**Practical No. 03**

**Aim**: Connect the computers to the Local Area Network. (IP addressing and Subnetting) and design a Host with Enabling IP forwarding in it.

**Procedure: On the host computer**

On the host computer, follow these steps to share the Internet connection:

1. Log on to the host computer as Administrator or as Owner.

2. Click Start, and then click Control Panel.

3. Click Network and Internet Connections.

4. Click Network Connections.

5. Right-click the connection that you use to connect to the Internet. For example, if you connect to the Internet by using a modem, right-click the connection that you want under Dial-up / another network available.

6. Click Properties.

7. Click the Advanced tab.

8. Under Internet Connection Sharing, select the Allow other network users to connect through this computer's Internet connection check box.

9. If you are sharing a dial-up Internet connection, select the Establish a dial-up connection whenever a computer on my network attempts to access the Internet check box if you want to permit your computer to automatically connect to the Internet

10. Click OK. You receive the following message:

When Internet Connection Sharing is enabled, your LAN adapter will be set to use IP address 192.168.0. 1. Your computer may lose connectivity with other computers on your network. If these other computers have static IP addresses, it is a good idea to set them to obtain their IP addresses automatically. Are you sure you want to enable Internet Connection Sharing?

11. Click Yes.

The connection to the Internet is shared with other computers on the local area network (LAN). The network adapter that is connected to the LAN is configured with a static IP address of 192.168.0. 1 and a subnet mask of 255.255.255.0

**On the Client’s computer**

To connect to the Internet by using the shared connection, you must confirm the LAN adapter IP

configuration, and then configure the client computer. To confirm the LAN adapter IP

configuration, follow these steps:

1. Log on to the client computer as Administrator or as Owner.

2. Click Start, and then click Control Panel.

3. Click Network and Internet Connections.

4. Click Network Connections.

5. Right-click Local Area Connection and then click Properties.

6. Click the General tab, click Internet Protocol (TCP/IP) in the connection using the list of the following items and then click Properties.

7. In the Internet Protocol (TCP/IP) Properties dialog box, click Obtain an IP address automatically (if it is not already selected), and then click OK.

Note: You can also assign a unique static IP address in the range of 192.168.0.2 to

254. For example, you can assign the following static IP address, subnet mask, and default gateway:

8. IP Address 192.168.31.202

9. Subnet mask 255.255.255.0

10. Default gateway 192.168.31.1

11. In the Local Area Connection Properties dialog box, click OK.

12. Quit Control Panel

2. Enabling IP forwarding in Windows Machine.

1. Open the Registry Editor.
2. Navigate to "HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters."
3. Right-click "IP Enable Router" and click Modify.
4. Change the "Value Data" field from "0" to "1."
5. Click Ok, close the Registry Editor, and restart your computer.