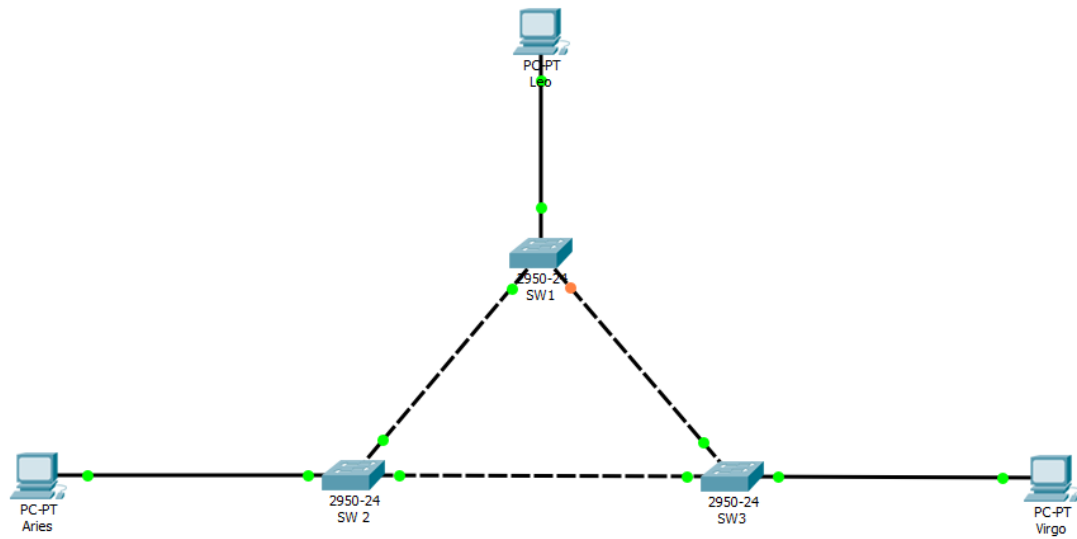


Nama : Annas Fagiat
Kelas : D
NIM : L200170163

TUGAS PRAKTIKUM JARKOM
MODUL 6
(SPANNING TREE PROTOCOL)

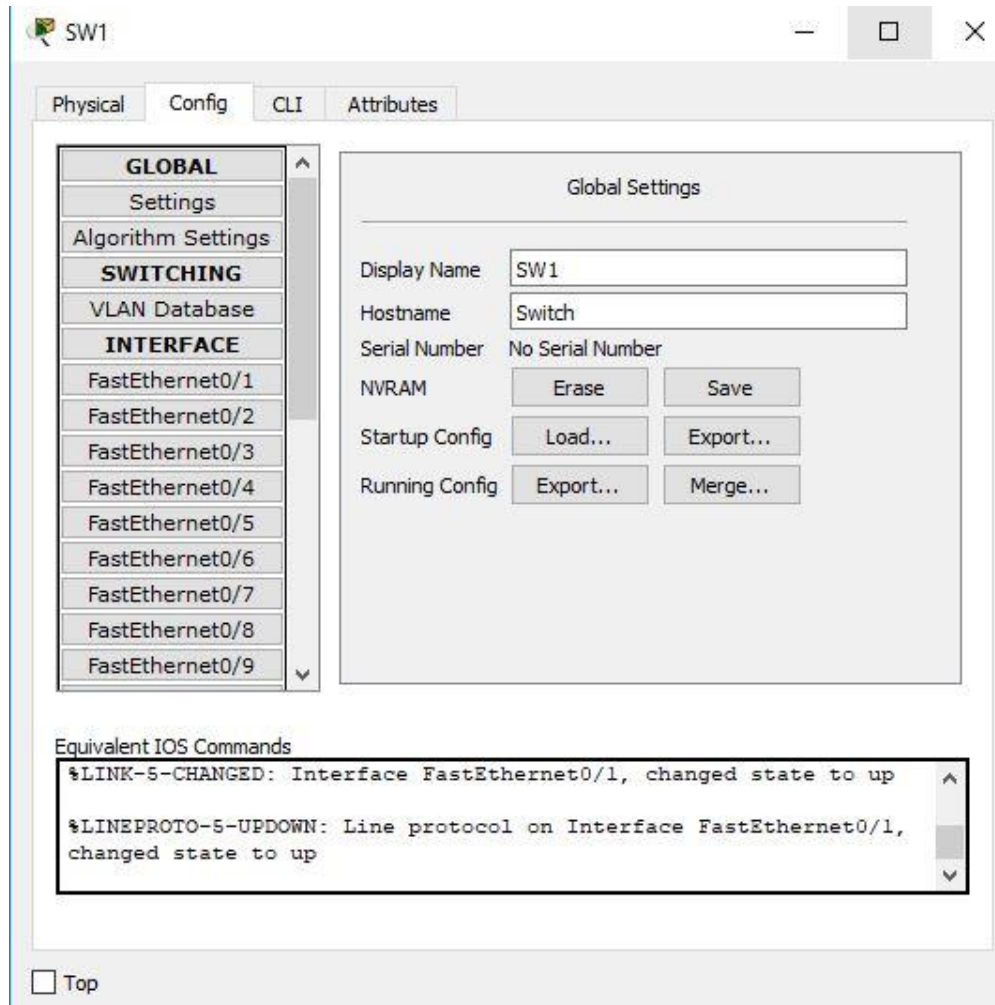
Tugas 1A: Tulis langkah pembuatan topologi!

Jawab : Pilih switch 2950-24 sebanyak 3 buah dengan 3 buah PC. Kemudian hubungkan 3 buah switch tersebut dengan kabel dan hubungkan 3 buah PC tersebut dengan kabel juga.



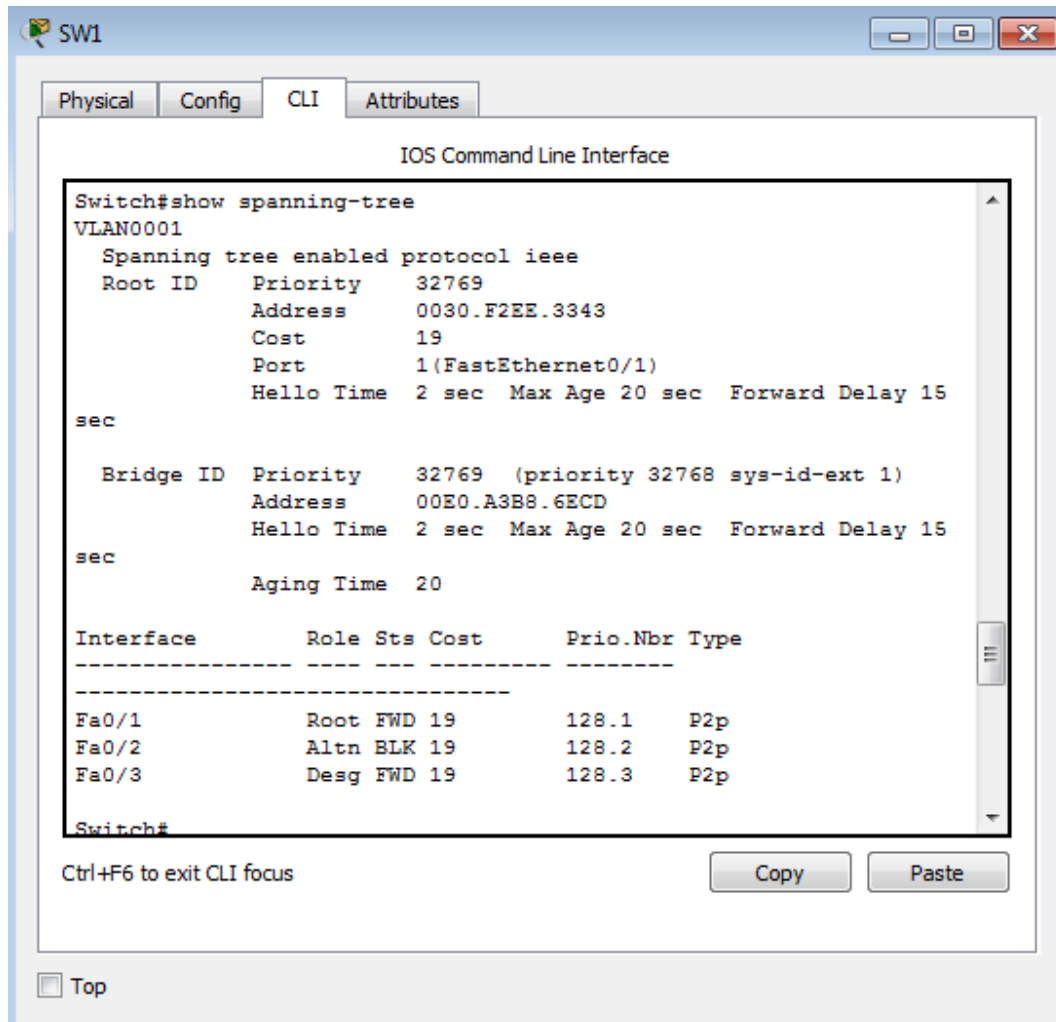
Tugas 2A : Tulis langkah pemberian nama switch mulai dari mode user.

Jawab : Beri nama Switch lalu klik switch yang ingin diberi nama lalu pilih config dan isikan pada kolom global settings atau bisa secara langsung dengan cara mengklik switch nya dan tinggal mengganti namanya.

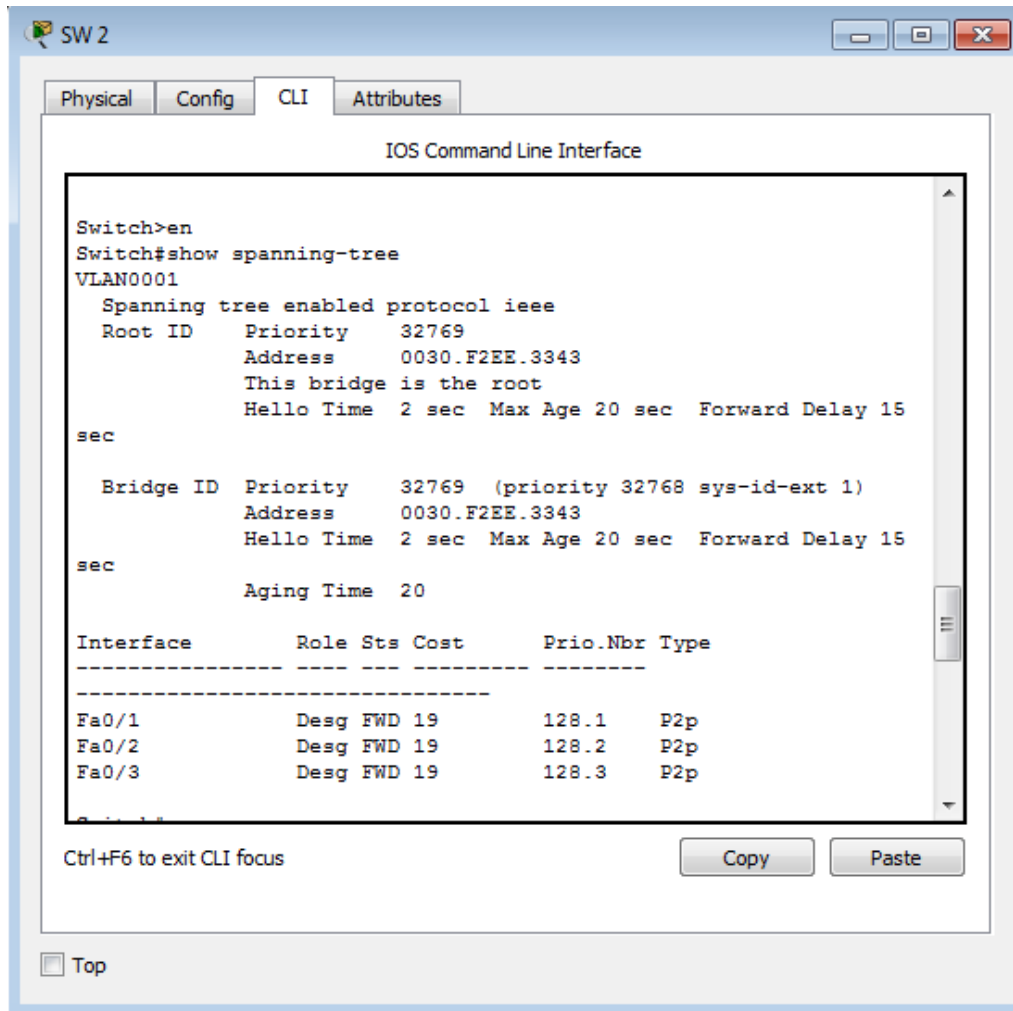


Tugas 4A : Pada kondisi default, capture masing-masing tampilan status STP switch (SW1,SW2, dan SW3)

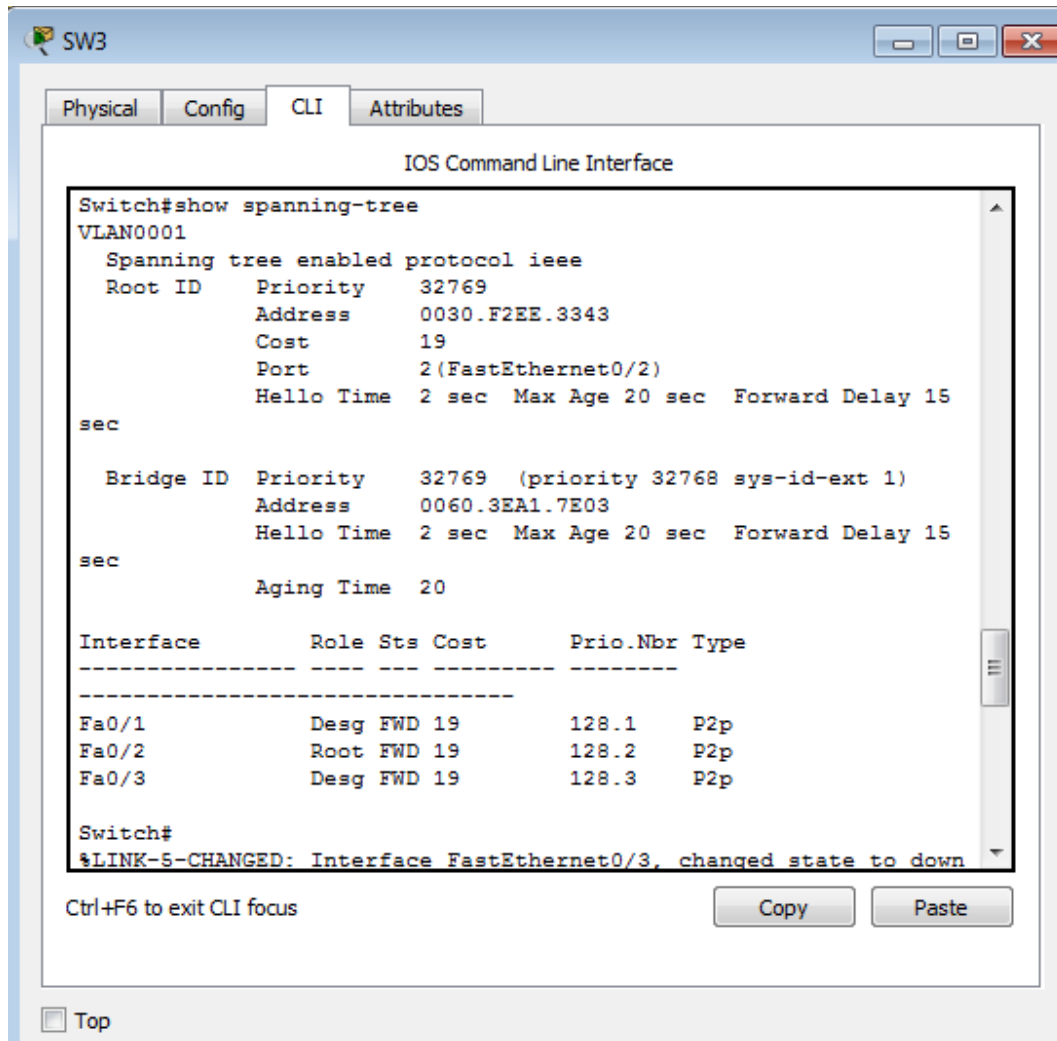
a. SW 1



b. SW 2



c. SW 3



Tugas 4B :Untuk tiap-tiap switch, isikan tabel berikut ini :

- SW 1

No	Variabel	Nilai		Interface	Role	Status
1.	Root ID	32769 : 0030.F2EE.3343		Fa 0/1	Root	FWD
2.	Priorty	32769		Fa 0/2	Altn	BLK
3.	MAC Address	00E0.A3B8.6ECD		Fa 0/3	Desg	FWD
4.	Bridge ID	32769 : 00E0. A3B8.6ECD				
5.	Cost(0/1:0/2:0/3)	0/1 = 19 0/2 = 19 0/3 = 19				
6.	Hello Time	2 sec				
7.	Max Age	20 sec				
8.	Forward Delay	15 sec				

- SW2

No	Variabel	Nilai		Interface	Role	Status
1.	Root ID	32769 : 0030.F2EE.3343		Fa 0/1	Desg	FWD
2.	Priorty	32769		Fa 0/2	Desg	FWD
3.	MAC Address	0030.F2EE.3343		Fa 0/3	Desg	FWD
4.	Bridge ID	32769 : 0030.F2EE.3343				
5.	Cost(0/1:0/2:0/3)	0/1 = 19 0/2 = 19 0/3 = 19				
6.	Hello Time	2 sec				
7.	Max Age	20 sec				
8.	Forward Delay	15 sec				

- SW 3

No	Variabel	Nilai		Interface	Role	Status
1.	Root ID	32769 : 0030.F2EE.3343		Fa 0/1	Desg	FWD
2.	Priorty	32769		Fa 0/2	Root	FWD
3.	MAC Address	0060.3EA1.7E03		Fa 0/3	Desg	FWD
4.	Bridge ID	32769 : 0060.3EA1.7E03				
5.	Cost(0/1:0/2:0/3)	0/1 = 19 0/2 = 19 0/3 = 19				
6.	Hello Time	2 sec				
7.	Max Age	20 sec				
8.	Forward Delay	15 sec				

Tugas 4C : Pada kondisi default tersebut, switch dan port mana saja yang :

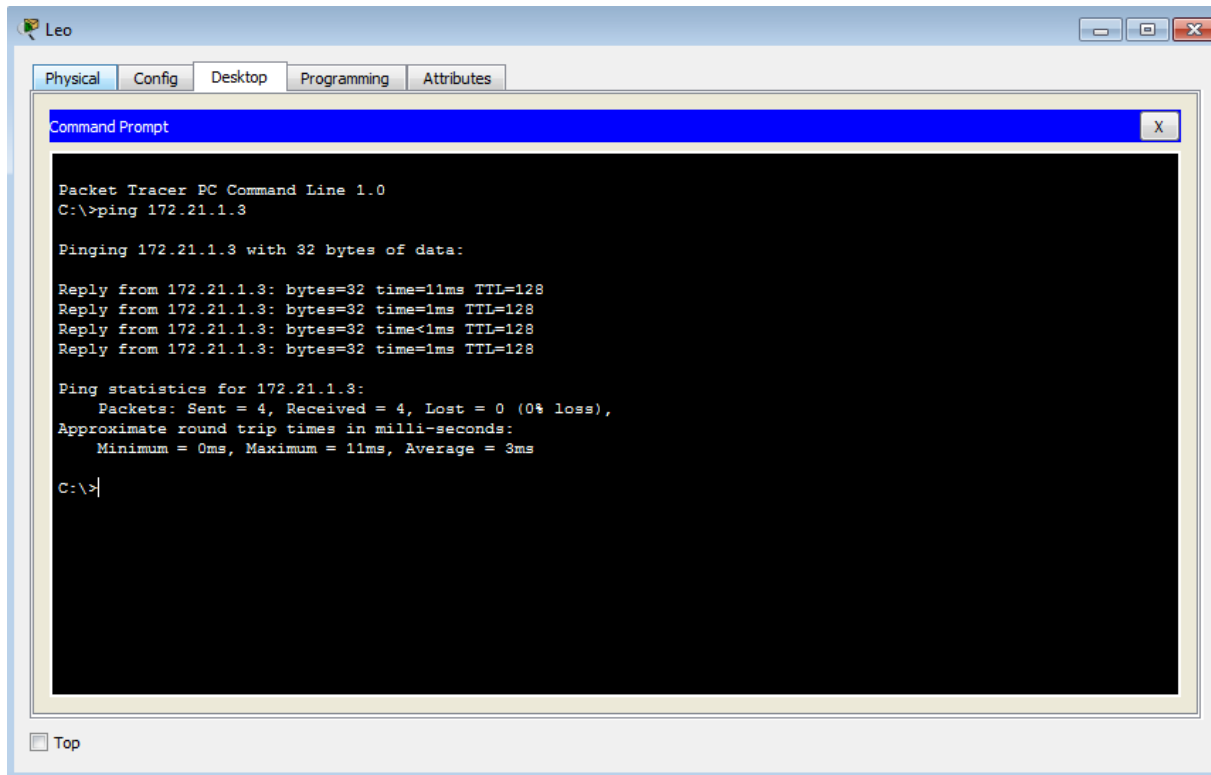
- Menjadi *root bridge* : SW 2
- Menjadi *designated bridge* : SW 1
- Menjadi *root port* : SW 1 Fa 0/1 dan SW 3 Fa 0/3
- Menjadi *designated port* : SW 1 Fa 0/3 , SW 2 (Fa 0/1 ; 0/2; 0/3) dan SW 3 (Fa 0/1, Fa 0/3)

Tugas 4D : Pada kondisi default tersebut, dan port mana saja yang :

- Berada pada keadaan *forwarding* : SW 1 (Fa 0/1; 0/3), SW 2 (Fa 0/1; 0/2; 0/3) SW 3 (Fa 0/1; 0/2; 0/3)
- Berada pada keadaan *blocking* : SW 1 (Fa 0/2)

Tugas 5A : Tulis langkah untuk melakukan perintah ping.

Jawab : Pilih salah satu PC kemudian klik PC tersebut, selanjutnya pilih desktop kemudian pilih command prompt lalu ketik *ping 172.21.1.3* (sesuai dengan ip pada pc yang ingin di ping)



Tugas 6A : Tulis Langkah untuk menyimpan konfigurasi jaringan.

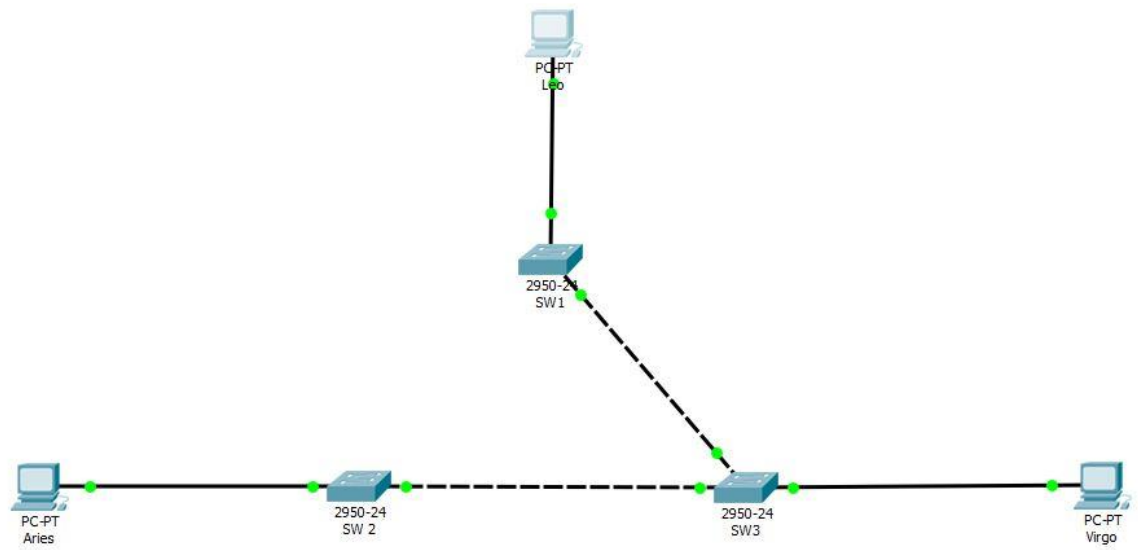
Jawab : Klik switch kemudian pilih CLI masuk ke mode user/privillage kemudian tulis

Switch#copy running-config startup-config

Lalu enter.

Simpan konfigurasi jaringan dengan nama lab2.pkt

Tugas 9A : Kerjakan tugas seperti pada tugas langkah lab.4 .



1. Melihat status STP pada masing-masing switch.
 - SW 1

SW1

Physical

Config

CLI

Attributes

IOS Command Line Interface

Switch>en
Switch#show spanning-tree
VLAN0001
Spanning tree enabled protocol ieee
Root ID Priority 32769
 Address 0030.F2EE.3343
 Cost 38
 Port 2(FastEthernet0/2)
 Hello Time 2 sec Max Age 20 sec Forward Delay 15
sec

 Bridge ID Priority 32769 (priority 32768 sys-id-ext 1)
 Address 00E0.A3B8.6ECD
 Hello Time 2 sec Max Age 20 sec Forward Delay 15
sec

 Aging Time 20

Interface Role Sts Cost Prio.Nbr Type

Fa0/3 Desg FWD 19 128.3 P2p
Fa0/2 Root FWD 19 128.2 P2p
|
Switch#

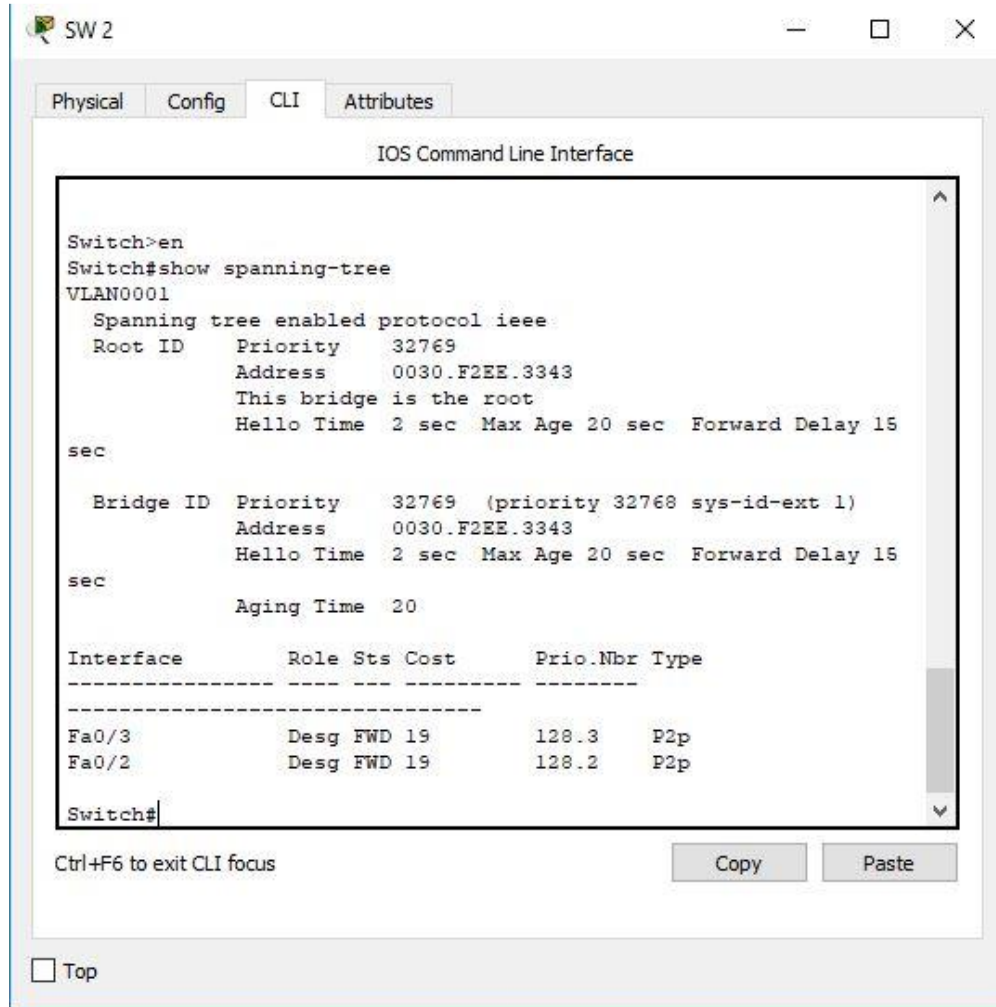
Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top

- SW 2



The screenshot shows a network switch configuration window titled "SW 2". The "CLI" tab is selected, displaying the "IOS Command Line Interface". The command sequence entered is:

```
Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0030.F2EE.3343
             This bridge is the root
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15
sec
  Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
             Address     0030.F2EE.3343
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15
sec
             Aging Time  20
```

Below the text output, there is a table showing the spanning tree details for interfaces Fa0/3 and Fa0/2:

Interface	Role	Sts	Cost	Prio.Nbr	Type
Fa0/3	Desg	FWD	19	128.3	P2p
Fa0/2	Desg	FWD	19	128.2	P2p

The CLI prompt is currently at "Switch#". At the bottom of the window, there is a "Top" button and a "Ctrl+F6 to exit CLI focus" instruction. "Copy" and "Paste" buttons are also present.

- SW 3

The screenshot shows a window titled 'SW3' with tabs for 'Physical', 'Config', 'CLI', and 'Attributes'. The 'CLI' tab is active, displaying the 'IOS Command Line Interface'. The command 'Switch#show spanning-tree' has been entered, and the output for 'VLAN0001' is shown. The output indicates that spanning tree is enabled with the IEEE protocol. The root bridge has ID 32769, address 0030.F2EE.3343, and is connected to port 2 (FastEthernet0/2). The bridge ID is 32769, and the aging time is 20 seconds. A table at the bottom shows the roles of the interfaces: Fa0/2 is the root, Fa0/3 is the designated forwarder, and Fa0/1 is the designated forwarder.

```
Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0030.F2EE.3343
             Cost        19
             Port        2 (FastEthernet0/2)
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15
sec

  Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
             Address     0060.3EAE.7E03
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15
sec

             Aging Time  20

Interface      Role Sts Cost      Prio.Nbr Type
-----
Fa0/2          Root FWD 19        128.2    P2p
Fa0/3          Desg FWD 19        128.3    P2p
Fa0/1          Desg FWD 19        128.1    P2p

Switch#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

- SW 1

No	Variabel	Nilai		Interface	Role	Status
1.	Root ID	32769 : 0030.F2EE.3343		Fa 0/3	Desg	FWD
2.	Priorty	32769		Fa 0/2	Root	FWD
3.	MAC Address	00E0.A3B8.6ECD				
4.	Bridge ID	32769: 00E0.A3B8.6ECD				
5.	Cost(0/1:0/2:0/3)	0/3 = 19 0/2 = 19				
6.	Hello Time	2 sec				
7.	Max Age	20 sec				
8.	Forward Delay	15 sec				

- SW 2

No	Variabel	Nilai		Interface	Role	Status
1.	Root ID	32769 : 0030.F2EE.3343		Fa 0/3	Desg	FWD
2.	Priorty	32769		Fa 0/2	Desg	FWD
3.	MAC Address	0030.F2EE.3343				
4.	Bridge ID	32769 : 0030.F2EE.3343				
5.	Cost(0/1:0/2:0/3)	0/3 = 19 0/2 = 19				
6.	Hello Time	2 sec				
7.	Max Age	20 sec				
8.	Forward Delay	15 sec				

- SW 3

No	Variabel	Nilai	Interface	Role	Status
1.	Root ID	32769 : 0030.F2EE.3343	Fa 0/2	Root	FWD
2.	Priorty	32769	Fa 0/3	Desg	FWD
3.	MAC Address	0060.3EA1.7E03	Fa 0/1	Desg	FWD
4.	Bridge ID	32769 : 0060.3EA1.7E03			
5.	Cost(0/1:0/2:0/3)	0/2 = 19 0/3 = 19 0/1 = 19			
6.	Hello Time	2 sec			
7.	Max Age	20 sec			
8.	Forward Delay	15 sec			

Tugas 4C : Pada kondisi default tersebut,switch dan port mana saja yang :

- Menjadi *root bridge* : SW 2
- Menjadi *designated bridge* : SW 1 dan SW 3
- Menjadi *root port* : SW 1 Fa 0/2 dan SW 3 Fa 0/2
- Menjadi *designated port* : SW 1 Fa 0/3 , SW 2 (Fa 0/2;0/3) dan SW 3 (Fa 0/1, Fa 0/3)

Tugas 4D : Pada kondisi default tersebut, dan port mana saja yang :

- Berada pada keadaan *forwarding* : SW 1 (Fa 0/2;0/3), SW 2 (Fa 0/2;0/3) SW 3 (Fa 0/1;0/2;0/3)
- Berada pada keadaan *blocking* : Tidak ada switch dan port dalam keadaan blocking