DCN-Assignment # 02

Total Marks = 10

Last Date of Submission: 18th July 2021

Submit ONLY on Google Classroom in PDF File.

Question: Design a Star network which consist of 5 routers. Use serial cable between routers. Attach 3 PCs only where servers are attached. Server details are as follow, Email Server with router 1 switch, Web Server with router 2 switch, DHCP server with router 3 switch and DNS server with router 4 switch.

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. (**Use Public and Private IPs where each can be suitable.**)
5. PCs connected with router 1 switch must be able to send and receive email to each other. Email address must be on your name + ID. (**example: JUNAID_107251**)
6. PCs connected on router 2 switch must be able to access Web Page from a Domain Name. Web Page must be on your full name. (**example: JUNAID_AKHTER**)
7. Configure Static IP address on PCs connected with router 3 switch.
8. Users connected with router 4 switch must be able to get dynamic IPs from DHCP server. DHCP pool name must be on your Student name and ID. (**example: JUNAID_107251**)
9. Configure Static Routing Technique on Router1 to 4 for all possible destinations.

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 in previous point. **(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 Server Services and Web page accessed snaps from all PCs connected with router 2 switch.
7. Email Server Services snaps and Email send & receive snaps.
8. DNS Server Services snaps.
9. DHCP Server Services snaps.
10. Static Routing Technique code of all the mentioned routers.

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.