 780

Time: 01:31:34

SW1

Physical Config CLI Attributes

IOS Command Line Interface

```
1002 token-ring-default    active
1003 token-ring-default    active
1004 fddinet-default        active
1005 trnet-default          active

VLAN Type  SAID      MTU    Parent RingNo BridgeNo Stp    BrdgMode
Transl Trans2
-----
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
1005 trnet   101005   1500   -     -     -     ibm   0

VLAN Type  SAID      MTU    Parent RingNo BridgeNo Stp    BrdgMode
Transl Trans2
-----
Remote SPAN VLANs
-----
Primary Secondary Type      Ports
-----
Switch#
```

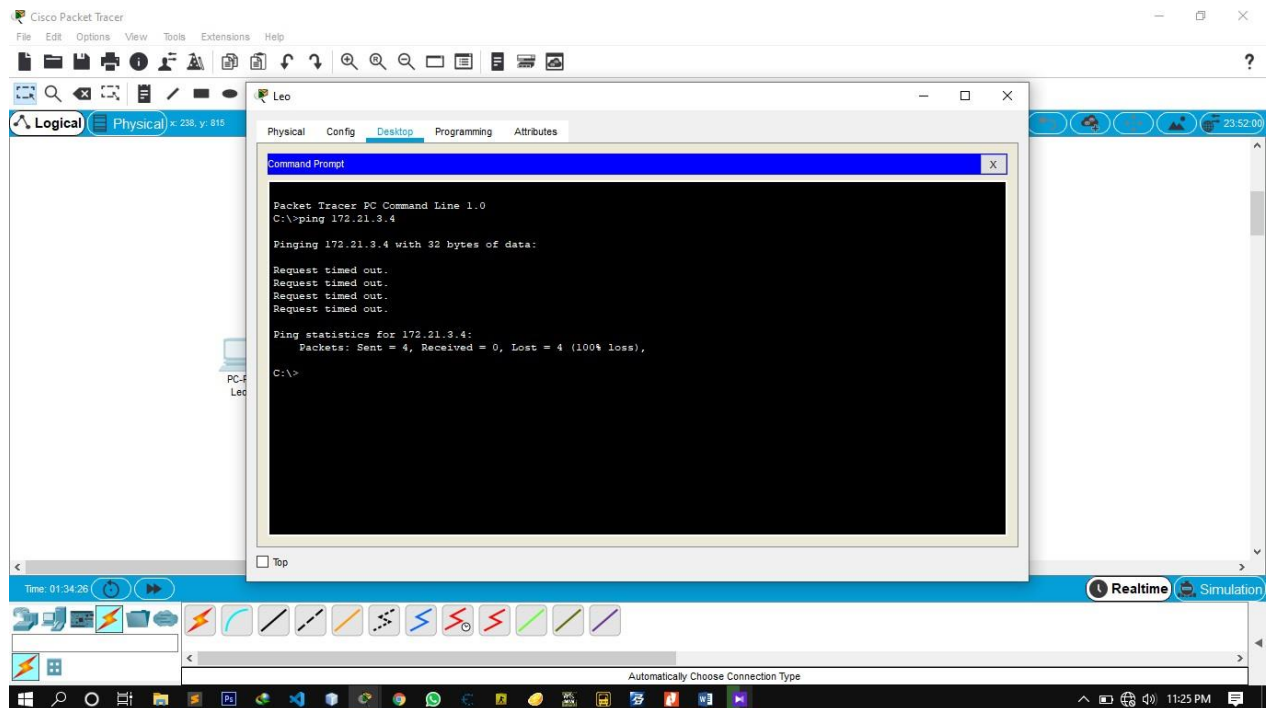
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Tugas 7A

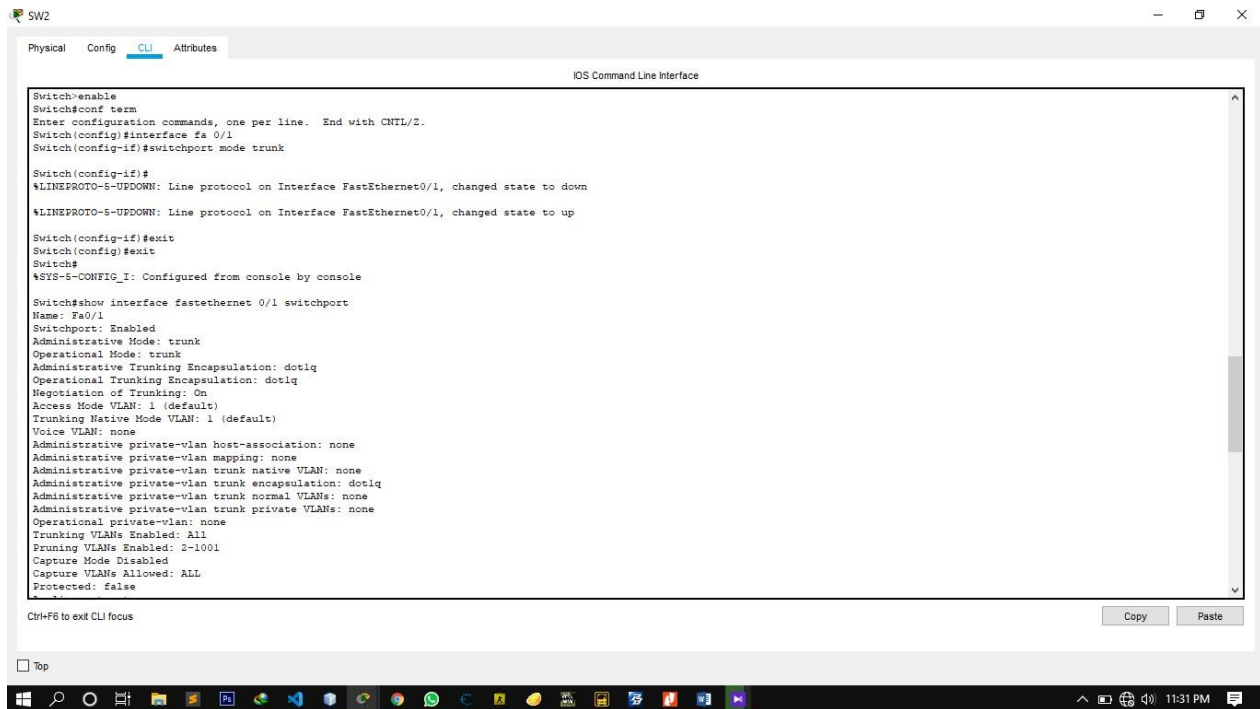
e. Lakukan ping ke PC Leo ke PC Pisces



Tugas 8A

Hasil ping dari PC Leo ke PC Pisces “Request timed out” karena PC Leo dan PC Pisces tidak berada dalam satu VLAN dan memiliki network access yang berbeda.

f. Konfigurasi VLAN trunking pada switch 2



SW2

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Switch>enable
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

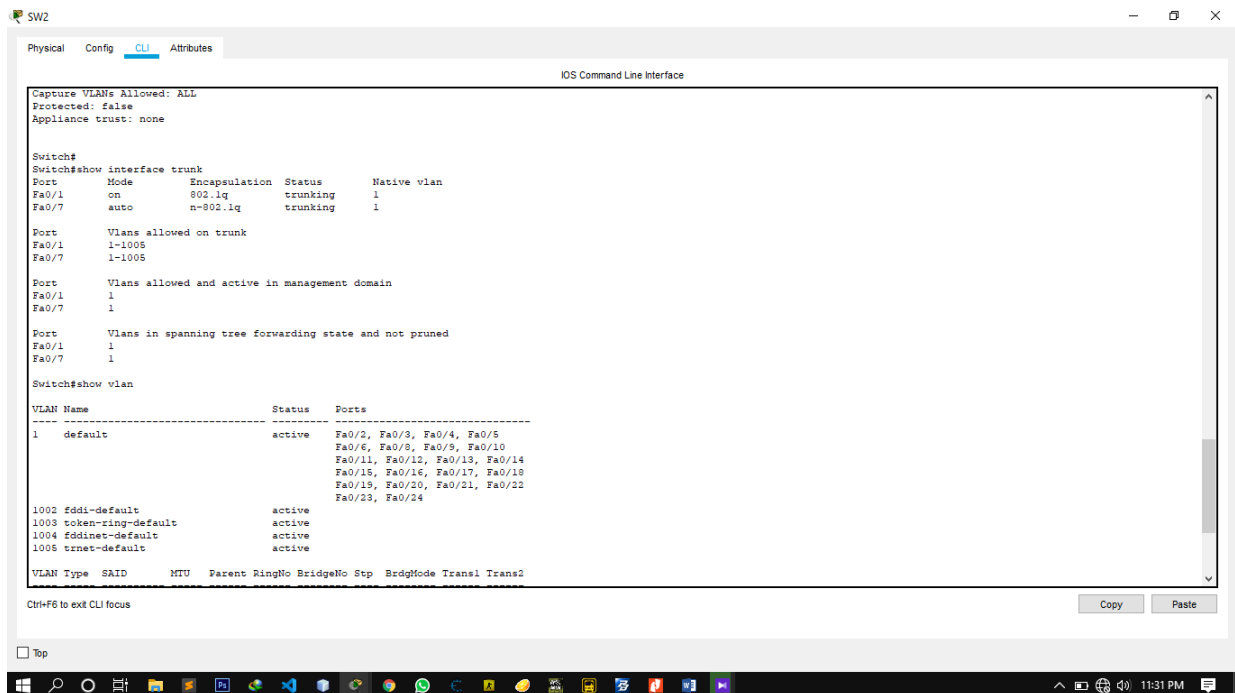
Switch(config-if)#exit
Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#show interface fastethernet 0/1 switchport
Name: Fa0/1
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
```

Ctrl+F6 to exit CLI focus

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SW2

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Capture VLANs Allowed: ALL
Protected: false
Appliance trust: none

Switch#
Switch#show interface trunk
Port      Mode      Encapsulation  Status      Native vlan
Fa0/1     on        802.1q         trunking    1
Fa0/7     auto      n-802.1q       trunking    1

Port      Vlans allowed on trunk
Fa0/1     1-1005
Fa0/7     1-1005

Port      Vlans allowed and active in management domain
Fa0/1     1
Fa0/7     1

Port      Vlans in spanning tree forwarding state and not pruned
Fa0/1     1
Fa0/7     1

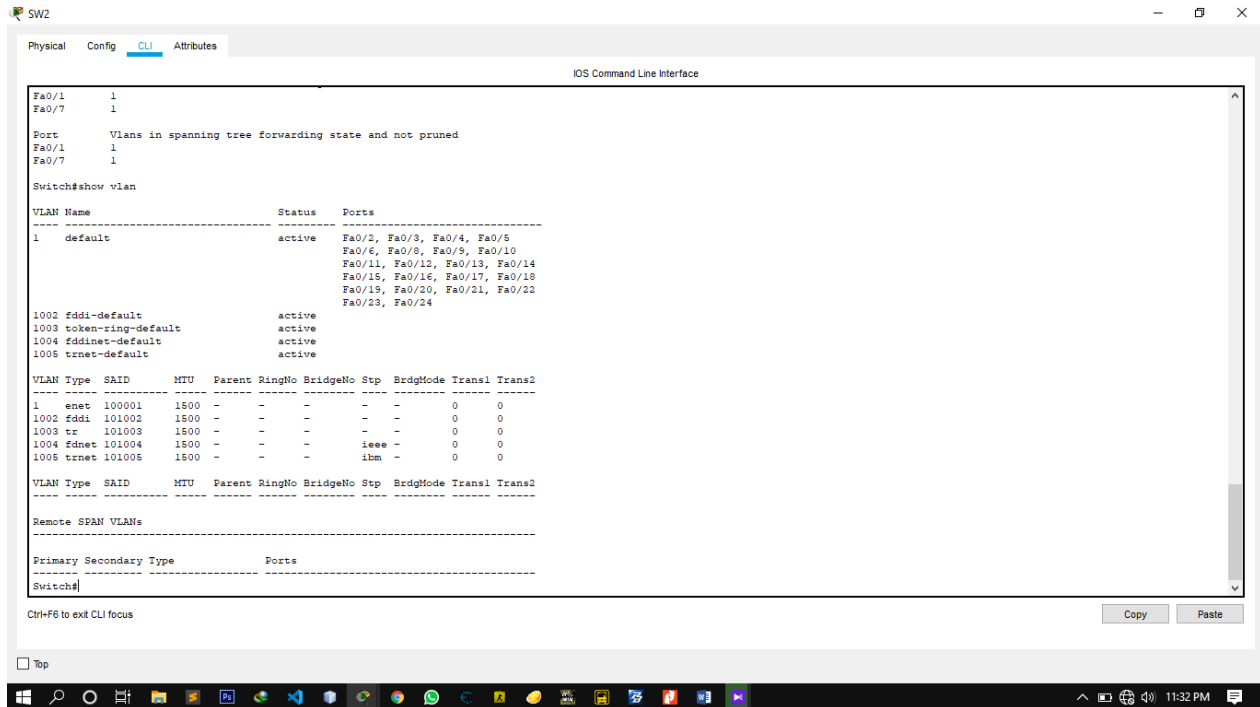
Switch#show vlan
VLAN Name                Status      Ports
-----
1    default                active      Fa0/2, Fa0/3, Fa0/4, Fa0/5
                                           Fa0/6, Fa0/8, Fa0/9, Fa0/10
                                           Fa0/11, Fa0/12, Fa0/13, Fa0/14
                                           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    BrgdMode Trans1 Trans2
```

Ctrl+F6 to exit CLI focus

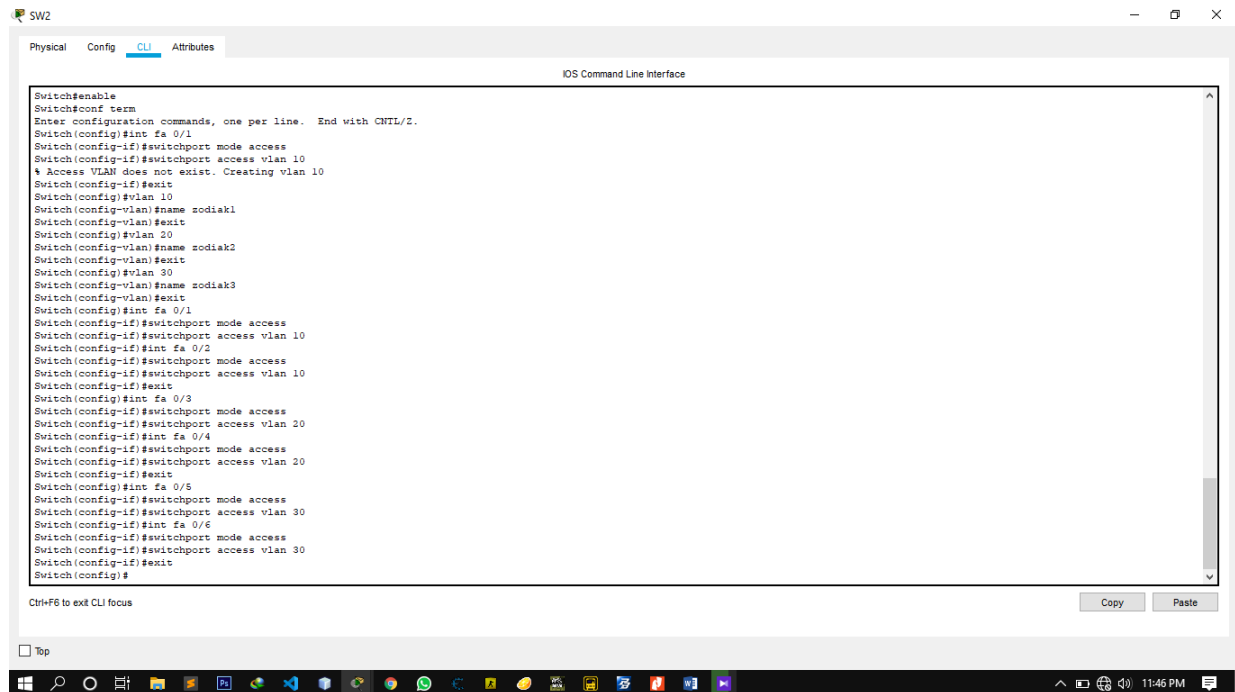
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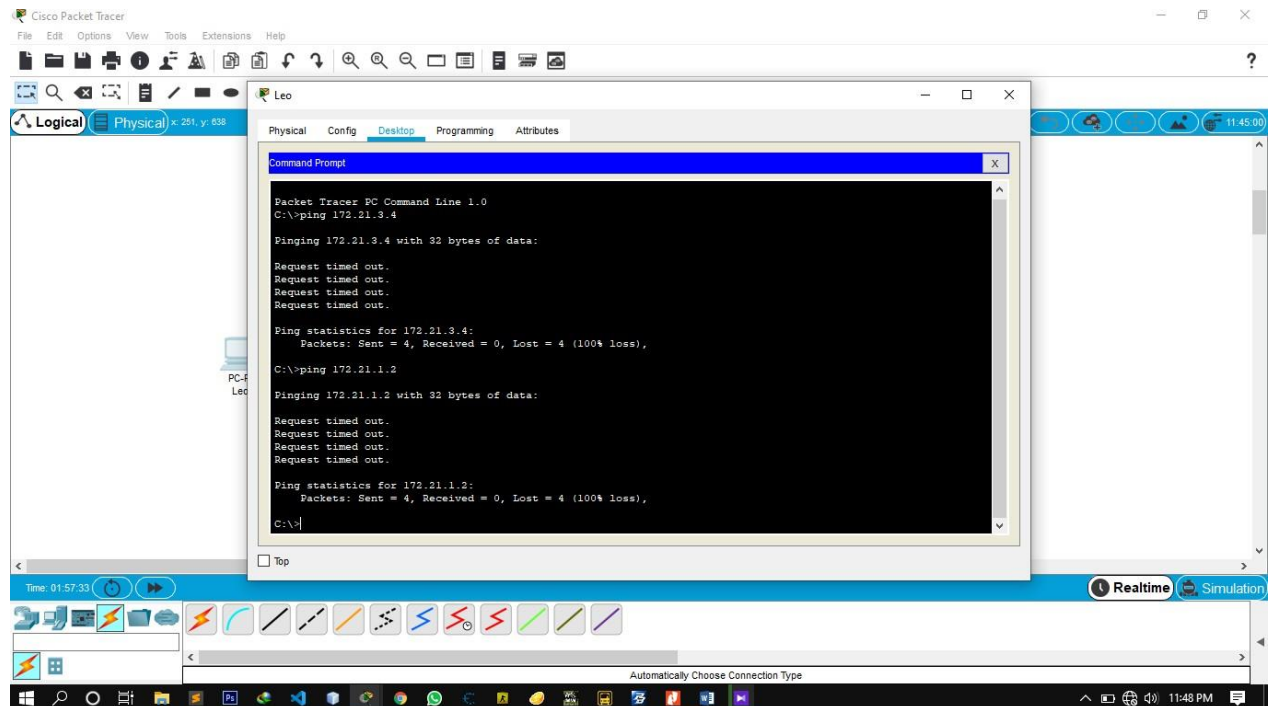
Tugas 10A Pada langkah ini port-port fastethernet belum terkonfigurasi ke dalam VLAN, bahkan VLAN nya belum dibuat.

g. Konfigurasi port- port switch kedalam vlan



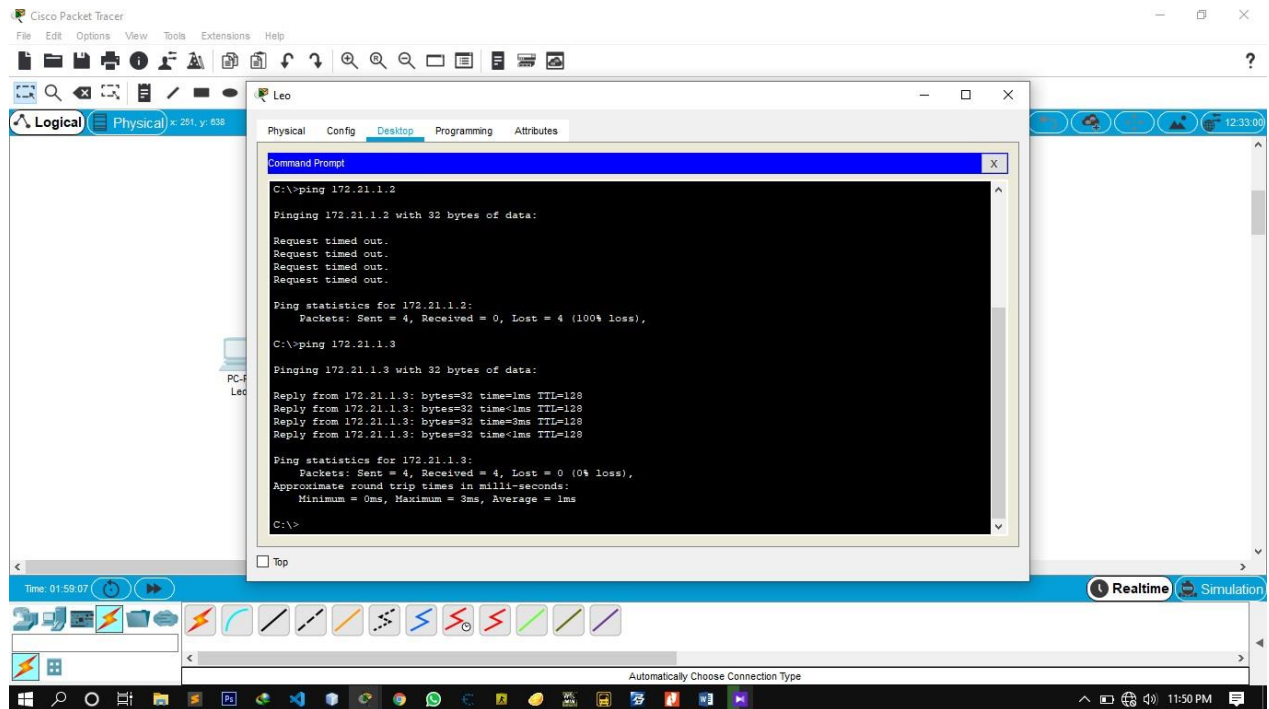
h. Lakukan ping :

- Dari PC Leo ke PC Aries



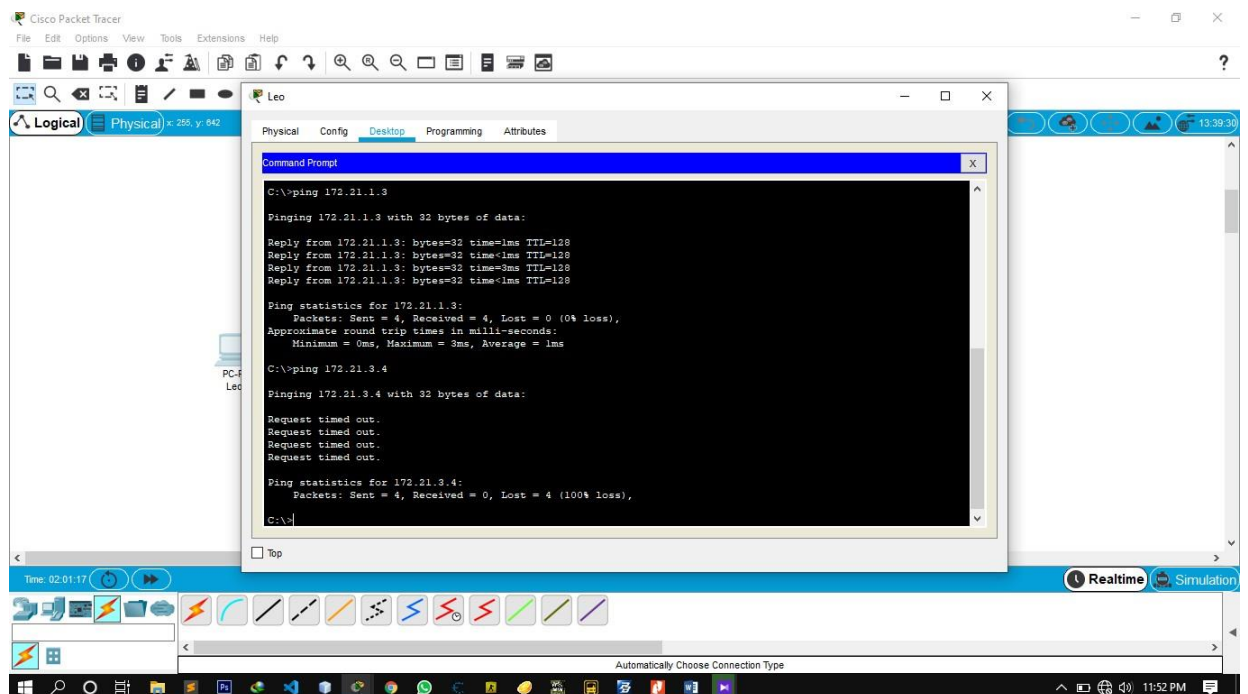
Hasil ping dari PC leo ke PC aries “Request timed out” karena PC leo dan PC aries tidak berada dalam satu VLAN meskipun memiliki network access yang sama.

- Dari PC Leo ke PC Aquarius



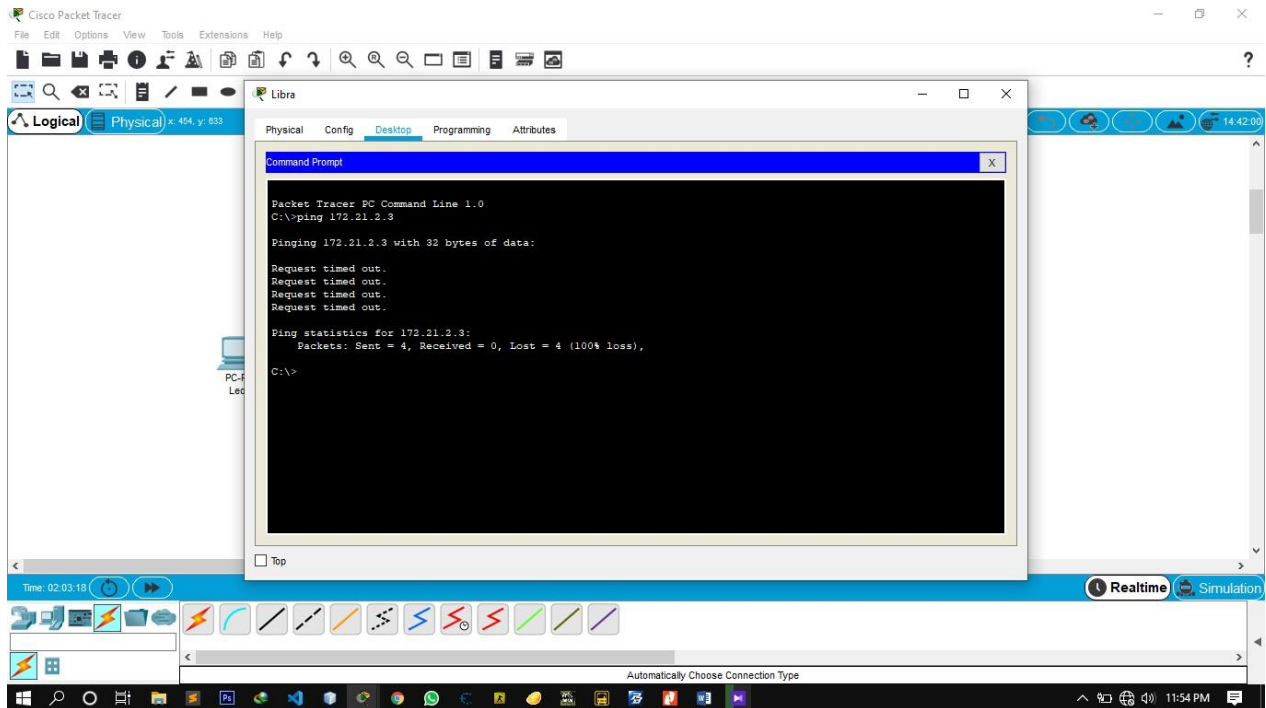
Hasil ping dari PC leo ke PC aquarius “Reply” karena PC leo dan PC aquarius berada dalam satu VLAN dan memiliki network access yang sama.

- Dari PC Leo ke PC Pisces



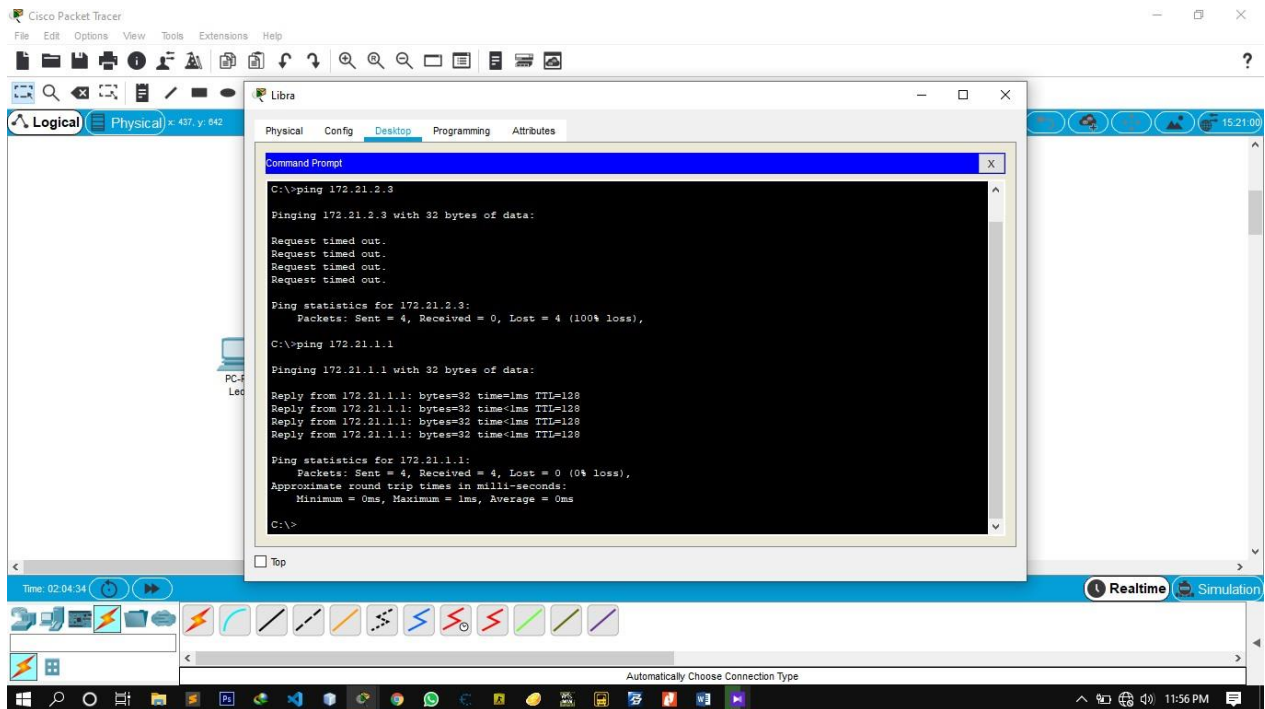
Hasil ping dari PC leo ke PC pisces “Request timed out” karena PC leo dan PC pisces tidak berada dalam satu VLAN dan memiliki network access yang berbeda.

- Dari PC Libra ke PC Cancer



Hasil ping dari PC libra ke PC cancer “Request timed out” karena PC libra dan PC cancer tidak berada dalam satu VLAN meskipun memiliki network access yang sama.

- Dari PC Libra ke PC Leo



Hasil ping dari PC libra ke PC leo “Reply” karena PC libra dan PC leo berada dalam satu VLAN dan memiliki network access yang sama.

Tugas 12A Pada langkah 8 port yang sudah terkonfigurasi ke dalam vlan yaitu port 0/1 sampai port 0/6, sedangkan port 0/7 untuk trunking antar switch.