As a part of our semester project on computer networks. We are required to design and implement the Vic Modern Hotel network. The hotel has three floors on the first floor there are three departments **(Reception, Store, and Logistics)** in the second floor are three departments **(Finance, HR, and Sales Marketing)** while the third floor hosts the I**T(Information Technology)** and Admin department. Therefore, the following are part of the consideration during the design and implementation.

1. There are three routers connecting to each floor ( all placed in the server room in the IT department).
2. All routers are connected to each other using a serial DCE cable.
3. The network between the routers should be 10.10.10.0/30, 10.10.10.4/30, 10.10.10.8/30.
4. Each floor is expected to have one switch (placed on the respective floor).
5. Each floor is expected to have WIFI networks connected to laptops and phones.
6. Each department is expected to have a printer.
7. Each department is expected to be a different VLAN with the following details.

( 1st Floor )

● Reception - VLAN 80, Network of 192.168.8.0/24
● Store - VLAN 70, Network of 192.168.7.0/24
● Logistics - VLAN 60, Network of 192.168.6.0/24

( 2nd Floor)

● Finance - VLAN 50, Network of 192.168.5.0/24
● HR - VLAN 40, Network of 192.168.4.0/24
● Sales - VLAN 30, Network of 192.168.3.0/24

(3rd Floor)

● Admin - VLAN 20, Network of 192.168.2.0/24
● IT - VLAN 10, Network of 192.168.1.0/24

8. Use OSDF as the routing protocol to advertise routes.
9. All devices in the network are expected to obtain an IP address dynamically with their respective router configured as the DHCP server.
10. All the devices in the network are expected to communicate with each other.
11. Configure SSH in all the routers for remote login.
12. In IT department, the PC called Test-PC to port fa0/1 and use it to test remote login.
13. Configure port security to IT-dept switch to allow only Test-PC to access port fa0/1 (we use sticky method to obtain mac-address with violation mode of the shutdown.)