3- HOTEL MANAGEMENT PROJECT

You are required to design and implement Vic. Modern Hotel Nerwork. Te Hotel hast three floors; in the first floor there are three departments: Reception, Store and Logistics), in the second floor, there are three department too: Finance, HR and Sales/MKT, while in the third floor hosts the IT and Admin departments. Therefore, the following are part of the considerations during the design and implementation.

1. There should be **three routers connecting each floor** (all placed in the server room, in IT department).
2. All routers should be connected to each other using 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 in the respective floor)
5. **Each floor** is expected to have **WIFI networks** connected to laptops and phones.
6. **Each department** is expected to be **in different VLAN** with the following details:

   1st Floor:

   - Reception**: VLAN 80 – Network 192.168.8.0/24**
   - Store: **VLAN 70 – Network 192.168.7.0/24**
   - Logistics: **VLAN 60 – Network 192.168.6.0/24**

   2nd Floor:

   - Finance: **VLAN 50 – Network 192.168.5.0/24**
   - HR: **VLAN 40 – Network 192.168.4.0/24**
   - Sales: **VLAN 30 – Network 192.168.3.0/24**

   3rd Floor

   - Admin: **VLAN 20 – Network 192.168.2.0/24**
   - IT: **VLAN 10 – Network 192.168.1.0/24**

7. **Use OSFP** as the routing Protocol to advertise routers.
8. All devices in network are expected to **obtain address dynamically** with their **respective router configured as the DHCP server**.
9. **Configure SSH** in all the routers for remote login.
10. In IT department, add PC called **Test-PC to Port Gi0/1 and use it to test remote login**.
11. Configure port security to IT department switch to allow only Test-PC to access de port Fa0/1 (use **sticky method** to obtain mac-address with violation mode of shutdown)

ADDRESSING

NETWORK ADDRESS ALLOCATION

1st Floor					
Department	**VLAN**	**Network**	**Mask**	**Host Range**	**Broadcast**
RECEPTION	80	192.168.8.0	255.255.255.0 /24	8.1 – 8.254	192.168.8.255
STORE	70	192.168.7.0	255.255.255.0 /24	7.1 – 7.254	192.168.7.255
LOGISTICS	60	192.168.6.0	255.255.255.0 /24	6.1 – 6.254	192.168.6.255
2nd Floor					
FINANCE	50	192.168.5.0	255.255.255.0 /24	5.1 – 5.254	192.168.5.255
HR	40	192.168.4.0	255.255.255.0 /24	4.1 – 4.254	192.168.4.255
SALES	30	192.168.3.0	255.255.255.0 /24	3.1 – 3.254	192.168.3.255
3rd Floor					
ADMIN		192.168.2.0	255.255.255.0 /24	2.1 – 2.254	192.168.2.255
IT		192.168.1.0	255.255.255.0 /24	1.1 – 1.254	192.168.1.255

PORTMAPPING

Device	**Port**	**Network**	**IP**	**Mask**	**Description**
F1-Router	Se0/2/0	10.10.10.4	10.10.10.5	255.255.255.252	To F3-Router Se0/2/0
	Se0/2/1	10.10.10.8	10.10.10.9	255.255.255.252	To F2-Router Se0/2/1
	Gi0/0.60	192.168.6.0	192.168.6.1	255.255.255.0	VLAN 60
	Gi0/0.70	192.168.7.0	192.168.7.1	255.255.255.0	VLAN 70
	Gi0/0/80	192.168.8.0	192.168.8.1	255.255.255.0	VLAN 80
F2-Router	Se0/2/0	10.10.10.0	10.10.10.1	255.255.255.252	To F1-Router Se0/2/1 – Clockrate 64000
	Se0/2/1	10.10.10.8	10.10.10.10	255.255.255.252	To F3-Router Se0/2/0
	Gi0/0.30	192.168.3.0	192.168.3.1	255.255.255.0	VLAN 30
	Gi0/0.40	192.168.4.0	192.168.4.1	255.255.255.0	VLAN 40
	Gi0/0.50	192.168.5.0	192.168.5.1	255.255.255.0	VLAN 50
F3-Router	Se0/2/0	10.10.10.4	10.10.10.6	255.255.255.252	To-F1-Router Se0/2/0 Clockrate 64000
	Se0/2/1	10.10.10.0	10.10.10.2	255.255.255.252	To F2-Router Se0/2/1 Clockrate 64000
	Gi0/0.10	192.168.1.0	192.168.1.1	255.255.255.0	VLAN 10
	Gi0/0.20	192.168.2.0	192.168.2.1	255.255.255.0	VLAN 20