STUDENT NAMES: SHAGHIL, FAISAL, RAMEEZ, OMAR

STUDENT IDs: 10643, 10567,10394,10619

SUBJECT: DCN SEMESTER PROJECT

SUBMISSION DEADLINE: JULY19, 2021

SUBMITTED TO SIR SANJAY KUMAR

UNIVERSITY NETWORK SYSTEM (UNS)

INTRODUCTION:

This is a University Network System (UNS) in which we have 4 departments. Each department have PCs (Labs & Rooms, etc.) and a DHCP server. This DHCP server is allocating dynamic IPs to all the devices of same network. We have designed and worked on General Lab and other things. It has a President room too. We have implemented Routing Information Protocol (RIP) on complete network which finds the best short route to reach the destination whenever packet (Data & IP information) is passed or sent. Network consist of a web servers of each department which can be accessed by any PC. In Domain Name Server (DNS) we assigned domain names to IP addresses to each web server. We have used File Transfer Protocol (FTP) in our network too. Which can be accessed by any PC of this network.

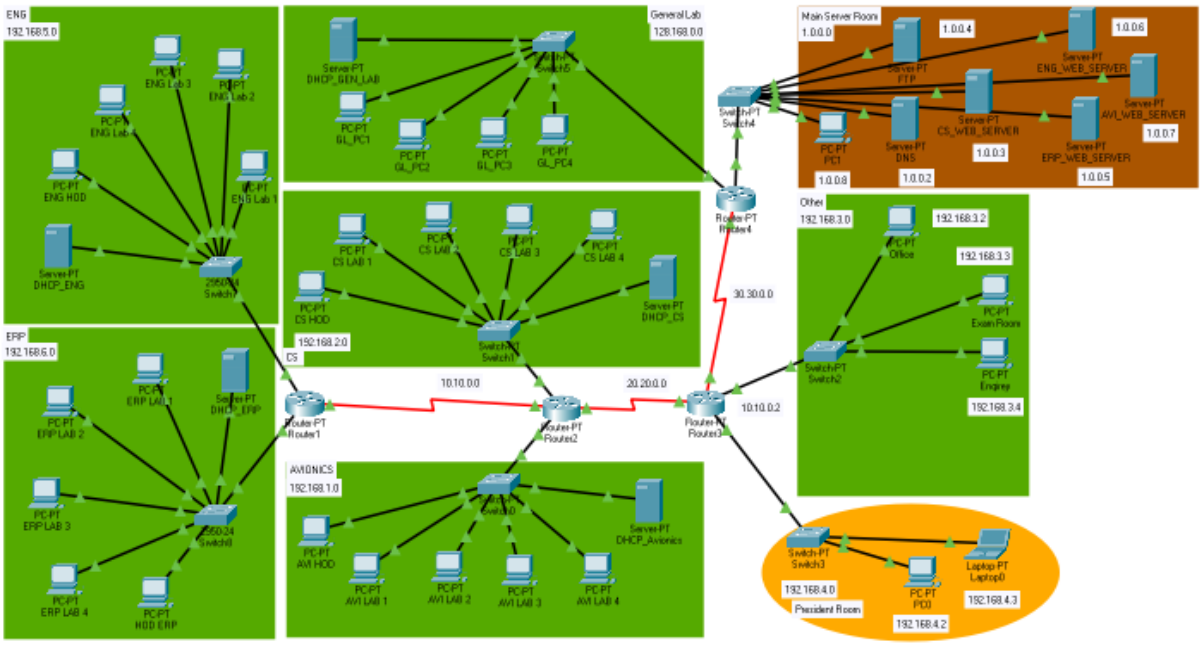
TOPICS COVERED IN THIS NETWORK:

- IP Addressing
- HTTP
- DHCP
- FTP
- DNS
- RIP

OBJECTIVE:

The main objective of this network is to update the existing network and also enhance its capabilities and increase the flexibility of the network which will eventually provide good security.

NETWORK TOPOLOGY:



IP ADDRESSING:

AVIONICS DEPARTMENT(192.168.1.0/24)
Getting dynamic IPs of this network through DHCP server.

COMPUTER SCIENCE DEPARTMENT(192.168.2.0/24)
Getting dynamic IPs of this network through DHCP server.

ENGINEERING DEPARTMENT(192.168.5.0/24)
Getting dynamic IPs of this network through DHCP server.

ERP DEPARTMENT(192.168.6.0/24)
Getting dynamic IPs of this network through DHCP server.

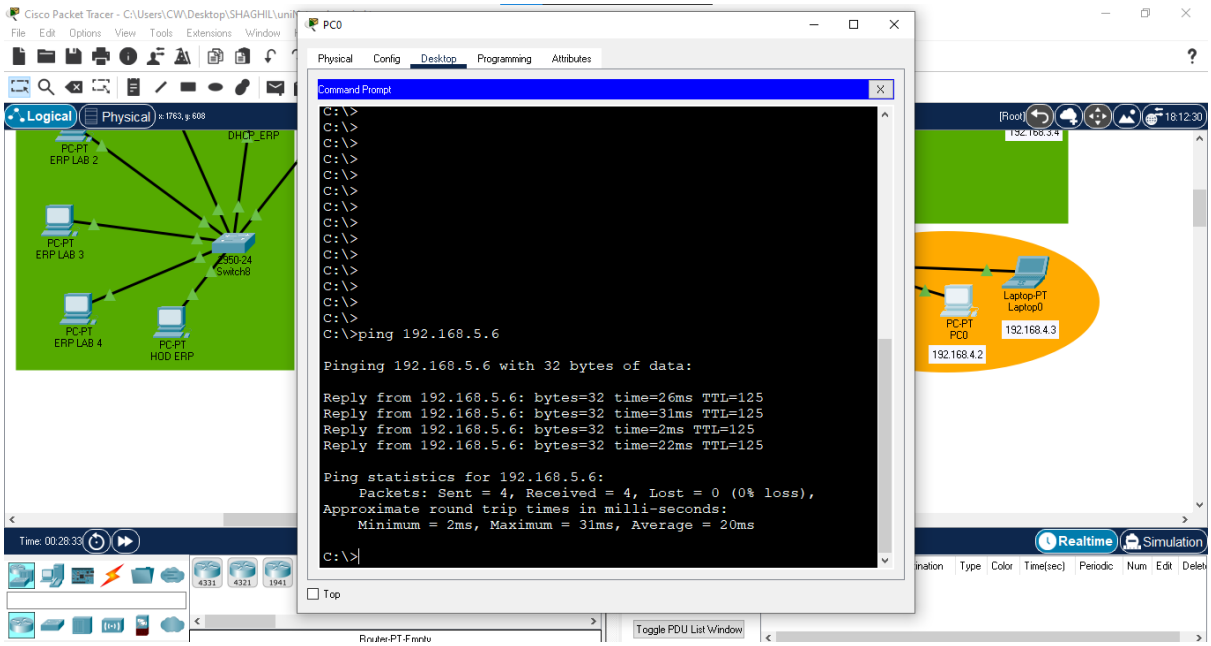
GENERAL LAB(128.168.0.0/16)
Getting dynamic IPs of this network through DHCP server.

OTHERS (192.168.3.0/24)	
OFFICE	192.168.3.2
EXAM ROOM	192.168.3.3
ENQUIRY	192.168.3.4

PRESIDENT ROOM (192.168.4.0/24)	
PC 0	192.168.4.2
LAPTOP 0	192.168.4.3

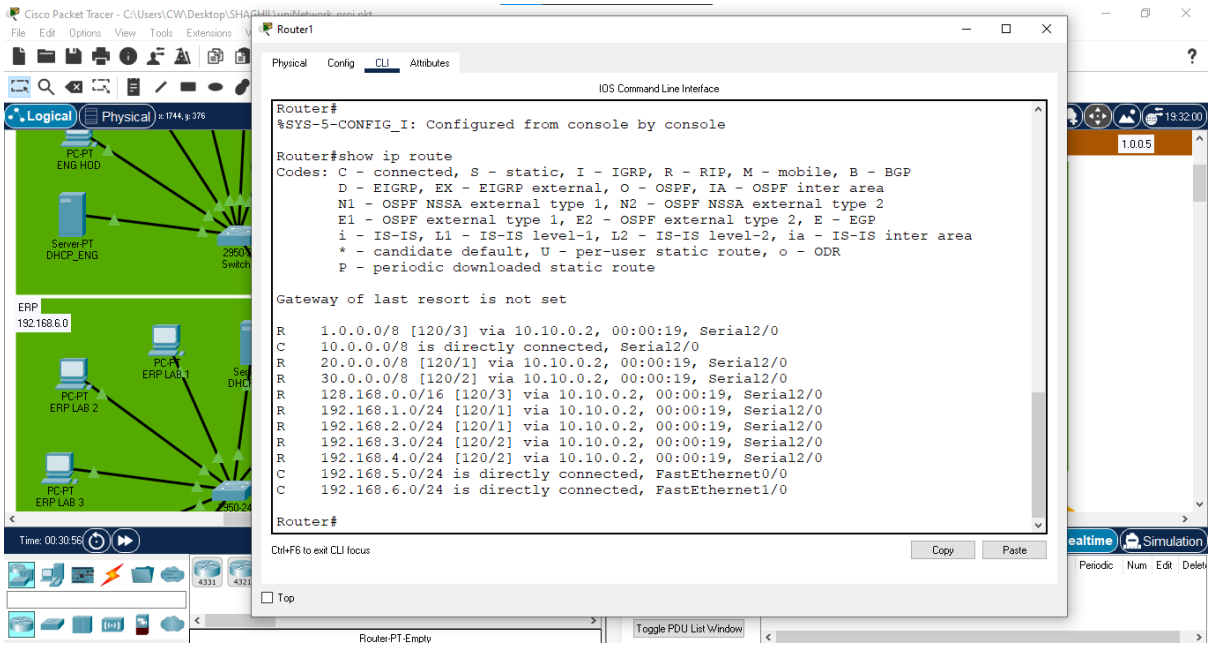
MAIN SERVER ROOM (1.0.0.0/8)	
DNS SERVER	1.0.0.2
CS_WEB_SERVER	1.0.0.3
FTP SERVER	1.0.0.4
ERP_WEB_SERVER	1.0.0.5
ENG_WEB_SERVER	1.0.0.6
AVI_WEB_SERVER	1.0.0.7
PC 1	1.0.0.8

TESTING VLAN FROM PRESIDENT ROOM TO ENGINEERING DEPARTMENT:

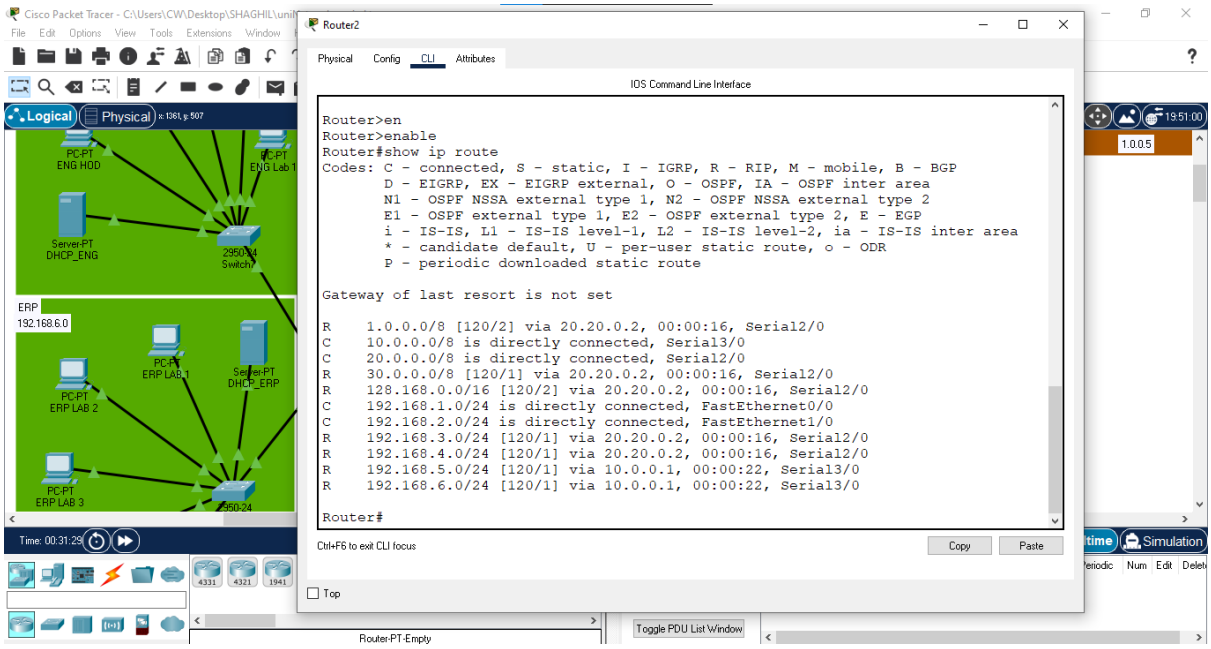


ROUTING INFORMATION PROTOCOLS:

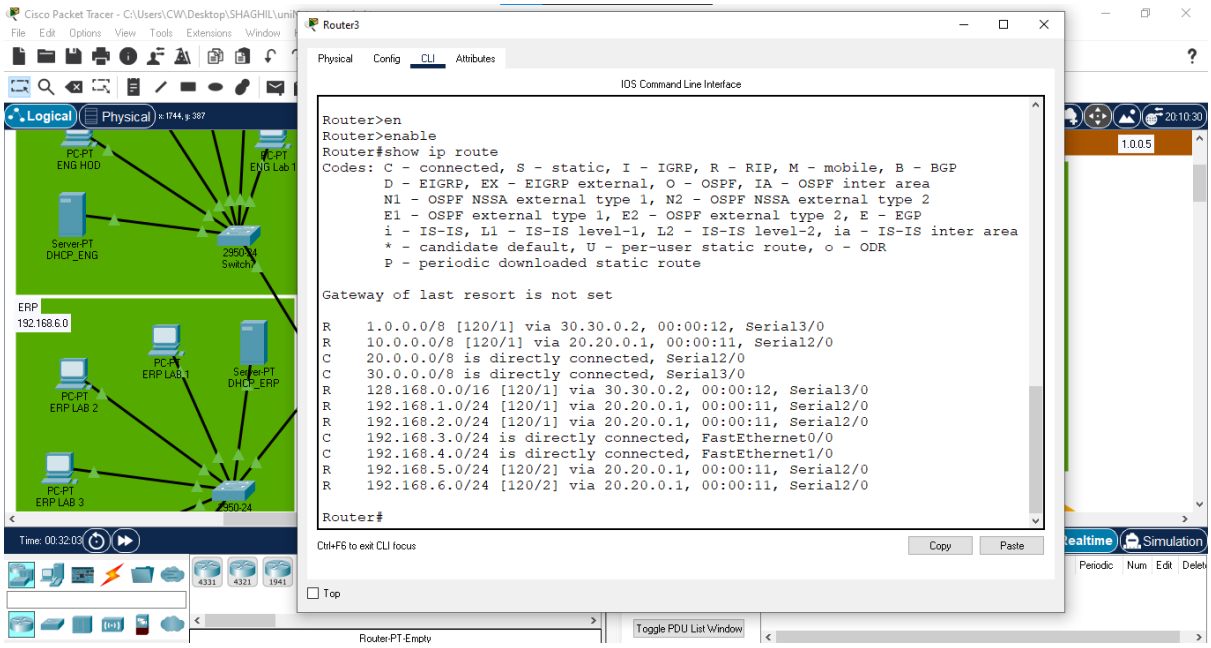
ROUTER 1:



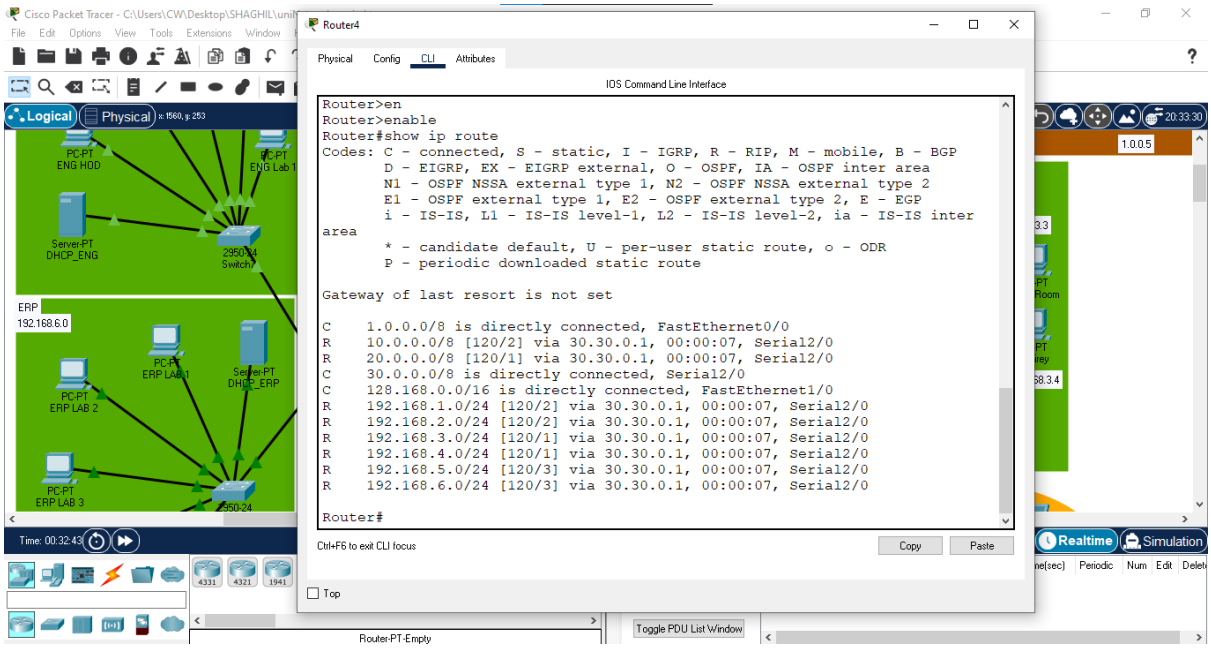
ROUTER 2:



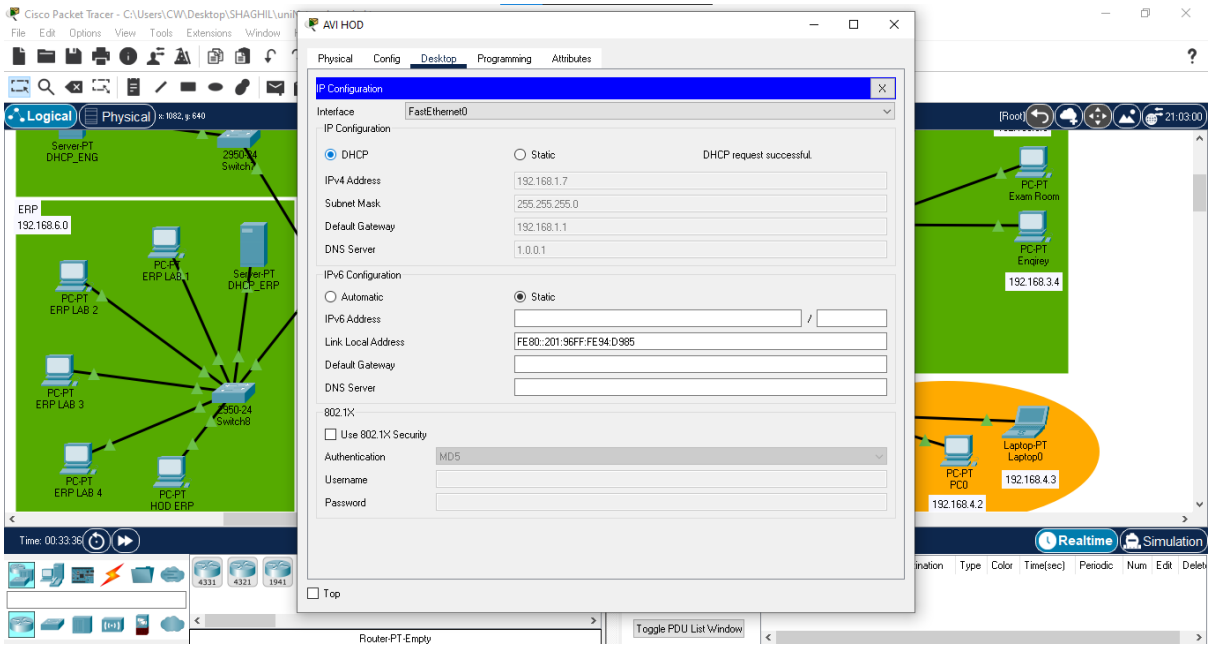
ROUTER 3:



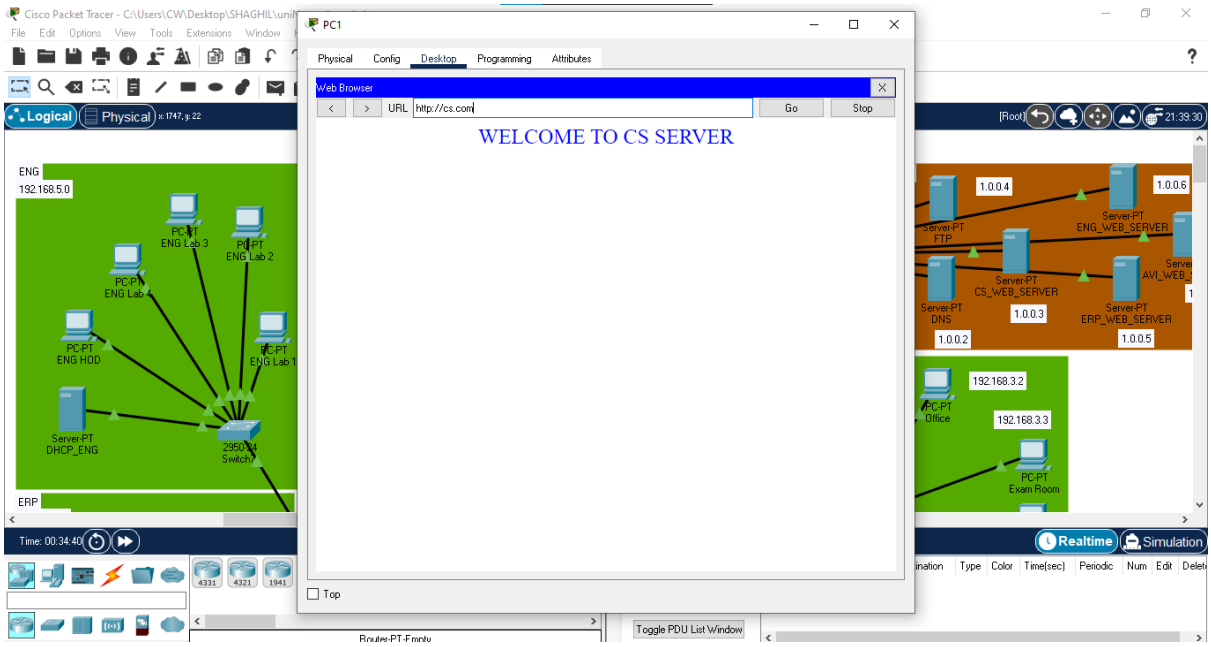
ROUTER 4:



ASSIGNING IPs DYNAMICALLY THROUGH DHCP SERVER:



TESTING WEB HOSTING:



TESTING FTP SERVER: