**PS2897**

**EU/IS/2019/PHY/147**

**G.S.C Kumari**

**CS4163-part 01**

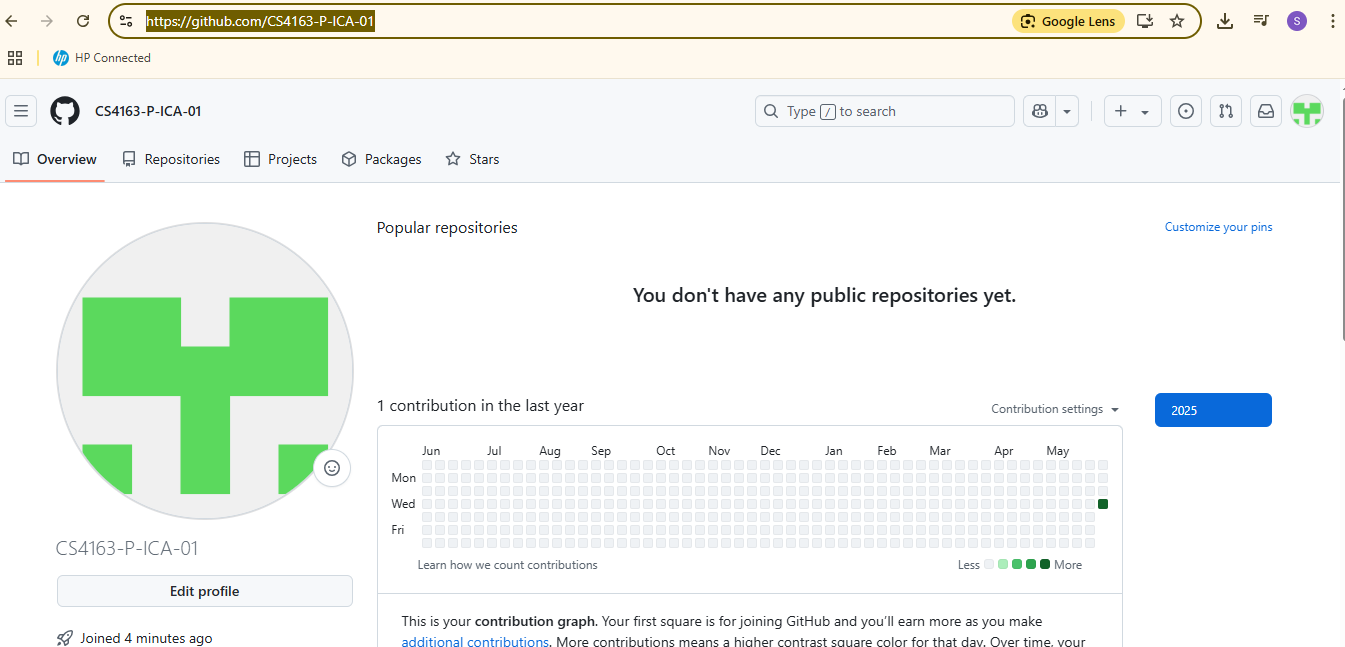
1. **GitHub account information**

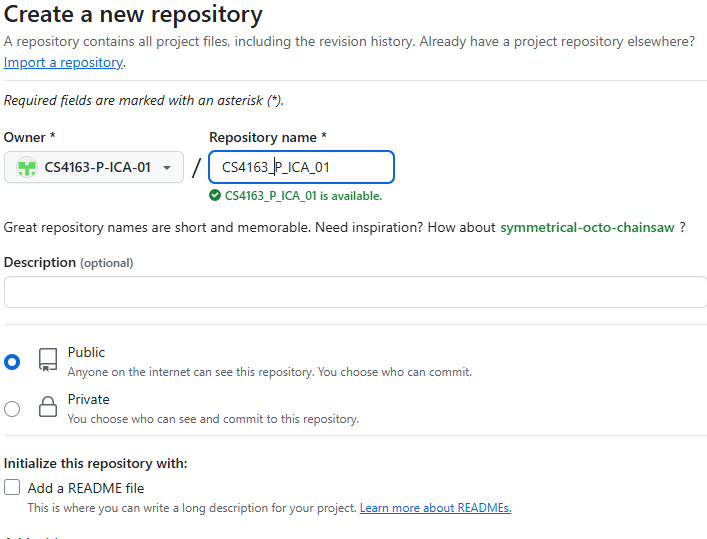
Email: [sewwandhichathu19@gmail.com](mailto:sewwandhichathu19@gmail.com)

Password: gitHubSew25

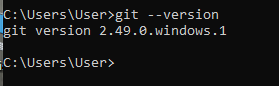
Username: CS4163-P-ICA-01

URL: https://github.com/CS4163-P-ICA-01

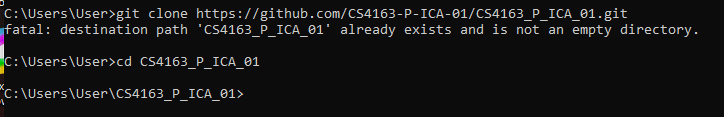


Creating a repository

Installing github

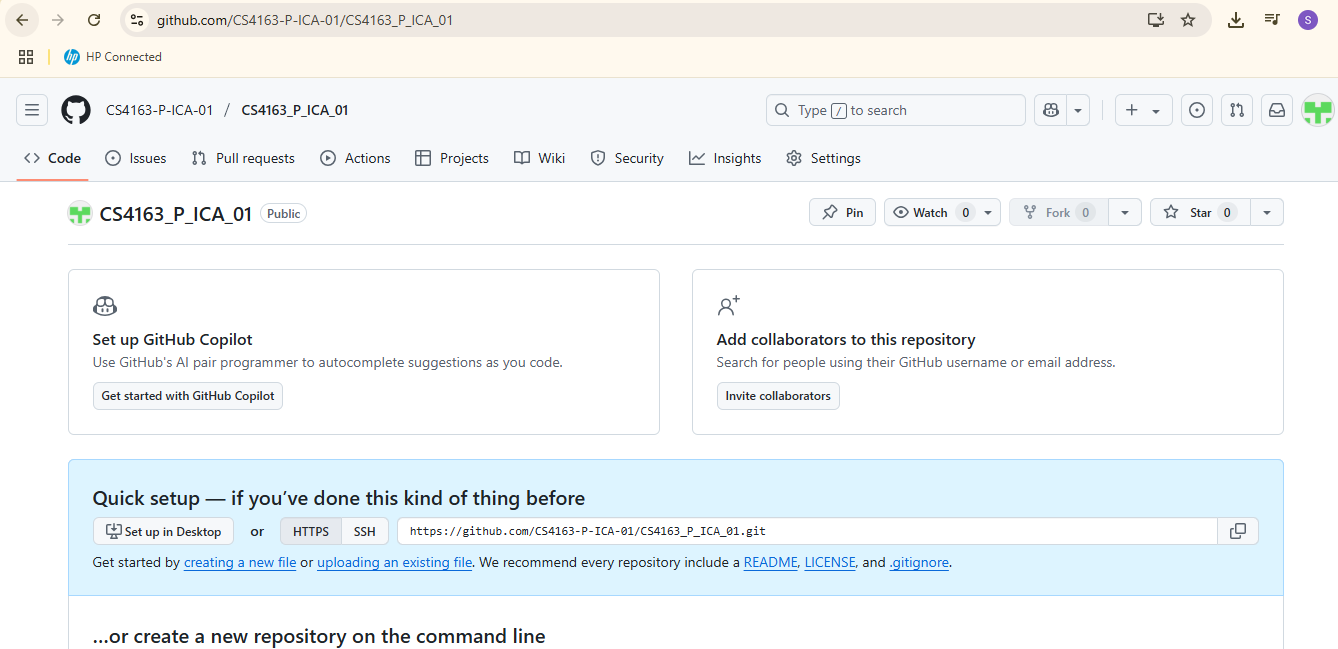


Cloning



Creating the topology

<https://github.com/CS4163-P-ICA-01/CS4163_P_ICA_01>



1. **Network topology using Cisco-Packet Tracer**

Description about topology

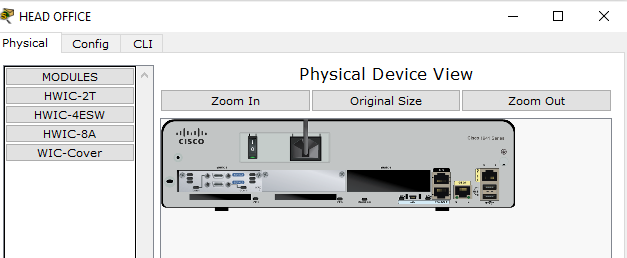
There are four departments in the head office building as management, HR, salary, audit in main office complex.

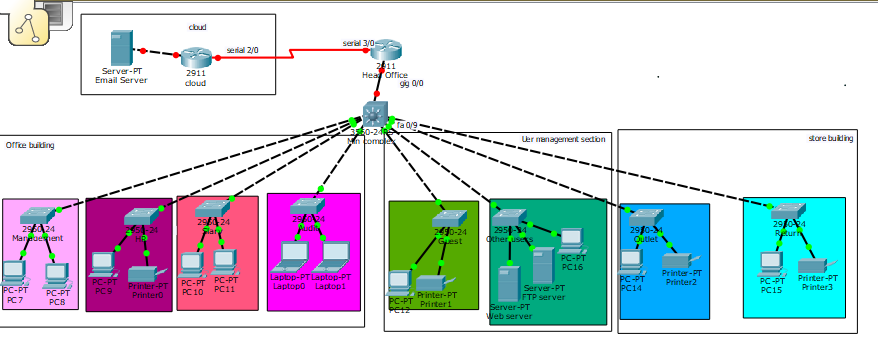
There are two departments namely Guest and other users in access management complex.

There is another building for return store and outlet. There is an email server connected with a router.

**Process**

Creating serial interfaces at the routers



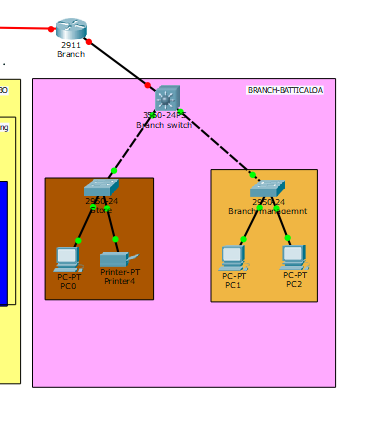


We are going to connect it to a branched network

(For that we need a router)

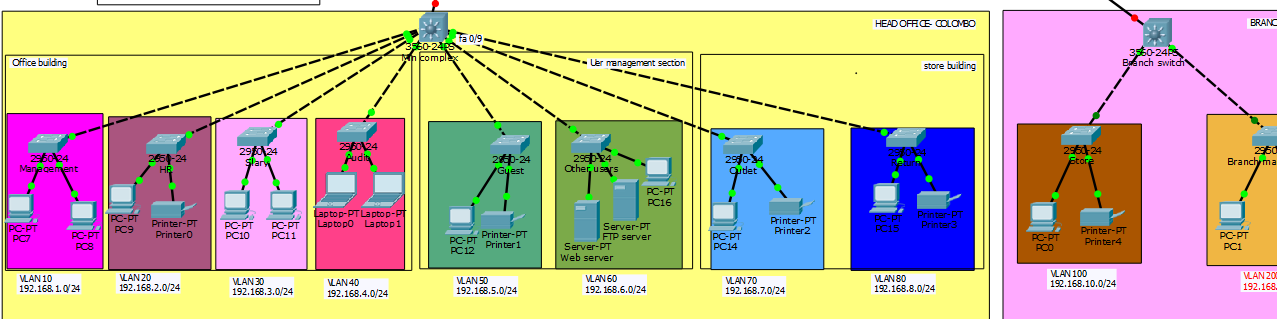
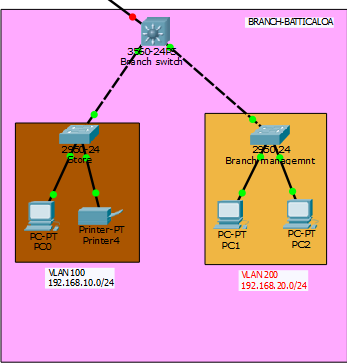
There will be another branch. Where two departments in it is access layer.

Adding serial ports to the branch router.



Each department should be in a different network meaning that they have different IPs.

Assigning VLANs for easy understanding.



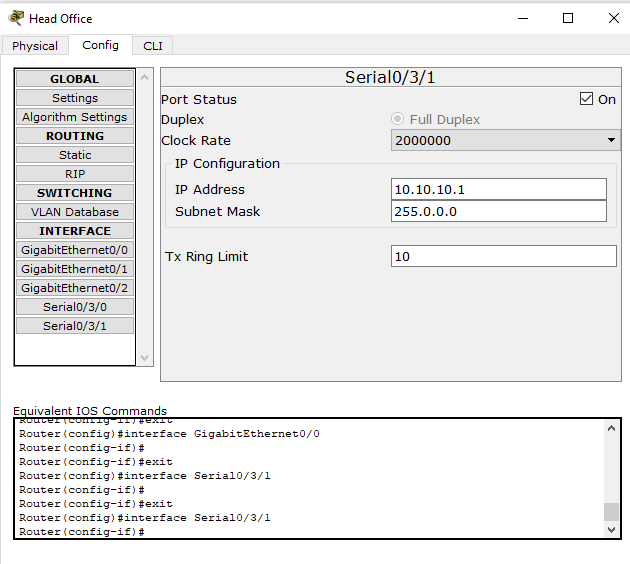
Connecting routers

Let network between the router be 10.10.10.0/30



Now setting the network router connection up.

Also give the clock rates to them.

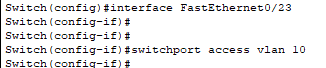


Now we will configure the VLANS

Vonfiguring VLAN 10

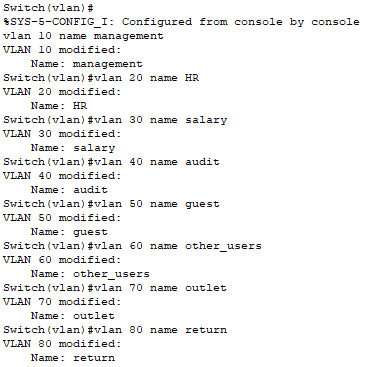


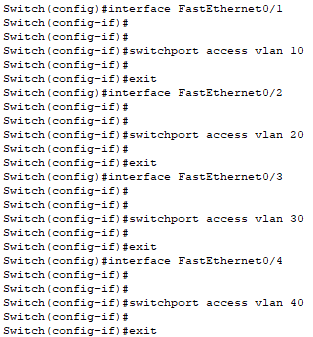


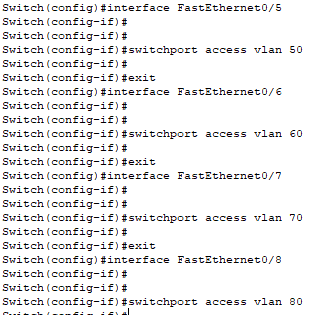


Similarly add and configure the fast Ethernet connections for VLANs.

Now configure the main switch which connects the all of the switches which connects to the VLAN.

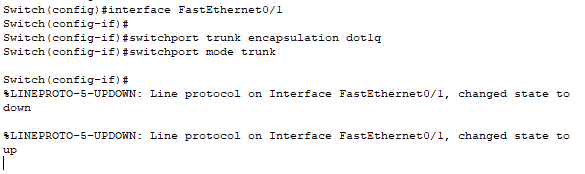




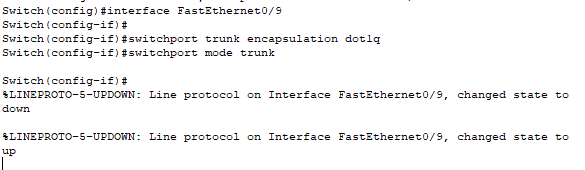


Similarly configure the switches in the branch also.

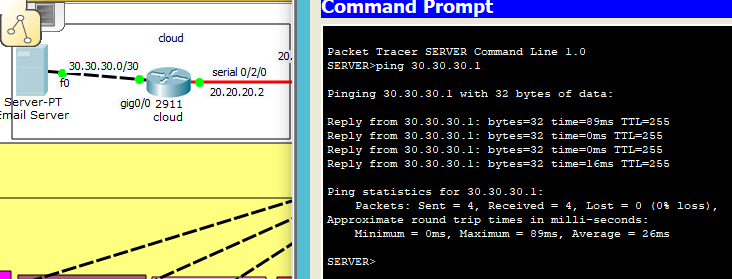
Then make the port between that major switch and the router to be a trunk port in branch section.



Similarly configure the main office switch and router as trunk port.



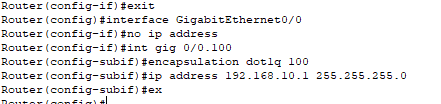
After setting IP addresses for routers and the server we can ping server and router to see if it works.



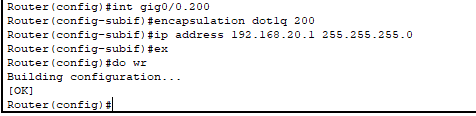
**Inter VLAN routing**

Now we will get default IPs thorough DHCP configuration.

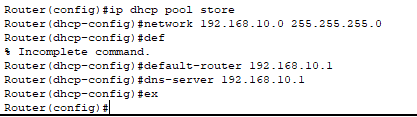
For VLAN 100

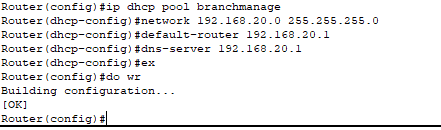


For VLAN 200

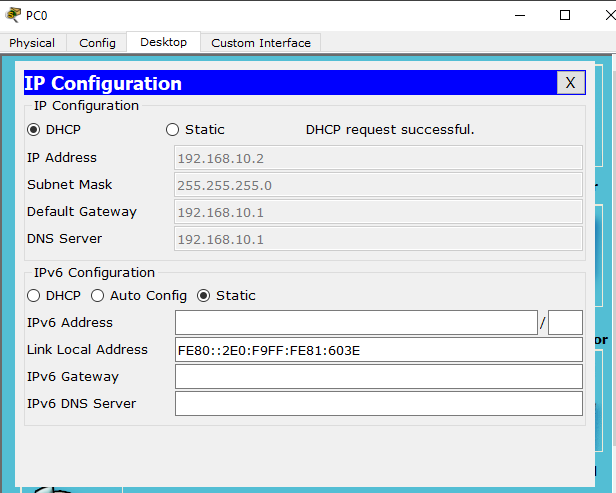


Configuring the router

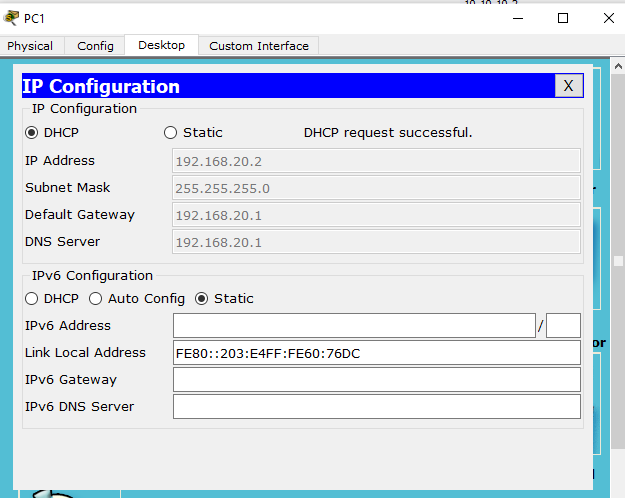




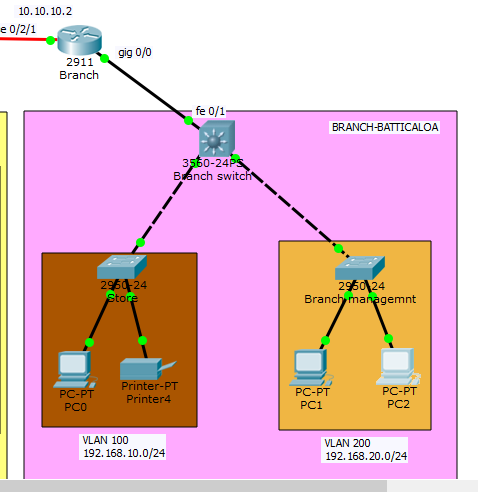
Getting DHCP IPs.

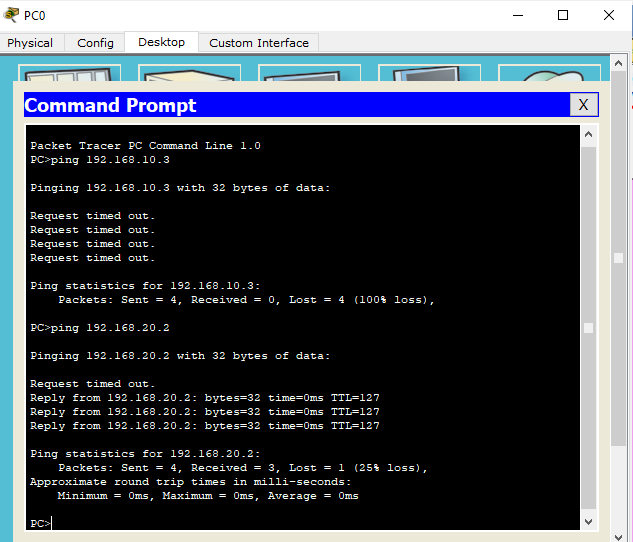


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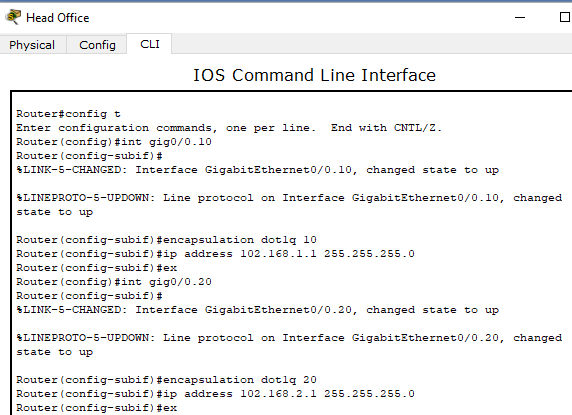


Now let’s ping to see the connections.





Do similar in the head office too.



Do the similar process for all 8 VLANS

Now enable DHCP in them.

