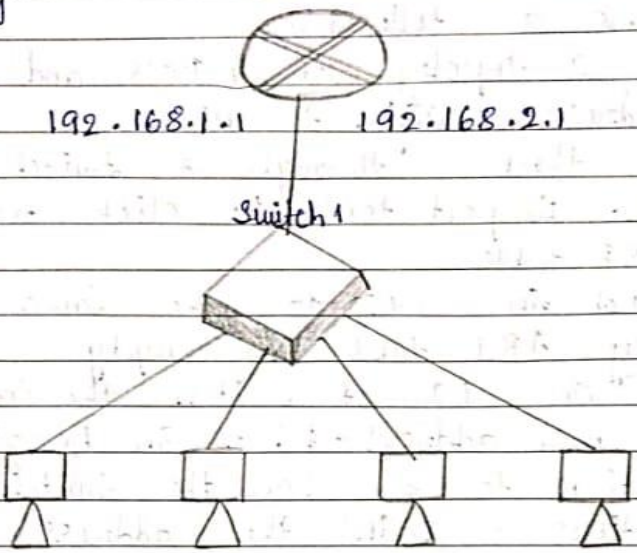
To construct a VLAN and make the PC's communicate among a VLAN.

LAB-

2) AIM: To Construct a VLAN and make the PC's Communicate among a VLAN.

Topology:



Steps:

1) To Create a new VLAN, we use 6 class C type addresses.
2) Create a topology as seen below Choose the 1841 router.
3) In the switch, go to Config tab and select VLAN database.
4) Give any VLAN number say 2 here. Include any name. Say Add.
5) Select the interface is fastethernet 1/1 (near the switch from router) and make it the trunk.
6) VLAN trunking allows switches to forwards frames from different VLAN'S over a single link called trunk.

7) This is done by adding an additional header information called tag to the Ethernet frame. The process of adding this small header is called VLAN tagging.

8) hook into the interfaces of the switches with the 2 NEWVLAN systems.
This makes the switch understand NEWVLAN.
Next the router is to understand the NEWVLAN

9) Config tab of router select VLAN DATABASE enter the number & name of the Vlan created.

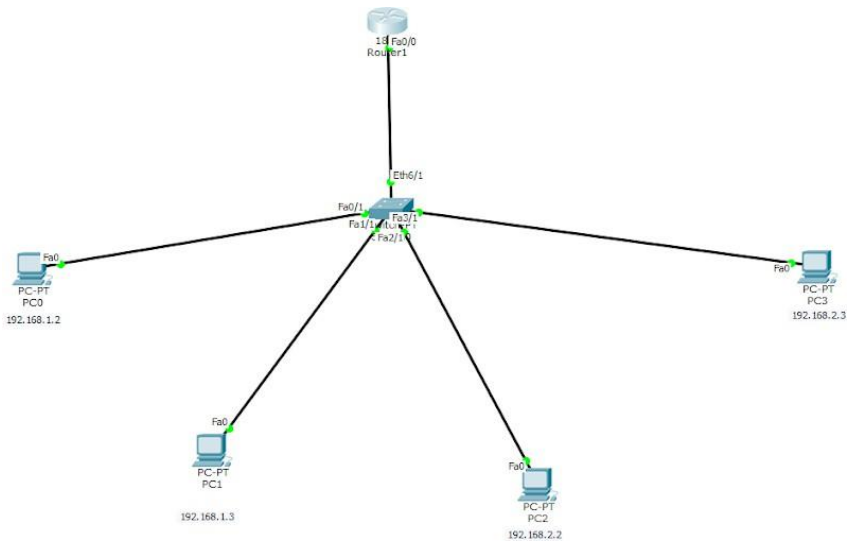
Go to CLI, & Run the following

→ Config t
→ interface fastEthernet 0/0.1
→ encapsulation dot1q 2
→ ip address 192.168.2.1 255.255.255.0
→ no shut
→ exit

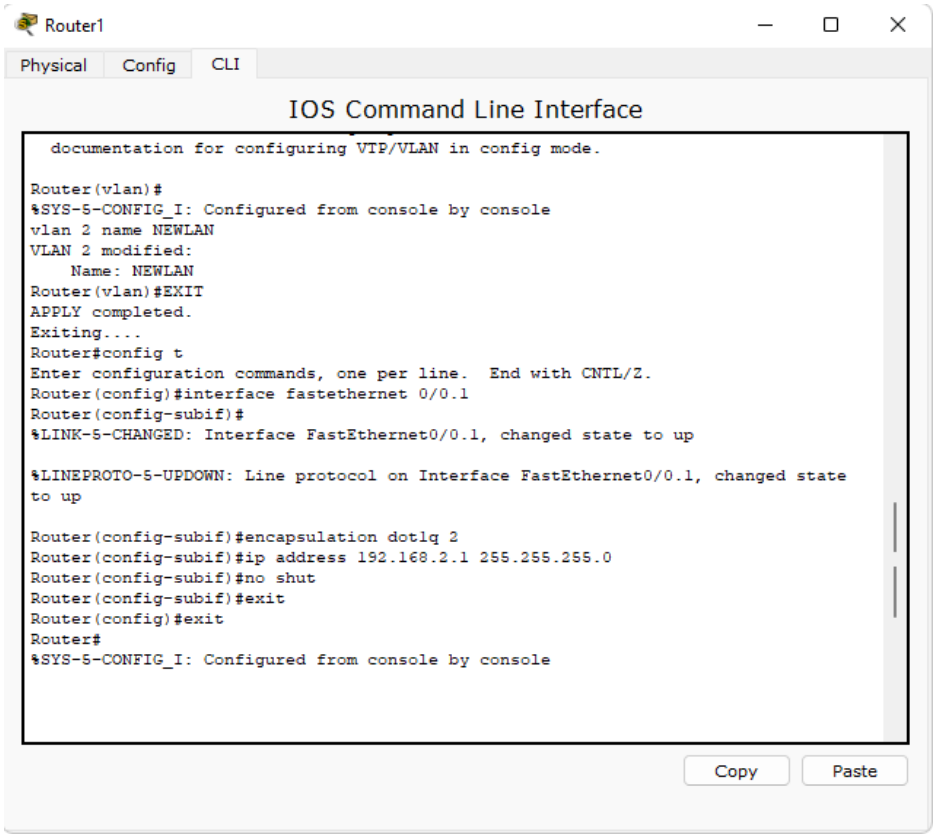
Observation:

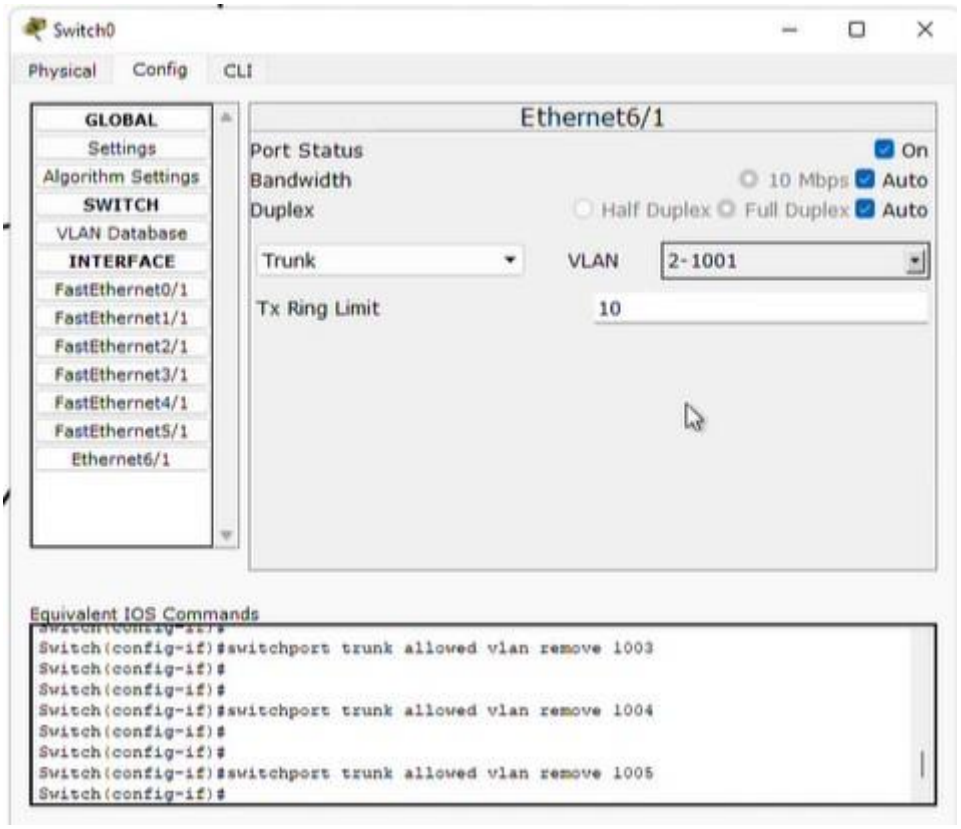
1) VLANs are used to logically segment a network, devices in the same VLAN to communicate directly while isolating traffic from other VLAN'S.
2) Switches must be configured to create VLAN'S, assign VLAN IDS, & allocate ports to specific VLAN'S.

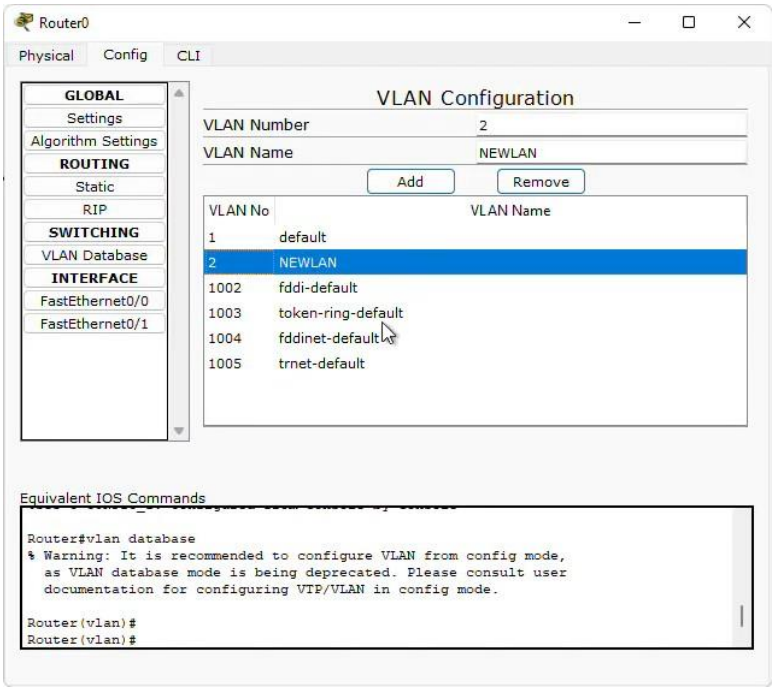
TOPLOGY:



OUTPUT:

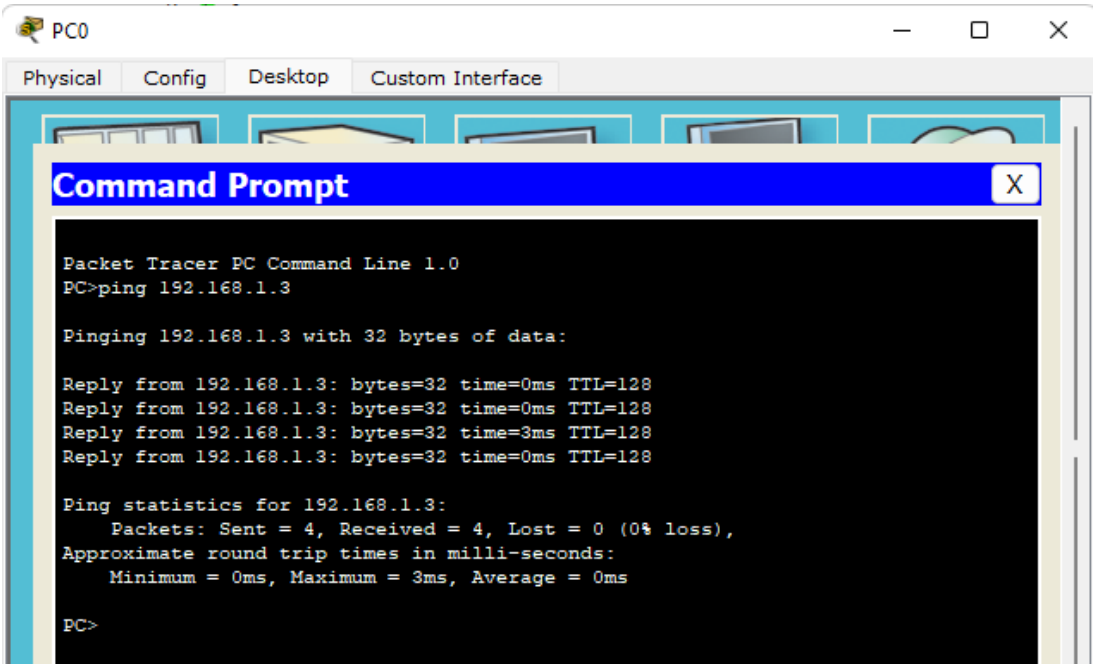







```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to
up
exit
Router(config)#
Router(config)#exit
Router#vlan database
% Warning: It is recommended to configure VLAN from config mode,
  as VLAN database mode is being deprecated. Please consult user
  documentation for configuring VTP/VLAN in config mode.

Router(vlan)#
%SYS-5-CONFIG_I: Configured from console by console
vlan 2 name NEWLAN
VLAN 2 modified:
    Name: NEWLAN
Router(vlan)#EXIT
```


PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
X
Packet Tracer PC Command Line 1.0
PC>ping 192.168.1.3
Pinging 192.168.1.3 with 32 bytes of data:
Reply from 192.168.1.3: bytes=32 time=0ms TTL=128
Reply from 192.168.1.3: bytes=32 time=0ms TTL=128
Reply from 192.168.1.3: bytes=32 time=3ms TTL=128
Reply from 192.168.1.3: bytes=32 time=0ms TTL=128
Ping statistics for 192.168.1.3:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 3ms, Average = 0ms
PC>