Group A

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Consider a network that contains five LANs from 3 routers. Design a network architecture as follows:

- The first LAN subnet from router named "Faculty" with address 10.0.0.0/24 it contains:
  - Two PCs with names "Student 1" and "Student 2".
  - A DNS server named "Faculty DNS" which directs website requests with domain "edu" to server "University DNS".
  - "Faculty DNS" is also DHCP server for the PCs.
- The second LAN between router "Faculty" and router "University" with address 10.1.0.0/24.
- The third LAN subnet from router "University" with address 10.2.0.0/24 it contains a DNS server named "University DNS" which directs websites "asu.edu" to server "sci.asu.edu".
- The fourth LAN between router "University" and router "Science" with address 10.3.0.0./24
- The fifth LAN subnet from router "Science" with address 10.4.0.0/24. The network contains server "sci.asu.edu".
- Design DNS hierarchy so that PCs "Student 1" and "Student 2" should be able to open "sci.asu.edu" website.

Use Packet tracer to build the above network such that every device can ping the others. Check the functionality of DNS and DHCP servers.

Bonus question:

Attach a wireless router (WRT300N) to network 10.0.0.0, add a PC and connect it to the wireless network. Make the necessary configuration to the router. Change the name of the wireless network to be your division name, and the password to your name.

Group B

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Consider a network that contains five LANs from 3 routers. Design a network architecture as follows:

- The first LAN subnet from router named "Home" with address 10.0.0.0/24 it contains:
  - One PC with name "Owner".
  - A DNS server named "Home DNS" which directs website requests with domain "eg" to server "Cairo DNS".
  - "Home DNS" is also FTP server, add a new username and password to it.
- The second LAN between router "Home" and router "Cairo" with address 10.1.0.0/24.
- The third LAN subnet from router "Cairo" with address 10.2.0.0/24 it contains a DNS server named "Cairo DNS" which directs websites with domains "gov.eg" to server "city.gov.eg".
- The fourth LAN between router "Cairo" and router "City" with address 10.3.0.0./24
- The fifth LAN subnet from router "City" with address 10.4.0.0/24. The network contains server "city.gov.eg".
- Design DNS hierarchy so that PC "Owner" should be able to open "city.gov.eg" website and using other names like "central.gov.eg".

Use Packet tracer to build the above network such that every device can ping the others. Check the functionality of DNS and FTP servers.

Bonus question:
Attach a wireless router (WRT300N) to network 10.4.0.0, add a PC and connect it to the wireless network. Make the necessary configuration to the router. Change the name of the wireless network to be your division name, and the password to your name.