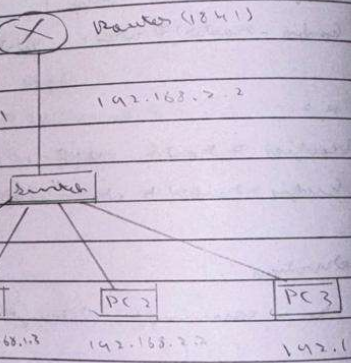
LAB-8

Aim:
To create virtual LAN/VLAN

Devices used:
Router, switch, end devices

Topology




Procedure:

(i) Create the topology seen above using router 1841

(ii) Assign IP addresses as shown in the topo

(iii) Go to the switch and choose VLAN to configure the VLAN. Give the VLAN and VLAN number and add it here take it as "two" and "2".

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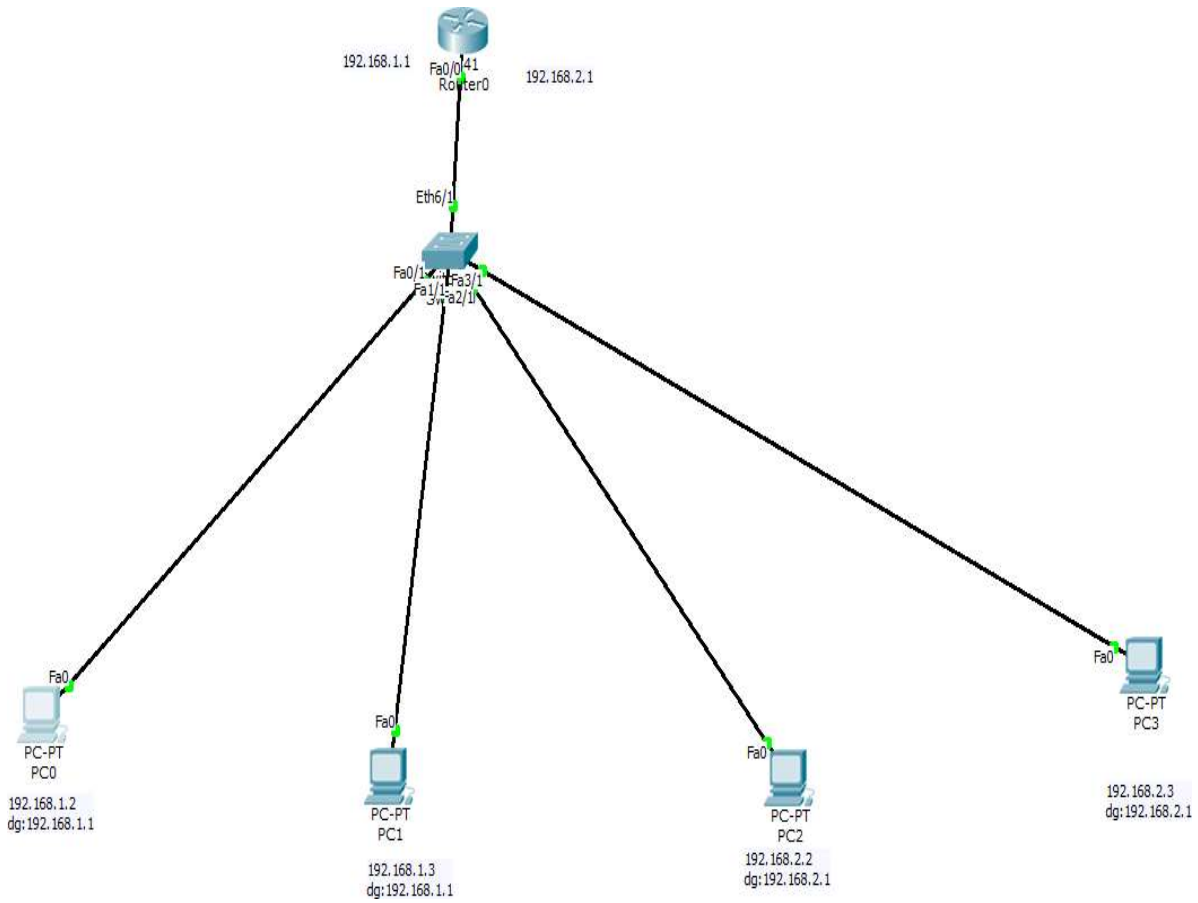
(iv) Select the interface i.e fastethernet 4/1 (port switch from router) and make it Trunk.
(VLAN trunking allows switches to forward frames from different VLANS over a single link called trunk)

(v) To make the router understand VLAN, go to the router's config tab and select VLAN database. Enter the number and name of VLAN created ('Exam' and 'i here).

(vi) Go to the router CLI

Router # config terminal
Router (config) # interface fastethernet 0/0.1
Router (config-subif) #
#encapsulation dot1q 2
# ip address 192.168.2.1 255.255.255.0
# no shut
# exit
Router (config) # exit

Observation:
- Proper trunk configuration is established to make VLAN work properly
- Ping from any one VLAN to another one is works properly.


192.168.1.1
Fa0/0
Router0
192.168.2.1
Eth6/1
Fa0/1
Fa1/1
Fa2/1
Fa3/1
Fa0
PC-PT
PC0
192.168.1.2
dg:192.168.1.1
Fa0
PC-PT
PC1
192.168.1.3
dg:192.168.1.1
Fa0
PC-PT
PC2
192.168.2.2
dg:192.168.2.1
Fa0
PC-PT
PC3
192.168.2.3
dg:192.168.2.1

## Command Prompt

```
Packet Tracer PC Command Line 1.0
PC>ping 192.168.2.2

Pinging 192.168.2.2 with 32 bytes of data:

Request timed out.
Reply from 192.168.2.2: bytes=32 time=0ms TTL=127
Reply from 192.168.2.2: bytes=32 time=0ms TTL=127
Reply from 192.168.2.2: bytes=32 time=4ms TTL=127

Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 4ms, Average = 1ms

PC>ping 192.168.2.2

Pinging 192.168.2.2 with 32 bytes of data:

Reply from 192.168.2.2: bytes=32 time=0ms TTL=127
Reply from 192.168.2.2: bytes=32 time=0ms TTL=127
Reply from 192.168.2.2: bytes=32 time=2ms TTL=127
Reply from 192.168.2.2: bytes=32 time=0ms TTL=127

Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 2ms, Average = 0ms

PC>ping 192.168.2.3

Pinging 192.168.2.3 with 32 bytes of data:

Request timed out.
Reply from 192.168.2.3: bytes=32 time=3ms TTL=127
Reply from 192.168.2.3: bytes=32 time=2ms TTL=127
Reply from 192.168.2.3: bytes=32 time=1ms TTL=127

Ping statistics for 192.168.2.3:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 3ms, Average = 2ms

PC>ping 192.168.2.3

Pinging 192.168.2.3 with 32 bytes of data:

Reply from 192.168.2.3: bytes=32 time=0ms TTL=127
Reply from 192.168.2.3: bytes=32 time=0ms TTL=127
Reply from 192.168.2.3: bytes=32 time=2ms TTL=127
Reply from 192.168.2.3: bytes=32 time=0ms TTL=127

Ping statistics for 192.168.2.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 2ms, Average = 0ms

PC>
```