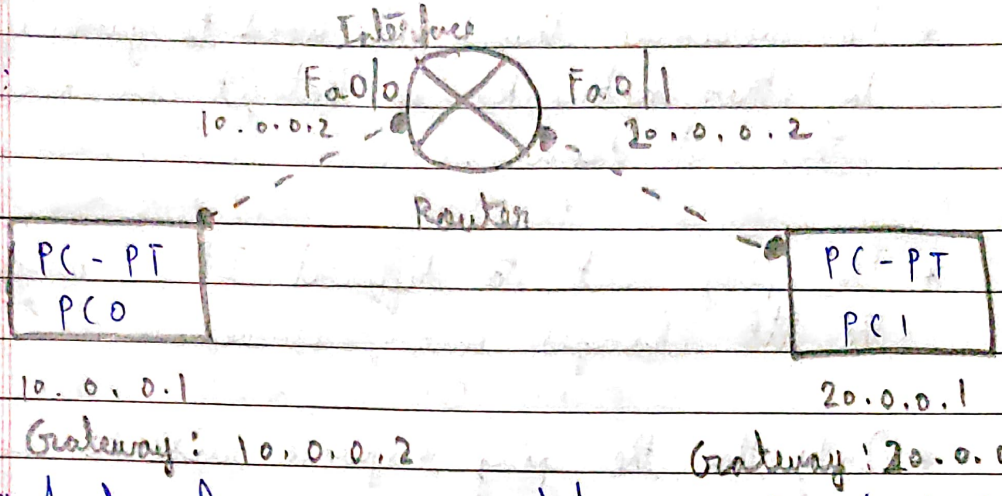
17/11/22

LAB - 2

AIM: Configuring IP address to routers in Packet tracer. Explore: Ping responses, Destination unreachable, Reply, Request timed out.

TOPOLOGY:



PROCEDURE:
- A topology was created using 2 end devices with different IP address configuration.
- Router was configured with respective interface and IP.
- In end devices, we changed the gateway to different IP address.
- In CMD, we will ping to other IP's connected by router.

~~EXECUTION~~ Router CLI commands:

```
enable
config terminal
interface Fa0/0
ip address 10.0.0.2 255.0.0.0
no shutdown
exit
```

OBSERVATION: First we'll notice request timed out, because of ttl (time to leave) was 0, and whenever passed after that will be discarded.

* To overcome this, we need to give gateway to other networks so that it can access other end devices.

* The ping sent to different IP's and the ttl changes were observed.

* Only then the ping response will be successful.

RESULT:

```
PC1> ping 10.0.0.2
Pinging 10.0.0.2 with 32 bytes of data:
Reply from 10.0.0.2 : bytes=32 time=0 ms
Reply from 10.0.0.2 : bytes=32 time=0 ms
Reply from 10.0.0.2 : bytes=32 time=0 ms
Reply from 10.0.0.2 : bytes=32 time=0 ms
ping statistics for 10.0.0.2
Packets : Sent = 4, Recieved = 4, lost = 0 (0% loss)
```

* Successful reply on pinging from one end device to different end device, only after specifying gateway, through a router network.

* Similarly, from PC1 we'll ping to 20.0.0.1 & 20.0.0.2, to get a successful reply.
* And also from PC2 we'll ping to 10.0.0.1, 20.0.0.2, 10.0.0.2, to get a successful reply.
* Without gateway, reply timed out occurs.

PC> ping 10.0.0.2
Pinging 10.0.0.2 with 32 bytes of data:
~~Reply from 10.0.0.2 : bytes=32~~
Request timed out.
Request timed out.
Request timed out.
Request timed out.
ping statistics for 10.0.0.2
Packets : Sent = 4, Recieved = 0, lost = 4 (100% loss)

This is for request timed out scenario, when gateway is not specified.

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