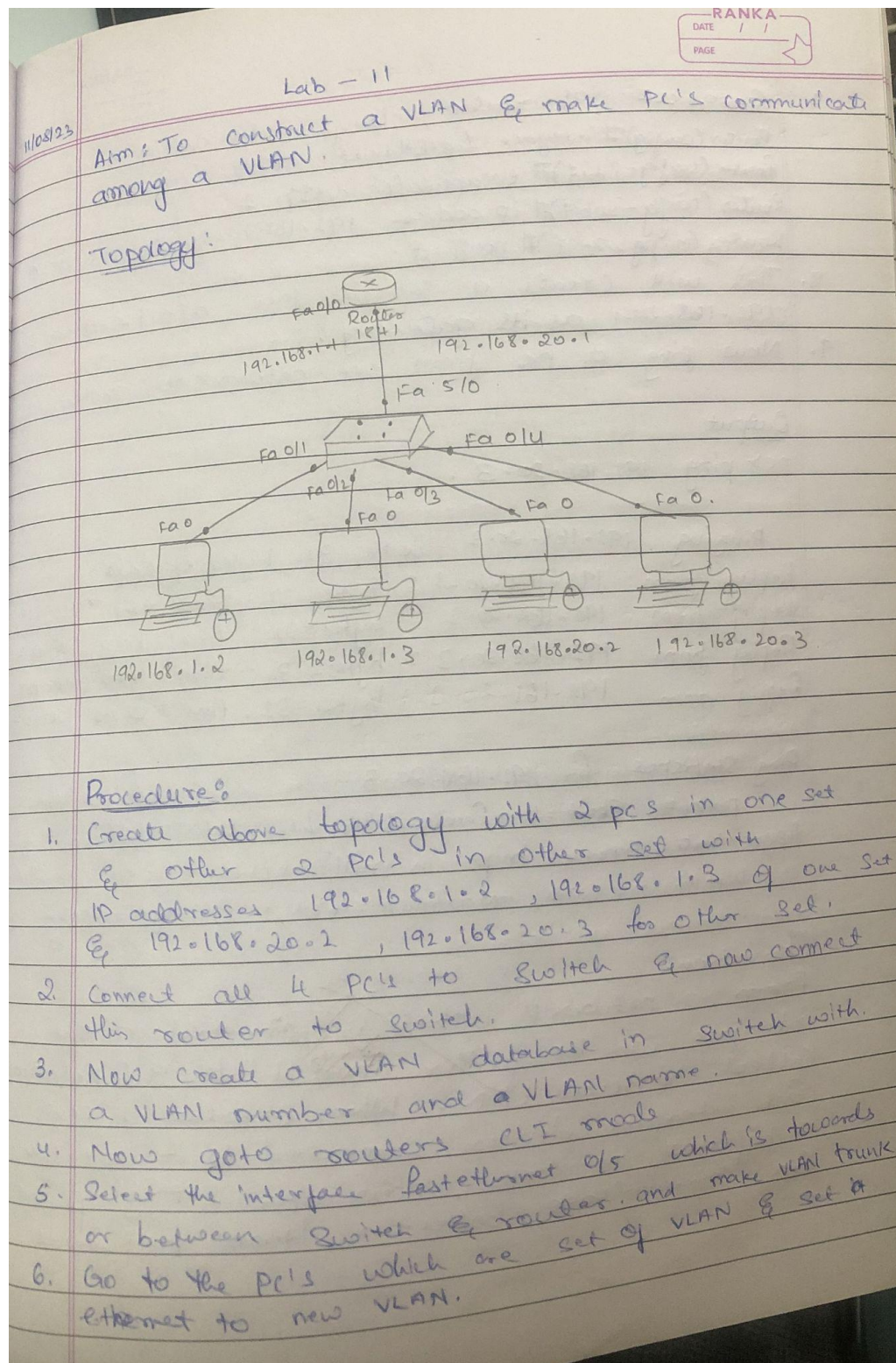


Aim: To construct a VLAN and make the PC's communicate among a VLAN

Observation:





7. Go to CLI of router, change it to config mode.  
 Router(config)# interface FastEthernet 0/0.1  
 Router(config-subif)# encapsulation dot1q 2  
 Router(config-subif)# ip address 192.168.20.1 255.255.255.255  
 Router(config-subif)# no shut.
8. This will create a sub interface 0/0.1 setting 192.168.20.1 as its gateway.
9. Now ping a pc from one network to another.

### Output

pc > ping 192.168.20.3.

Pinging 192.168.20.3 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=1ms TTL=128  
 Reply from 192.168.20.3 : bytes=32 time=4ms 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% loss),

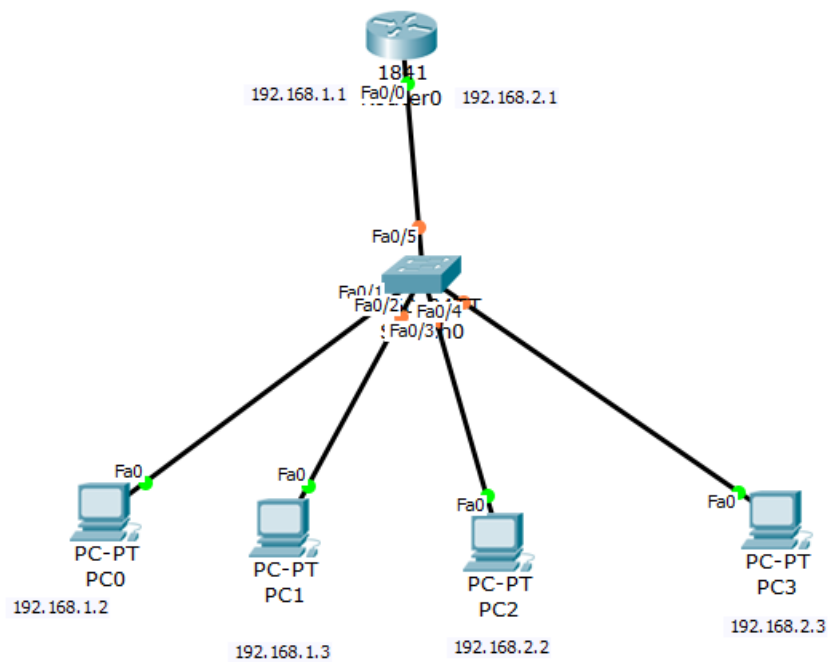
Approximate round trip time in milliseconds:

Minimum=0ms, Maximum=4ms, Average=1ms.

### Observation:

From a network which is connected to one interface can be further divided into sub networks called Virtual LAN. When created a new sub interface devices connected to it act like a different network. Now after setting up, we can communicate between two networks.

Topology:



Output:

The screenshot shows a Packet Tracer PC Command Prompt window for PC3. The window title is "PC3" and it has tabs for "Physical", "Config", "Desktop", and "Custom Interface". The "Desktop" tab is active, showing a "Command Prompt" window. The command prompt displays the following output:

```
Packet Tracer PC Command Line 1.0
PC>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=0ms TTL=127
Reply from 192.168.1.2: bytes=32 time=0ms TTL=127
Reply from 192.168.1.2: bytes=32 time=0ms TTL=127
Reply from 192.168.1.2: bytes=32 time=0ms TTL=127

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

PC>
```