PRAKTIKUM JARINGAN KOMPUTER

MODUL IV

VIRTUAL LAN DAN TRUNKING

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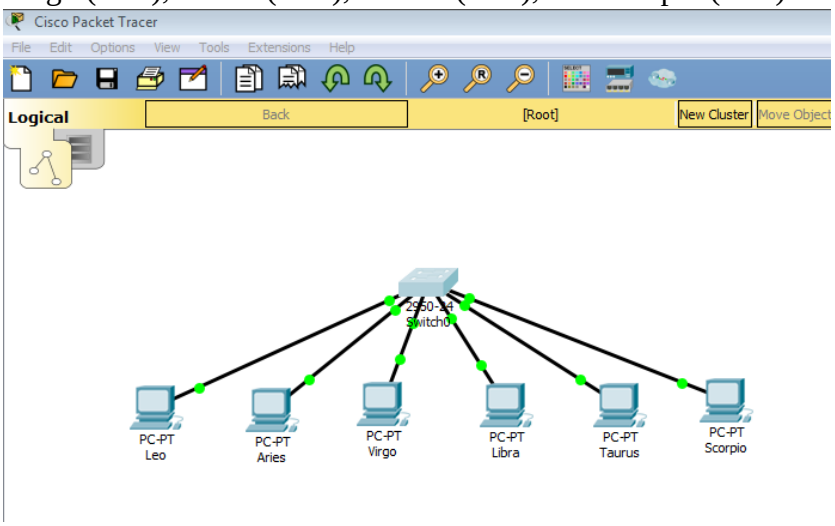
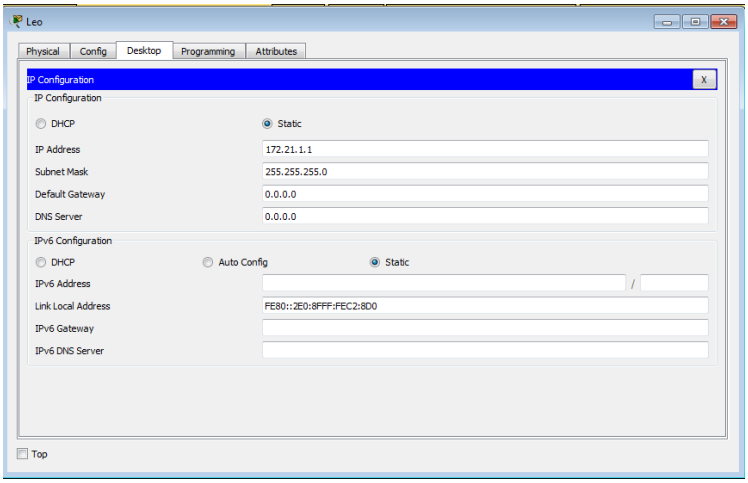
Kelas : D

Kegiatan 1. Topologi 1

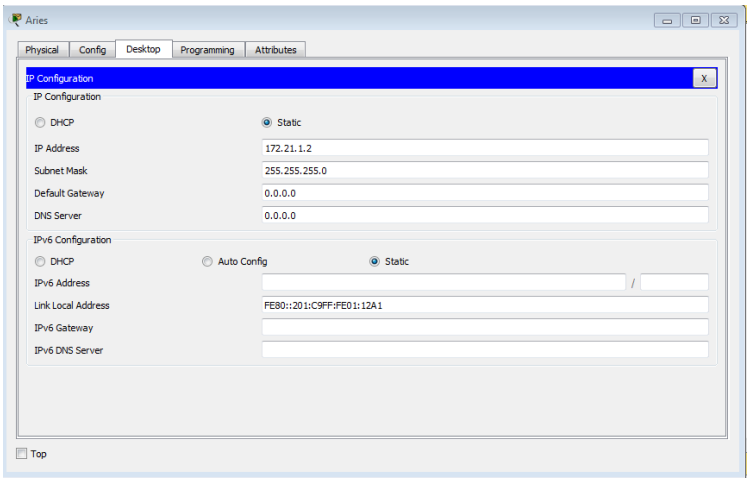
1. Menggunakan *packet tracker* buat topologi berikut ini dengan menggunakan switch dan beri nama masing-masing perangkat dengan SW1 (switch), Leo (PC0), Aries (PC1), Virgo (PC2), Pisces (PC3), Taurus (PC4), dan Scorpio (PC5)



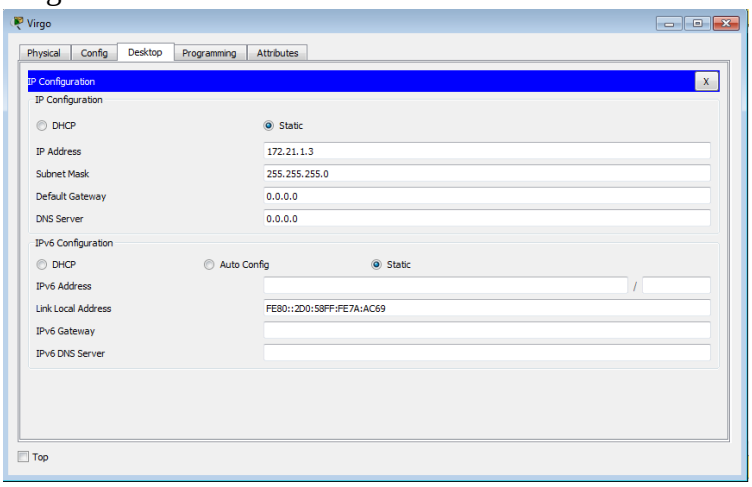
2. Konfigurasi masing-masing PC dengan nama dan alamat IP berikut ini:
   - Leo = 172.21.1.1/24



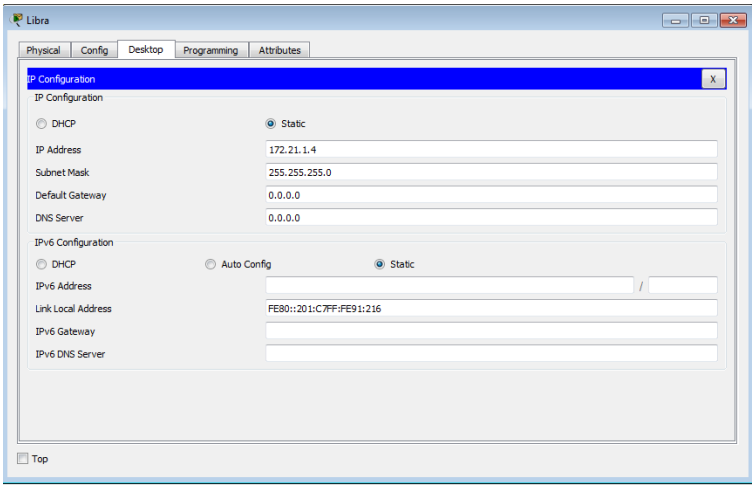
- Aries = 172.21.1.2/24



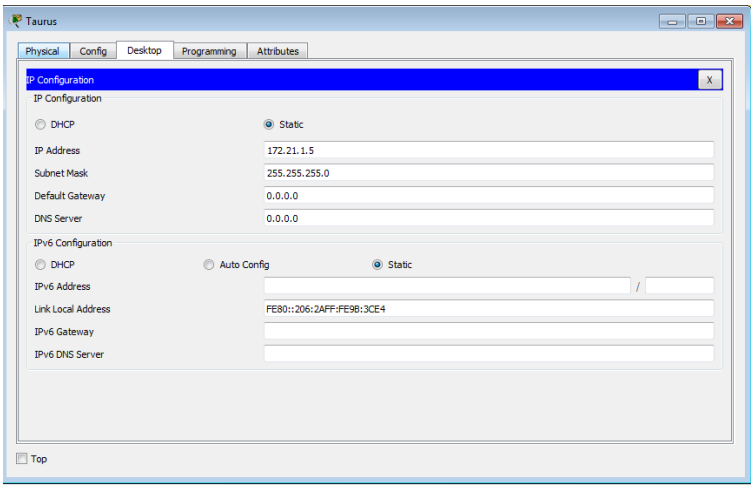
- Virgo = 172.21.1.3/24



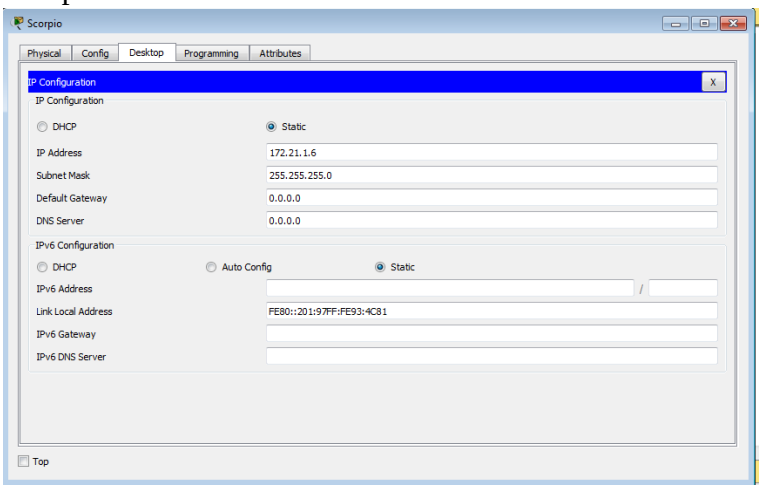
- Libra = 172.21.1.4/24



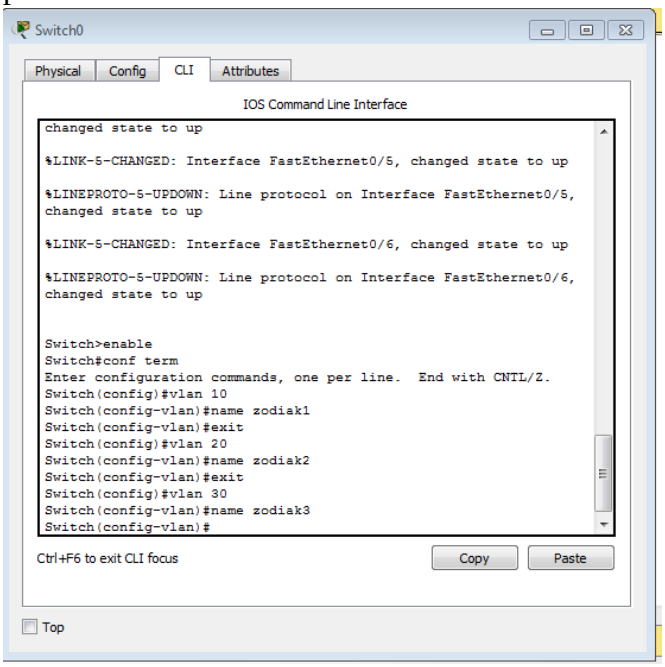
- Taurus = 172.21.1.5/24



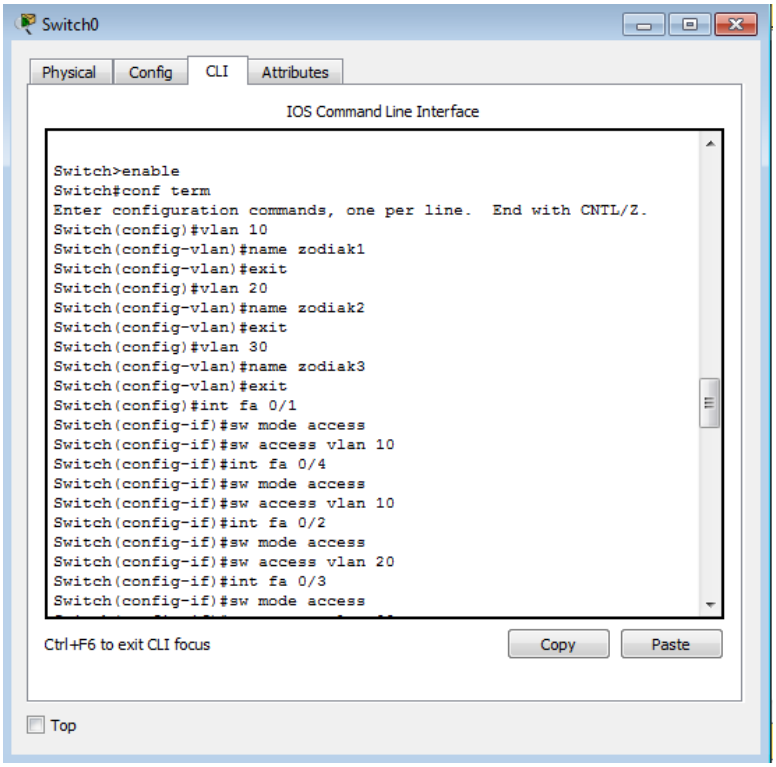
- Scorpio = 172.21.1.6/24

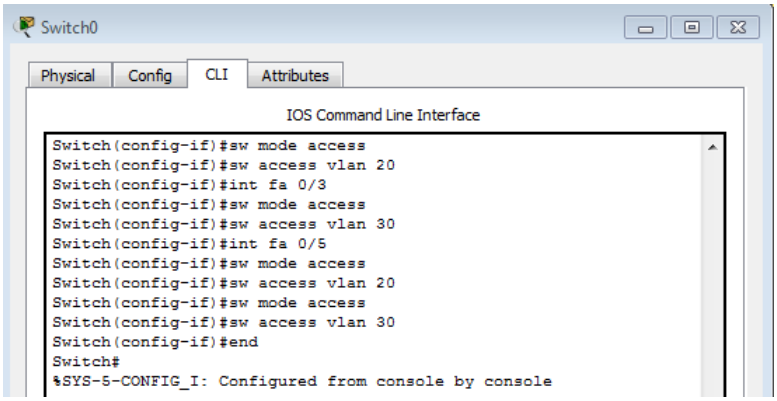


3. Konfigurasi pada switch dengan mode *user* atau mode *privileged*, buat 3 VLAN dengan nama zodiak1, zodiak2, dan zodiak3. Dengan cara klik pada switch 2 kali. Kemudian pilih CLI

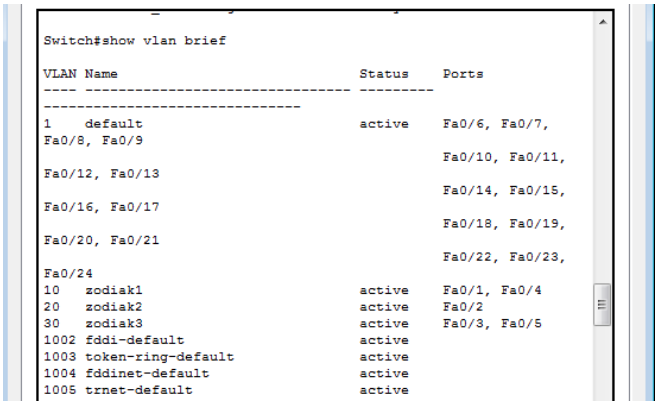


4. Pada mode *configuration*, konfigurasi port-port switch kedalam VLAN zodiak1, zodiak2, dan zodiak3 dengan anggota sebagai berikut
   - Zodiak1 = leo dan libra
   - Zodiak2 = aries dan taurus
   - Zodiak3 = virgo dan scorpio



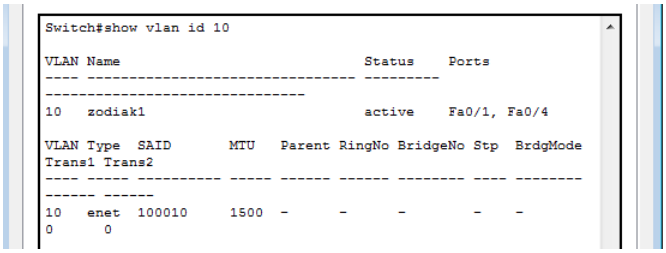


5. Pada mode *user* atau *privileged*, lihat konfigurasi VLAN yang telah dibuat.
   - Informasi VLAN keseluruhan



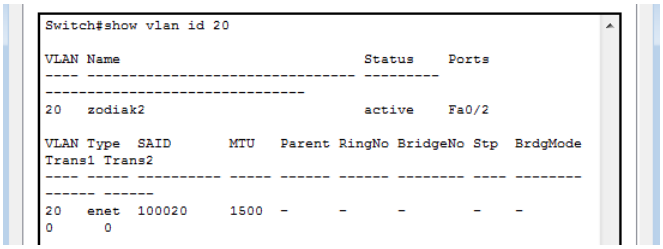
```
Switch#show vlan brief

VLAN Name                             Status    Ports
---- -------------------------------- ---------
--------------------------------
1    default                          active    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
10   zodiak1                          active    Fa0/1, Fa0/4
20   zodiak2                          active    Fa0/2
30   zodiak3                          active    Fa0/3, Fa0/5
1002 fddi-default                     active
1003 token-ring-default               active
1004 fddinet-default                  active
1005 trnet-default                    active
```

   - Informasi VLAN 10



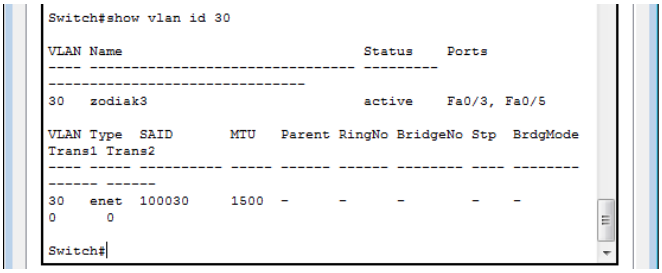
```
Switch#show vlan id 10

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
```

   - Informasi VLAN 20



```
Switch#show vlan id 20

VLAN Name                             Status    Ports
---- -------------------------------- ---------
--------------------------------
20   zodiak2                          active    Fa0/2

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

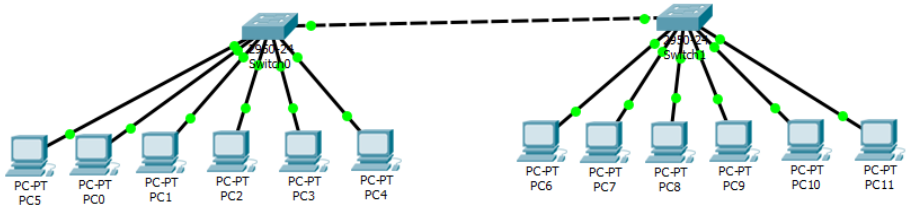
   - Informasi VLAN 30



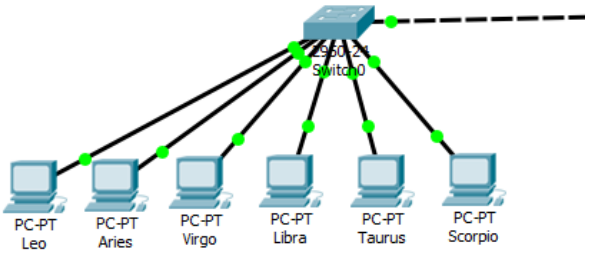
```
Switch#show vlan id 30

VLAN Name                             Status    Ports
---- -------------------------------- ---------
--------------------------------
30   zodiak3                          active    Fa0/3, Fa0/5

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

Switch#
```

Kegiatan 2. Topologi 2

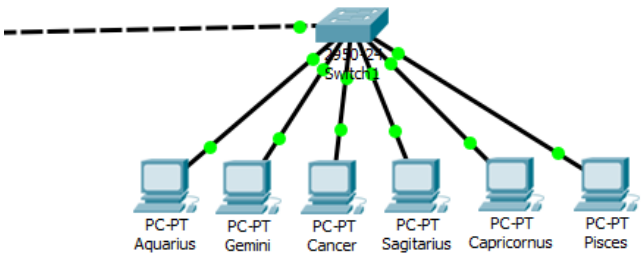
1. Menggunakan cicsco packet tracker buat topologi berikut ini dengan menggunakan switch Catalyst 2950



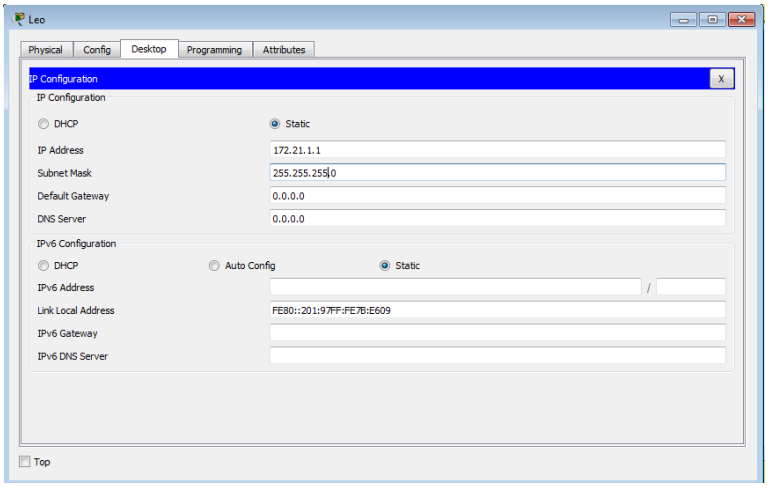
2. Beri nama masing-masing pernagkat dengan SW1 (switch 1), Leo (PC0), Aries (PC1), Virgo (PC2), Pisces (PC3), Taurus (PC4), dan Scorpio (PC5) untuk segmen switch 1



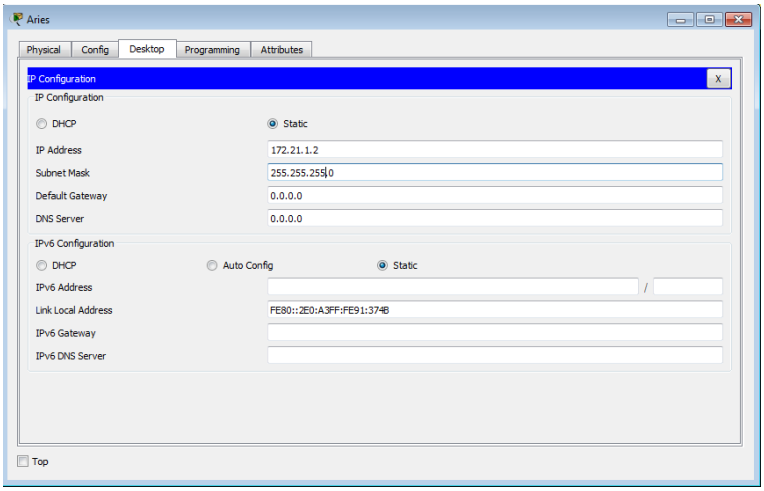
3. Beri nama masing-masing pernagkat dengan SW2 (switch 2), Aquarius (PC6), Gemini (PC7), Cancer (PC8), Sagitarius (PC9), Capricorcus (PC10), dan Pisces (PC11) untuk segmen switch 2



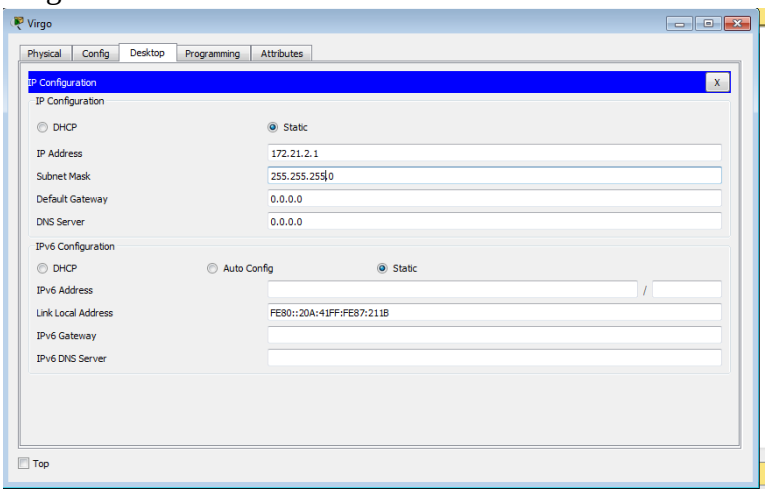
4. Konfigurasi masing-masing PC dengan nama dan alamat IP berikut ini :
   - Leo = 172.21.1.1/24



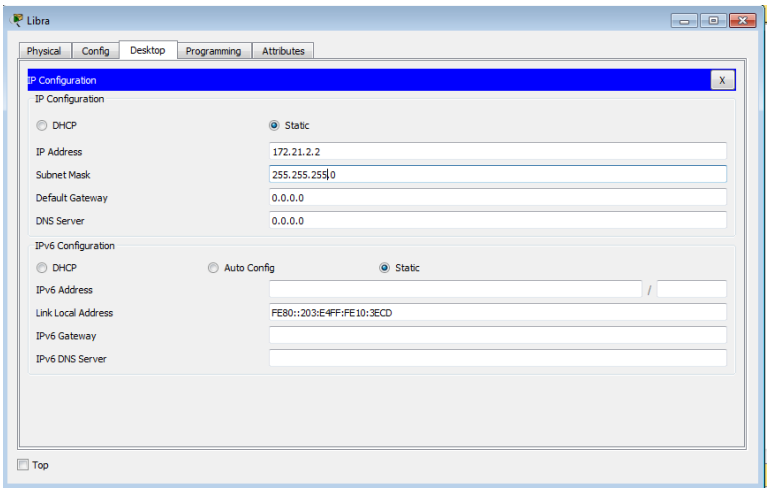
   - Aries = 172.21.1.2/24



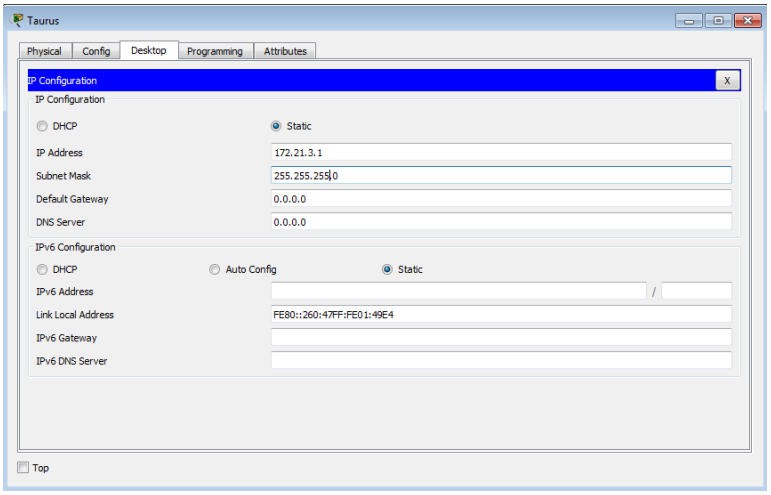
   - Virgo = 172.21.2.1/24



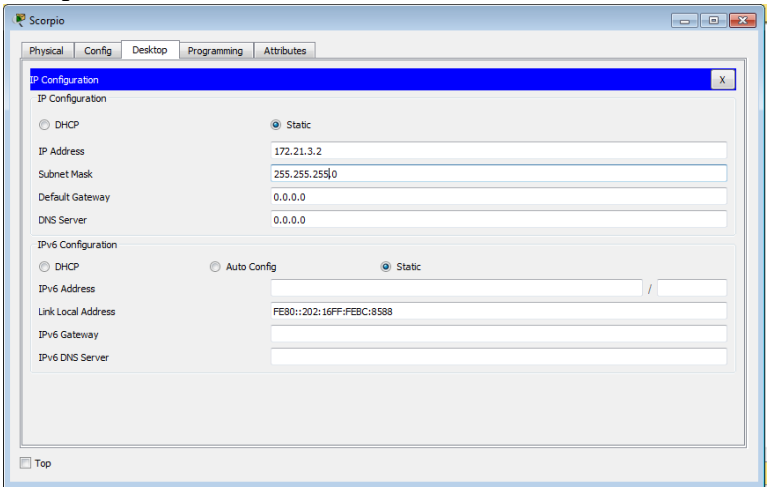
- Libra = 172.21.2.2/24



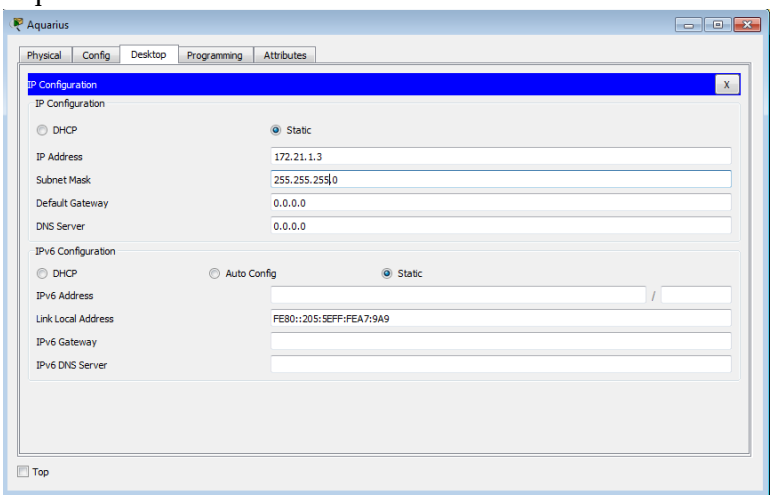
- Taurus = 172.21.3.1/24



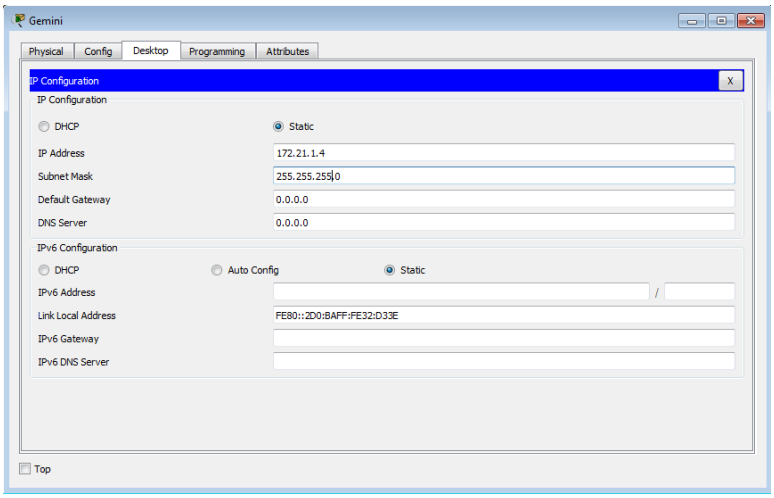
- Scorpio = 172.21.3.2/24



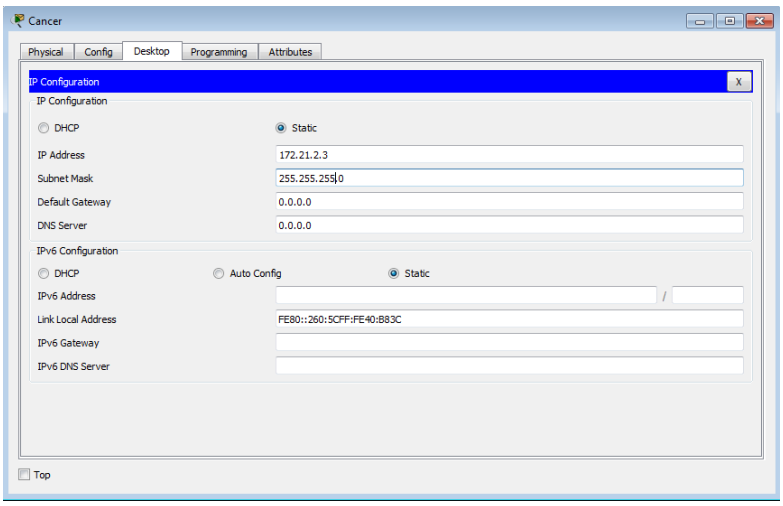
- Aquarius = 172.21.1.3/24



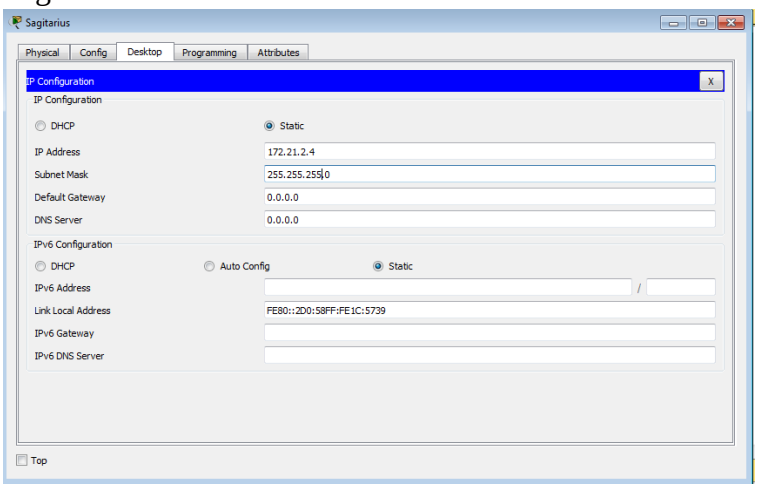
- Gemini = 172.21.1.4/24



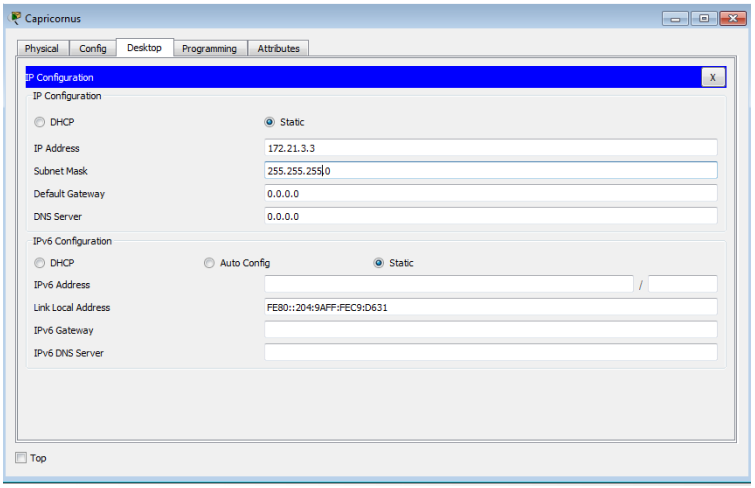
- Cancer = 172.21.2.3/24



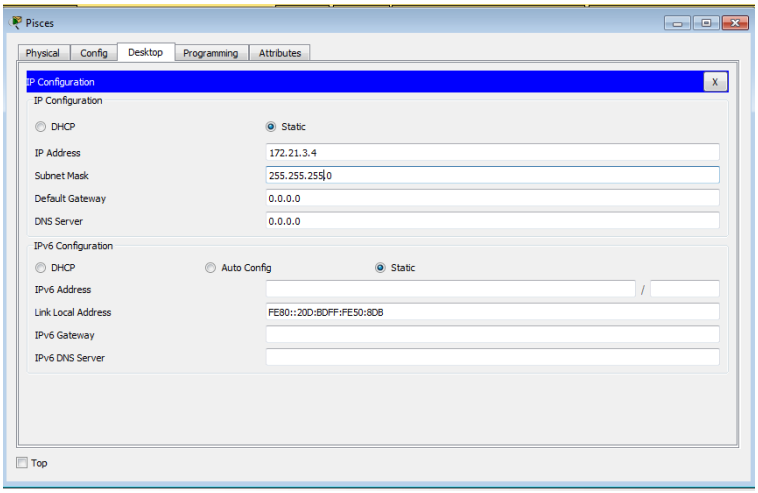
- Sagitarius = 172.21.2.4/24



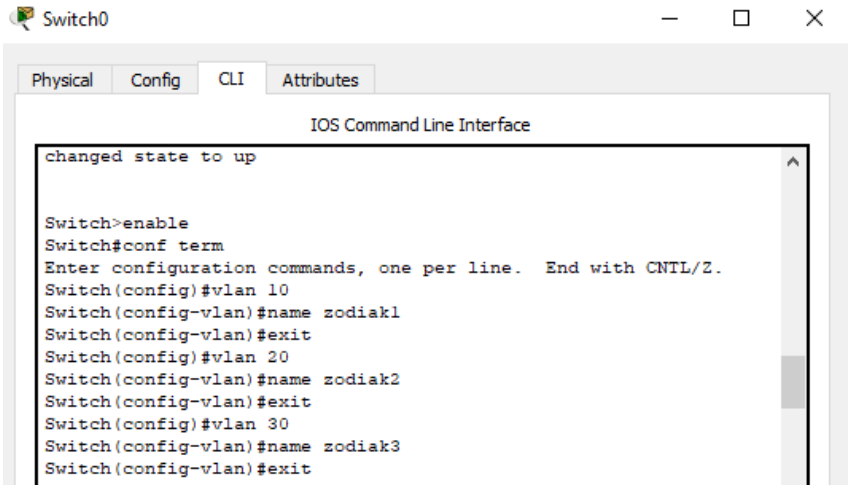
- Capricornus = 172.21.3.3/24

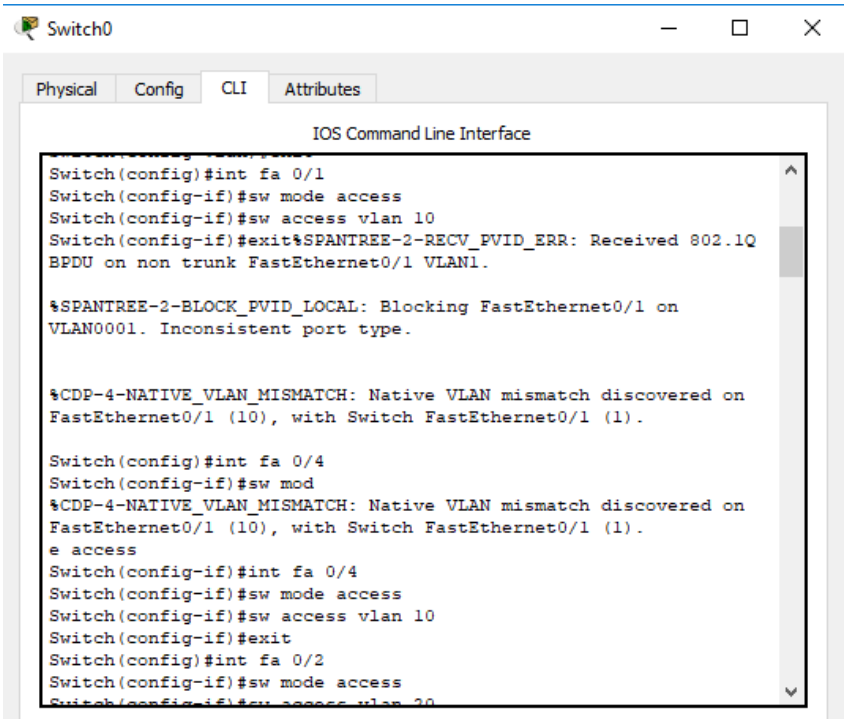


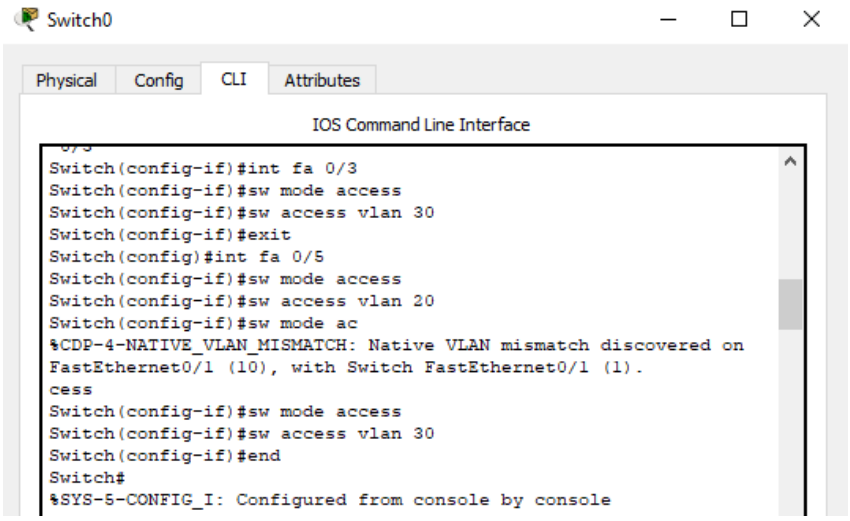
- Pisces = 172.21.3.4/24



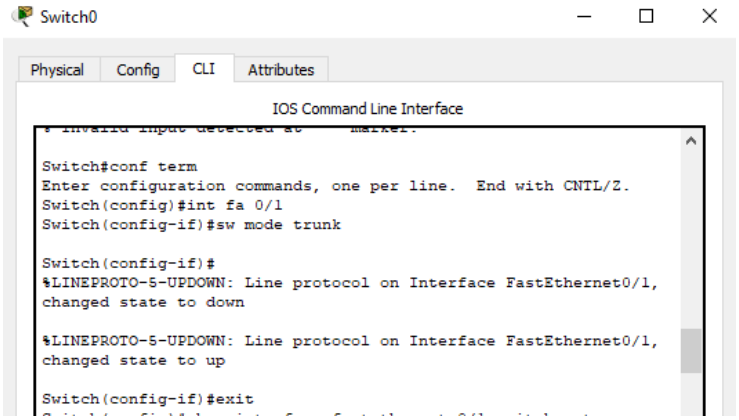
5. Lakukan langkah 4 daan 5 laboratorium 1 untuk switch 1



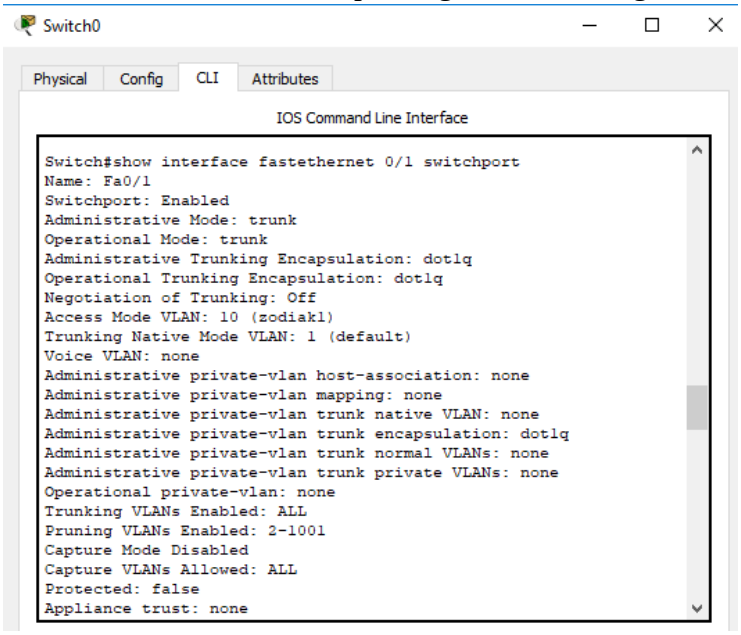


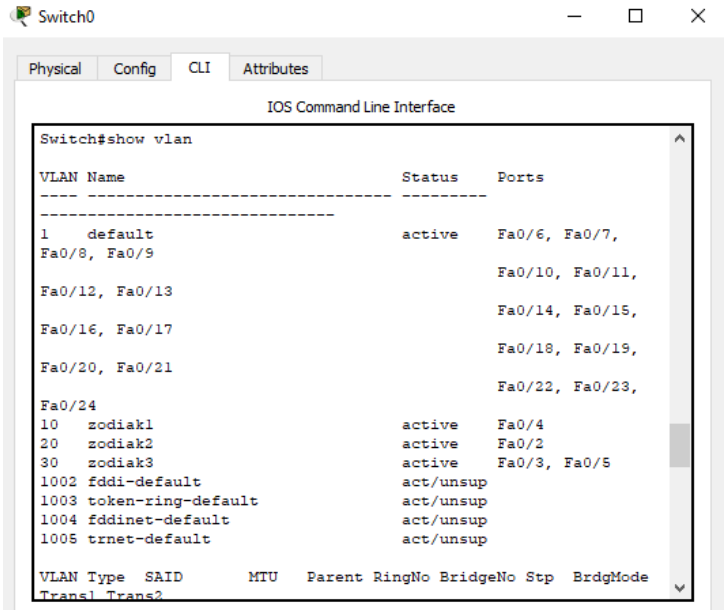


6. Lakukan konfigurasi VLAN trunking pada switch 1



7. Pada mode user atau mode privileged, lihat konfigurasi trunking yang telah dibuat





8. Lakukan ping ke PC leo ke PC pisces

```
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),
```

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

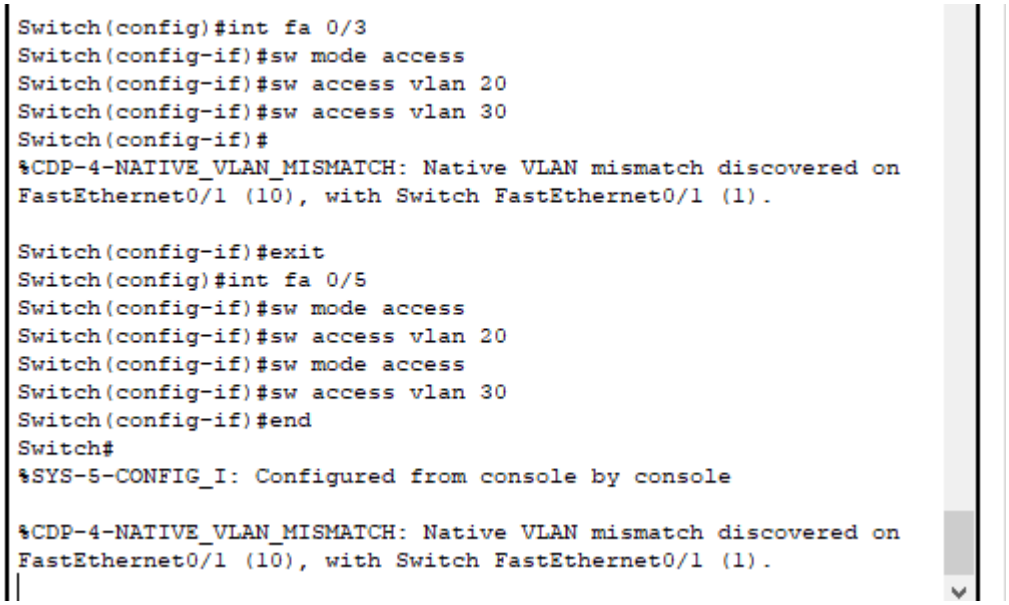
```
Switch>enable
Switch#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#interface fa 0/1
Switch(config-if)#switchport mode trunk
Switch(config-if)#exit
Switch(config)#
```

10. Pada mode user atau mode privileged, lihat konfigurasi VLAN pada switch 2

```
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                     act/unsup
1003 token-ring-default               act/unsup
1004 fddinet-default                  act/unsup
1005 trnet-default                    act/unsup

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode
Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- --------
------ ------
1    enet  100001     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
------------------------------------------------------------------------
-------------
```

11. 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

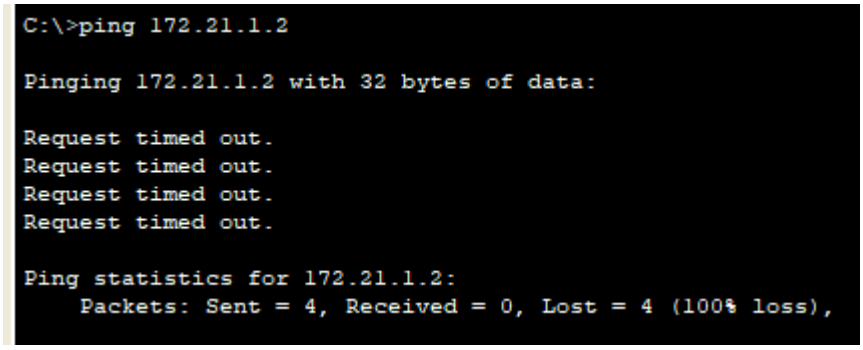
```
Switch(config)#int fa 0/1
Switch(config-if)#sw mode access
Switch(config-if)#%SPANTREE-2-RECV_PVID_ERR: Received 802.1Q BPDU
on non trunk FastEthernet0/1 VLAN1.

%SPANTREE-2-BLOCK_PVID_LOCAL: Blocking FastEthernet0/1 on
VLAN0001. Inconsistent port type.

sw access
% Incomplete command.
Switch(config-if)#sw access vlan 10
Switch(config-if)#exit
Switch(config)#int fa 0/4
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 10
Switch(config-if)#exit
Switch(config)#int fa 0/2
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#exit
Switch(config)#
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on
FastEthernet0/1 (10), with Switch FastEthernet0/1 (1).
```



```
Switch(config)#int fa 0/3
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#sw access vlan 30
Switch(config-if)#
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on
FastEthernet0/1 (10), with Switch FastEthernet0/1 (1).

Switch(config-if)#exit
Switch(config)#int fa 0/5
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
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

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

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

    + Leo ke Aries



```
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),
```

+ Leo ke Aquarius

```
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),
```

+ Leo ke Pisces

```
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),
```

+ Libra ke Cancer

```
Packet Tracer PC Command Line 1.0
C:\>ping 172.21.2.3

Pinging 172.21.2.3 with 32 bytes of data:

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

Ping statistics for 172.21.2.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

+ Libra ke Leo

```
C:\>ping 172.21.1.1

Pinging 172.21.1.1 with 32 bytes of data:

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

Ping statistics for 172.21.1.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```