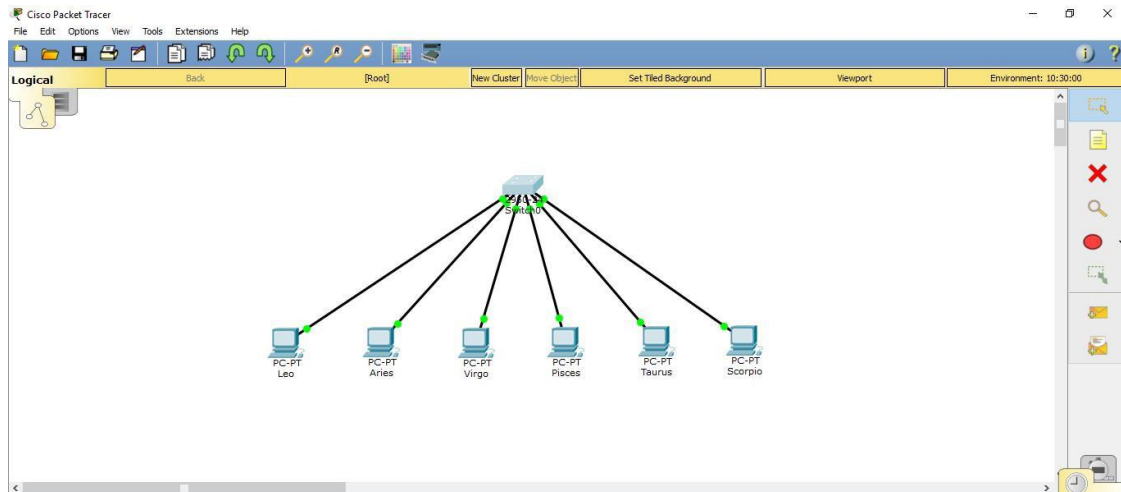Nama   : Fahri Alfandi
NIM   : L200180023
Kelas   : A

Modul 4
(Kegiatan
dan tugas)

KEGIATAN 1.

switch 2950-24.

Keterangan alamat IP :
- 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

Membuat VLAN dengan nama zodiak1, zodiak2, dan zodiak3

```
Switch>en
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
```

Konfigurasi port masing-masing PC ke VLAN

1. untuk zodiak1 = leo(port 0/1) dan libra(port 0/4)

```
Switch(config)#int fa 0/1
Switch(config-if)#sw mode access
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)#
```

2. untuk zodiak2 = aries (port 0/2) dan taurus (port 0/5)

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

3. untuk zodiak3 = virgo (port 0/3) dan scorpio (port 0/6)

```
Switch(config)#int fa 0/3
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#exit
Switch(config)#int fa 0/6
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
Switch(config-if)#exit
Switch(config)#exit
```

Melihat hasil konfigurasi

1. Informasi VLAN keseluruhan

2. Informasi vlan 10

3. Informasi vlan 20

```
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#
```

4. Informasi vlan 30

```
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#
```
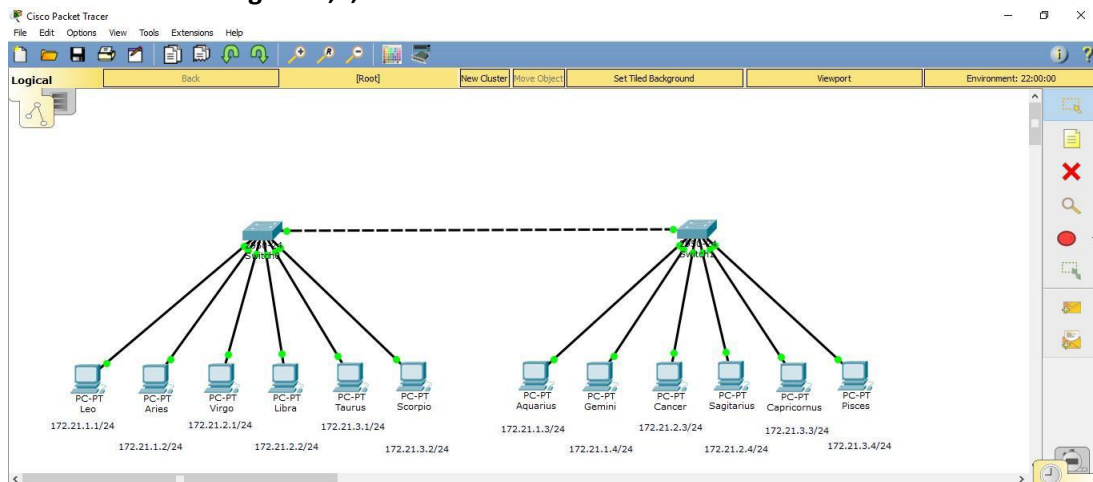
No.	Variable	nilai		
1	Nomor VLAN	10	20	30
2	Nama VLAN	zodiak1	zodiak2	zodiak3
3	Port	0/1,0/4	0/2,0/5	0/3,0/6
4	Status	active	active	active

KEGIATAN 2.

switch 2950-24. Langkah 1,2,3 dan 4

Switch 2 :


```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/7, 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)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#inter Fa 0/1
Switch(config-if)#switchport mode acces
Switch(config-if)#switchport access vlan 10
Switch(config-if)#inter 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)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#inter Fa 0/4
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 20
Switch(config-if)#exit
Switch(config)#inter Fa 0/5
Switch(config-if)#sw mode access
Switch(config-if)#sw access vlan 30
```

Konfigurasi VLAN trunking pada switch 1 dan melihat konfigurasinya

```
Switch>enable
Switch#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#interface fa 0/7
Switch(config-if)#switchport mode trunk

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/7, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/7, changed state to up

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

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
                                                Fa0/12, 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
```

Physical | Config | CLI | Attributes

```
...5-0 CONFIG_I: Configured from console by console

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
                                                Fa0/12, 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
 --More--
```
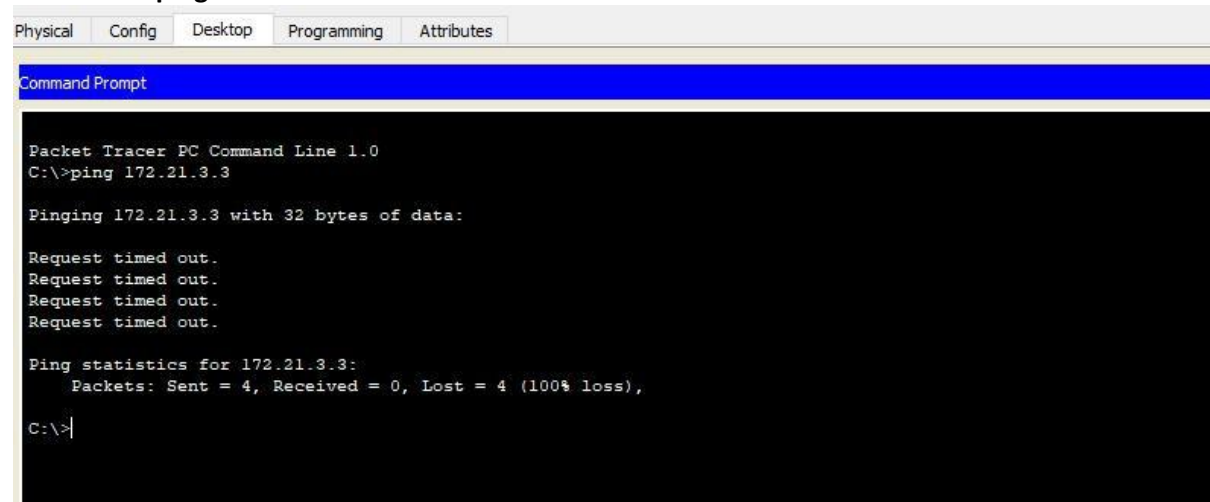
Ctrl+F6 to exit CLI focus

Tugas 7A:

Hasil yang diperoleh pada mode privileged pada switch 1 yaitu pada vlans allowed on trunk mempunyai nilai 1-1005 pada port fa 0/7 yang artinya menggunakan jaringan skala kecil dan menengah. Vlan allowed and active in management domain (config untuk manajemen switch) memiliki nilai 1,10,20,30. vlans spanning tree forwarding state and not pruned mempunyai nilai 1,10,20,30. Mempunyai status trunking mode on, encapusilation 802.1q (protokol umum yang didukung oleh banyak vektor)

Melakukan ping dari PC Leo ke PC Pisces

```
Physical    Config    Desktop    Programming    Attributes

Command Prompt

Packet Tracer PC Command Line 1.0
C:\>ping 172.21.3.3

Pinging 172.21.3.3 with 32 bytes of data:

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

Ping statistics for 172.21.3.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>
```

Tugas 8A:

Hasil ping dari pc leo ke pc pisces bukanlah reply, tetapi request timed out (RTO), karena permintaan koneksi yang lama dan subnet address nya sudah berbeda.

Konfigurasi VLAN trunking pada switch 1 dan melihat konfigurasinya

```
Switch>enable
Switch#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#interface fa 0/7
Switch(config-if)#sw mode trunk
Switch(config-if)#exit
Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#
```

Physical | CODfiq   CDI   Attrit:rites'.'

Switch ›enable

Bnter configuration commands, one per line. Bna with CNTL/Z.
Switchlconfig)#interface fa 0/7

Switchlconfig-if)#enit
Switchlconfig)#exit
°'witch#
$s¥s-E-DONFIc I: configurea from «onsole by console

Switch#show vlan

1	default	active	Fa0/f, Fa0/8, Fa0/9, Fa0/10
			ra0rii,ra0ri2,ra0rio,ra0ri4
			ra0ma,ra0ia.ra0mv,ra0ie
			Fa0/IS, Fa0/20, Fa0/21, Fa0/22
			Fa0/23, Fa0/24
10	zodiakl	active	Fa0/I, Fa0/2
20	zodiak2	active	Fa0/3, Fa0/4
30	zodiak3	active	Fa0/5

i0o2 faai-aefauic
1003 token-ring-default
i0o4faa ec-aefaui,
room cmec-aezauic

VLAN	Type	SAID	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode	Transl	Trans2
1	ezie c	100001								
10	ezie c	100010							0	0
20	ezie c	100020	1500						0	0
			1500							
30	ezie c	100030	1500							
			1500						0	0

Cbl-th-6 to exit CLI leers

```
------ - ------ -- ------------ ---- ------- -- -------

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
                                                Fa0/12, 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
 --More-- |
```

Ctrl+F6 to exit CLI focus

Tugas 10A:
    Hasil yang diperoleh pada mode privileged pada switch 1 yaitu pada vlans allowed on trunk mempunyai nilai 1-1005 pada port fa 0/7 yang artinya menggunakan jaringan skala kecil dan menengah. Vlan allowed and active in management domain (config untuk manajemen switch) memiliki nilai 1,10,20,30. vlans spanning tree forwarding state and not pruned mempunyai nilai 1,10,20,30. Mempunyai status trunking mode on, encapusilation 802.1q (protokol umum yang didukung oleh banyak vektor)

Konfigurasi port-port switch ke dalam VLAN zodiak1, zodiak2, dan zodiak3

Physical | Config | CLI | Attributes

IOS Command Line Interface

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface fastEthernet0/6, changed state to up

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)#exit
Switch(config)#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)#exit
Switch(config)#int Fa 0/3
Switch(config-if)#sw mode access vlan 30'
                                        ^
% Invalid input detected at '^' marker.

Switch(config-if)#sw mode access vlan 30
                                         ^
% Invalid input detected at '^' marker.

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

Switch#show id 10
             ^
% Invalid input detected at '^' marker.
```

Ctrl+F6 to exit CLI focus

Melakukan ping

1. Ping dari 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),

C:\>
```

2. Ping dari Leo ke Aquarius

```
C:\>ping 172.21.1.3

Pinging 172.21.1.3 with 32 bytes of data:

Reply from 172.21.1.3: bytes=32 time<1ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128
Reply from 172.21.1.3: bytes=32 time<1ms TTL=128

Ping statistics for 172.21.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

3. Ping dari 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),

C:\>
```

4. Ping dari 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),

C:\>
```

5. Ping dari 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),

C:\>
```

Tugas 12A:

Hasil ping PC leo ke PC pisces adalah request time out permintaan koneksi yang lama dan karena subnet address nya sudah berbeda.