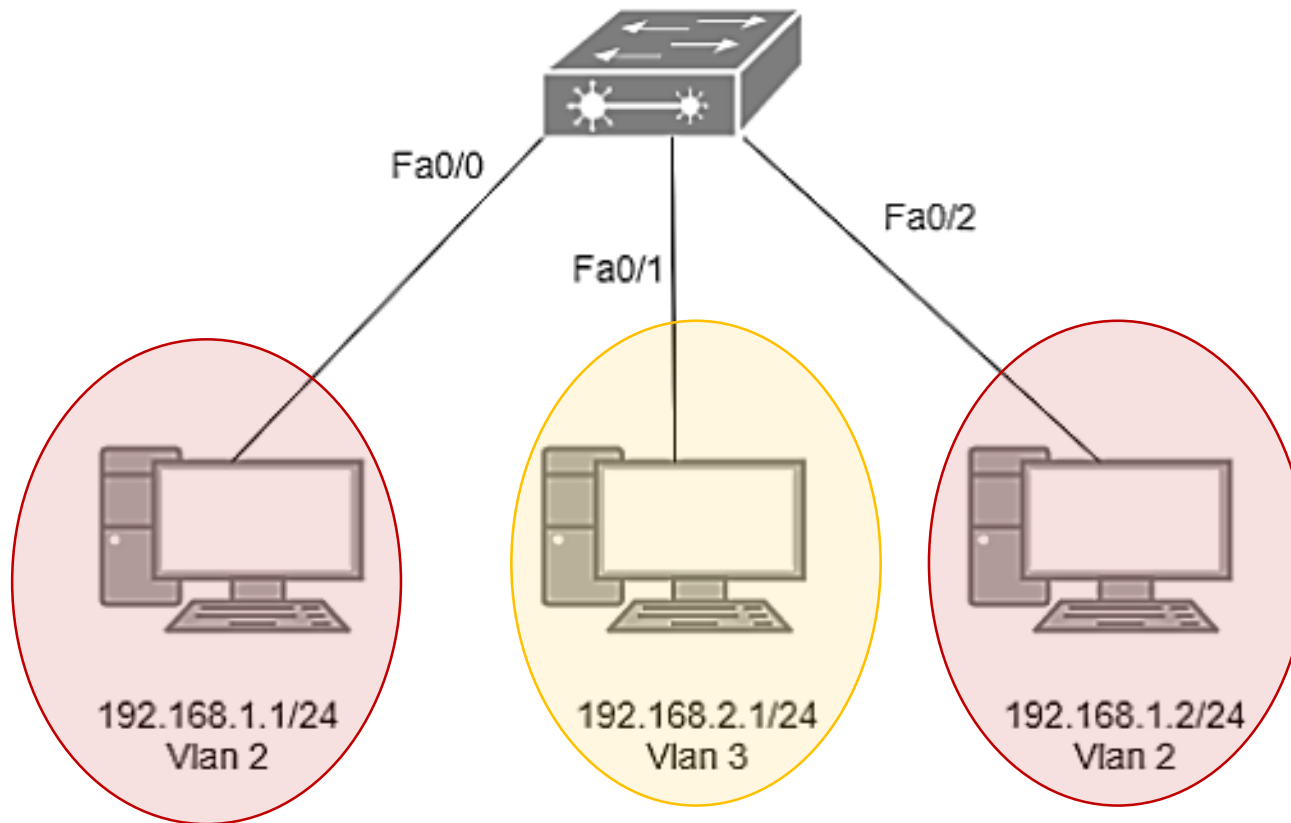
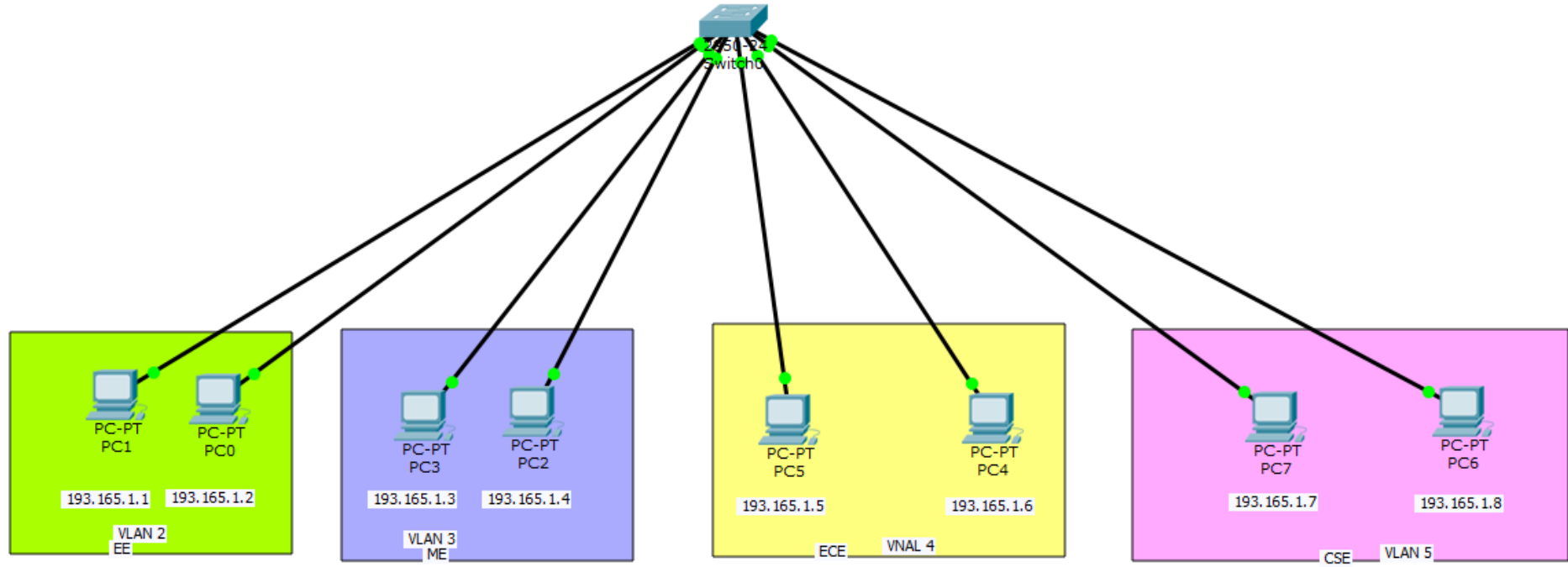


# Assignment 6: Configuration of VLAN (Virtual Local Area Network) in Cisco Packet Tracer tool

**VLAN: A virtual local area network or VLAN is a logical grouping of devices connected to a single Ethernet segment. VLAN is a way of logically separating a group of computers into a separate network. This means they will only communicate with each other and not with any other devices connected to the same physical network. It's like having a private wireless network at home.**





```
config t
hostname sw1
```

```
vlan 2
name EE
```

```
vlan 3
name ME
```

```
vlan 4
name ECE
```

```
vlan 5
name CSE
```

Why not VLAN1? VLAN 1 is default VLAN in the switch. In port column the last row is VLAN1.

Port	Link	VLAN	IP Address	MAC Address
FastEthernet0/1	Down	1	--	0001.43C0.6401
FastEthernet0/2	Down	1	--	0001.43C0.6402
FastEthernet0/3	Down	1	--	0001.43C0.6403
FastEthernet0/4	Down	1	--	0001.43C0.6404
FastEthernet0/5	Down	1	--	0001.43C0.6405
FastEthernet0/6	Down	1	--	0001.43C0.6406
FastEthernet0/7	Down	1	--	0001.43C0.6407
FastEthernet0/8	Down	1	--	0001.43C0.6408
FastEthernet0/9	Down	1	--	0001.43C0.6409
FastEthernet0/10	Down	1	--	0001.43C0.640A
FastEthernet0/11	Down	1	--	0001.43C0.640B
FastEthernet0/12	Down	1	--	0001.43C0.640C
FastEthernet0/13	Down	1	--	0001.43C0.640D
FastEthernet0/14	Down	1	--	0001.43C0.640E
FastEthernet0/15	Down	1	--	0001.43C0.640F
FastEthernet0/16	Down	1	--	0001.43C0.6410
FastEthernet0/17	Down	1	--	0001.43C0.6411
FastEthernet0/18	Down	1	--	0001.43C0.6412
FastEthernet0/19	Down	1	--	0001.43C0.6413
FastEthernet0/20	Down	1	--	0001.43C0.6414
FastEthernet0/21	Down	1	--	0001.43C0.6415
FastEthernet0/22	Down	1	--	0001.43C0.6416
FastEthernet0/23	Down	1	--	0001.43C0.6417
FastEthernet0/24	Down	1	--	0001.43C0.6418
Vlan1	Down	1	<not set>	000D.BD5E.4350
Hostname: Switch				
Physical Location: Intercity, Home City, Corporate Office, Main Wiring Closet				

Now we need to create VLAN2, VLAN3, VLAN4, VLAN5. Click on the switch and go to CLI.

## IOS Command Line Interface

```
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to
up

%LINK-5-CHANGED: Interface FastEthernet0/2, changed state to up

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

%LINK-5-CHANGED: Interface FastEthernet0/3, changed state to up

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

%LINK-5-CHANGED: Interface FastEthernet0/4, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4, changed state to
up

%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
```

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Now using the **enable** command you can enter to the **privilege execution mode**. Now to create a VLAN you have to enter in the **configuration mode** using **config t** command.



## IOS Command Line Interface

```
%LINK-5-CHANGED: Interface FastEthernet0/4, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4, changed state to
up
%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#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#vlan 2
Switch(config-vlan)#name EE
Switch(config-vlan)#exit
Switch(config)#vlan 3
Switch(config-vlan)#name ME
Switch(config-vlan)#exit
Switch(config)#vlan 4
Switch(config-vlan)#name ECE
Switch(config-vlan)#exit
Switch(config)#
```

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Now VLAN2, VLAN3, VLAN4, VLAN5 are created.  
Next task is VLAN configuration with the interface.



## IOS Command Line Interface

```
Swit>
Swit>
Swit> Switch>enable
Swit> Switch#config t
Enter configuration commands, one per line.  End with CNTL/Z.
% In> Switch(config)#interface fastethernet 0/2
Swit> Switch(config-if)#switchport access vlan 2
Swit> Switch(config-if)#exit
Swit> Switch(config)#interface fastethernet 0/1
Swit> Switch(config-if)#switchport access vlan 2
Swit> Switch(config-if)#exit
Swit> Switch(config)#interface fastethernet 0/4
%SYS> Switch(config-if)#switchport access vlan 3
Switch(config-if)#exit
Swit> Switch(config)#interface fastethernet 0/3
Ente> Switch(config-if)#switchport access vlan 3
Swit> Switch(config-if)#exit
Swit> Switch(config)#interface fastethernet 0/6
Swit> Switch(config-if)#switchport access vlan 4
Swit> Switch(config-if)#exit
Swit> Switch(config)#interface fastethernet 0/5
Swit> Switch(config-if)#switchport access vlan 4
Swit> Switch(config-if)#exit
Swit> Switch(config)#interface fastethernet 0/8
Swit> Switch(config-if)#switchport access vlan 5
Swit> Switch(config-if)#exit
Swit> Switch(config)#interface fastethernet 0/7
Swit> Switch(config-if)#switchport access vlan 5
Swit> Switch(config-if)#exit
Swit> Switch(config)#
Switch(config)#interface fastethernet 0/6
Switch(config-if)#switchport access vlan 4
Switch(config-if)#exit
Switch(config)#
```

All the interfaces are configured via VLAN, now check the VLAN configuration using a ping command.

# Command Prompt



```
Reply from 193.165.1.6: bytes=32 time=1ms TTL=128
```

```
Reply from 193.165.1.6: bytes=32 time=0ms TTL=128
```

```
Ping statistics for 193.165.1.6:
```

```
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
```

```
Approximate round trip times in milli-seconds:
```

```
    Minimum = 0ms, Maximum = 6ms, Average = 1ms
```

```
PC> PING 193.165.1.2
```

```
Pinging 193.165.1.2 with 32 bytes of data:
```

```
Reply from 193.165.1.2: bytes=32 time=1ms TTL=128
```

```
Reply from 193.165.1.2: bytes=32 time=0ms TTL=128
```

```
Reply from 193.165.1.2: bytes=32 time=0ms TTL=128
```

```
Reply from 193.165.1.2: bytes=32 time=0ms TTL=128
```

```
Ping statistics for 193.165.1.2:
```

```
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
```

```
Approximate round trip times in milli-seconds:
```

```
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

```
PC> PING 193.165.1.5
```

```
Pinging 193.165.1.5 with 32 bytes of data:
```

```
Request timed out.
```

```
Request timed out.
```