Lab 7
Configure Routers Using DHCP and DNS Servers

What is DNS Server?

The **Domain Name System** (DNS) is a standard technology for managing public names of Web sites and other Internet domains. DNS technology allows you to type names into your Web browser like ***compnetworking.about.com*** and your computer automatically find that address on the Internet. A key element of the DNS is a worldwide collection of *DNS servers.*

What is DHCP Server?

Dynamic Host Configuration Protocol (DHCP) is a client/server protocol that automatically provides an Internet Protocol (IP) host with its IP address and other related configuration information such as the subnet mask and default gateway.

Aims of This Lab

➢ The aim of this Lab is to show how to design WAN using Routers.

➢ The aim of this Lab is to show how to configure routers using EIGRP Protocol.

➢ The aim of this Lab is to show how to configure routers to be DHCP with addition to its function.

➢ The aim of this Lab is to show how to configure routers to be DNS Server with addition to its function.

➢ After this Lab, the Student can know how to configure routers dynamically.
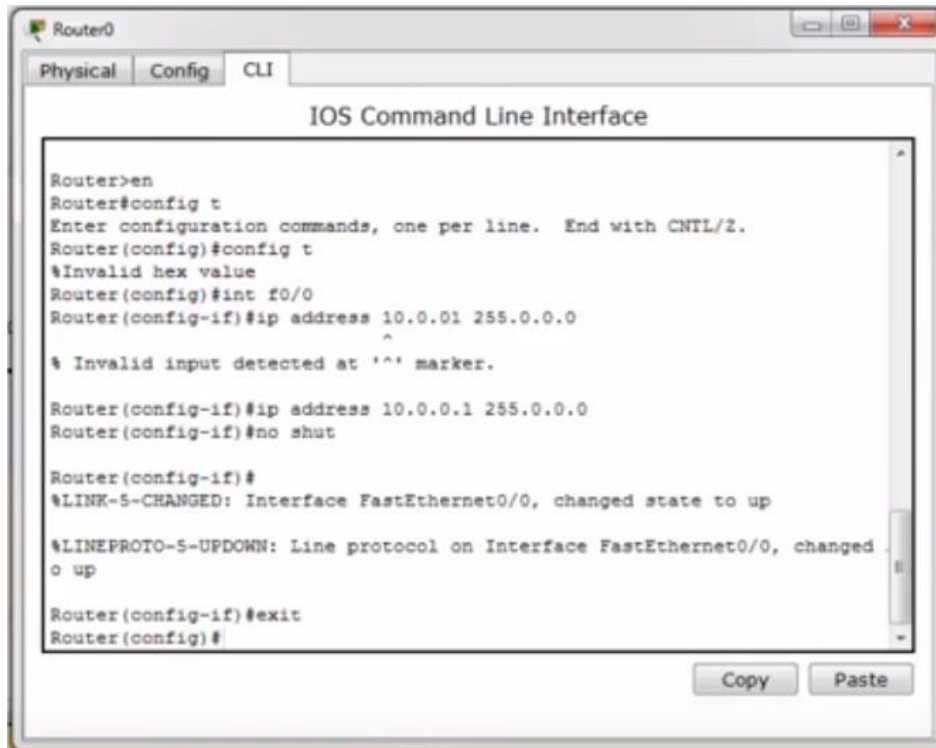
Experiment Procedure

1. **Design Network**

   ➢ Design two LANs; each one consists of two Computers and switch.
   ➢ Select one router type 1841.
   ➢ Connect both networks to the router.
   ➢ Put note about the address you want to use for each LAN.
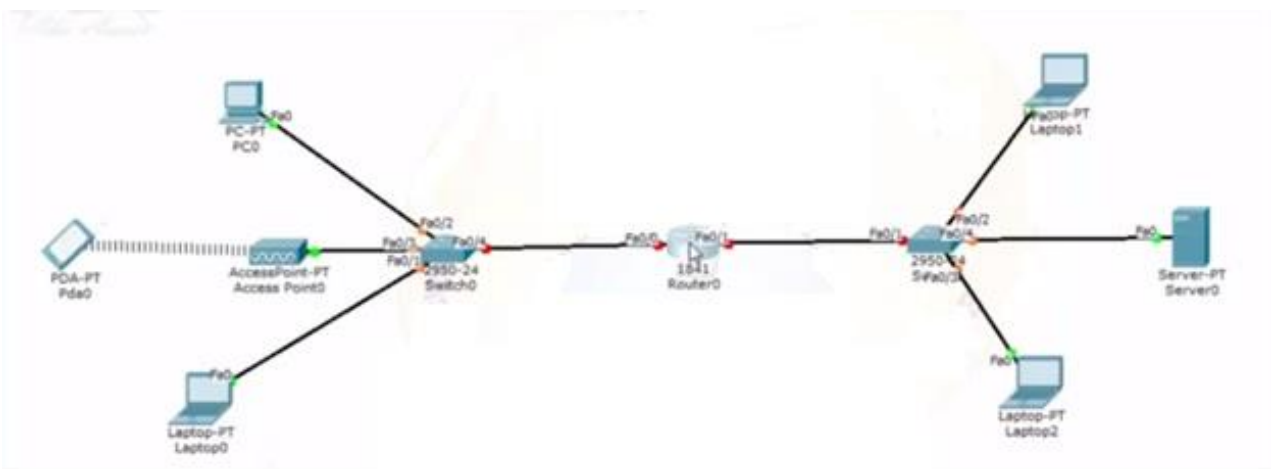
A. **Configure router interface and IP**

   1. Enable

   2. Config t

   3. Interface <type>< number>

   4. Ip address <address>< mask>

   5. Clock rate 64000

   6. No sh

   7. Repeat all steps (1-6) for both interfaces.
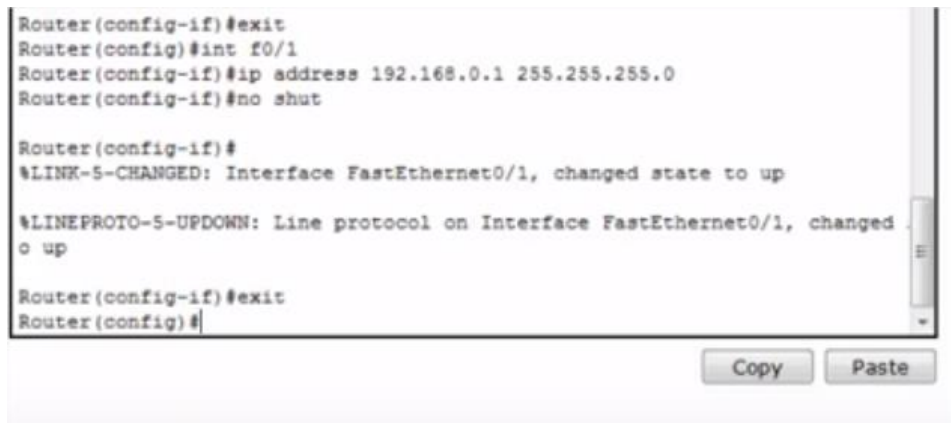
B. Configure Dynamic Routing

1. Enable

2. Config t

3. Router eigrp <**any number** must be used for all router in the networks>

4. Network <network IP><mask>

5. Repeat step 4 if there are another networks

6. exit

```
Router(config-if)#exit
Router(config)#router eigrp 1
Router(config-router)#network 10.0.0.0 255.0.0.0
Router(config-router)#network 192.168.0.0 255.255.255.0
Router(config-router)#exit
```
Copy   Paste

C. Configure DHCP

1. Enable

2. Config t

3. Ip dhcp pool <network number>

4. Network <network IP><mask>

5. Default <gateway ip address>

6. Dns< dns ip address>

7. Exit

8. Repeat same steps for the second network as shown in figure below.
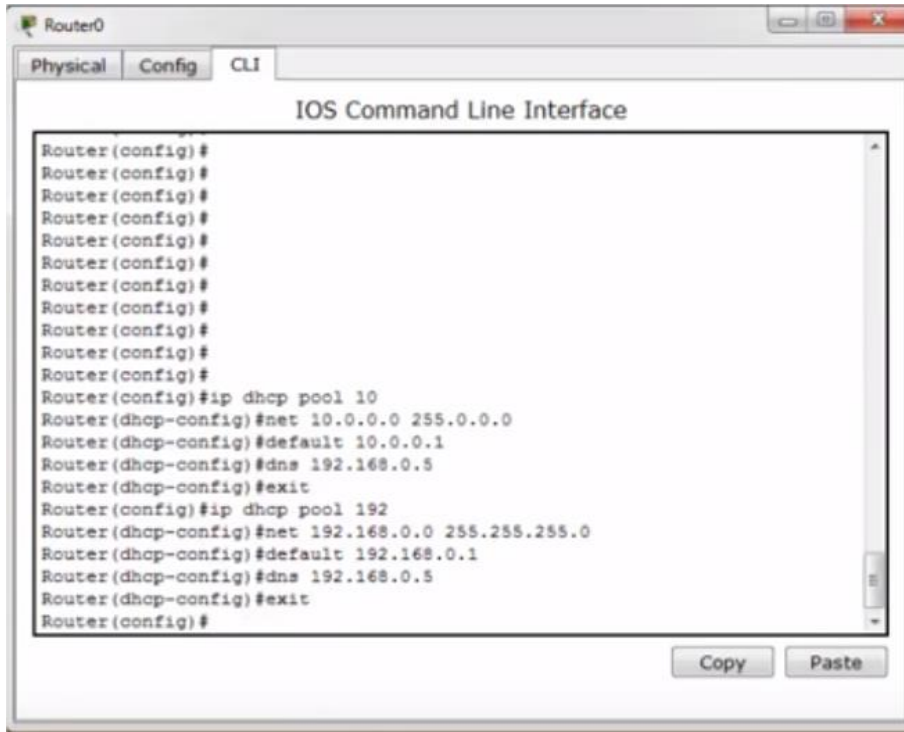
Give auto ip for all computers by going to desktop and ip

D. Configure DNS server

1. Click on the server.

2. Goto configure

3. Select from the left side menu the Fastethernet.

4. Enable the DHCP in order to get ip address.

5. From the menu (left side) select DNS as shown in next figure.

6. Give name to the server such as (**www.m.com**).

7. Put the address given to the server (192.168.0.5) in the address field.
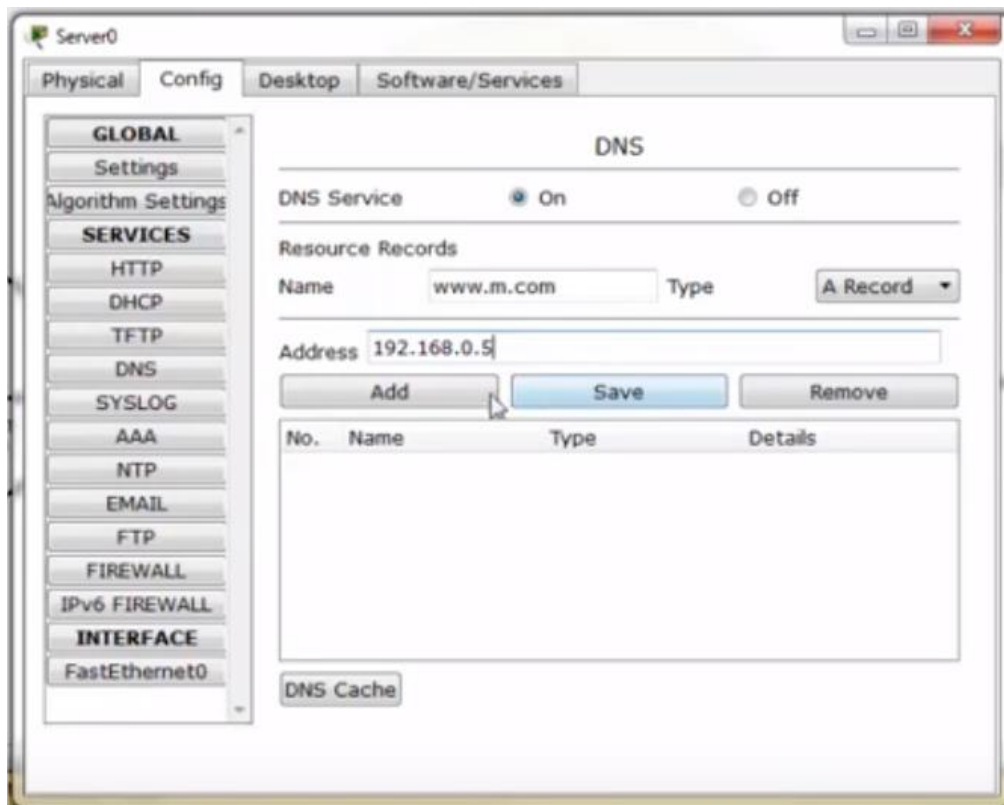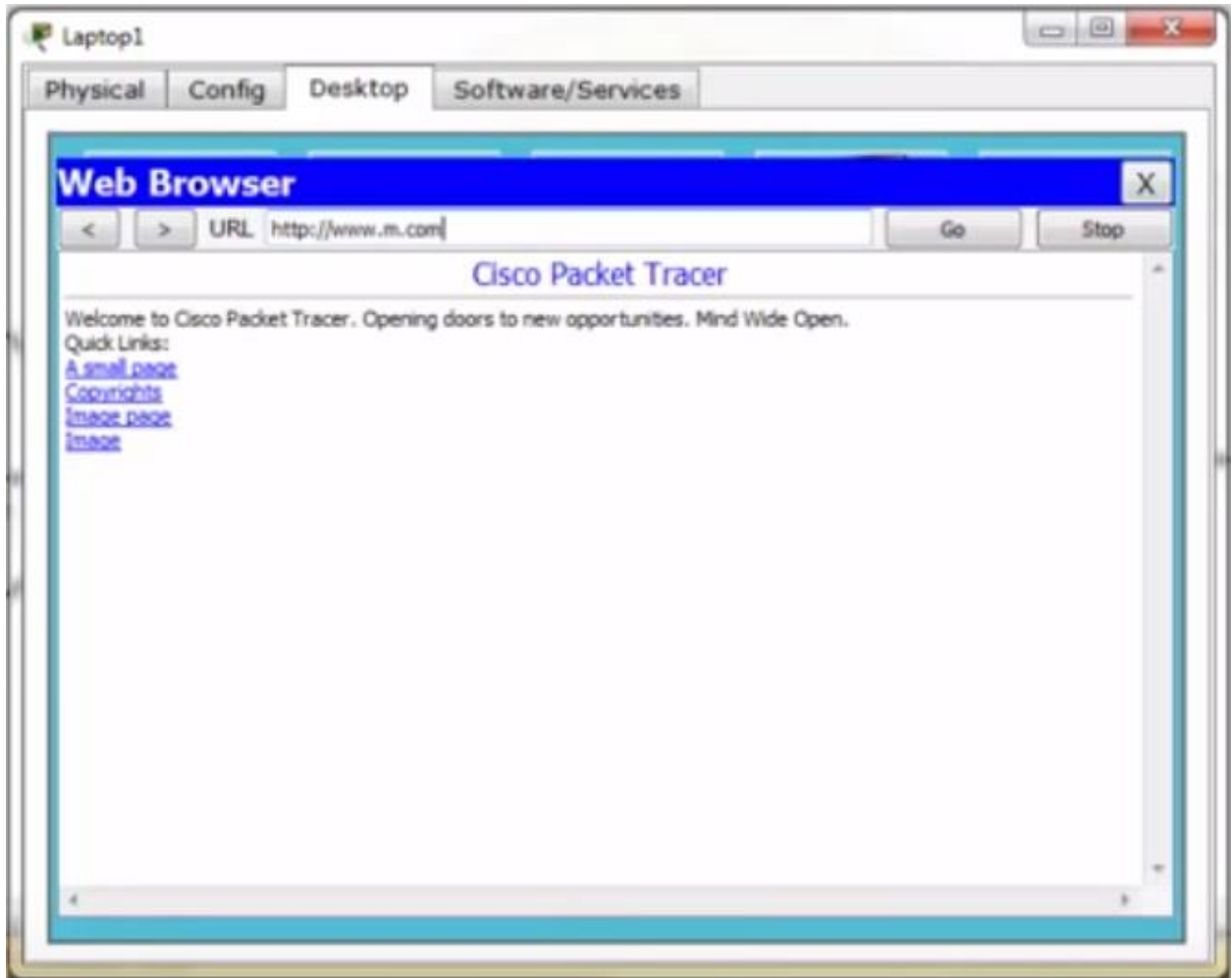

8. Press add as shown below
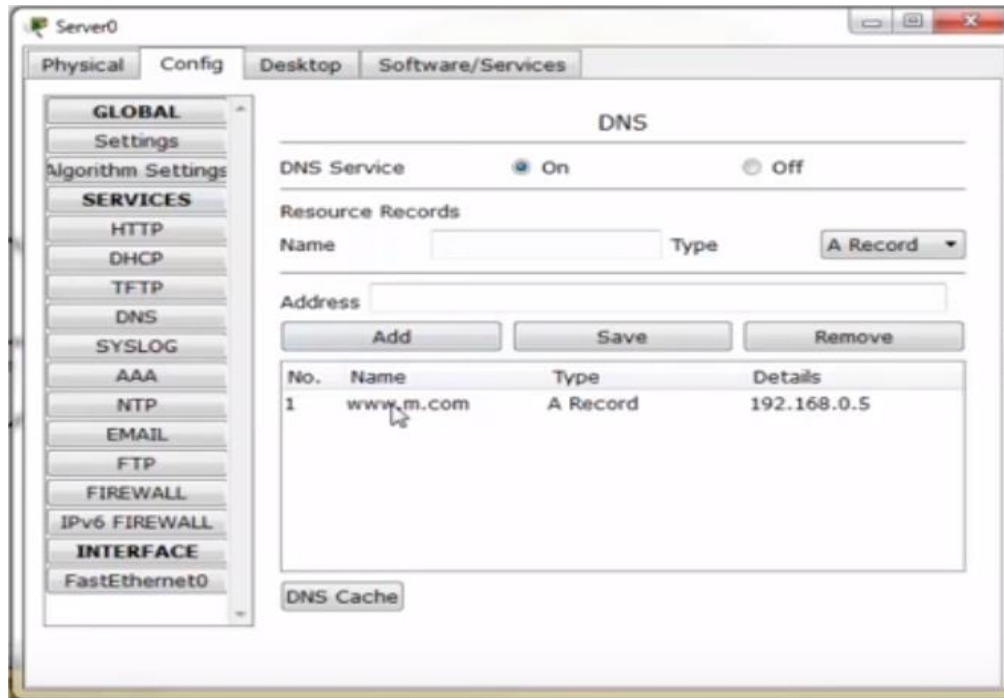
9. Click on any computer.

10. Goto web browser.

11. You will see the below figure

12. Give address and press go you will see

Questions (put the answer in your report)

1. What is the main function of router?

2. What is the DNS?

3. What is the meaning of DHCP?

4. How to configure servers?