**Three router topology – configuration, IP routes and pinging**

Observation:-

* First when we connect PCs to router we see that the link is down and no message can be sent.
* After configuring PC with default gateway and IP address we can configure the Router.
* We configure the routers accordingly using CLI. After configuring all the required interfaces we see all links are up.
* If we send a ping message from PC0 to PC1 we see that we get an error saying Destination Unreachable.
* This means that we should add all the existing routers to routing table of all the routers that come in between the two PCs.
* We can check which all networks were connected using “Show ip route” command and then add the missing networks.
* Then we can use the command prompt of any of the connected PCs to send a ping request to any other PCs connected to the router. We also see that some time the request times out, but we eventually get the confirmation that the device responded.

Outcome:-

* Learnt how to connect and configure multiple router across multiple networks.
* Experienced the errors that might occur during configuration and corrected them.
* Learnt when Destination Unreachable errors occur.