**EXPERIMENT 3**

**Connect Computers in LAN**

Creating a **LAN (Local area network)** connection between 2 computer systems can make sharing easy by using a **LAN** **connection**, you can transfer your **GB’s** of data files like documents, music, and media, quickly from one computer to another. And not just that, by connecting two computers via **LAN**, you can also make your computer to play **multiplayer games** on it and to do that, you’ll just need to connect two computers, create a **LAN** connection, host a multiplayer game and Play On.

**So Let’s See How To Create A LAN Connection**

The first thing you’ll have to make sure is, you do have a crossover cable in your hand to connect to two computers **because cross-over and straight cable look both same but work differently.**

Mainly **to connect two different networking devices** we use a **straight Ethernet cable** and **to connect two same devices** we need to use a **crossover Ethernet cable**, and the actually different in these two different kinds of cables is the internal wire connection.

So, make sure you have a **crossover** **cable** because it’s the only way to connect two computers without a modem, or otherwise you can use a straight cable if you’re both computer is connected to the **network device** like a **Router**, **Network Switch** or a **Modem**.

### **Step 1: Creating a Physical Connection**

Now the first thing what you’ll need to do is to connect each end of your **LAN** cable into both of your computer’s **Ethernet Port** to connect both computers with each other. If you’re using a **modem** or **router switch** then make sure everything is connected properly.

And if you are trying to share thing like transferring some files from your laptop to some another laptop, then you can also user your laptops **Wi-Fi** to share your files wirelessly. To do that, both of the **WIFI** enabled devices needed to connect to some **WIFI router**, and the rest of whole procedure is same like others.

### **Step 2 –LAN Connection Setting**

After connecting everything now it’s time to setup an **IP address** in both your computers to make your computer to identify the connection. You’ll just need to follow this same procedure in both of your computers or maybe laptops.

* Open your **Windows Control Panel**, or you can search for “**Network and Sharing Center”** in the **Start Menu**.
* Select the **Network and Sharing Center** option.
* From the left sidebar, click on “**Change Adapter Settings”** option.

After that, open your **“Local Area Connection”** or I say **Ethernet Adaptor’s** properties.

Now select the **“Internet protocol Version 4 (TCP/IPv4)”** option and then click on its **“Properties”** button.

Now when the **“Internet protocol Version 4 (TCP/IPv4) properties”** windows get popped up. Enter the IP address manually as shown in the picture given below and click on the “**Ok**” button after entering it.

This IP address given the picture is only going to works when you connected both of your computers via crossover cable.If you have a modem or

If you have a **modem** or **WIFI** **router**, then you’ll have to add the gateway IP as well. In that case, your **IP** should need to look like this –

### **Step 3 – Change Default Sharing Setting**

After entering the **IP Address** in both of your computers, now you’ll need to change the sharing setting of your computers to permit **access rights** for another computer.

To do that, first, you’ll again have to go back to the Network and Sharing Center setting page of your Windows and then select the **“Advanced sharing settings”** option to see all your computers network sharing setting.

**After when the sharing setting window gets opened, now you’ll need to change your network setting to those options as shown listed below:**

* **Turn on** network discovery
* **Turn on** file and printer sharing
* **Allow** windows to manage home group connection (recommended)
* **Turn on** sharing so anyone with network access can read and write files in the public folders
* **Use 128-bit** encryption to help protect files sharing connections (recommended)
* **Turn off** password protected sharing

**Make these changes in all network profiles;**

### **Step 4 – Change Default Workgroup Setting**

By the use of this setting, you can create the same **workgroup** for both computers to starts sharing, by connected both of them in the same workgroup. **Workgroup setting** must be same in both your computers but the computer’s name should be different to identify both.

* First, you’ll have to press **Windows + Pause Break** Key on your keyboard to open your system’s properties window. After that, click on **“Change setting”** in workgroup settings category as shown in the picture given below.

Now in the System properties, you’ll need to click on the change button, and then you will able to see the other options for changing your **Computer’s Name.** So first, click on the **“Change”** button then type “**WORKGROUP**” in the ‘Workgroup:’ options and then click on “ok”. After that, you’ll have to do the same thing again on your different computer which you wanted to connect (or maybe on all computers of your LAN sharing computers). And that’s how your computer can communicate to each other by working on same LAN Workgroup;

* After that click on **“Network ID”** and do this manual setting as given in the picture given below:
* After that click on **Finish** and restart both of your computers.

### **Step 5- At Last, Turn On Drive Sharing**

Now you will able to see your both computer in your windows network place location and to share your drive via network you’ll just need to Turn On the drive sharing by making some changes in that drive’s properties.

**Here’s the list of some steps what you can follow to turn on the drive sharing in your computer or laptop:**

* Right click on your drive and select **Properties**.
* Then, select “**Sharing”.**
* Then, click on “**Advanced Sharing”.**
* Then, tick the **“Share this folder”.**
* Then, click on “**Permissions”.**
* Then, tick on “**Full control”.**
* Then, click on “**OK”.**
* At last, click on “**OK”** again and that’s it.