Walk-Through to Build Hotel Simple Network

*****First, I want to thank you that you are watching my tutorial, and I hope u are doing well in your learning *****

First step

Design your network as u like I designed this network that will be a hotel with 3 floors

Devices needed:

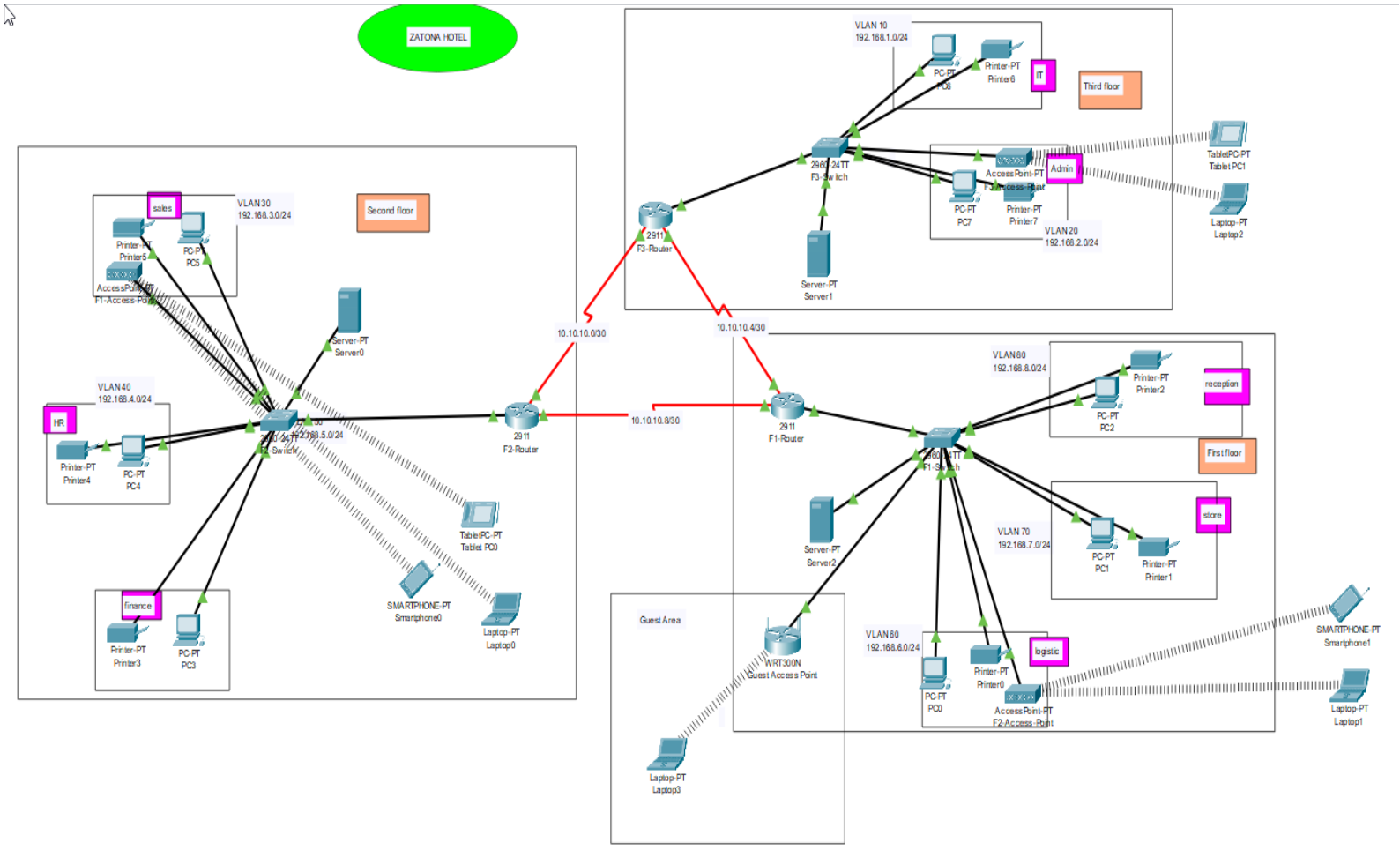
3 Routers one for each floor (name as u like) and connect them together using serial DCE

3 Switches connected to the router

Every switch has **PCs** and **Printers** will be isolated using VLANs

3 Access points connected to the 3 switches for **wireless Devices** (laptops, mobiles, tablets)

One **home router** on the first floor to be the Guest N/W



Configuration Part

// in the routers

```
enable
conf t
int s0/1/0
no shutdown
int s0/1/1
no shutdown
int g0/0
no shutdown
do write
```

//in the switches

```
en
conf t
int range f0/2-3
switchport mode access
switchport access vlan 80
```

// repeat for all interfaces for departments

```
int f0/1
switchport mode trunk
do write
```

//go back to the router to give Ips

```
int s0/2/0
ip address 10.10.10.5 255.255.255.252
```

//do same for each interface and remember to give IP above the network we hypothesized we made it 252 to save the IP space for better performance and optimization

//now we need to make the devices use DHCP while remaining their VLANS

on each router configure the sub interfaces

int g0/0.80
encapsulation dot1q 80
ip address 192.168.8.1 255.255.255.0
//now we must configure dhcp on the router
service dhcp
ip dhcp pool Reception
network 192.168.8.0 255.255.255.0
default-router 192.168.8.1
dns-server 192.168.8.1
exit

//repeat for all pools u have

//u can now configure OSPF protocol to make the networks talk to each other

router ospf 10

//networks connected to the router

network 10.10.10.4 255.255.255.252 area 0
network 10.10.10.8 255.255.255.252 area 0

// inner networks connected to the router

network 192.168.6.0 255.255.255.0 area 0
network 192.168.7.0 255.255.255.0 area 0
network 192.168.8.0 255.255.255.0 area 0

// for the access point I just added SSID and presharedkey with wpa2/sk as it is more secure

Then I connected tablets, laptops, and smartphones.

Remember laptops need wpc300n so remove the default module and apply this for wireless connection

//HOLD ON WHERE ARE YOU GOING, WE ARE ALMOST DONE MY FRIEND :(

//now enable the ssh for routers

hostname F1-Router
ip domain-name zatona
username zatona password zatona
crypto key generate rsa
1024
line vty 0 15
login local
transport input ssh
do write

// same for other routers but different password I just made it like that because this is an educational network

//for the home router (Guest N/W)

***Configure the same thing as Access Point but make the SSID broadcast limited and add mac filtering for the devices you want to connect**

//For additional security layers you should make a password for the router

Conf t
Line console 0
Password cisco
Login
End
Do write

//disable unused ports for routers and switches (for all unused ports according to your connection)

int range f0/8-24
shutdown
Do write

//enable port security on switches

Int range f0/2-8
Switchport port-security
Switchport port-security maximum 1
Switchport port-security violation restrict
Switchport port-security mac-address sticky

Note: the servers are for syslog if you want to add it, I didn't configure it I just added it in place as this walk-through is not for security reasons as a main goal but to allow you to make a well-organized network with basic real environment configurations

I appreciate that you finished this walk-through and hope you find it well and if you want to ask or you are stuck in smth don't hesitate to contact me my friend <3