**MODERN HOTEL MANAGEMENT NETWORK DESIGN AND IMPLEMENTATION:**

As a part of your end year networking project, you are required to design and implement Vic Modem Hotel network. The hotel has three floors; In the first floor there should be three departments (Reception, store and Logistics) and the second floor there are three departments (Finance, HR and Sales/Marketing), while the third floor hosts the IT and Admin. Therefore, the following are part of the considerations during the design and implementation.

1. ﻿﻿﻿There should be three routers that connects each floor (all placed in the server room where the IT department is).

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 are connected to laptops and phones.

6. ﻿﻿﻿Each department is expected to have a printer.

7. ﻿﻿﻿Each department is expected to be in 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 OSPF as the routing protocol to advertise routes.

9. ﻿﻿﻿All devices in the network are expected to obtain 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, add 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 (use sticky method to obtain mac-address with violation mode of shutdown.)