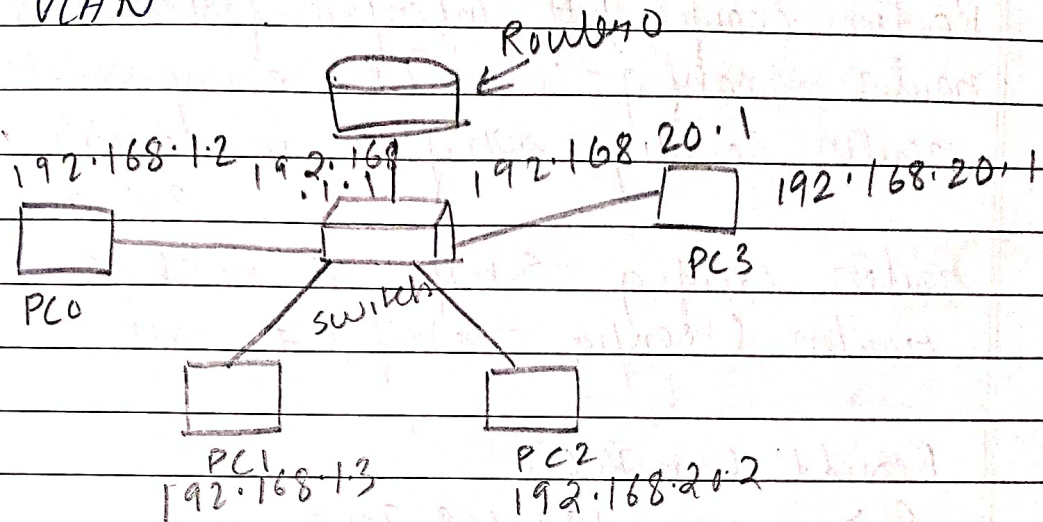


10-8-23

Aim: To construct a VLAN and make the PC communicate among VLAN



### Procedure

- 1) Set up the topology as shown above, use 1891 router.
- 2) Add an extra port to the switch as its needed
- 3) use copper straight through wire set the IP address & gateway
- 4) In switch → config → VLAN database give any VLAN number, here 20 and VLAN name - here - NEWVLAN.
- 5) Select add, select the interface here fastethernet 0/1 (create the switch from router)
- 6) Look into fast ethernet 2/1 and 3/1 and change VLAN 1 to 20 NEWVLAN
- 7) And in router select VLAN database, enter the number and name of VLAN created. In CLI of router.

```

router (VLAN) # config t
router (config) # interface fastethernet 0/0
router (config-if) # ip address 192.168.1.1 255.255.255.255
router (config-if) # no shut.
  
```



```

Router (config) # interface fast ethernet 0/0
router (config-subif) # encapsulation dot1q 20
router (config-subif) # ip address 192.168.20.1
                        255.255.255.0

router (config-subif) # no shut
router (config-subif) # exit

```

Result:- (in PC0)

```

PC> ping 192.168.20.3
pinging 192.168.20.1 with 32 bytes of data
reply from 192.168.20.3 bytes=32 time=0ms TTL=128
reply from 192.168.20.3 bytes=32 time=0ms TTL=128
reply from 192.168.20.3 bytes=32 time=0ms TTL=128
reply from 192.168.20.3 bytes=32 time=0ms TTL=128
Ping statistics for 192.168.20.3
    Packets: Sent = 4, Received = 4, Lost = 0 (0%)
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

```

### Observation

- 1) VLAN → virtual local area network is any broadcast domain that is fashioned and isolated in complete network at the data link layer.
- 2) It is a virtualized connection that connects multiple devices and network nodes from different LAN into one logical network.



