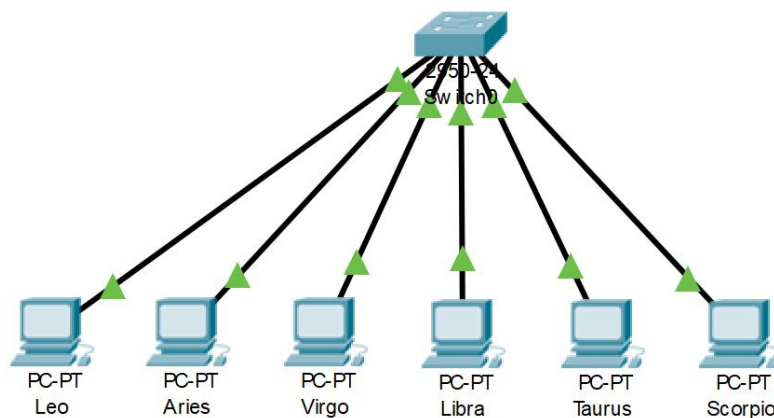


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Kelas : B

MODUL IV VIRTUAL DAN TRUNKING

KEGIATAN1

1. Menggunakan *packet tracer* buat topologi berikut ini dengan menggunakan switch.
2. Memberi nama masing – masing perangkat dengan SW1 (switch), Leo (PC0), Aries (PC1), Virgo (PC2), Libra (PC3), Taurus (PC4), dan Scorpio (PC5).
3. 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



4. 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.

```

%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)#

```

5. Pada *mode configuration*, konfigurasi port – port switch ke dalam VLAN zodiak1, zodiak2, dan zodiak3 dengan anggota sebagai berikut.

- Zodiak1 = leo dan libra
- Zodiak2 = aries dan taurus
- Zodiak3 = virgo dan scorpio

langkah pengoperasian :

Masuk mode configuration

Ketik interface Fastethernet 0/1

Ketik switchport mode access

Ketik switchport access vlan 10

Ketik interface Fastethernet 0/4

Ketik switchport mode access

Ketik switchport access vlan 10

Ketik exit

Lakukan langkah-langkah diatas untuk port VLAN zodiak2 (Aries dan Taurus) dan port VLAN zodiak3 (Virgo dan Scorpio)

```

Switch(config)#vlan 30
Switch(config-vlan)#name zodiak3
Switch(config-vlan)#exit
Switch(config)#int fa 0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#int fa 0/4
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#exit
Switch(config)#int fa 0/2
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#int fa 0/5
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#exit
Switch(config)#int fa 0/3
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#int fa 0/6
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#exit
Switch(config)#

```

6. Pada *mode user* atau *mode privileged*, lihat konfigurasi VLAN yang telah dibuat.

- Informasi VLAN keseluruhan

```

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>

```

Informasi VLAN 10

```

Fa0/21, Fa0/22
Fa0/19, Fa0/20,
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
Transl Trans2
-----
10   enet   100010   1500  -     -     -     -     -     0
0

Switch>

```

-Informasi VLAN id 20

```

10   zodiak1           active    Fa0/1, Fa0/4

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

Switch>

```

-Informasi VLAN id 30

```

-----
20    zodiak2                                active    Fa0/2, Fa0/5
VLAN Type  SAID      MTU    Parent RingNo BridgeNo Stp  BrdgMode
Transl 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
Transl Trans2
-----
30    enet  100030    1500  -      -      -      -      -      0
0

Switch>

```

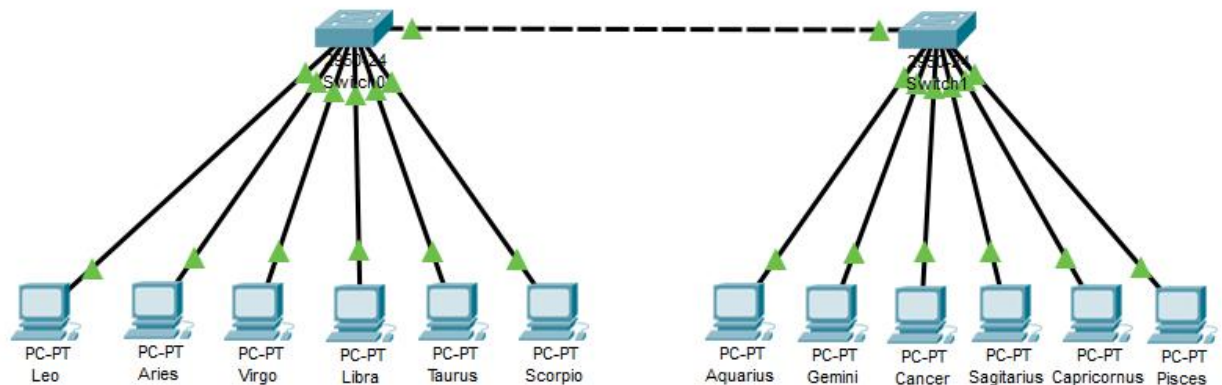
Tugas 6A :

No	Variabel	Nilai		
1	Nomor VLAN	10	20	30
2	Nama VLAN	zodiak1	zodiak2	zodiak3
3	Port	Fa0/1, Fa0/4	Fa0/2, Fa05	Fa0/3, Fa0/6
4	Status	active	active	active

KEGIATAN 2.

1. Menggunakan *cisco packet tracer* buat topologi berikut ini dengan menggunakan switch Catalyst 2950.
2. Memberi nama masing – masing perangkat dengan SW1 (switch 1), Leo (PC0), Aries (PC1), Virgo (PC2), Libra (PC3), Taurus (PC4), dan Scorpio (PC5) untuk segmen switch1.
3. Memberi nama masing – masing perangkat dengan SW2 (switch 21), 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
- Capricornus = 172.21.3.3/24
- Pisces = 172.21.3.4/24



5. 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.

```
%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)#
```

Pada *mode configuration*, konfigurasi port – port switch ke dalam VLAN zodiak1, zodiak2, dan zodiak3 dengan anggota sebagai berikut.

- Zodiak1 = leo dan libra
- Zodiak2 = aries dan taurus
- Zodiak3 = virgo dan scorpio


```

Switch(config)#vlan 30
Switch(config-vlan)#name zodiak3
Switch(config-vlan)#exit
Switch(config)#int fa 0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#int fa 0/4
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#exit
Switch(config)#int fa 0/2
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#int fa 0/5
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#exit
Switch(config)#int fa 0/3
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#int fa 0/6
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#exit
Switch(config)#

```

6. Lakukan konfigurasi VLAN trunking pada switch 1.

```

Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#int fa 0/4
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#exit
Switch(config)#int fa 0/2
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#int fa 0/5
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#exit
Switch(config)#int fa 0/3
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#int fa 0/6
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#exit
Switch(config)#
Switch(config)#int fa 0/7
Switch(config-if)#switchport mode trunk
Switch(config-if)#exit
Switch(config)#

```

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

- Informasi *interface fasthethernet 0/7 switchport*

```

Switch#show int fa 0/7 switchport
Name: Fa0/7
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

```

- Informasi *interface fashethernet 0/7*

```

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

Switch#show int fa 0/7 trunk
^
% Invalid input detected at '^' marker.

Switch#

```


- Informasi VLAN

```
Switch#show vlan
```

VLAN Name	Status	Ports
-----	-----	-----
1 default	active	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		

Jelaskan secara singkat hasil yang anda peroleh dari langkah 5

Informasi *interface fashethernet 0/7 switchport* menampilkan :

Switchport : enable

Administrative mode : trunk

Operational mode : trunk

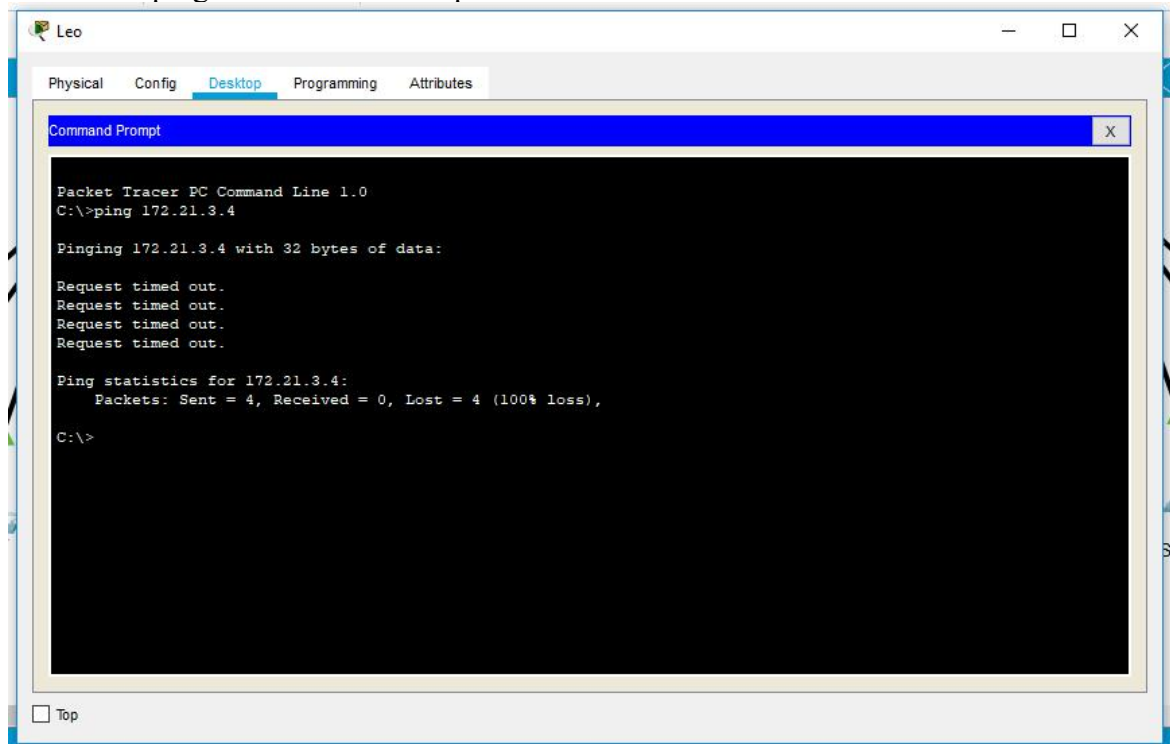
Informasi *interface fashethernet 0/7* menampilkan :

Invalid

Informasi VLAN menampilkan :

No	Variabel	Nilai		
1	Nomor VLAN	10	20	30
2	Nama VLAN	Zodiak1	Zodiak2	Zodiak3
3	Port	Fa 0/1, fa 0/4	Fa 0/2, fa 0/5	Fa 0/3, fa 0/6
4	Status	Aktif	Aktif	Aktif

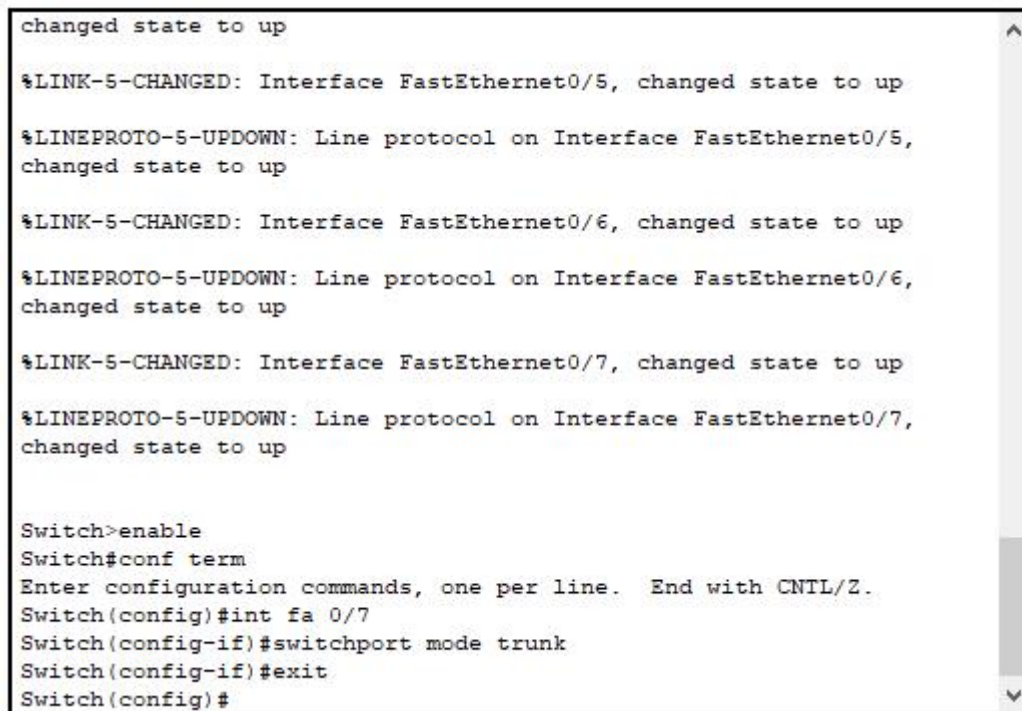
8. Lakukan ping dari PC leo ke PC pisces



Jelaskan secara singkat mengapa hasil yang anda peroleh dari langkah 6 mendapatkan status “reply”?.

Hasil yang anda peroleh dari langkah 6 mendapatkan status timed out.

9. Lakukan konfigurasi VLAN trunking pada switch 2 seperti langkah 4.



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

```
Switch#show vlan

VLAN Name                Status    Ports
-----
1    default                active    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, Fa0/2
20   zodiak2                 active    Fa0/3, Fa0/4
30   zodiak3                 active    Fa0/5, 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
```

Jelaskan secara singkat hasil yang anda peroleh dari langkah 8.

No	Variabel	Nilai		
1	Nomor VLAN	10	20	30
2	Nama VLAN	Zodiak1	Zodiak2	Zodiak3
3	Port	Fa 0/1, fa 0/2	Fa 0/3, fa 0/4	Fa 0/5, fa 0/6
4	Status	Aktif	Aktif	Aktif

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)#vlan 30
Switch(config-vlan)#name zodiak3
Switch(config-vlan)#exit
Switch(config)#int fa 0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#int fa 0/2
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#exit
Switch(config)#int fa 0/3
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#int fa 0/4
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#exit
Switch(config)#int fa 0/5
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#int fa 0/6
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 30
Switch(config-if)#exit
Switch(config)#
```

12. Ping PC leo ke PC aries, PC leo ke PC aquarius

