

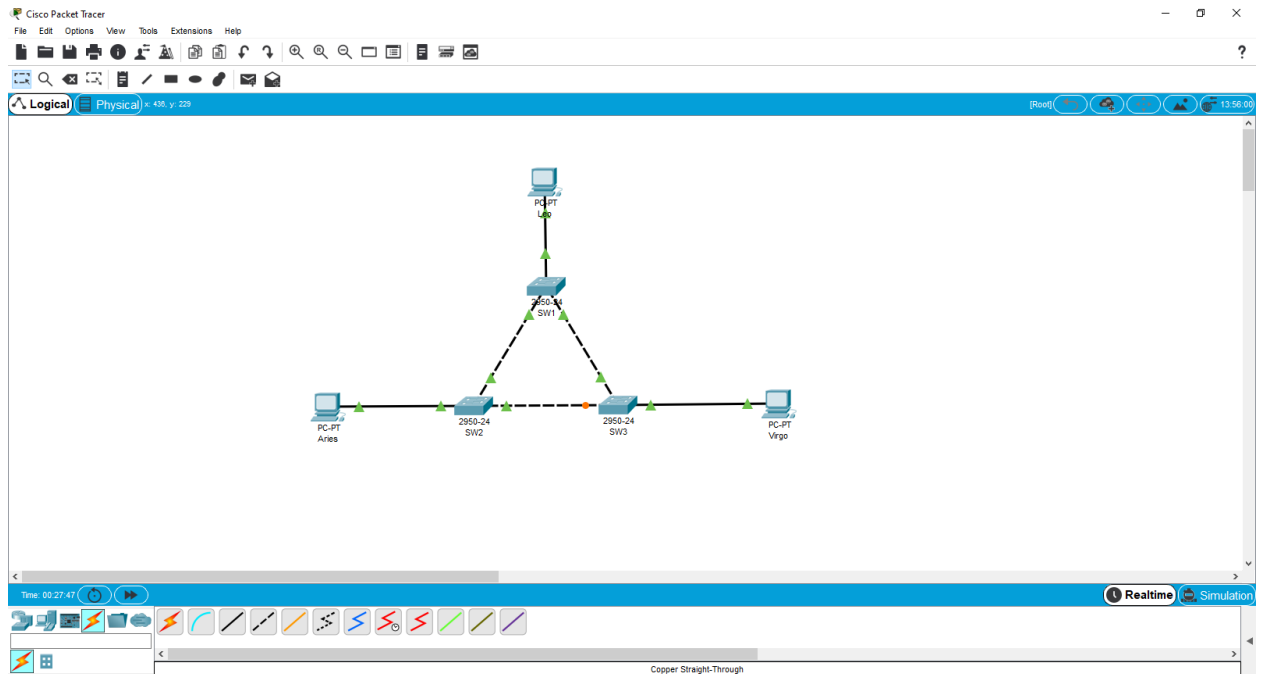
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NIM : L200180085

Kelas : C

Kegiatan 1

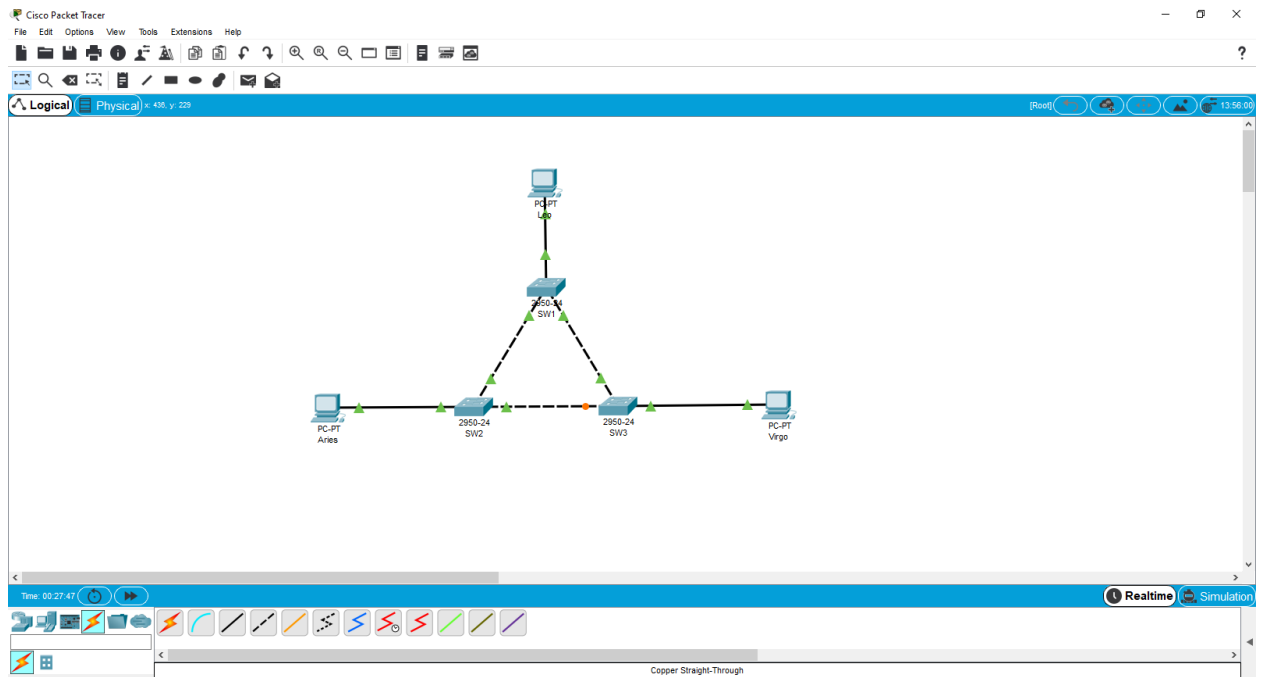
a. Buat Topologi



1A. Langkah pembuatan topologi

- Pilih pada bagian Network Devices → Switches → pilih tipe 2950-24 → letakkan 3 switch → berikan nama SW1, SW2, dan SW3 pada masing masing switch
- Pilih pada bagian End Devices → PC → letakkan 3 Komputer → berikan nama Aries, Leo, dan virgo pada masing masing komputer
- Hubungkan dengan kabel. Pilih connections → pilih icon petir lalu sambung

b. Memberi Nama pada Switch

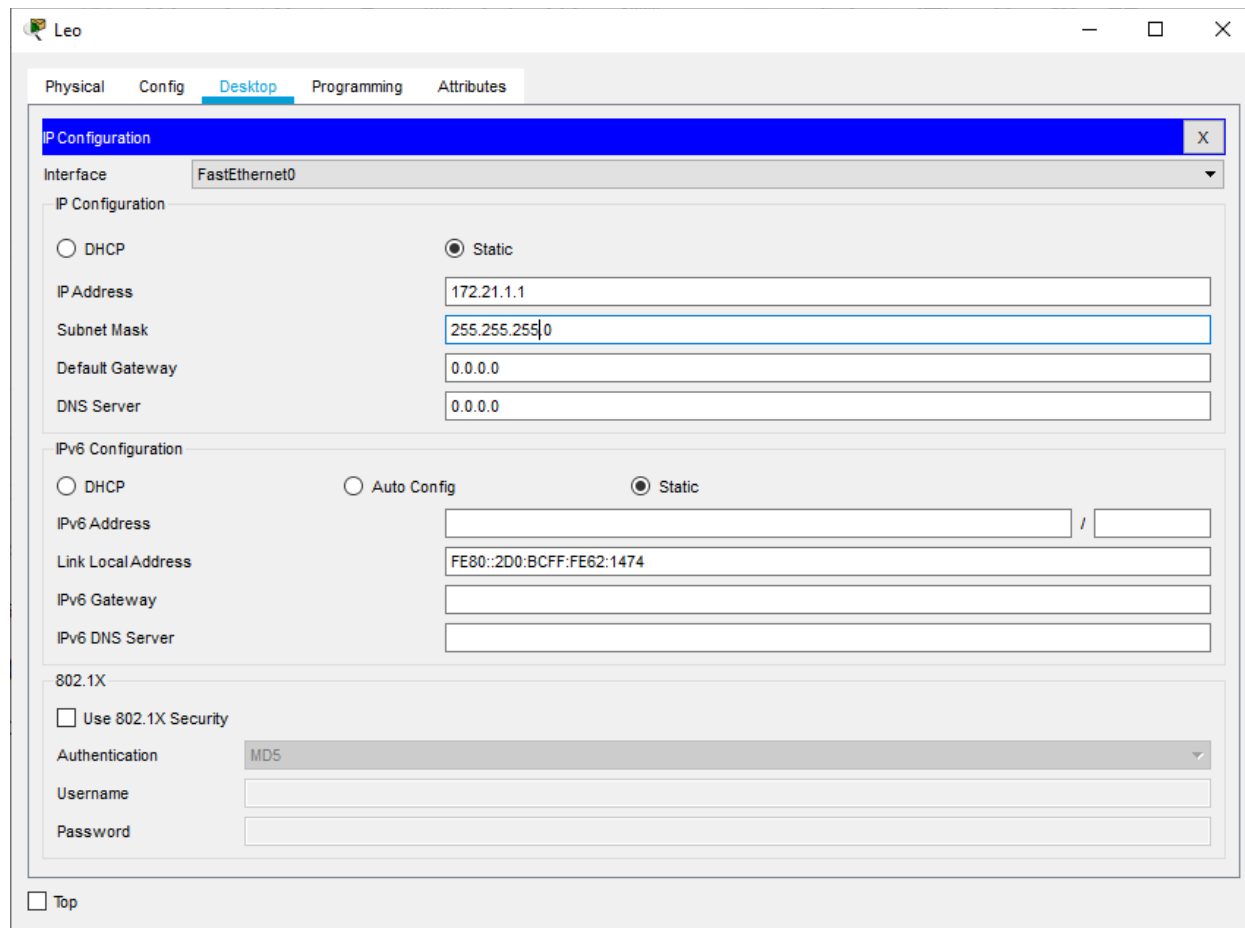


2A. Langkah pemberian nama Switch

- Switch>enable
- Switch#conf term
- Switch(config)#hostname SW1
- SW1(config)#end

c. Konfigurasi IP

- Leo



The screenshot shows the 'Leo' network configuration window with the 'Desktop' tab selected. The 'Interface' dropdown is set to 'FastEthernet0'. The 'IP Configuration' section has 'Static' selected, with fields for IP Address (172.21.1.1), Subnet Mask (255.255.255.0), Default Gateway (0.0.0.0), and DNS Server (0.0.0.0). The 'IPv6 Configuration' section has 'Static' selected, with fields for IPv6 Address, Link Local Address (FE80::2D0:BCFF:FE62:1474), IPv6 Gateway, and IPv6 DNS Server. The '802.1X' section has 'Use 802.1X Security' unchecked, with 'Authentication' set to 'MD5' and empty fields for 'Username' and 'Password'. A 'Top' button is at the bottom left.

Leo

Physical Config **Desktop** Programming Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 172.21.1.1

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::2D0:BCFF:FE62:1474

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: MD5

Username:

Password:

☐ Top

- Aries

Aries

PhysicalConfigDesktopProgrammingAttributes

IP Configuration

X

InterfaceFastEthernet0

IP Configuration

☐ DHCP

☒ Static

IP Address172.21.1.2

Subnet Mask255.255.255.0

Default Gateway0.0.0.0

DNS Server0.0.0.0

IPv6 Configuration

☐ DHCP

☐ Auto Config

☒ Static

IPv6 Address

Link Local AddressFE80::230:F2FF:FE61:5D29

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

AuthenticationMD5

Username

Password

☐ Top

- Virgo

Virgo

PhysicalConfigDesktopProgrammingAttributes

IP Configuration

X

InterfaceFastEthernet0

IP Configuration

☐ DHCP

☒ Static

IP Address172.21.1.3

Subnet Mask255.255.255.0

Default Gateway0.0.0.0

DNS Server0.0.0.0

IPv6 Configuration

☐ DHCP

☐ Auto Config

☒ Static

IPv6 Address

Link Local AddressFE80::20D:BDFE:FE4D:818E

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

AuthenticationMD5

Username

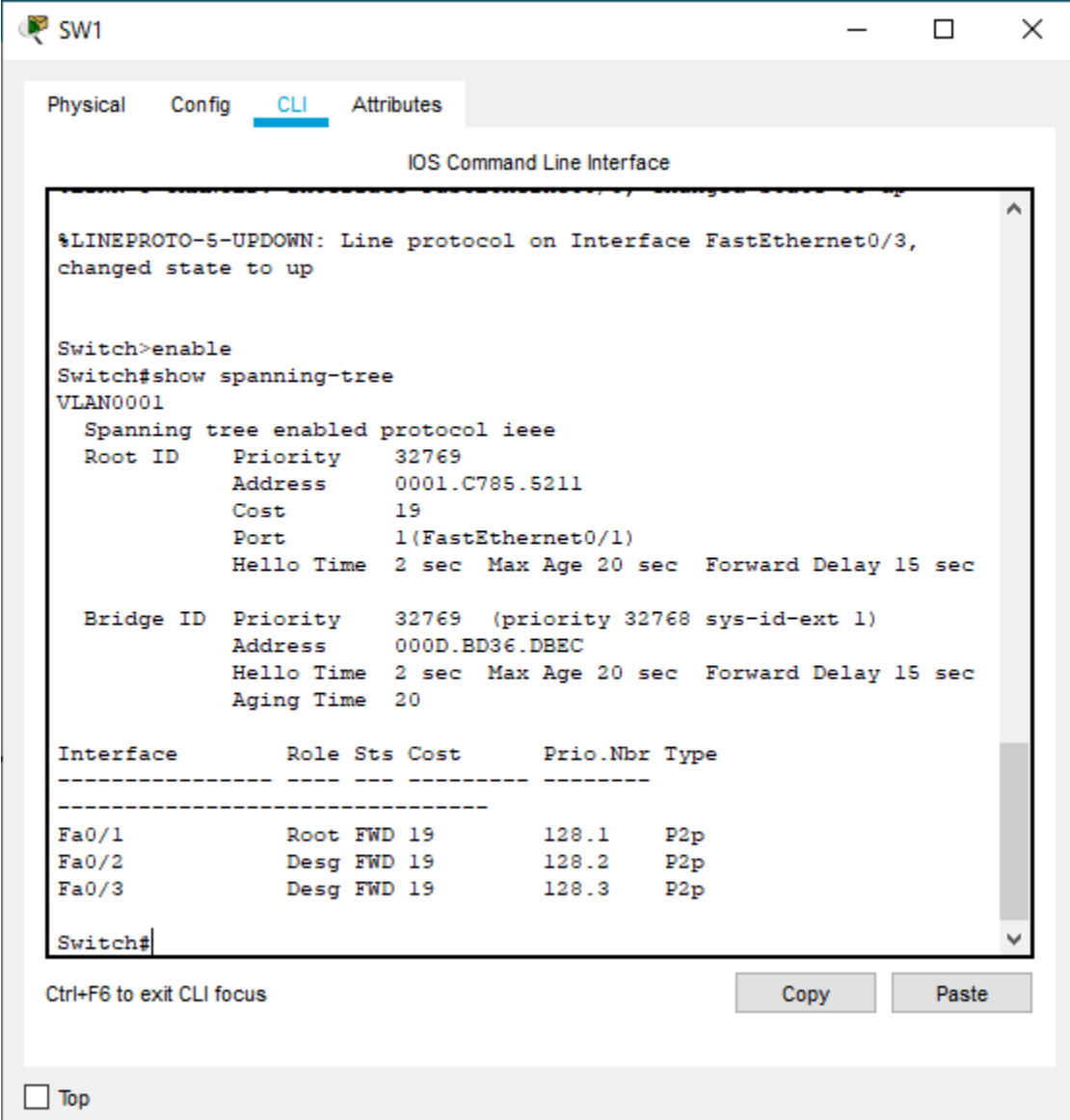
Password

☐ Top

d. Melihat Status STP

4A. Status STP Switch

- SW1



The screenshot shows the CLI interface of a switch named SW1. The 'CLI' tab is selected. The command history shows the user entering 'enable' and then 'show spanning-tree'. The output displays the STP status for VLAN0001, including the root ID, bridge ID, and a table of interface roles and costs.

Physical Config **CLI** Attributes

IOS Command Line Interface

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3,
changed state to up

Switch>enable
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0001.C785.5211
             Cost        19
             Port        1(FastEthernet0/1)
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
             Address     000D.BD36.DBEC
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
             Aging Time  20

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

Switch#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

- SW2

SW2

Physical
Config
CLI
Attributes

IOS Command Line Interface

```

-----
Fa0/2          Desg FWD 19          128.2      P2p
Fa0/3          Desg FWD 19          128.3      P2p
Fa0/1          Desg FWD 19          128.1      P2p

Switch>enable
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     0001.C785.5211
             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     0001.C785.5211
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
             Aging Time  20

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

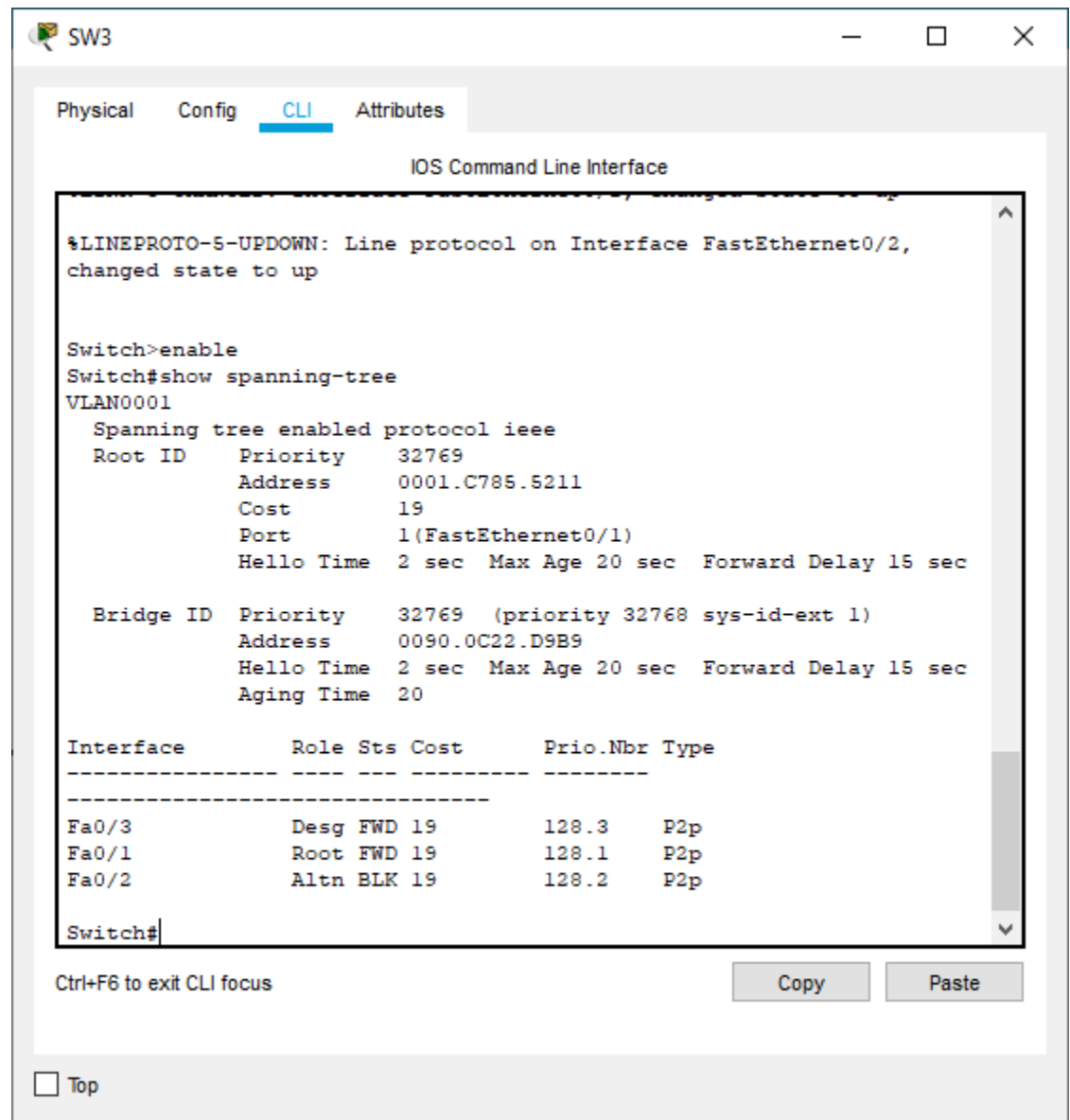
Switch#

```

Ctrl+F6 to exit CLI focus
Copy
Paste

☐ Top

- SW3



4B. Mengisi Tabel

- SW1

No	Variabel	Nilai
1	Root ID	32769
2	Priority	32769
3	MAC Address	000D.BD36.DBEC
4	Bridge ID	32769
5	Cost (0/1;0/2;0/3)	19
6	Hello Time	2 sec

7	MaxAge	20 sec
8	Forward Delay	15 sec

- SW2

No	Variabel	Nilai
1	Root ID	32769
2	Priority	32769
3	MAC Address	0001.C785.5211
4	Bridge ID	32769
5	Cost (0/1;0/2;0/3)	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

- SW3

No	Variabel	Nilai
1	Root ID	32769
2	Priority	32769
3	MAC Address	0090.0C22.D9B9
4	Bridge ID	32769
5	Cost (0/1;0/2;0/3)	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

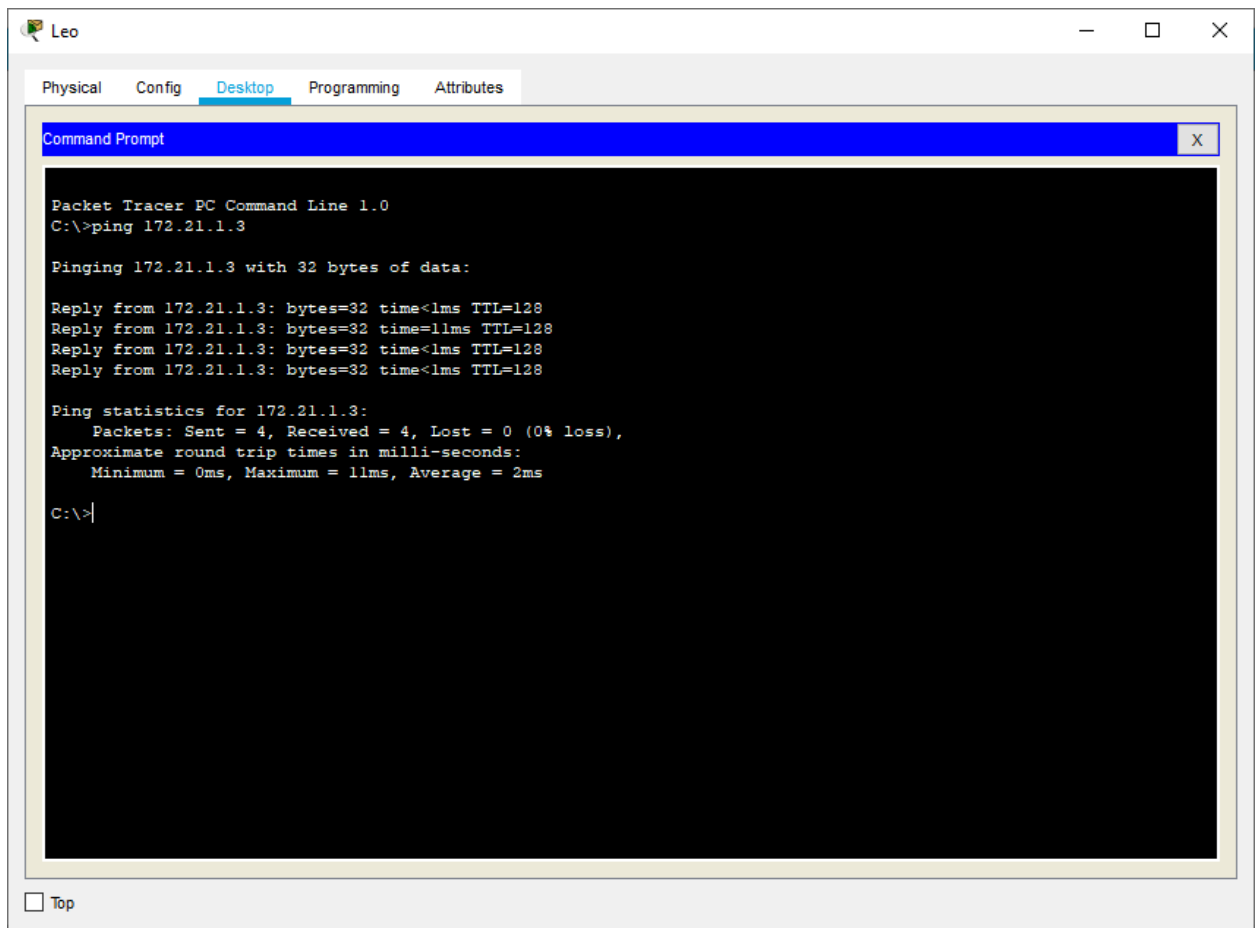
4C. Pada kondisi default tersebut, switch dan port mana saja yang:

- Menjadi root bridge : SW2
- Menjadi designated bridge : SW3
- Menjadi root part : SW1(Fa0/1), SW3(Fa0/1)
- Menjadi designated port : SW1(Fa0/2, 0/3), SW2(Fa0/1, 0/2, 0/3), SW3(Fa0/3)

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

- Berada pada keadaan forwarding : SW1(Fa0/1, 0/2, 0/3), SW2(Fa0/1, 0/2, 0/3), SW2(Fa0/1, 0/3),
- Berada pada keadaan blocking : SW03(Fa0/2)

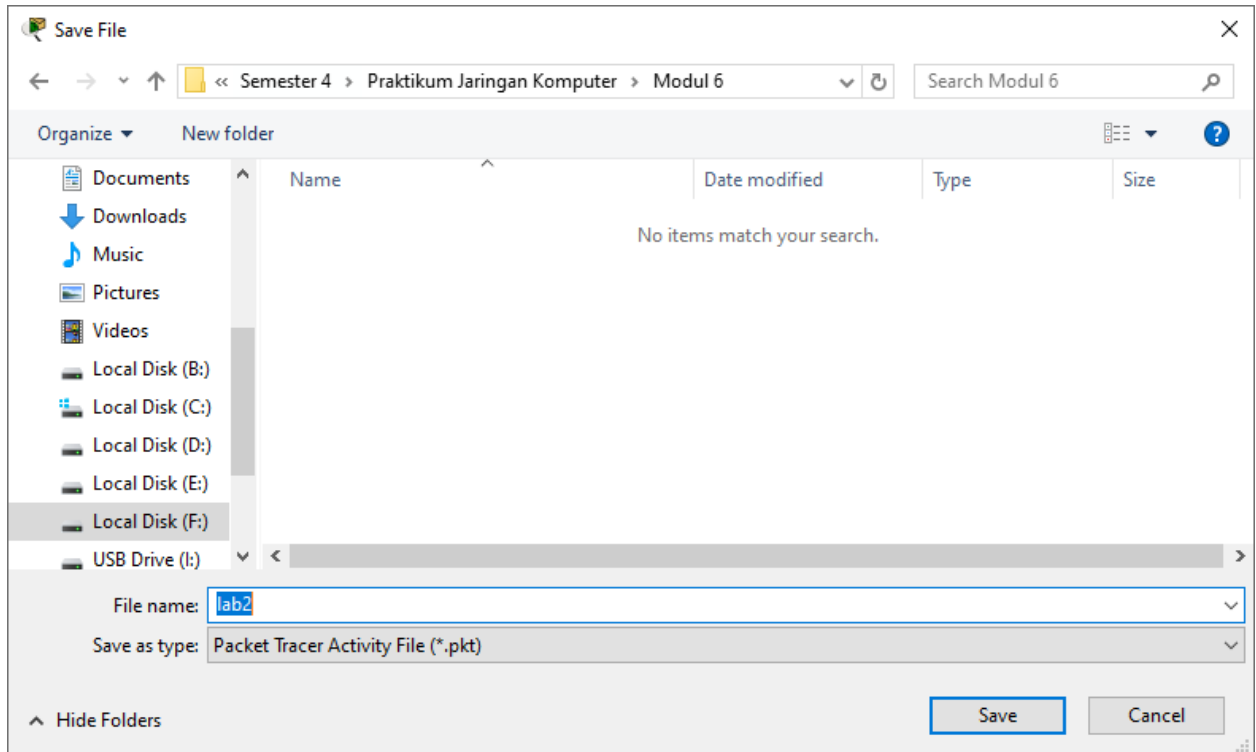
e. Melakukan Ping Leo-Virgo



5A. Langkah melakukan Ping

- Klik PC Leo
- Pilih tab desktop
- Pilih command promp
- Ketikkan ping 172.21.1.3

f. Menyimpan Konfigurasi Jaringan

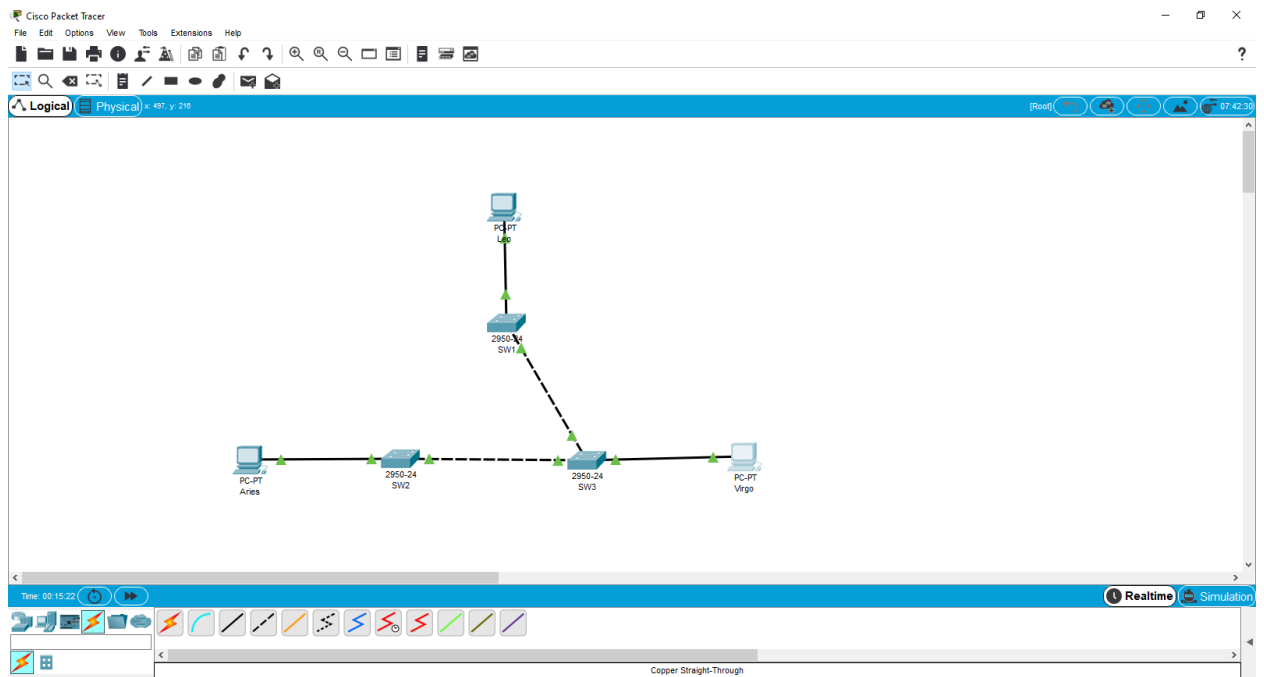


6A. Langkah untuk menyimpan

- Klik File
- Pilih Save
- Beri nama lab2.ekstensi akan menyesuaikan dengan aplikasi yg digunakan

Kegiatan 2

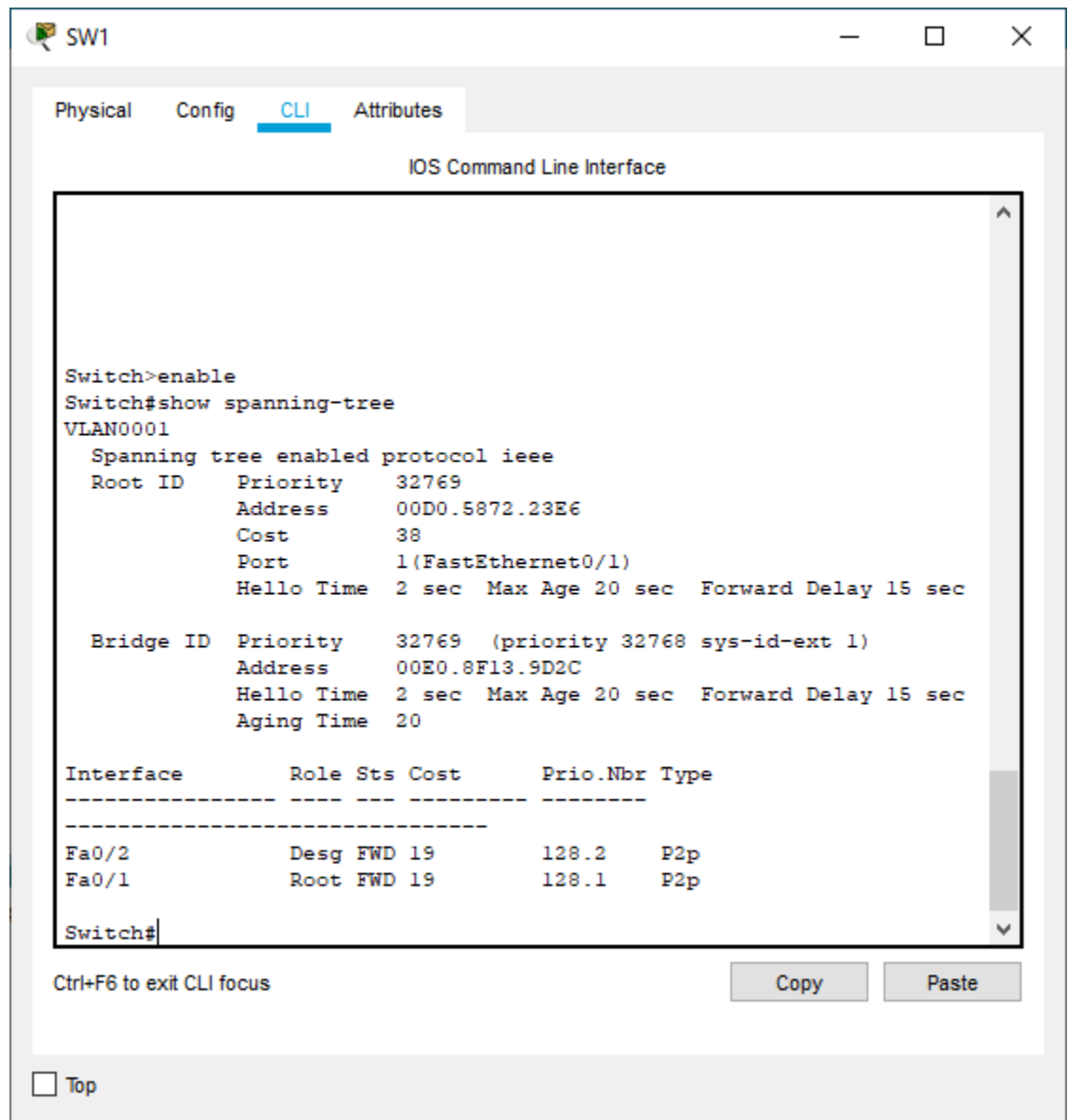
a. Buat Topologi



b. Melakukan langkah lab. 4, dan lab. 5

4A. Status STP Switch

- SW1



The screenshot shows a network switch configuration window titled 'SW1'. The 'CLI' tab is selected, displaying the 'IOS Command Line Interface'. The command 'enable' has been entered, followed by 'show spanning-tree'. The output shows the STP status for VLAN0001, including the root ID, priority, address, cost, port, and hello time. Below this, a table lists the interfaces and their roles in the STP topology.

```
Switch>enable
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     00D0.5872.23E6
             Cost        38
             Port        1(FastEthernet0/1)
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
             Address     00E0.8F13.9D2C
             Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
             Aging Time  20

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

Switch#
```

Ctrl+F6 to exit CLI focus

Copy Paste

Top

- SW2

SW2

Physical

Config

CLI

Attributes

IOS Command Line Interface

```

%LINK-5-CHANGED: Interface FastEthernet0/2, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2,
changed state to up

Switch>enable
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
             Address     00D0.5872.23E6
             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     00D0.5872.23E6
             Hello Time 2 sec  Max Age 20 sec  Forward Delay 15 sec
             Aging Time  20

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

Switch#

```

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top

- SW3

The screenshot shows the CLI window for SW3. The 'CLI' tab is selected. The window displays the following text:

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3,
changed state to up

Switch>enable
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
    Root ID    Priority    32769
              Address      00D0.5872.23E6
              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      00E0.F928.978C
              Hello Time   2 sec  Max Age 20 sec  Forward Delay 15 sec
              Aging Time   20

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

Switch#
```

Below the CLI window, there is a text prompt "Ctrl+F6 to exit CLI focus" and two buttons: "Copy" and "Paste". At the bottom left, there is a checkbox labeled "Top".

4B. Mengisi Tabel

- SW1

No	Variabel	Nilai
1	Root ID	32769
2	Priority	32769
3	MAC Address	00E0.8F13.9D2C
4	Bridge ID	32769
5	Cost (0/1;0/2;0/3)	38
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

- SW2

No	Variabel	Nilai
1	Root ID	32769
2	Priority	32769
3	MAC Address	00D0.5872.23E6
4	Bridge ID	32769
5	Cost (0/1;0/2;0/3)	19
6	Hello Time	2 sec
7	MaxAge	20 se
8	Forward Delay	15 sec

- SW3

No	Variabel	Nilai
1	Root ID	32769
2	Priority	32769
3	MAC Address	00E0.F928.978C
4	Bridge ID	32769
5	Cost (0/1;0/2;0/3)	19
6	Hello Time	2 sec
7	MaxAge	20 sec
8	Forward Delay	15 sec

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

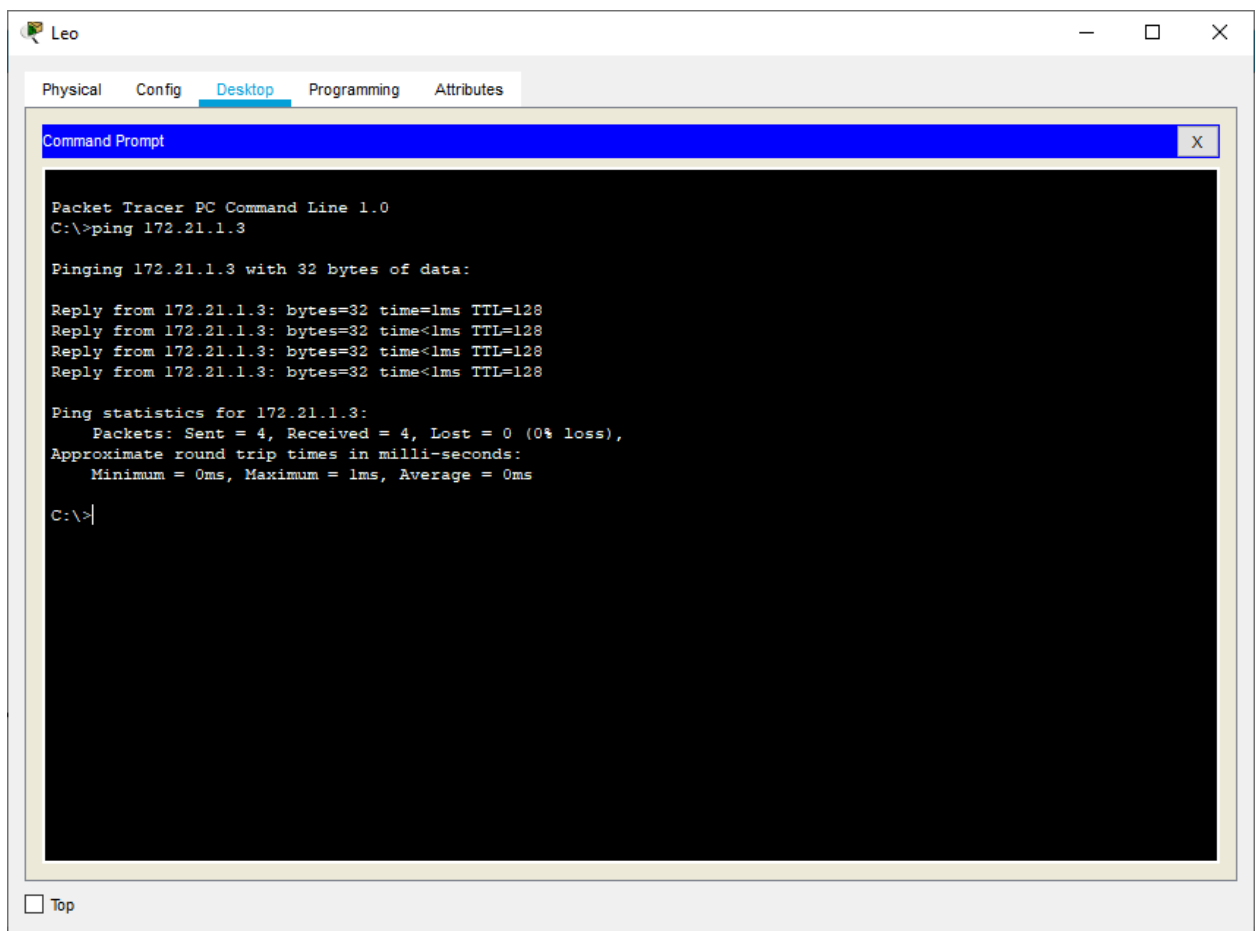
- Menjadi root bridge : SW2
- Menjadi designated bridge : SW3

- Menjadi root part : SW1(Fa0/1), SW3(Fa0/2)
- Menjadi designated port : SW1(Fa0/2), SW2(Fa0/1, 0/2), SW3(Fa0/1, 0/3)

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

- Berada pada keadaan forwarding : SW1(Fa0/1, 0/2), SW2(Fa0/1, 0/2), SW2(Fa0/1, 0/2, 0/3),
- Berada pada keadaan blocking : -

c. Melakukan Ping Leo-Virgo



```

Leo
Physical Config Desktop Programming Attributes
Command Prompt
Packet Tracer PC Command Line 1.0
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 = 1ms, Average = 0ms

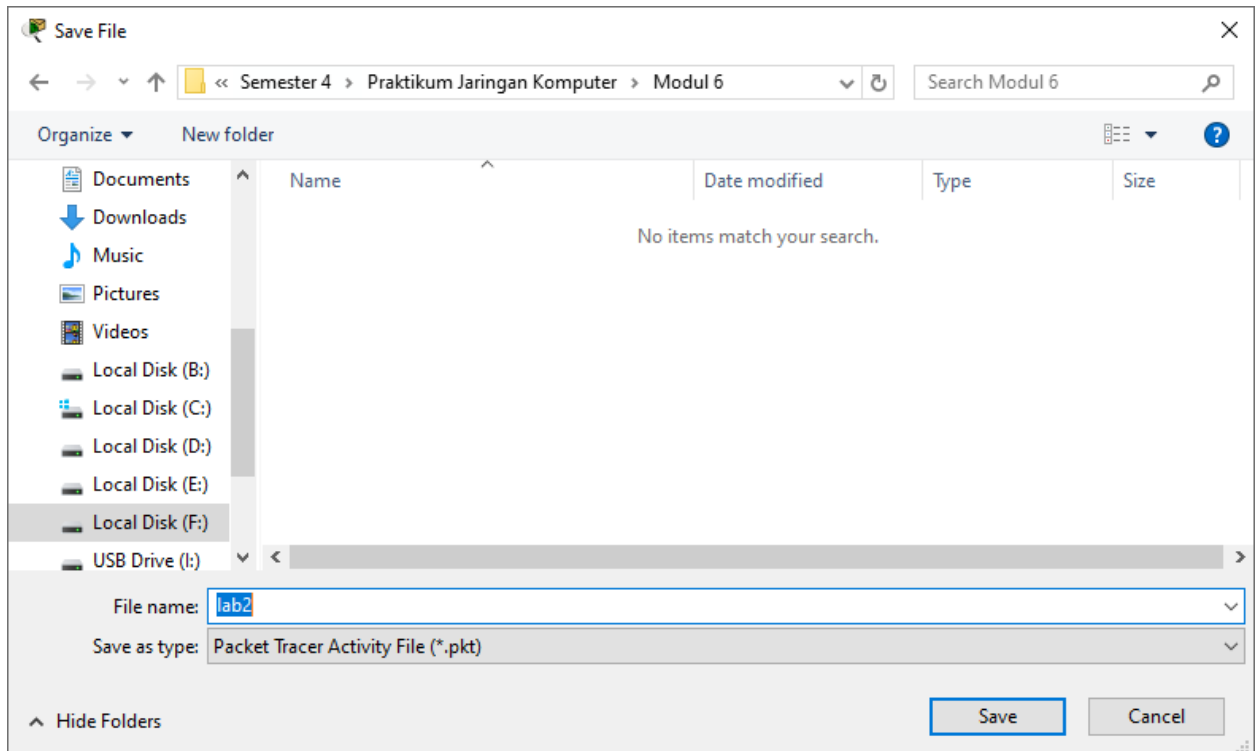
C:\>
  
```

5A. Langkah melakukan Ping

- Klik PC Leo

- Pilih tab desktop
- Pilih command promp
- Ketikkan ping 172.21.1.3

d. Menyimpan Konfigurasi Jaringan



6A. Langkah untuk menyimpan

- Klik File
- Pilih Save
- Beri nama lab2.ekstensi akan menyesuaikan dengan aplikasi yg digunakan