Ahmad Faizal Al Amin

L200170183

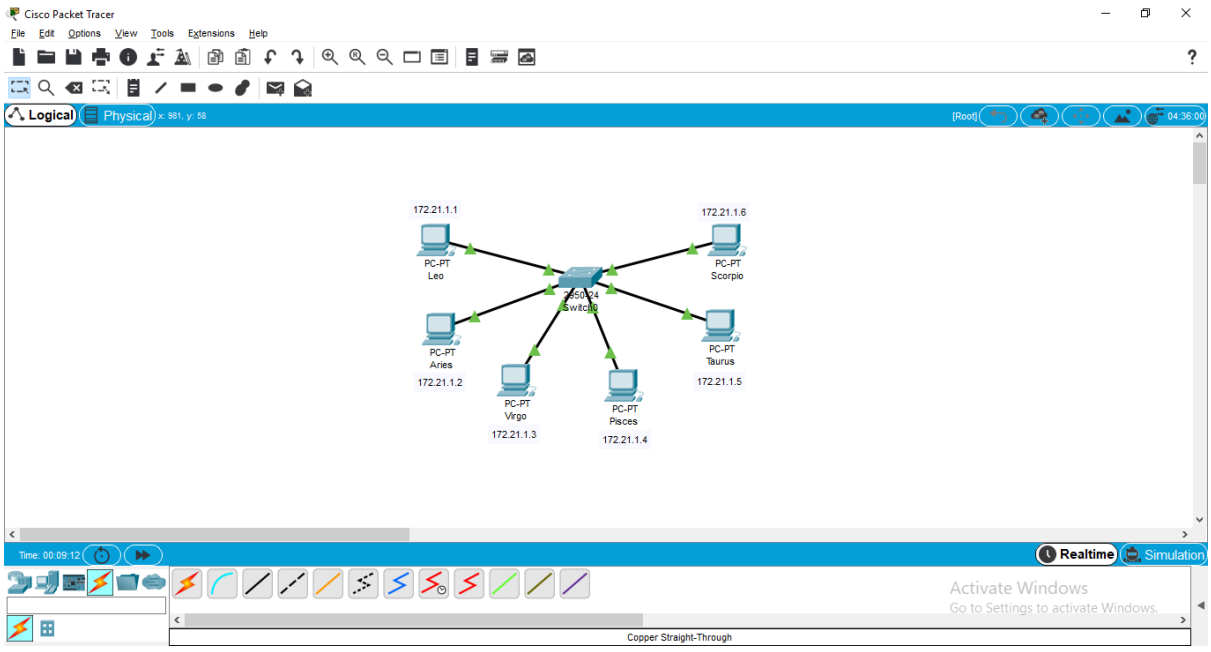
D

Kegiatan Modul_4

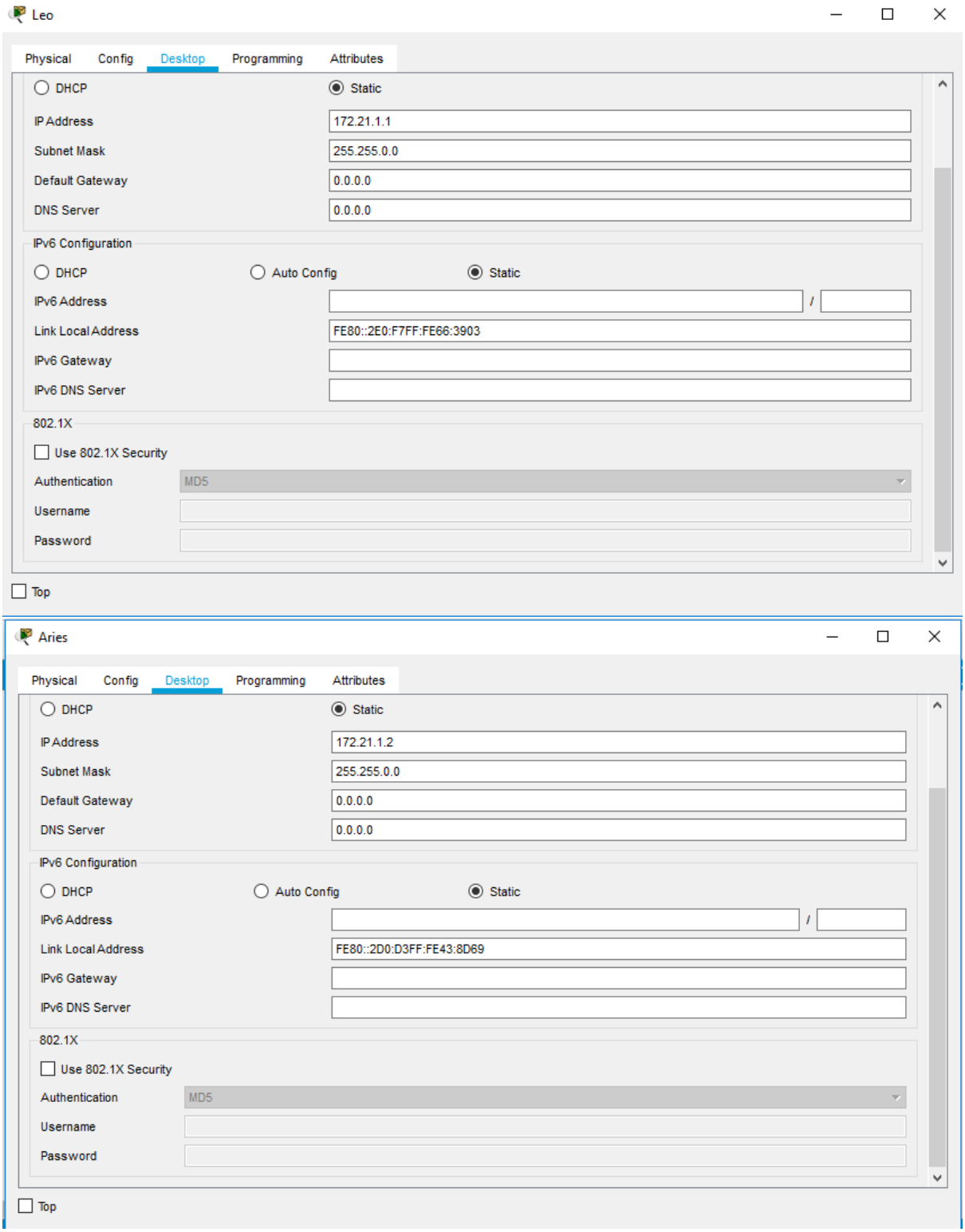
KEGIATAN PRAKTIKUM JARINGAN KOMPUTER

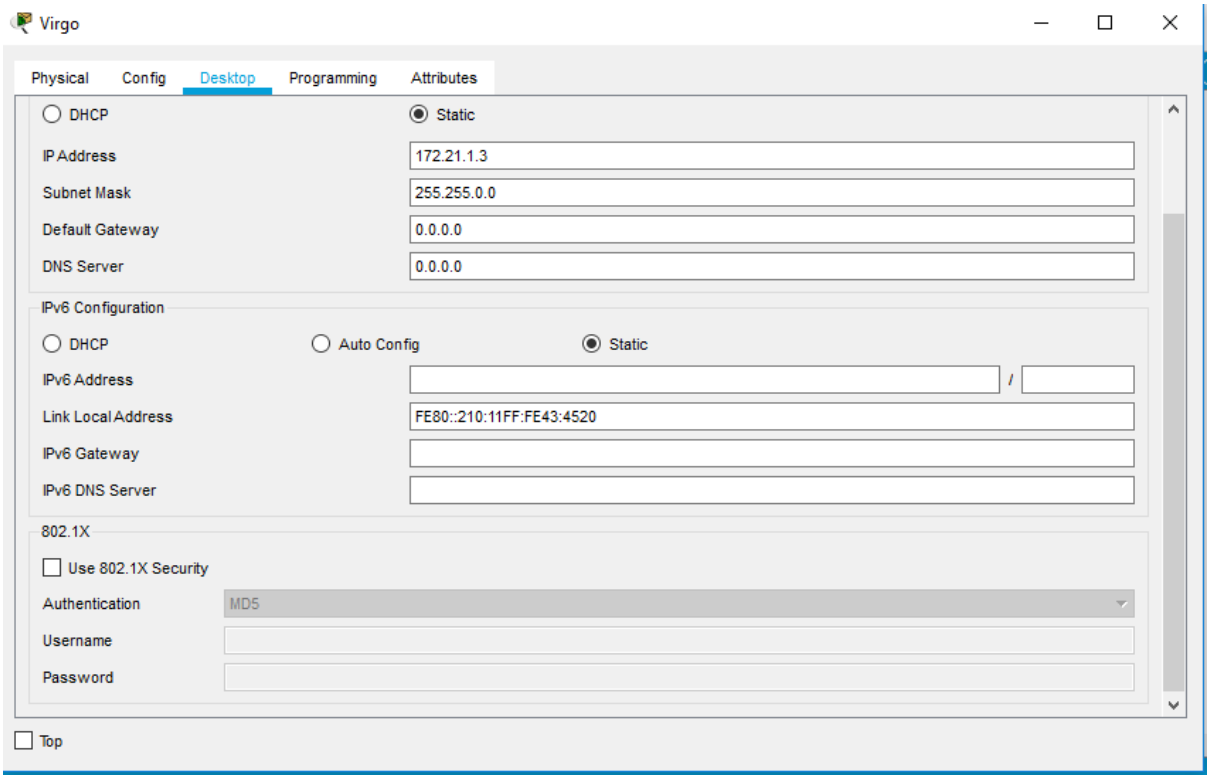
A. Kegiatan 1

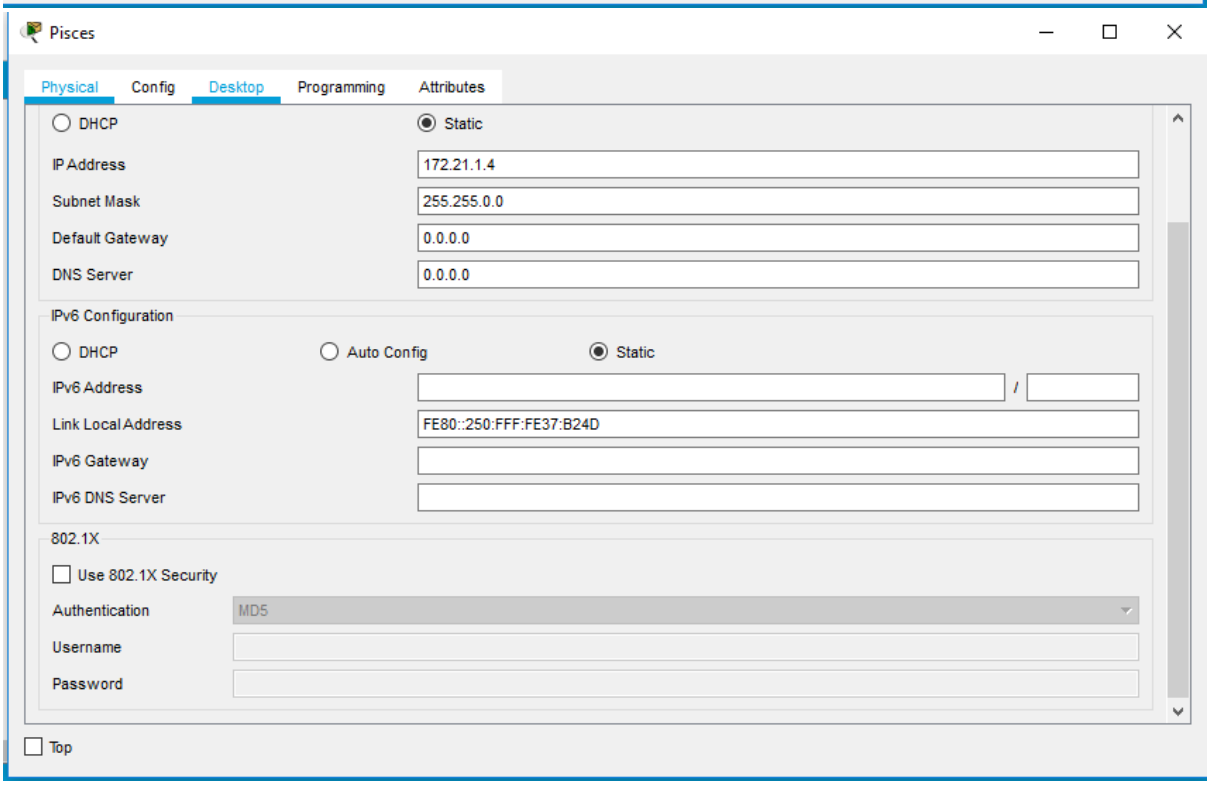
1. Desaign Topologi (1 switch, 6 PC)

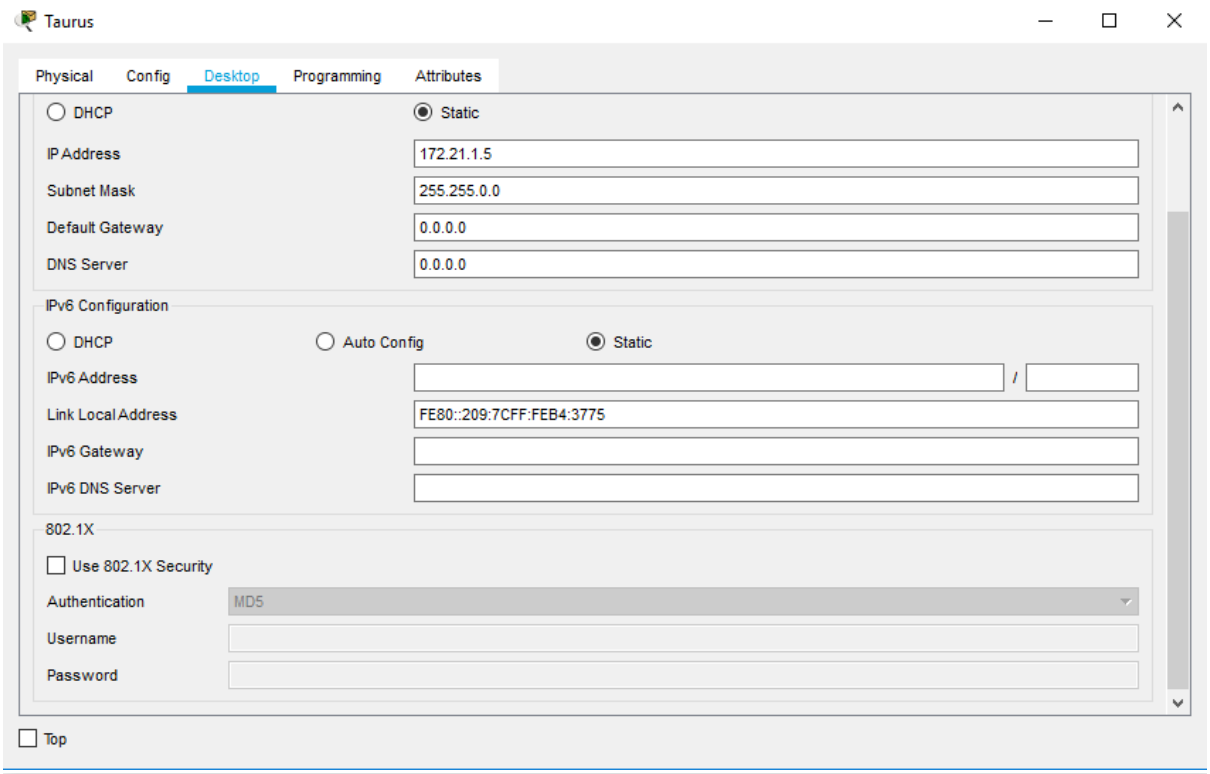


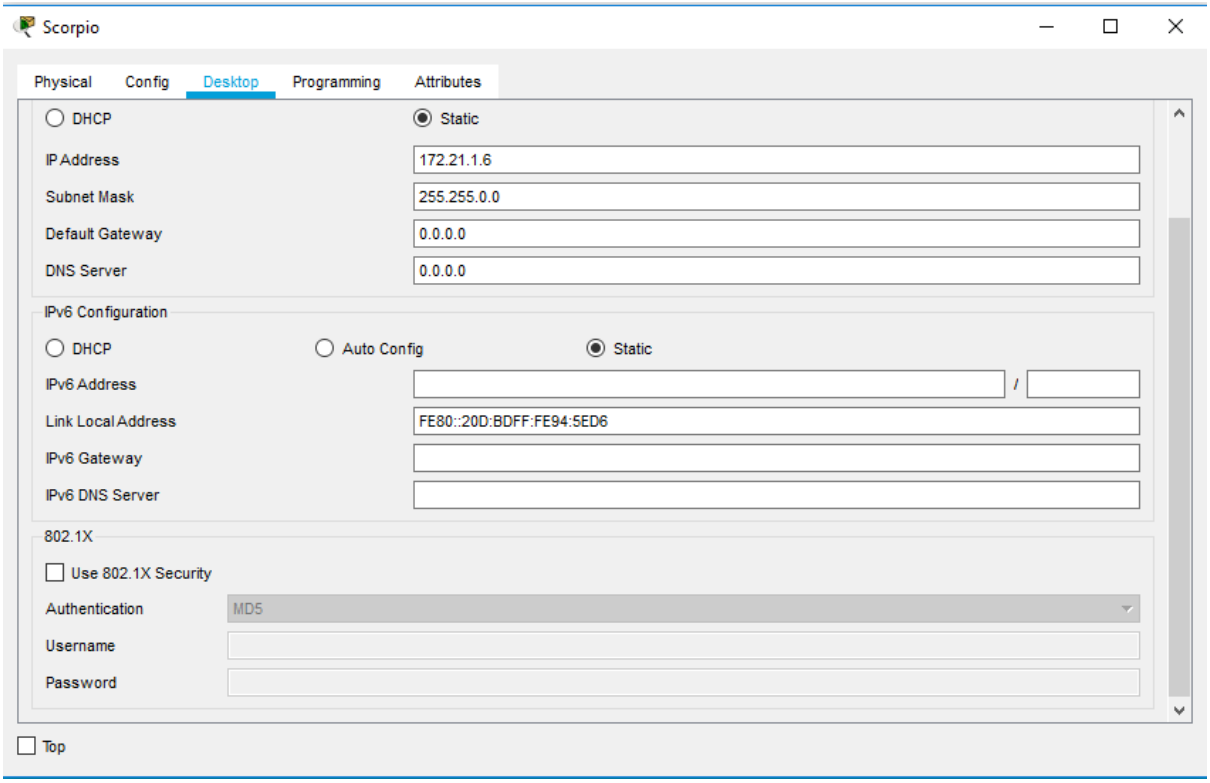
2. Address IP tiap PC




Virgo
Physical
Config
Desktop
Programming
Attributes
DHCP
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
DHCP
Auto Config
Static
IPv6 Address
Link Local Address
FE80::210:11FF:FE43:4520
IPv6 Gateway
IPv6 DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password
Top


Pisces
Physical
Config
Desktop
Programming
Attributes
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
Auto Config
Static
IPv6 Address
Link Local Address
FE80::250:FFF:FE37:B24D
IPv6 Gateway
IPv6 DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password
Top


Taurus
Physical
Config
Desktop
Programming
Attributes
DHCP
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
DHCP
Auto Config
Static
IPv6 Address
Link Local Address
FE80::209:7CFF:FEB4:3775
IPv6 Gateway
IPv6 DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password
Top


Scorpio
Physical
Config
Desktop
Programming
Attributes
DHCP
Static
IP Address
172.21.1.6
Subnet Mask
255.255.0.0
Default Gateway
0.0.0.0
DNS Server
0.0.0.0
IPv6 Configuration
DHCP
Auto Config
Static
IPv6 Address
Link Local Address
FE80::20D:BDFF:FE94:5ED6
IPv6 Gateway
IPv6 DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password
Top

3. Langkah Pengoperasian

```
APPLY completed.
Exiting....
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)#ex
Switch(config)#int fa 0/1
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#int fa 0/2
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#mode access
                  ^
% Invalid input detected at '^' marker.

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 0/4
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#int fa 0/5
Switch(config-if)#mode access
                  ^
% Invalid input detected at '^' marker.
                      ^
% Invalid input detected at '^' marker.

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)#en
% Ambiguous command: "en"
Switch(config)#end
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#
```

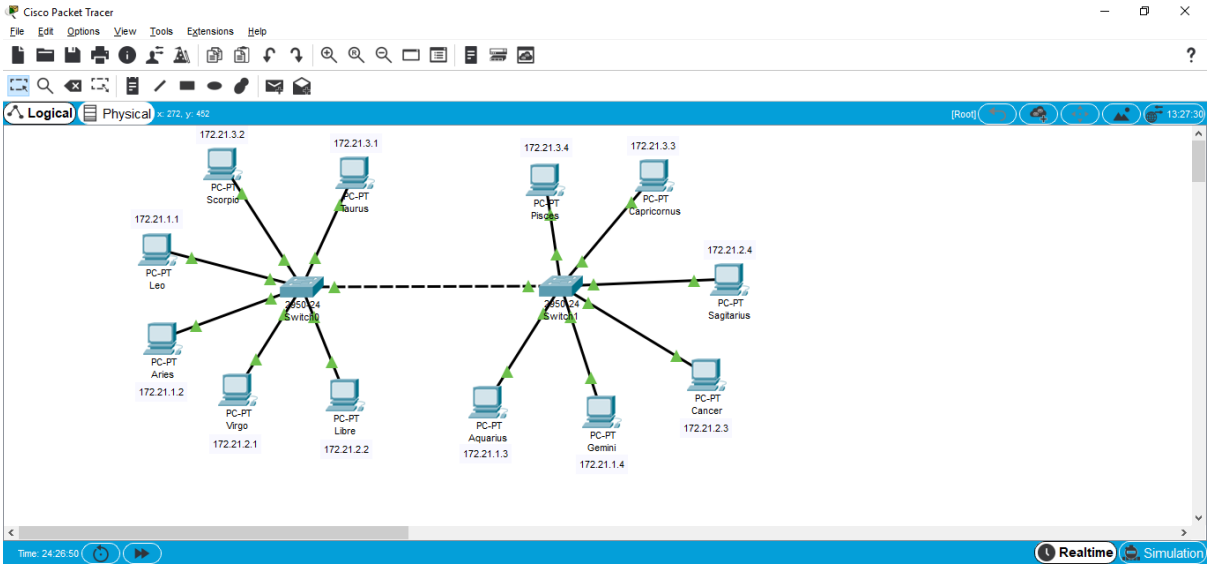
4. Langkah Pengoperasian untuk melihan konfigurasi

```
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 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 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 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#
```

B. Kegiatan 2

1. Desaign Topologi (2 switch 10 PC)



2. Konfigurasi alamat IP

No	Nama PC	IP Address
1	Leo	172.21.1.1/24
2	Aries	172.21.1.2/24
3	Virgo	172.21.2.1/24
4	Libra	172.21.2.2/24
5	Taurus	172.21.3.1/24
6	Scorpio	172.21.3.2/24
7	Aquarius	172.21.1.3/24
8	Gemini	172.21.1.4/24
9	Cancer	172.21.2.3/24
10	Sagitarius	172.21.2.4/24
11	Capricornus	172.21.3.3/24
12	Pisces	172.21.3.4/24

3. Konfigurasi pada segmen switch 1 dengan mode *user* atau mode *privileged*

```
Switch(vlan)#exit
APPLY completed.
Exiting....
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)#ex
Switch(config)#vlan 20
Switch(config-vlan)#name zodiak2
Switch(config-vlan)#ex
Switch(config)#vlan 30
Switch(config-vlan)#name zodiak3
Switch(config-vlan)#ex
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 0/5
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)#int
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/1 (10), with Switch FastEthernet0/7 (
Switch(config-if)#sw access vlan 30
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
```

```
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#
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/1 (10), with Switch FastEthernet0/7 (1).
```

No	VLAN ID / Nama	Host
1	10 / Zodiak1	Leo dan Libra
2	20 / Zodiak2	Aries dan Taurus
3	30 / Zodiak3	Virgo dan Scorpio

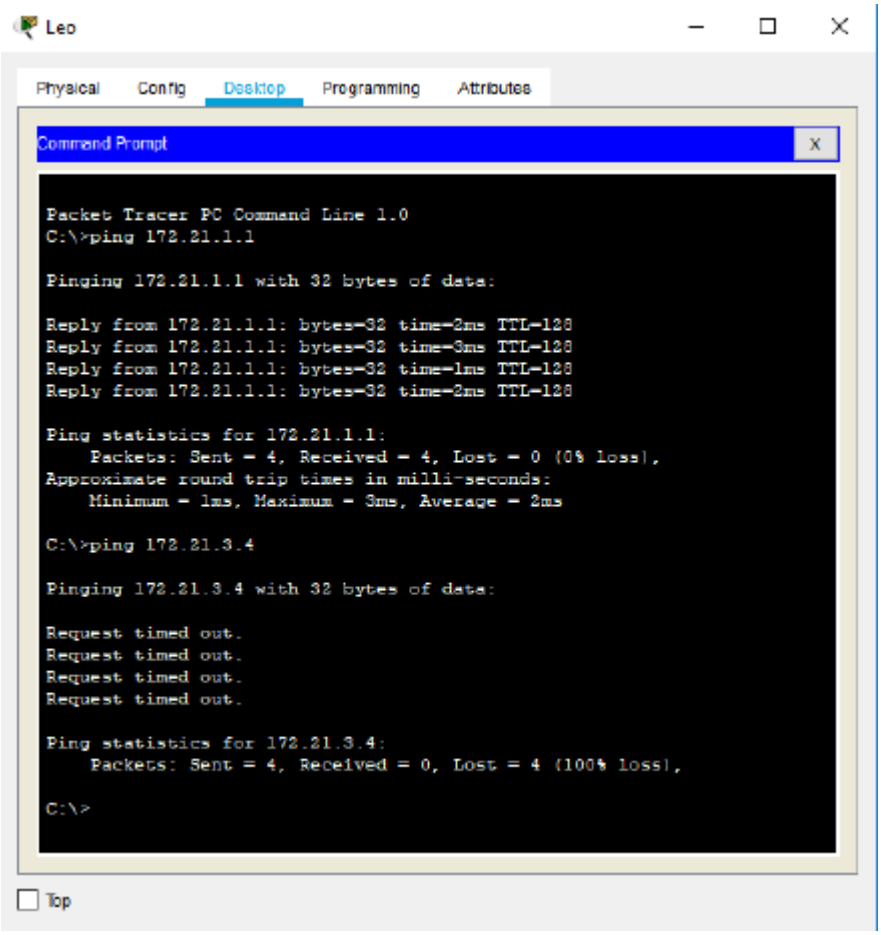
4. Langkah selanjutnya yaitu :

- Menambahkan konfigurasi Trunking pada segmen switch 1
- Menentukan port yang akan dilakukan konfigurasi Trunk pada switch
- Melakukan setting konfigurasi sesuai modul praktikum

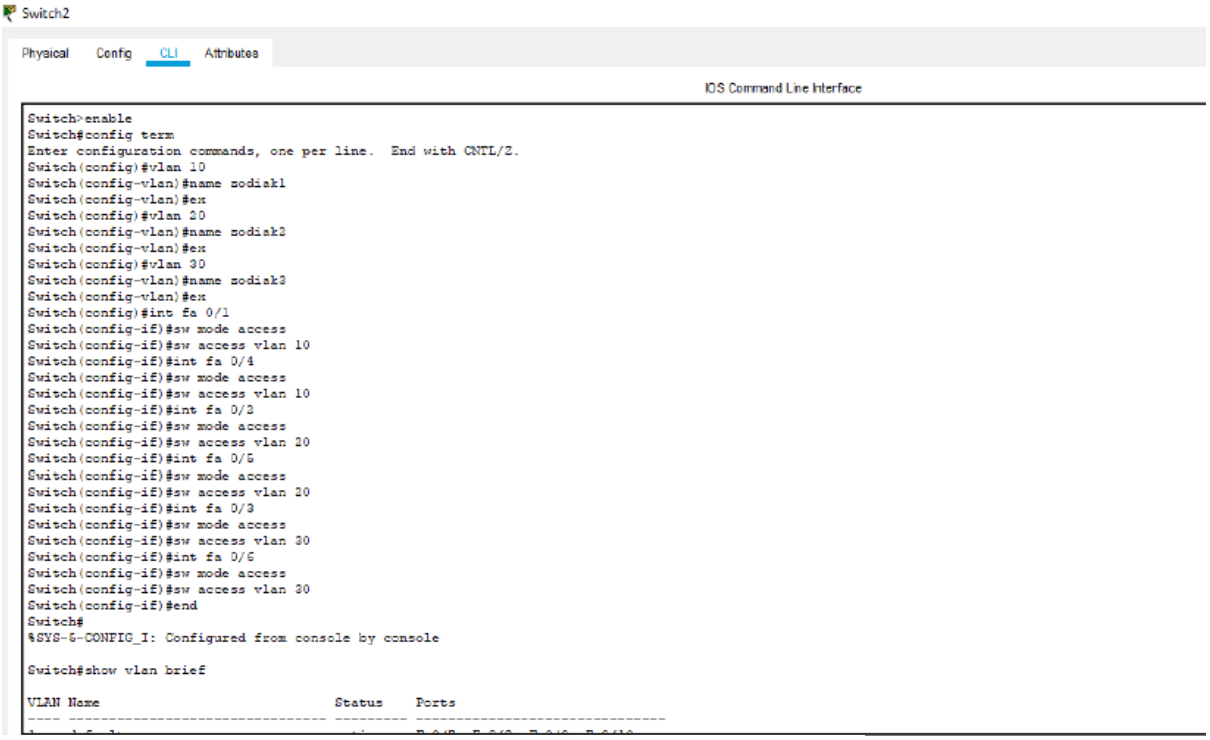
```
Switch#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#int fa 0/24
Switch(config-if)#sw mode trunk
Switch(config-if)#ex
Switch(config)#show int fa 0/1 sw
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/1 (10), with Switch FastEthernet0/7 (1).

                ^
% Invalid input detected at '^' marker.

Switch(config)#show int fa 0/1 sw
                ^
% Invalid input detected at '^' marker.

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

Switch#show int fa 0/1 sw
Name: Fa0/1
Switchport: Enabled
Administrative Mode: static access
Operational Mode: static access
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: native
Negotiation of Trunking: Off
Access Mode VLAN: 10 (zodiak1)
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


Switch#
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on FastEthernet0/1 (10), with Switch FastEthernet0/7 (1).
```

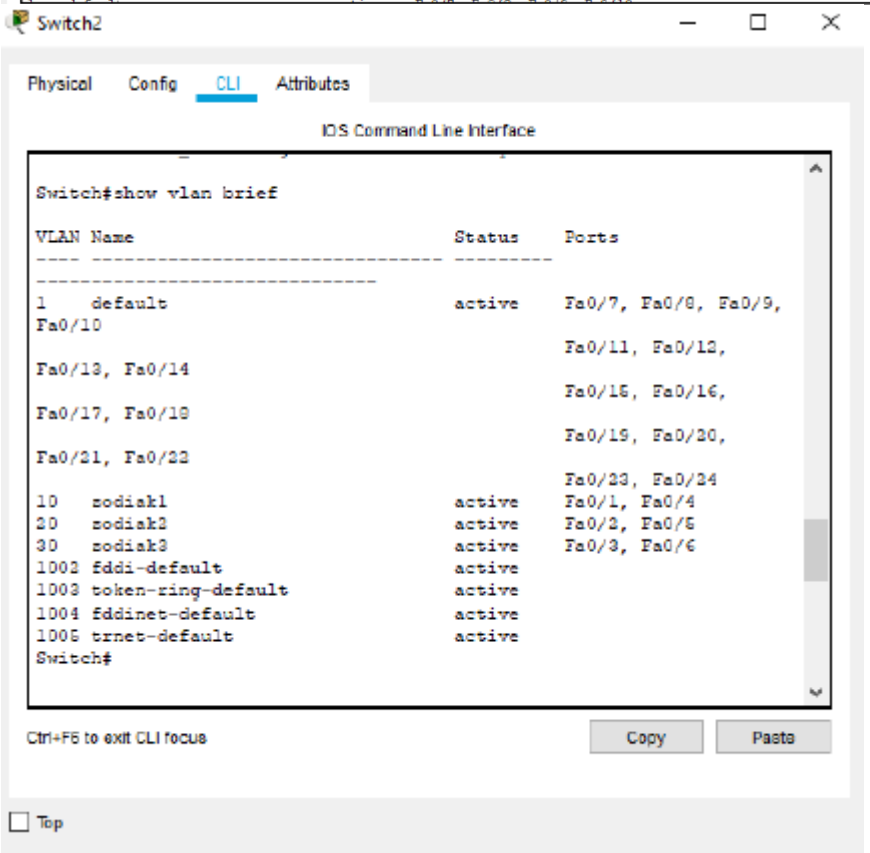
```
Switch#show vlan

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    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 Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------
1    enet  100001     1500  -      -      -        -    -        0      0
10   enet  100010     1500  -      -      -        -    -        0      0
20   enet  100020     1500  -      -      -        -    -        0      0
30   enet  100030     1500  -      -      -        -    -        0      0
1002 fddi  101002     1500  -      -      -        -    -        0      0
1003 tr    101003     1500  -      -      -        -    -        0      0
1004 fdnet 101004     1500  -      -      -        ieee -        0      0
1005 trnet 101005     1500  -      -      -        ibm  -        0      0

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------

Remote SPAN VLANs
------------------------------------------------------------------------------

Primary Secondary Type              Ports
------- --------- ----------------- ------------------------------------------

Switch#
```

5. Ping PC Leo ke PC pisces



6. Konfigurasi pada segmen switch 2 dengan mode *user*atau mode *privileged*





No	VLAN ID / Nama	Host
1	10 / Zodiak1	Aquarius dan Gemini
2	20 / Zodiak2	Cancer dan Sagitarius
3	30 / Zodiak3	Capricornus dan Pisces

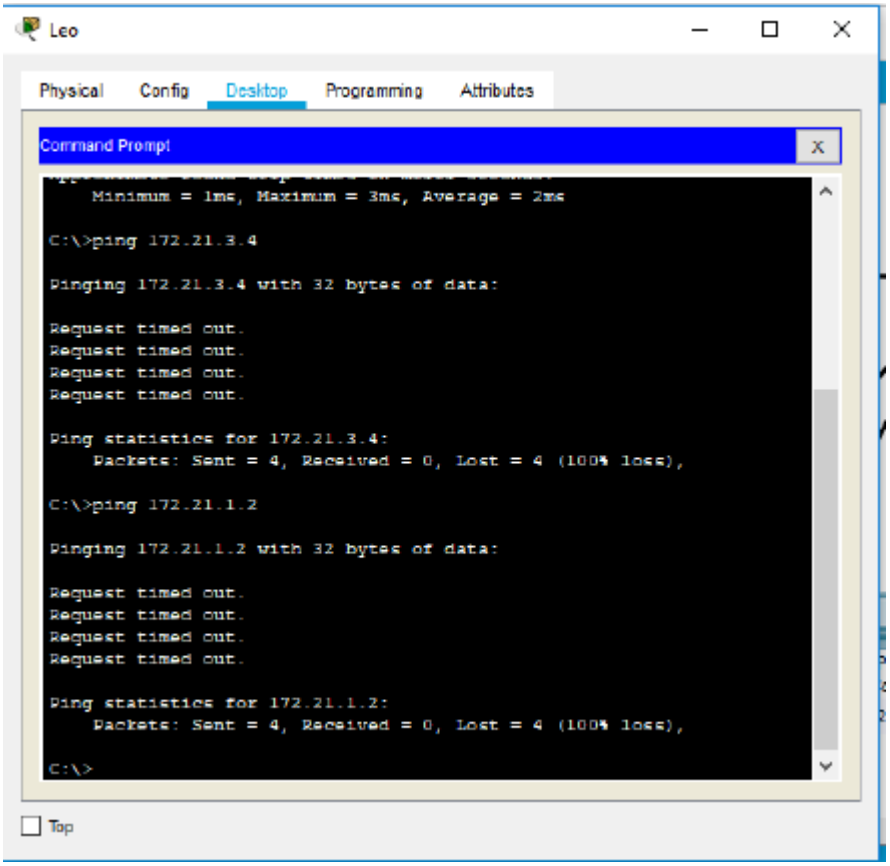
7. Langkah selanjutnya yaitu :

- Menambahkan konfigurasi Trunking pada segmen switch 1
- Menentukan port yang akan dilakukan konfigurasi Trunk pada switch
- Melakukan setting konfigurasi sesuai modul praktikum

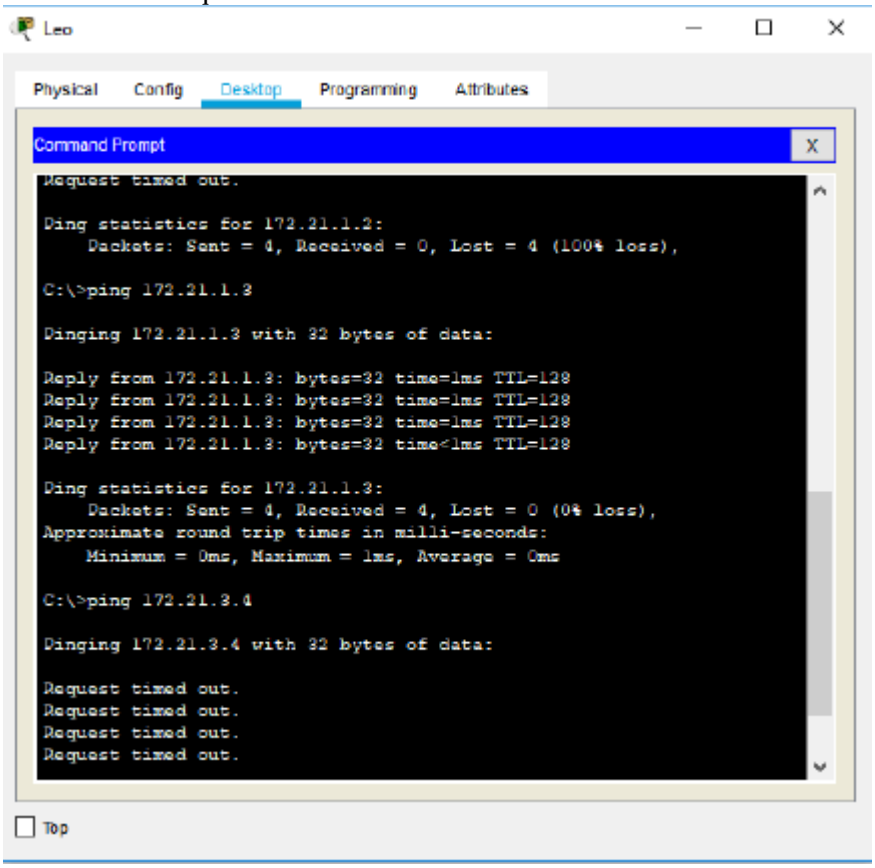
```
Protected: false
Appliance trust: none


Switch#sown int trunk
         ^
% Invalid input detected at '^' marker.

Switch#show int trunk
Port        Mode         Encapsulation  Status        Native vlan
Fa0/24      on           802.1q         trunking      1

Port        Vlans allowed on trunk
Fa0/24      1-1005

Port        Vlans allowed and active in management domain
Fa0/24      1,10,20,30

Port        Vlans in spanning tree forwarding state and not pruned
Fa0/24      1,10,20,30

Switch#show int fa 0/24 trunk
                    ^
% Invalid input detected at '^' marker.

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
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
```

```
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
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 Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------
1    enet  100001     1500  -      -      -        -    -        0      0
10   enet  100010     1500  -      -      -        -    -        0      0
20   enet  100020     1500  -      -      -        -    -        0      0
30   enet  100030     1500  -      -      -        -    -        0      0
1002 fddi  101002     1500  -      -      -        -    -        0      0
1003 tr    101003     1500  -      -      -        -    -        0      0
1004 fdnet 101004     1500  -      -      -        ieee -        0      0
1005 trnet 101005     1500  -      -      -        ibm  -        0      0

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------

Remote SPAN VLANs
------------------------------------------------------------------------------

Primary Secondary Type              Ports
------- --------- ----------------- ------------------------------------------

Switch#
Switch#
```

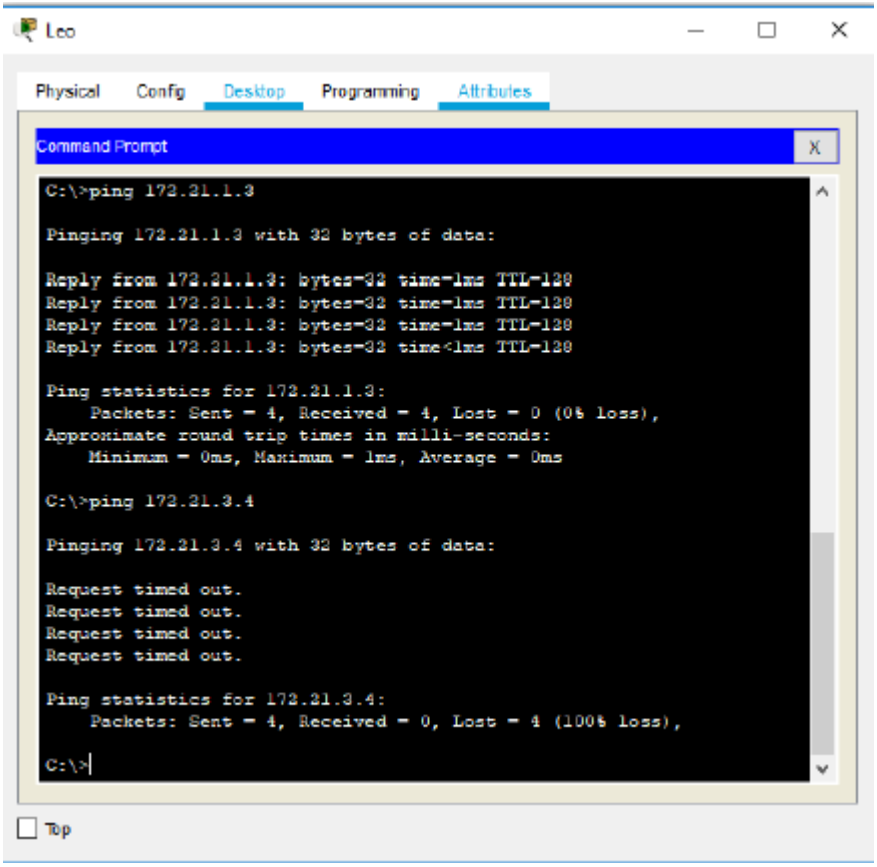
8. Langkah terakhir melakukan ping terhadap beberapa pc
   Pc Leo ke Pc Aries



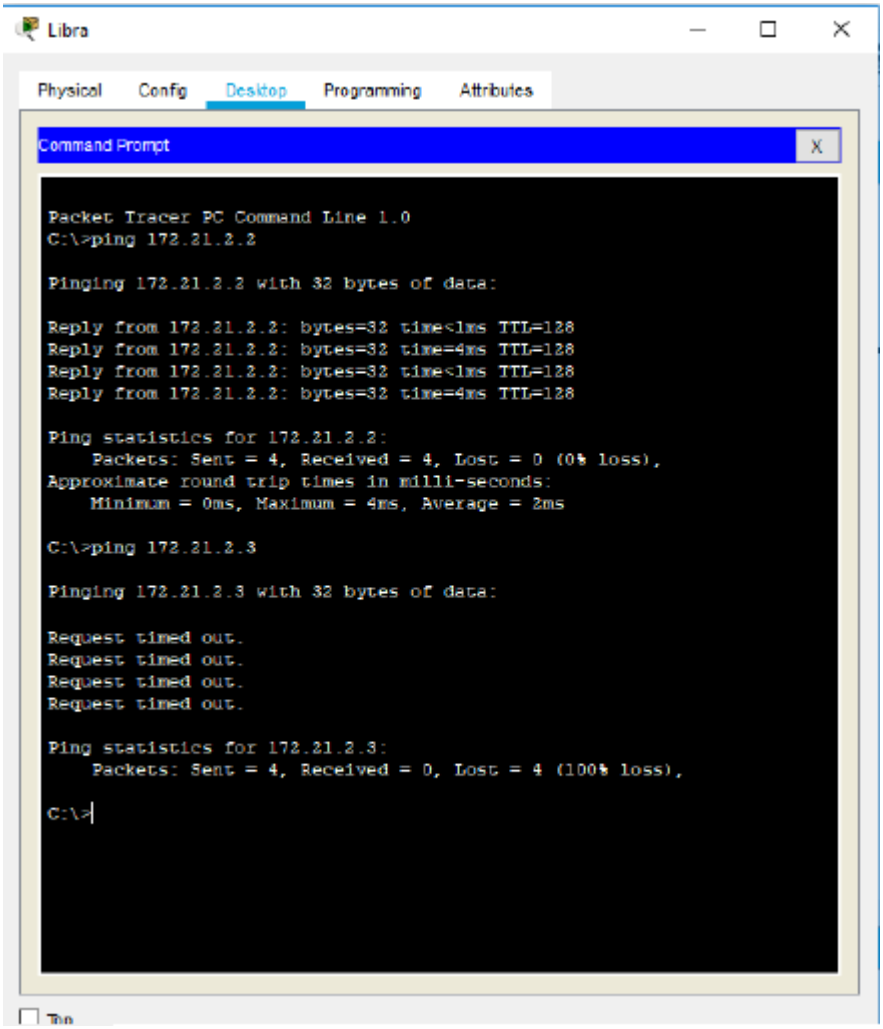
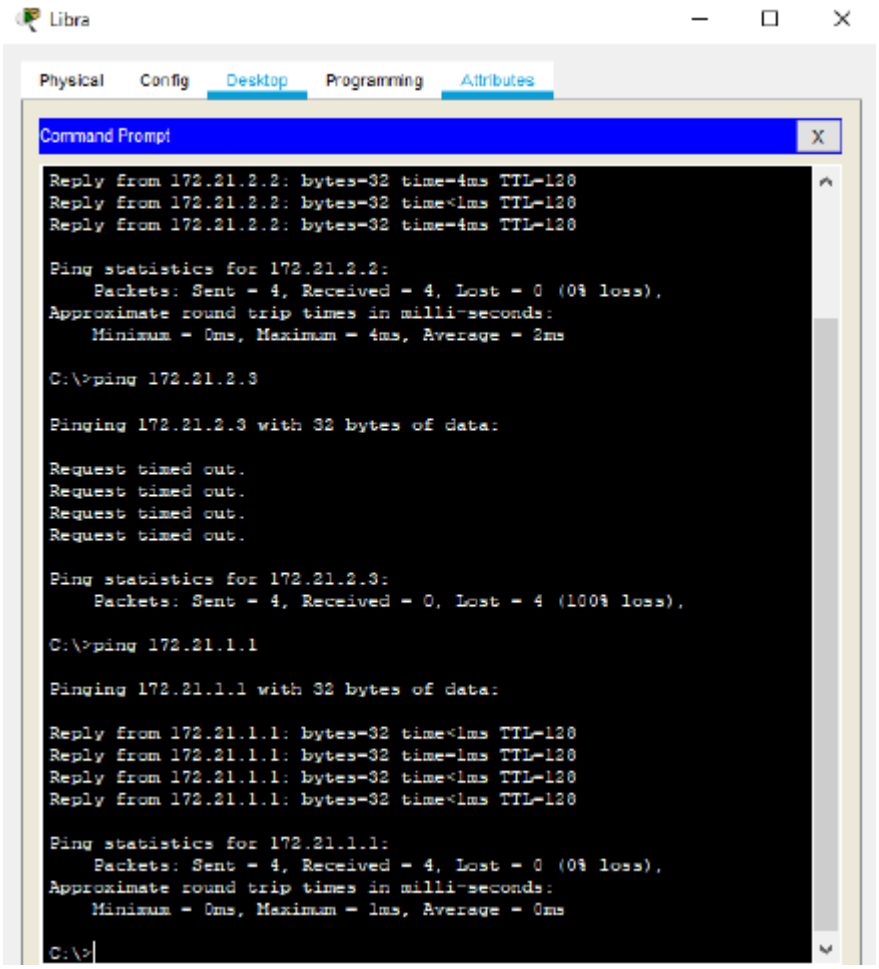
Pc Leo ke Pc Aquarius



Pc Leo ke Pc Pisces



Pc Libra ke Pc Cancer



Pc Libra ke Leo