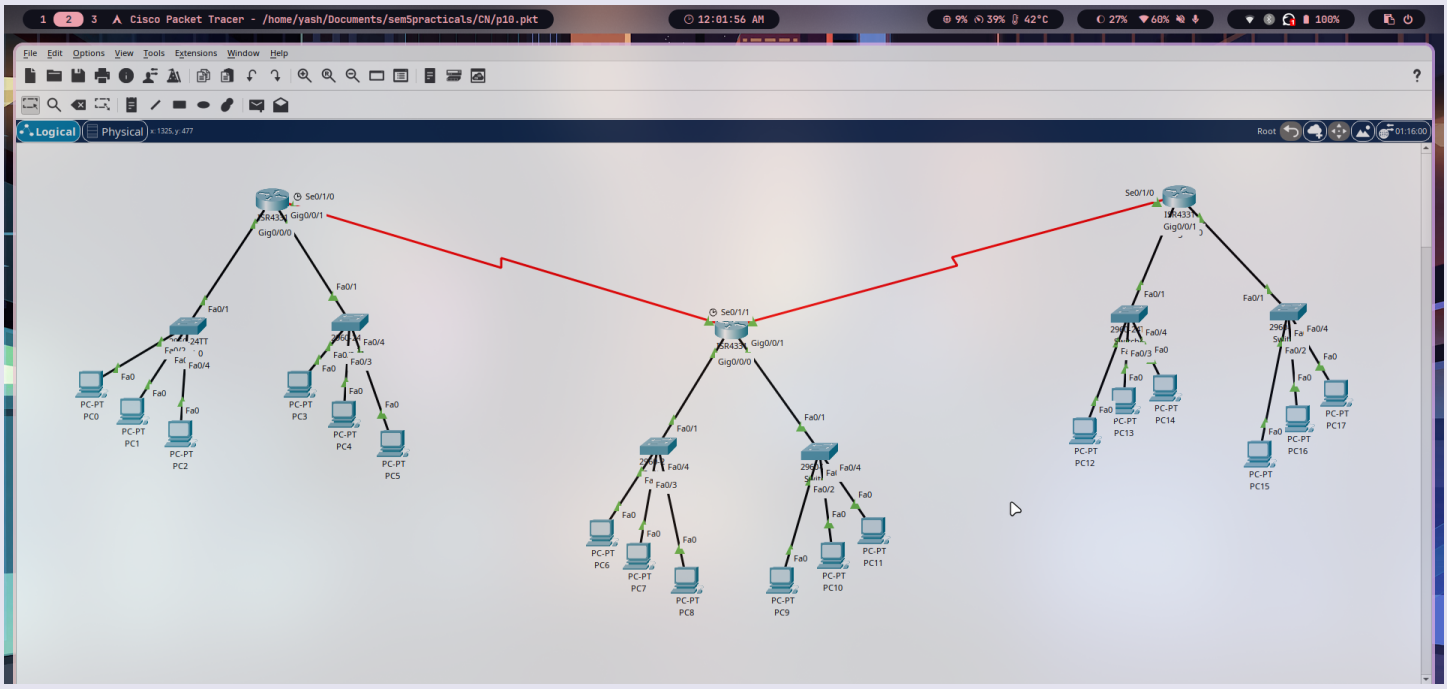
Practical 10

<u>Aim</u> : To design a network using Enhanced Interior Gateway Routing Protocol (EIGRP).

<u>Scenario</u> : Design a network of an organization having 6 different departments: Admin, HR, Support, Design, Development and Testing. Each department contains 3 hosts. Single autonomous system (AS) holds this network. Establish the communication between different departments using EIGRP protocol.

<u>Procedure</u> :

1. Create the required network topology as per the given scenario



2. Assign IP addresses to respective routers of departments :

Department-1 : 192.168.1.0
Department-2 : 192.168.2.0
Department-3 : 192.168.3.0
Department-4 : 192.168.4.0
Department-5 :192.168.5.0
Department-6 : 192.168.6.0

(Among ethernet connections with PCs or hosts : 10.0.0.0 to 60.0.0.0 respectively)

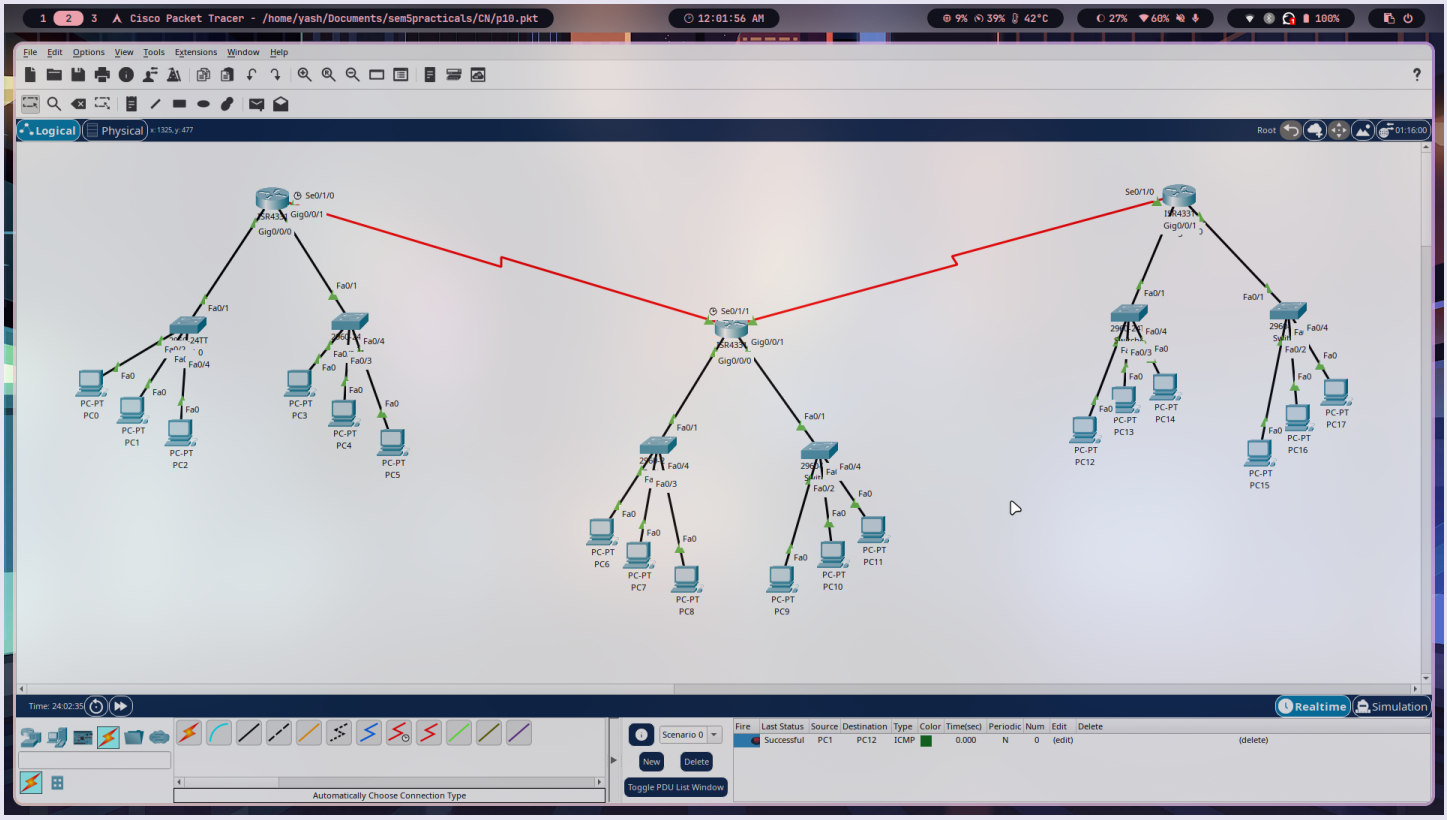
3. Implement EIGRP routing via CLI commands with used networks in ethernet and serial connections :

For Router 1 as example :

```
router eigrp 1
network 192.168.3.0
network 192.168.4.0
network 30.0.0.0
network 40.0.0.0
exit

wr mem
```

4. Ensure the proper connectivity among the hosts in the network



Conclusion : In this experiment, the EIGRP routing protocol is implemented and understood, where EIGRP is more preferred over OSPF, being easier and faster than OSPF. Unlike OSPF, where routing information and tables are sent every time, EIGRP does so only one time to make communication faster, which is its main benefit over other routing protocols.