**CCNA PROJECT 1**

1Crystal Hotel is a fast-growing hotel with more than 1000 customers daily. The hotel deals in buying and selling of food items and providing other after-sales services to its customers, which are basically operated from the headquarter. It is intending of opening a branch near a local city in Kenya, thus the hotel requires a young I.T graduate to design the network for the branch, the network is intended to operate separately from the HQ network.

Being a small network, the company has the following requirements during implementation,

* Two routers and 5 Catalyst cisco 3750cw switches to be used (All Cisco products).
* 5 Departments (**Administration,** Finance**, Security, Transport/Packing and** **Sales** Departments with one special network connecting two serial-linked routers between the subnets.
* Each department is required to be in different VLANs
* Each department is required to have wireless network for customers obtaining indoor services. Use wireless security protocols to secure wireless clients from attacks.
* Host devices on each VLAN are required to obtain IPV4 addresses automatically.
* Devices in all departments are required to communicate with each other.
* Assign the first subnet to **Administration** department, second subnet to **Sales** and third subnet to **Finance,** fourth subnet to the **Security department and** the fifth subnet to the **Transport and Packing** department. The sixth subnet should be used to link two-serial-linked routers to all networks.
* Secure the remained switch ports after assigning some to different VLANS.
* Configure the inter-VLAN routing using Router –on Stick(ROSA).

Assume the ISP gave out a base network of **192.168.10.0/24***,* you as young Network engineer who has been hired, design and implement a network considering the above requirements***. (100 marks)***