DCN-Assignment # 01

Total Marks = 10

Last Date of Submission: 25th June 2021

Submit ONLY on Google Classroom in PDF File.

Question: Design a Ring network which consist of 4 routers. Use serial cable between routers. Attach 3 PCs with each router by using switch. Connect a Web Server with router-4 switch also.

The requirements are as follows:

1. All the devices must be on your name.
2. Assign IP addresses on all devices. (use all three classes from the given range below)
3. IP address tagging is mandatory on network diagram with subnet prefix.
4. You have to apply VLSM on complete network.
5. PCs connected with router 4 switch must be able to access Web Server through an IP address. Web Page must be displayed on PCs attached with router 4 switch.
6. Configure TELNET by setting all three passwords on router 3. All attached PCs from this router 3 must be able to access router 3 configuration terminal. All passwords should be on your **Student name**.
7. Configure DHCP on router 2 so that all the attached PCs with router 2 must be able to get dynamic IPs from DHCP. DHCP pool name must be on your Student name and ID. (**example: JUNAID_1072**)
8. Configure router 1 through PC. You have to attach a console cable for this purpose. (Assign IP address on router 1 interfaces from this PC terminal)

Use the given IP addresses where each Public and Private addresses can be suitable.

10.20.30.1 to 14.14.14.255, 130.130.130.1 to 140.140.140.255, 172.30.30.1 to 190.90.90.255

Requirements:

1. All the above mentioned details on page 1.
2. Network Topology with complete tagging on page 2.
3. IP address of each router with specific router name. (Like router 1, all IPs of this router, then all IPs of router 2 and so on). All the routers must be on your name. {Like **DCN-Lab (config-if)# ip address 10.0.0.1 255.255.255.252**}
4. Take snaps of IP configuration on routers as mentioned. **(DCN-Lab is the host name which must be on your name. Don't close your file until you didn't take the configuration snap otherwise hostname will not be appeared)**
5. All IP address of PCs and subnet mask.
6. Web page must be access.
7. TELNET complete code of router.
8. User Access Verification window snap of all the PCs attached with the router 2.
9. DHCP complete code of router.

If you failed to complete the above mentioned requirements (as mentioned than you will get partial marks. Place all the snaps neat and clean (not cropped) so that every configuration should be visible. All the snaps must be in sequence as mentioned.