

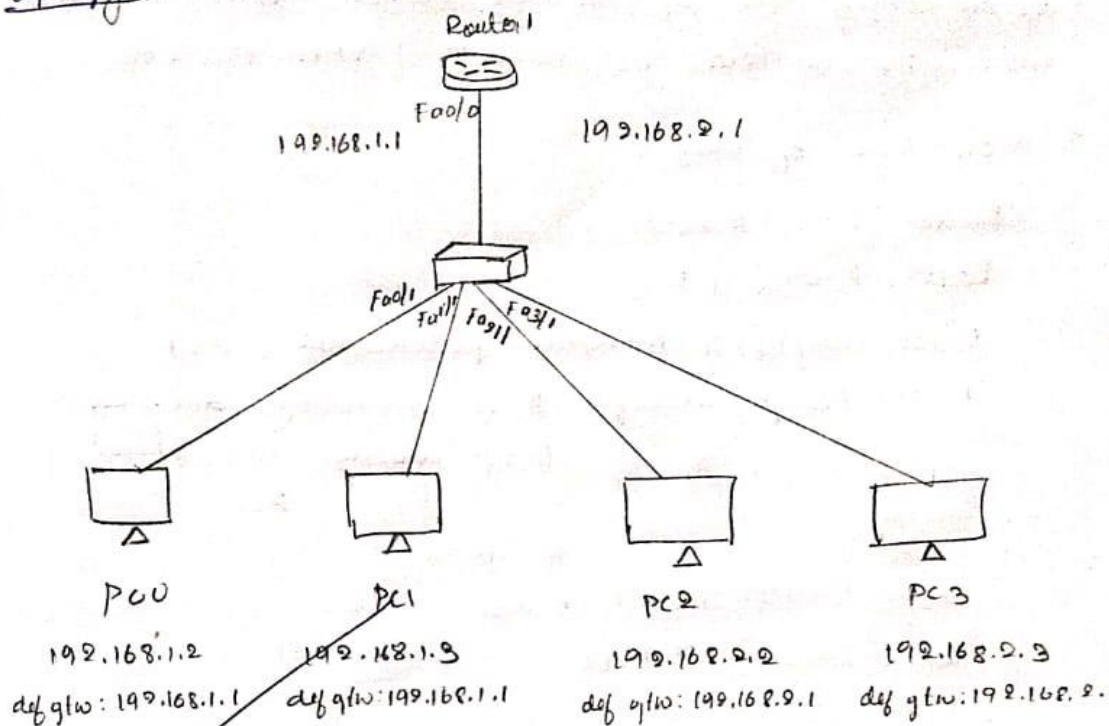
PROGRAM11: To construct a VLAN and make the PC's communicate among a VLAN

OBSERVATION:

Q] Creating a VLAN and make PC's communicate among the VLAN

Ans:- To configure VLAN and make PC's communicate each other.

Topology:



Procedure :-

- * Select 1841 router and connect to switch.
- * connect HPC's to switch.
- * assign IP addresses and gtw to the PC's as shown in the topology.
- * configure Router for 1st 3 PC's for def gtw: 192.168.1.1

enable

conf t

interface fastethernet 0/0

ip address 192.168.1.1 255.255.255.0

no shut

exit

- * Go to switch and enter `conf t` select VLAN Database
- * Set the VLAN number to 2
- * Set VLAN name bmsce and check AD/D
- * Go to fastethernet 1/1 and set access or trunk
- * Go to fastethernet 0/1 and set access or trunk
- * Go to config tab of switch select VLAN Database enter the number and name of vian created
- * Go to CLI of router:

Router (vian) # exit

Router # config t

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

Router (config-subif) # exit

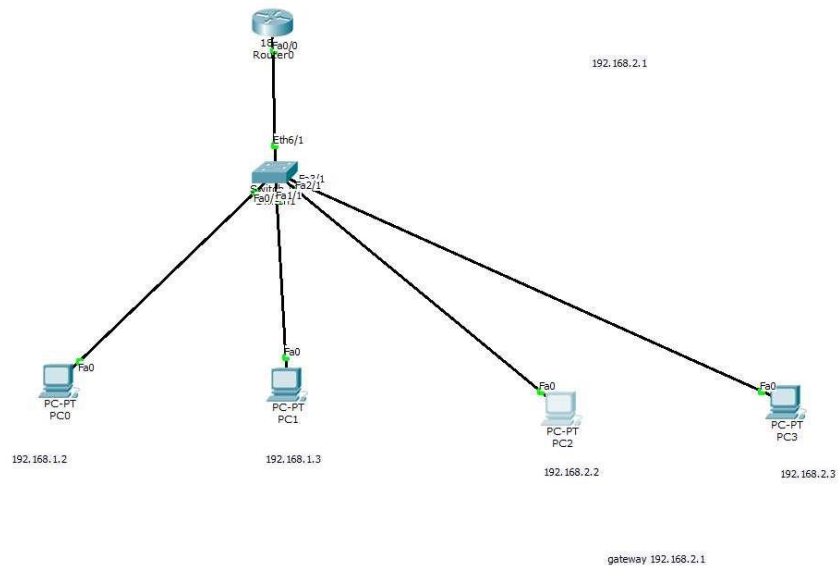
Router (config) # exit

- * Ping PC of one def gateway to the PC's of other gtw.

Observation:-

- * VLAN truncating allows switches to forward from d/f VLAN, over single link cabled trunk.
- * This is done by adding adding header (p) called tag to ethernet frame. This process is called tagging
- * The switch understands VLAN
- * The router understands VLAN

TOPOLOGY:



OUTPUT:

```
PC0
Physical Config Desktop Custom Interface
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=5ms TTL=127
Reply from 192.168.2.2: bytes=32 time=3ms 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 = 5ms, Average = 2ms

PC>
```