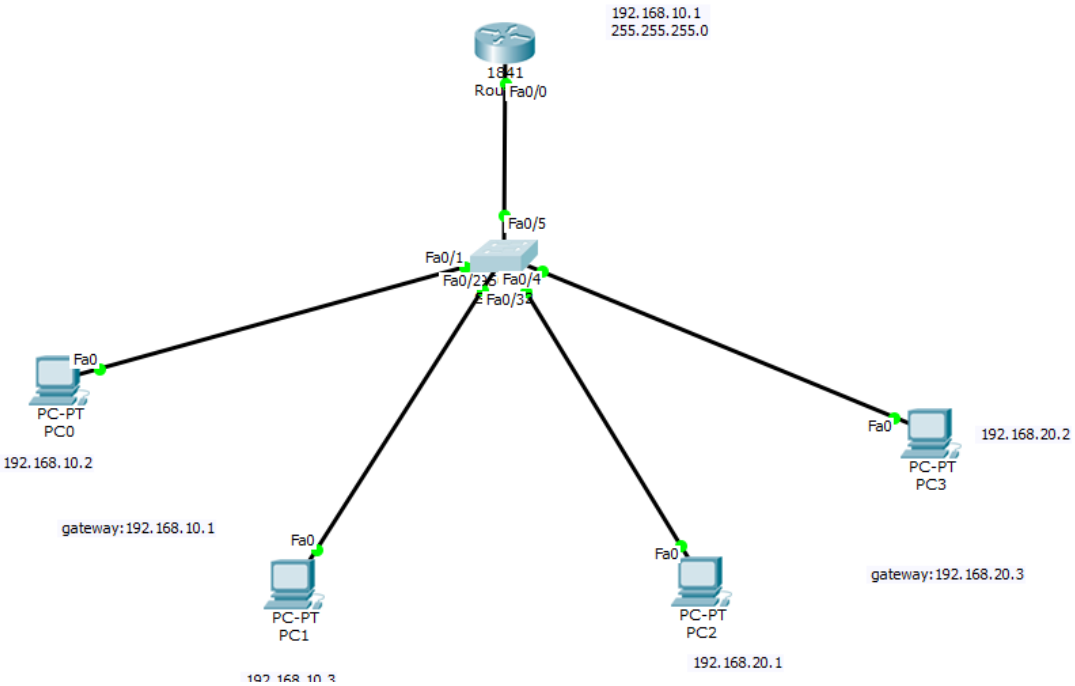
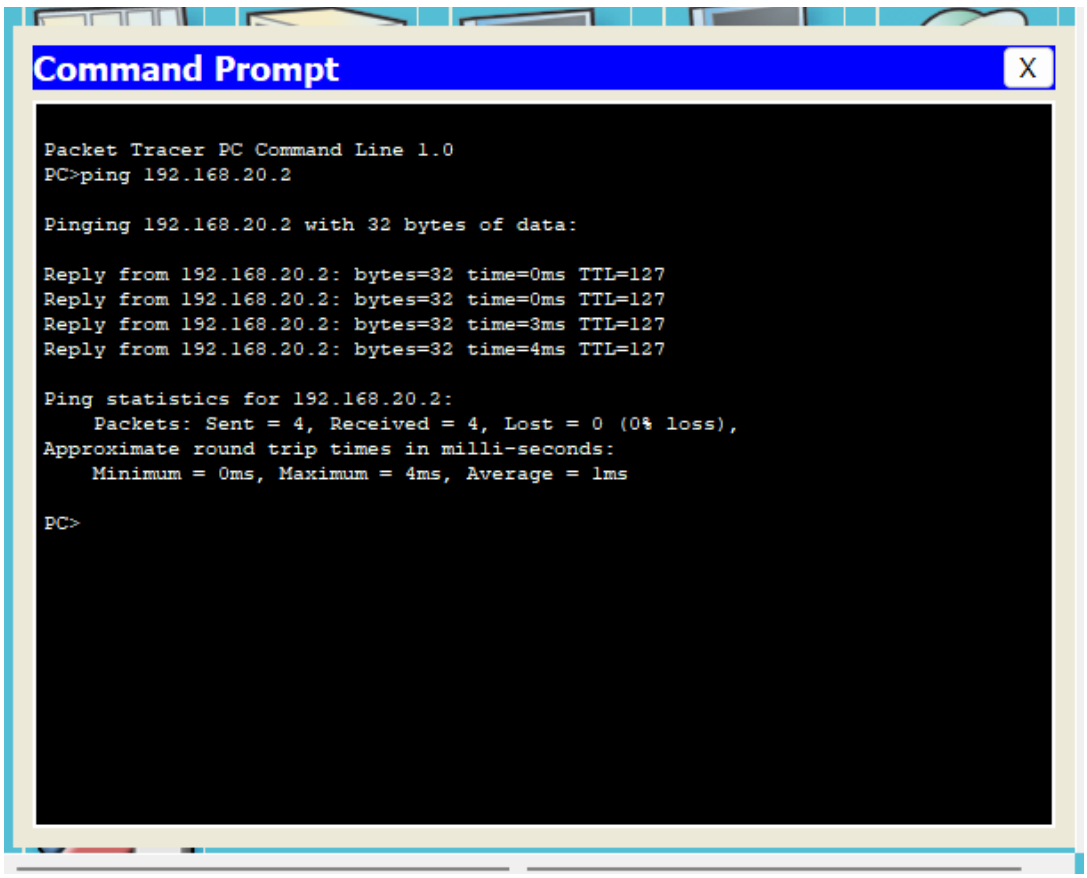
Experiment 11

Aim: To create a virtual Lan on top of the physical Lan and enable communication between physical Lan and virtual Lan

Topology:

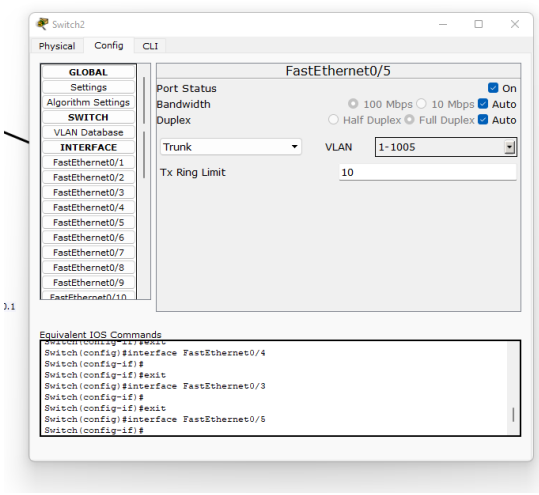


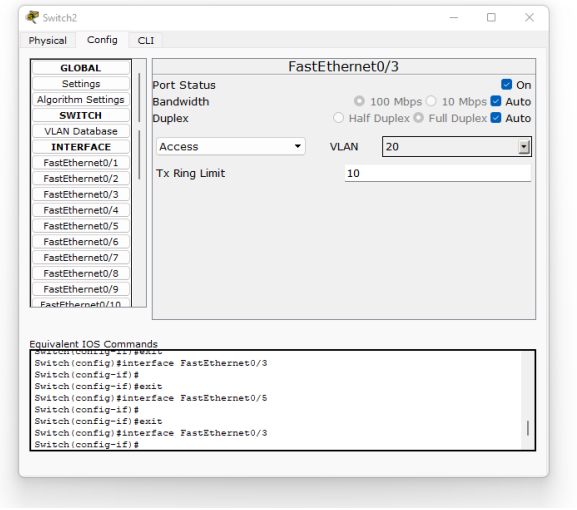
Output:

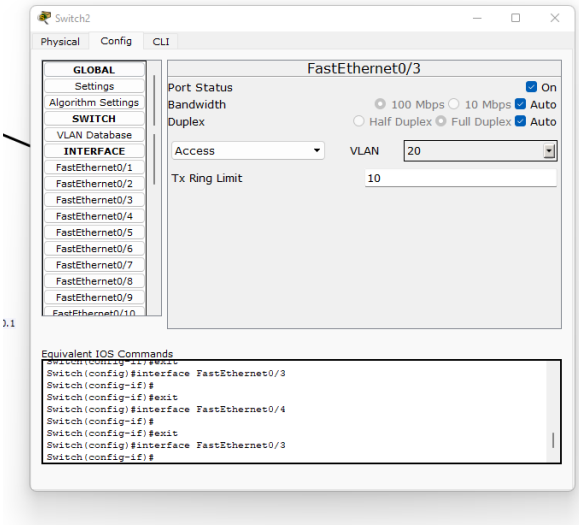


Configuration:

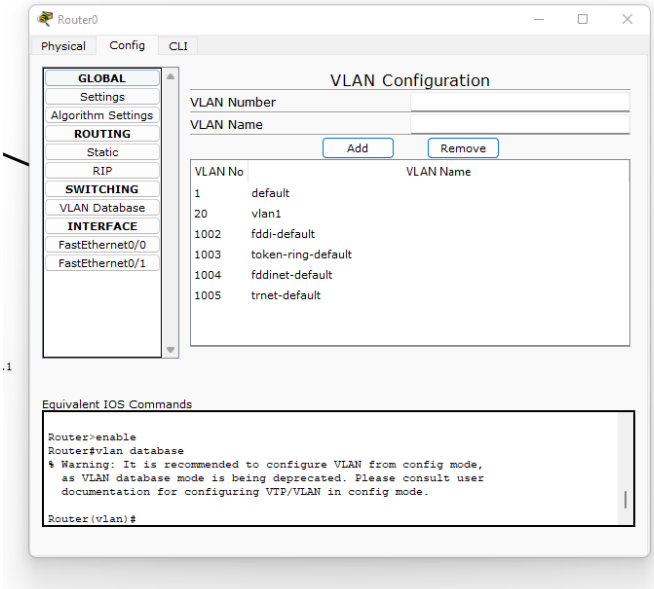
1) switch configuration:







2)router configuration:



Observation:

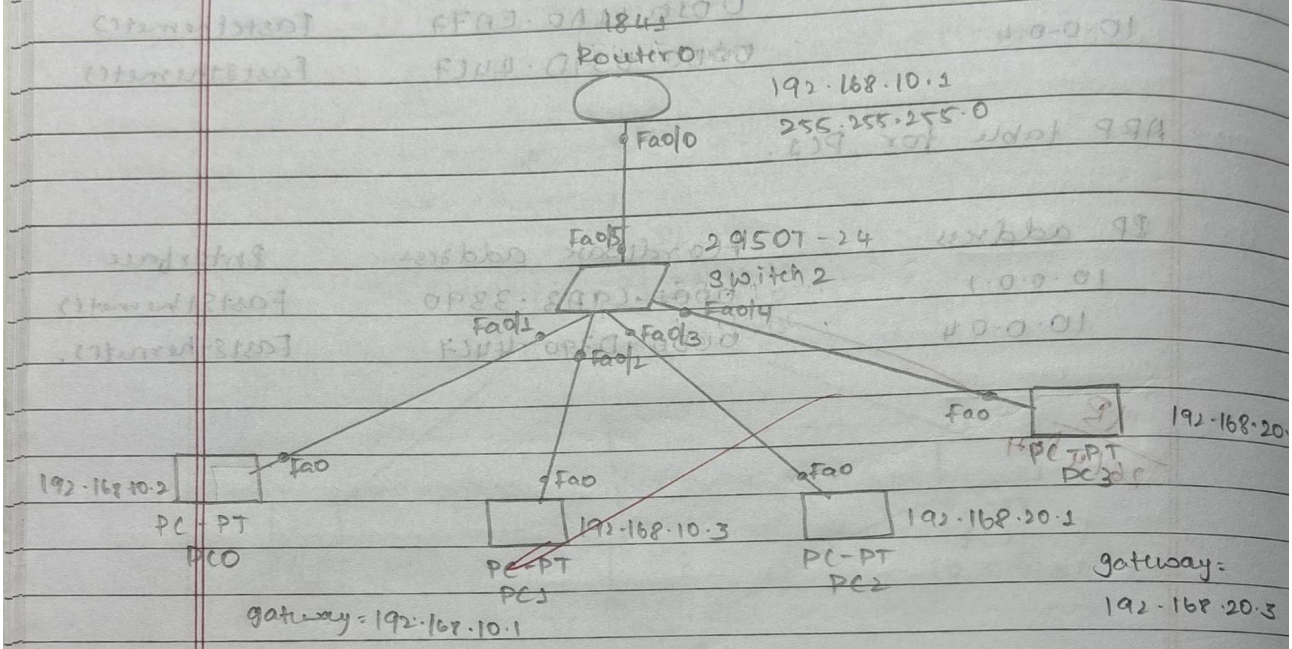
3/12/24

Experiment - 11

Aim: TO create a virtual LAN on top of the physical LAN and enable communication between physical LAN and virtual LAN

switch interface connecting to the router = trunk interface

TOPOLOGY:



Configuration:

(i) Place 4 PCPT and one 2950T-24 switch, 1841 Rout

(ii) Configure the router with ip address 192.168.10.1 with subnetmask 255.255.255.0

(iii) Configure PC0 and PC1 with IP address 192.168.10.2 and 192.168.10.3 ~~with subnet Ma~~ respectively.

(iv) Upon switch go to Fastethernet 0/5 and change the access to trunk

(v) In the same switch under VLAN database add a new VLAN config with VLAN number as 20 and VLAN name as vlan1.

(vi) Now ~~under~~ ~~router~~ Fastethernet 0/3 and 0/4 change the VLAN no 20.

(vii) Configur the PC 2 and PC3 with IP address 192.168.20.1 and 192.168.20.2.

(viii) Set the gateway as 192.168.20.3

(ix) Now in the router under VLAN database add the same vlan configuration

(x) Now under CLI carry out the following commands

Router> enable

Router # config t

Router (config) # interface fastethernet 0/0.1

Router (config-subif) # IP address 192.168.20.3 255.255.255.0

Router (config-subif) # no shutdown

Router (config) # exit

(x) Carry out the VLAN config. and then carryout the following commands

Router (vlan) # exit

Router # config t

Router (config) interface Fastethernet 0/0.1

Router (config-subif) # encapsulation dot1q 20

Router (config-subif) # no shoutdown

Router (config-subif) # exit.

(xi) Carry out Ping command across all the devices.

(If Requst timed out → try assigning the IP address to the Fastethernet 0/0.1 again after encapsulation dot1q 20 command)

OBSERVATIONS:

By creating a virtual LAN on top physical LAN we are able to communicate within the different devices in the diff LAN's.