

## EXPERIMENT-10

Aim: To understand the operation of TELNET by accessing the router in the server room from a PC in the IT office.

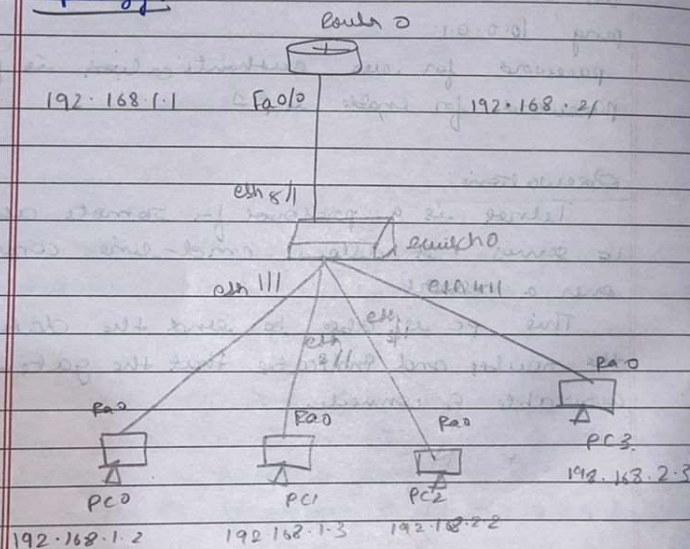
Topology , Procedure and Observation:

### Experiment 10:

- Q. To configure VLAN and the PCs communicate along a VLAN.

Aim: Construct a VLAN & enable communication between PCs among a VLAN

### Topology:



Connect 4 PCs to the switch and a router as well to the switch. Assign the IP address to the PC's & set def gateway

### Procedure:

1. Choose the 1841 router & connect to a switch & 4 PC's via ethernet interface & fastethernet interface respectively

2. Set  
router  
fastr  
# con  
# int  
# ip  
# n

3. in  
VLAN  
4. Set  
the PC  
it to  
def  
VLAN

5. Tr  
info  
6. lo  
switch

Config  
encl

Router  
# co  
# e  
# l  
# ip  
#  
# e  
# s

2. Set the IP addresses of the PCs & config the router 3 with IP address 192.168.1.1  
 Router > enable

# config t

# interface Fa 0/0

# ip address 192.168.1.1 255.255.255.0

# no shut

3. in the switch, go to config tab & select VLAN database

4. Set the VLAN number & VLAN name. Select the interface, i.e., fastethernet 5/1 & make it the trunk. VLAN trunking allows switches to forward frame from diff. VLAN over a single link called trunk

5. This is done by adding additional header info called tag to the ethernet frame

6. look into the interface of the switch & create 2 new VLAN systems

Config tab of switch select VLAN DATABASE  
 enter number & name of VLAN created

Router (R1) # exit

# config t

# interface fastethernet 0/0.1

# encapsulation dot1q 2

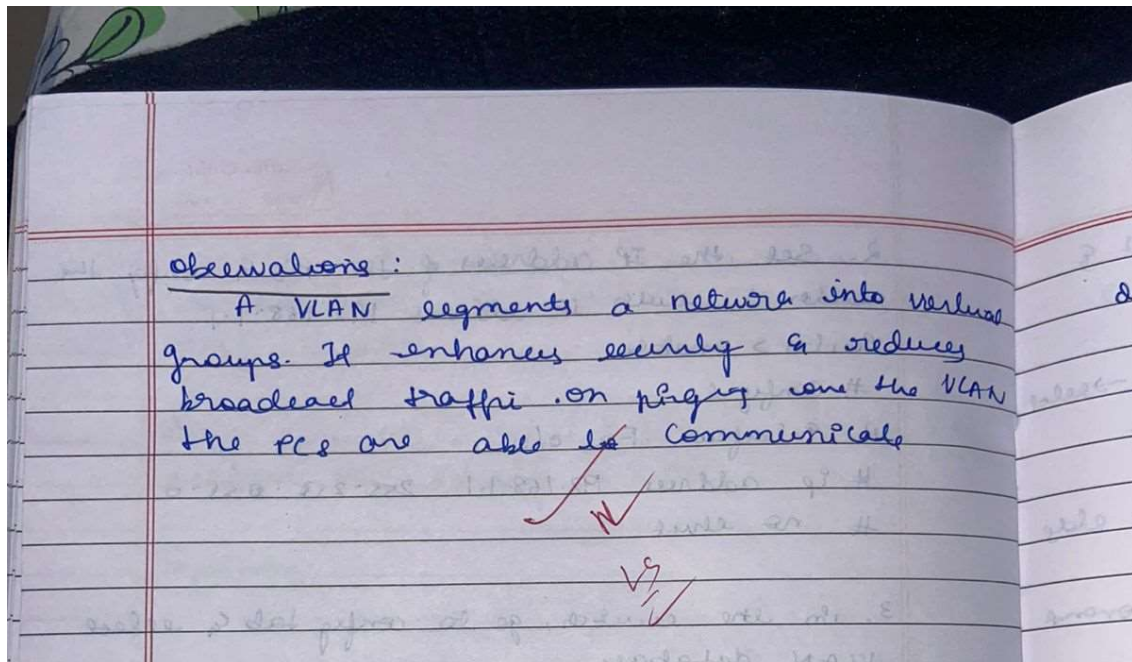
# ip address 192.168.2.1 255.255.255.0

# no shut

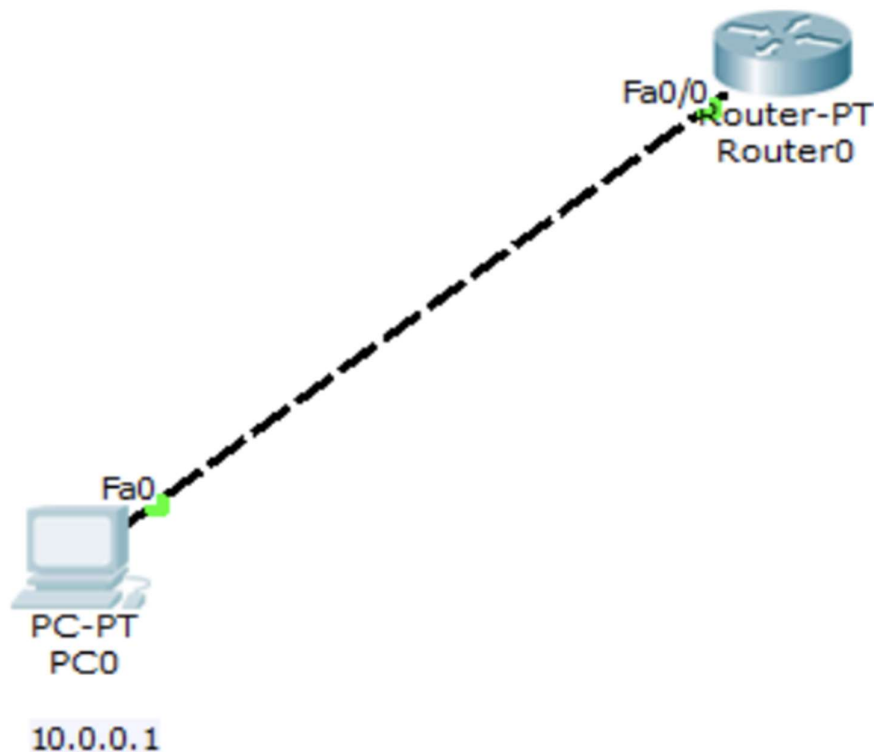
# exit

# exit





### Screenshots:



## Command Prompt

```
Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.2

Pinging 10.0.0.2 with 32 bytes of data:

Reply from 10.0.0.2: bytes=32 time=0ms TTL=255
Reply from 10.0.0.2: bytes=32 time=0ms TTL=255
Reply from 10.0.0.2: bytes=32 time=0ms TTL=255
Reply from 10.0.0.2: bytes=32 time=0ms TTL=255

Ping statistics for 10.0.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

PC>telnet 10.0.0.2
Trying 10.0.0.2 ...Open

User Access Verification

Password:
R1>enable
Password:
R1#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

C    10.0.0.0/8 is directly connected, FastEthernet0/0
R1#
```