**EXPERIMENT 4 LAB REPORT**

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**DIVISION: G2; EA 3**

**AIM:** To connect two PCs using peer to peer communication.

**APPARATUS:** PCs with NIC, Cable, RJ-45 Connectors and Crimping Tool

**Theory:** Connecting two PCs using a crossover Ethernet cable is the safest and easiest way of transferring files, pictures, videos and music. It is fail proof and secure. Data transfer between two PCs through a crossover Ethernet cable creates a network for sharing data and using two electronic resources, thus avoiding having a separate networking facility for each computer. The two PCs must have network cards preinstalled and the LAN RJ45 Ethernet cable plug-in between them. Change both computer names and in the network connection properties, select the internet protocol properties and add values to the IP address and Subnet Mask. Then save the changes. Later, when all internet connections are made, restart the PCs and view the LAN of the two computers in the network connections.

The only requirements for a computer to join a peer-to-peer network are an Internet connection and P2P software. Common P2P software programs include Kazaa, Limewire, BearShare, Morpheus, and Acquisition. These programs connect to a P2P network, such as "Gnutella," which allows the computer to access thousands of other systems on the network.

Once connected to the network, P2P software allows you to search for files on other people's computers. Meanwhile, other users on the network can search for files on your computer, but typically only within a single folder that you have designated to share. While P2P networking makes file sharing easy and convenient, is also has led to a lot of software piracy and illegal music downloads. Therefore, it is best to be on the safe side and only download software and music from legitimate websites.

**Software Used:** In this lab we have made use of the Cisco Packet Tracer.

Packet Tracer is a cross-platform visual simulation tool designed by Cisco Systems that allows users to create network topologies and imitate modern computer networks. The software allows users to simulate the configuration of Cisco routers and switches using a simulated command line interface.

**How to set up a network between two computers?**

Connect the crossover Ethernet cable to the LAN (RJ45) ports of both the PCs

**How is this important?**

1. File sharing between PCs and Savings in storage space
2. Moving large files between PCs
3. Educational purposes

**PROCEDURE:**

**PC-1**

1. Go to My Computer > Properties > Computer Name

2. Change the computer name to A and workgroup name to ABC

3. Click OK to save changes.

4. Go to Control Panel > Network Connections

5. Right click on your LAN connection and select Properties

6. Select Internet Protocol (TCP/IP) > Properties

7. Enter these values: IP Address - 192.168.0.1,

Subnet Mask - 255.255.255.0

8. Leave the other fields blank and click OK to save changes.

**PC-2**

1. Go to My Computer > Properties > Computer Name

2. Change the computer name to B and workgroup name to ABC

3. Click OK to save changes.

4. Go to Control Panel > Network Connections

5. Right click on your LAN connection and select Properties

6. Select Internet Protocol (TCP/IP) > Properties

7. Enter these values: IP Address - 192.168.0.2,

Subnet Mask - 255.255.255.0

8. Leave the other fields blank and click OK to save changes.

· After the connections and settings have been saved, both the PCs should be connected by LAN.

· You may need to restart both the PCs. You can check if the connection is working by pinging one PC from the other

· For PC-1, Start > Run > CMD > ping 192.168.0.2

· For PC-2, Start > Run > CMD > ping 192.168.0.1

· You can view the PCs in My Network Places

· You can use this LAN connection to share files

**SCREENSHOTS OF OUTPUT:**

Graphical user interface, text, application, Word

Description automatically generated

Shape

Description automatically generated

Chart

Description automatically generated with medium confidence

**CONCLUSION: From this experiment we have learnt how to perform Peer to Peer pairing of two PCs on CISCO PACKET TRACER.**