

Computer Networks Lab

Assignment # 01 – RJ-45 Connector

BS - SE (S)

Due: March 19, 2023

Submitted To: Naveed Khurshid

Group Members:

Zeeshan Ali
20i-2465

Ans Zeshan
20i-0543

Assignment # 01

In this assignment, we will be using wired physical media. In the wired media, we will be using Twisted pair cable.

Wire:

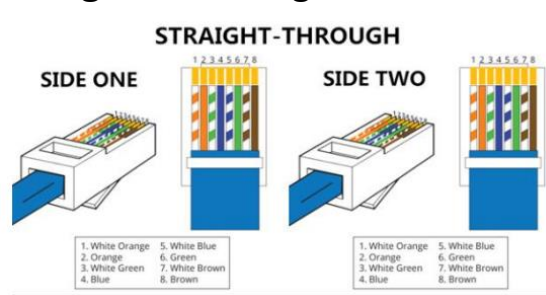
- UTP cable without shield
- Category: CAT-6 (Platinum indoor solid- GIGA-speed)

Given:

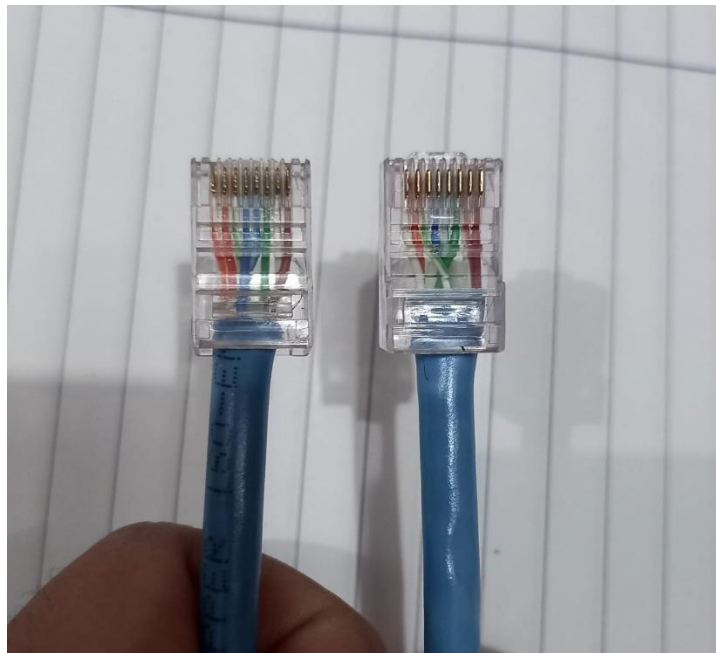
- 1 meter wire
- 4 RJ-45 connectors

Task-1:

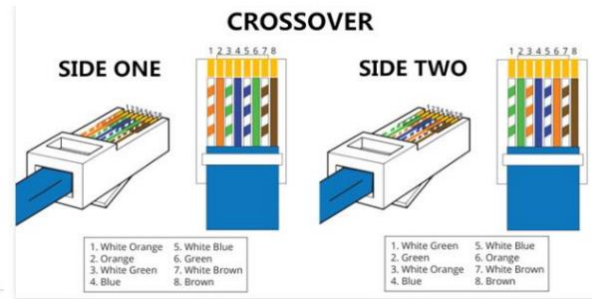
We make a **Straight through** wire using this color scheme.



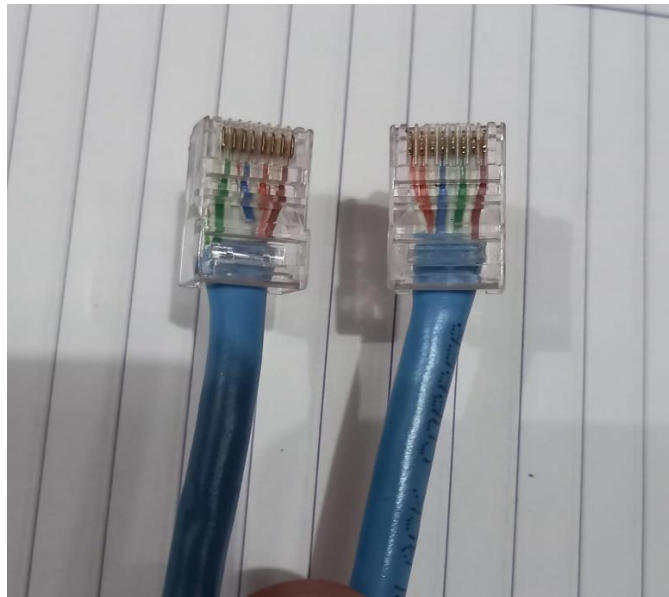
Here, I have added my cable and the cable is tested and checked by the lab instructor.



We make a **Cross-Over** wire using this color scheme.



Here, I have added my cable and the cable is tested and checked by the lab instructor.



Task-2:

Now to check the connectivity between 2 laptops using Cross-Through wires are shown below.

Laptop 1:

```
Microsoft Windows [Version 10.0.19044.2604]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Rana Zeeshan Ali>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::f49f:74db:cf82:6e4e%16
    IPv4 Address. . . . . : 192.168.1.1
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.2

Ethernet adapter Ethernet 2:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::eda1:2597:93f1:2e9f%18
    IPv4 Address. . . . . : 192.168.56.1
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 

Wireless LAN adapter Local Area Connection* 1:
```

```
Command Prompt
Microsoft Windows [Version 10.0.19044.2604]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Rana Zeeshan Ali>ifconfig
'ifconfig' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\Rana Zeeshan Ali>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Rana Zeeshan Ali>
```

Laptop 2:

```
C:\Users\pcs>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::965a:e18e:9ca:e485%11
    IPv4 Address. . . . . : 192.168.1.2
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.1

Ethernet adapter VirtualBox Host-Only Network:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::9cb3:745c:846f:93b8%21
    IPv4 Address. . . . . : 192.168.56.1
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . :
```

```
Command Prompt
Microsoft Windows [Version 10.0.19045.2604]
(c) Microsoft Corporation. All rights reserved.

C:\Users\pcs>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\pcs>
```

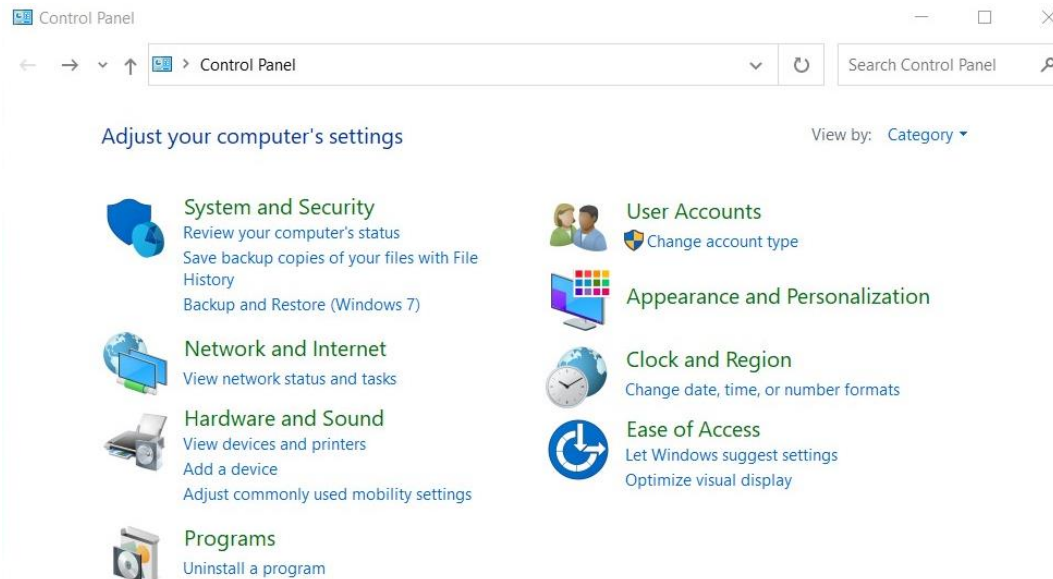
Task-3:

Share a Folder between two Laptops that both have access to it.

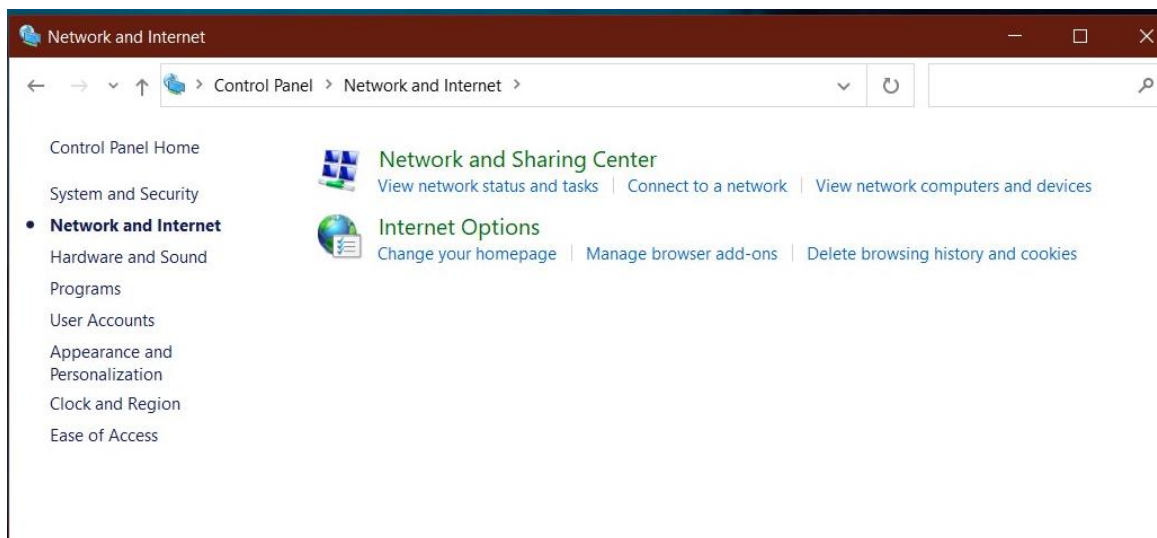
Firstly, I Set the **same settings on both laptops** that I show below in pictures.

Settings:

1- Open a control panel in the laptop, this screen will be appeared.

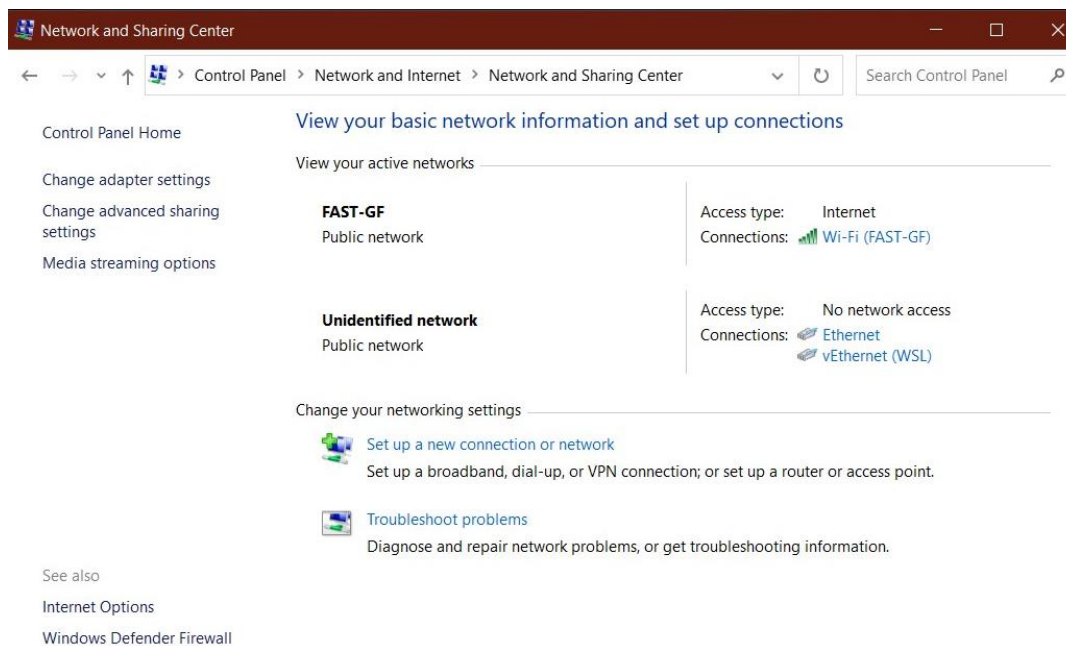


2- Now click on the **Network and Internet** text, it will bring you on new page.

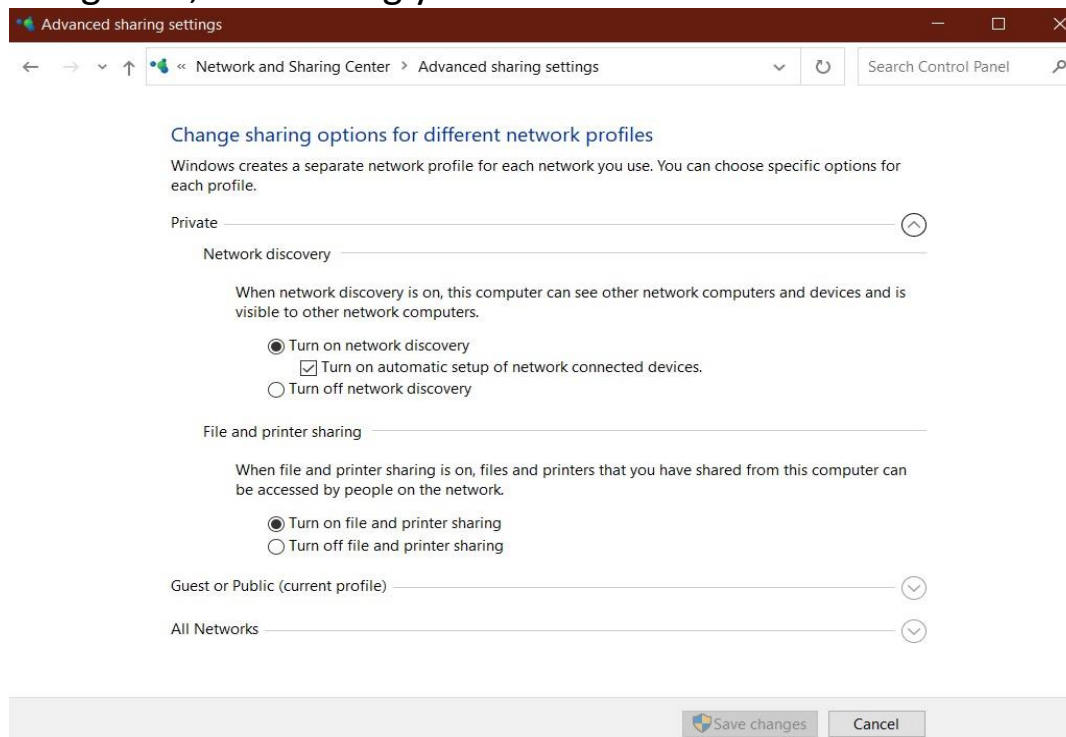


Now click on Network and sharing center so that it will bring you on new page.

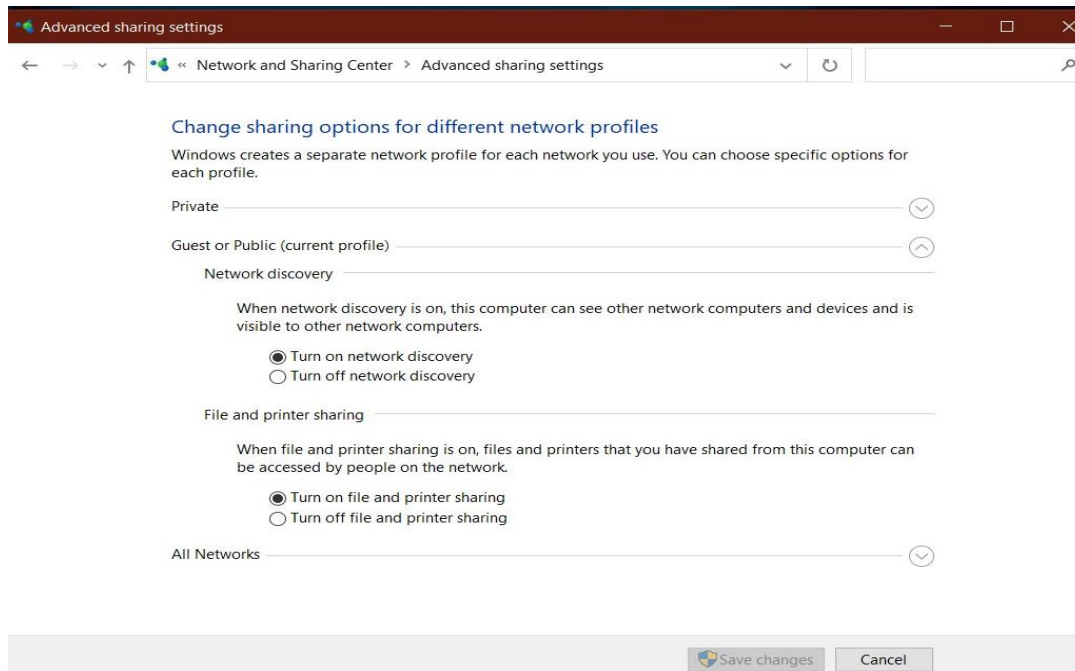
3- Now here you will see about the ethernet connection with the laptop. Now click on **Change advanced sharing settings** that is on left side the screen.



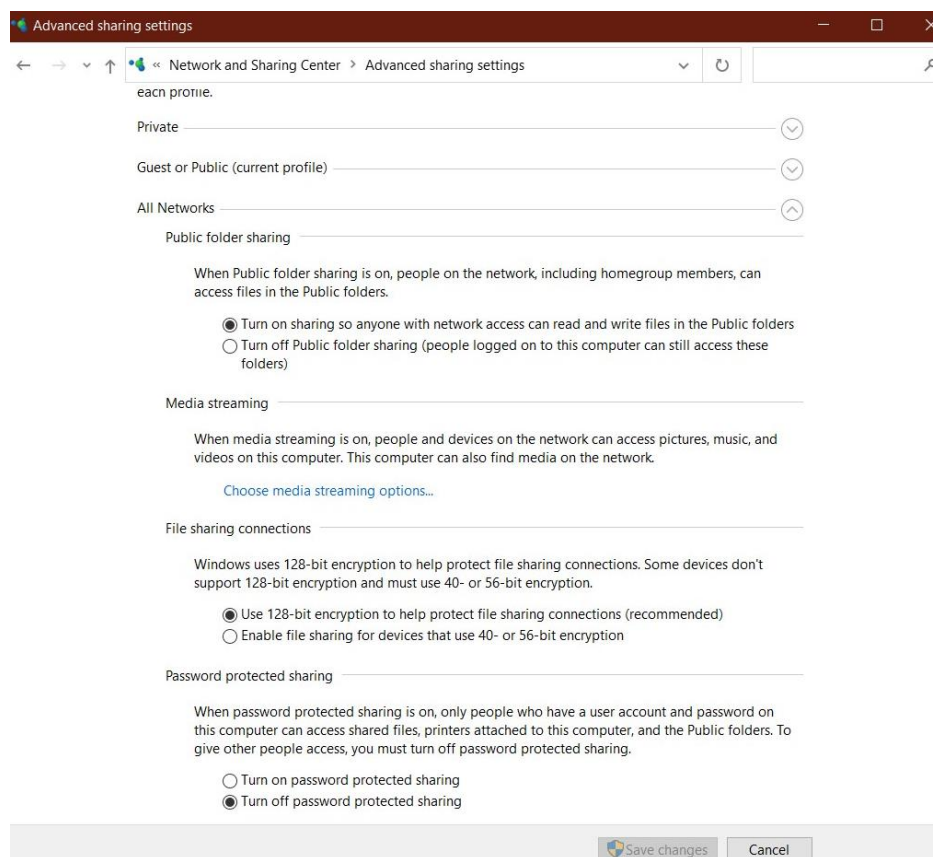
4- By clicking on it, it will bring you on the new screen.



In private section, select the Turn on Things so that it would be easy to do sharing b/w computers.

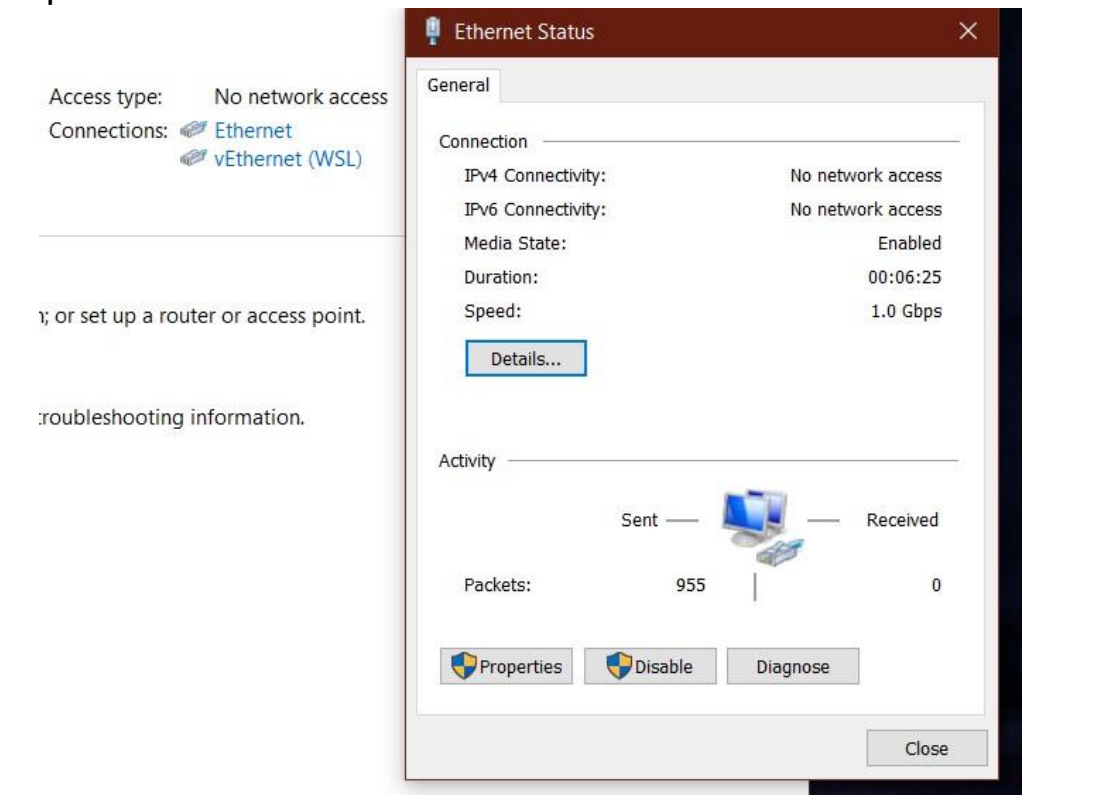


In Guest or Public section, select the Turn on Things so that it would be easy to do sharing b/w computers.

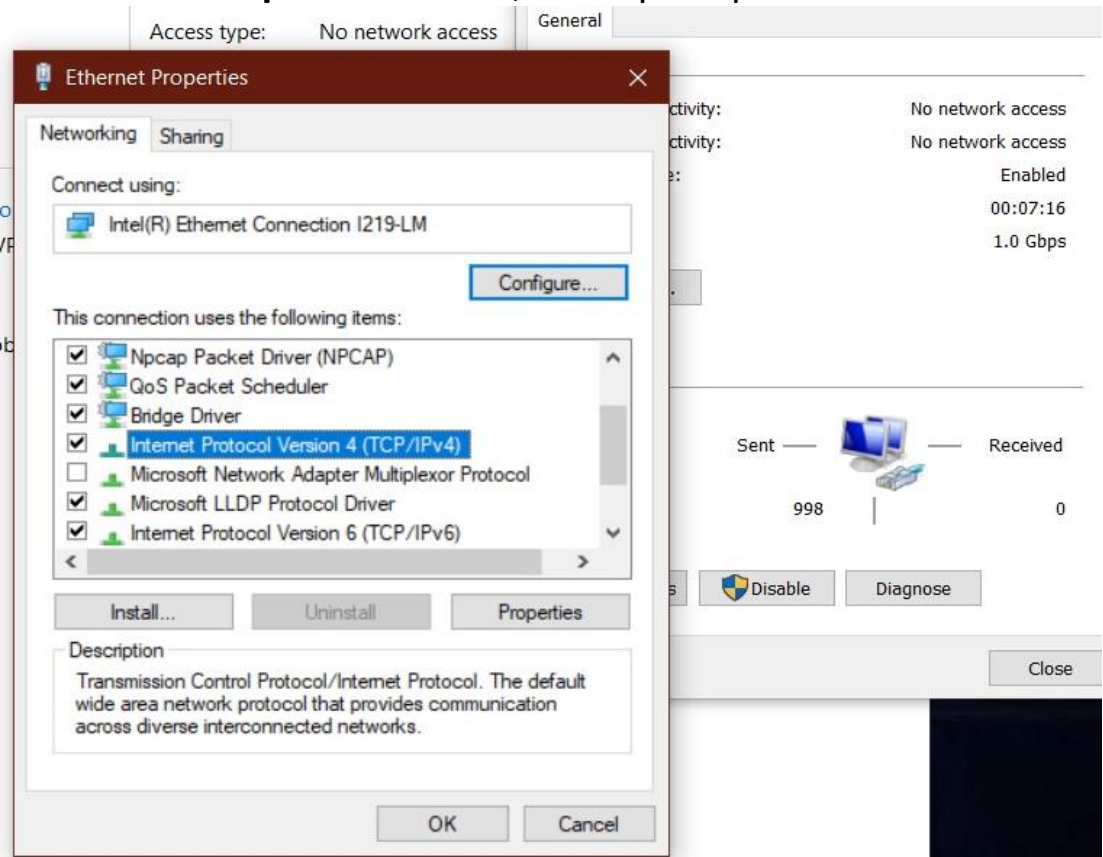


In All Network section, select the Turn on Things so that it would be easy to do sharing b/w computers. After this click on Save changes button.

5- Now referring to the Pic 3 as above, double click on the **Ethernet**, it prompts a new screen.

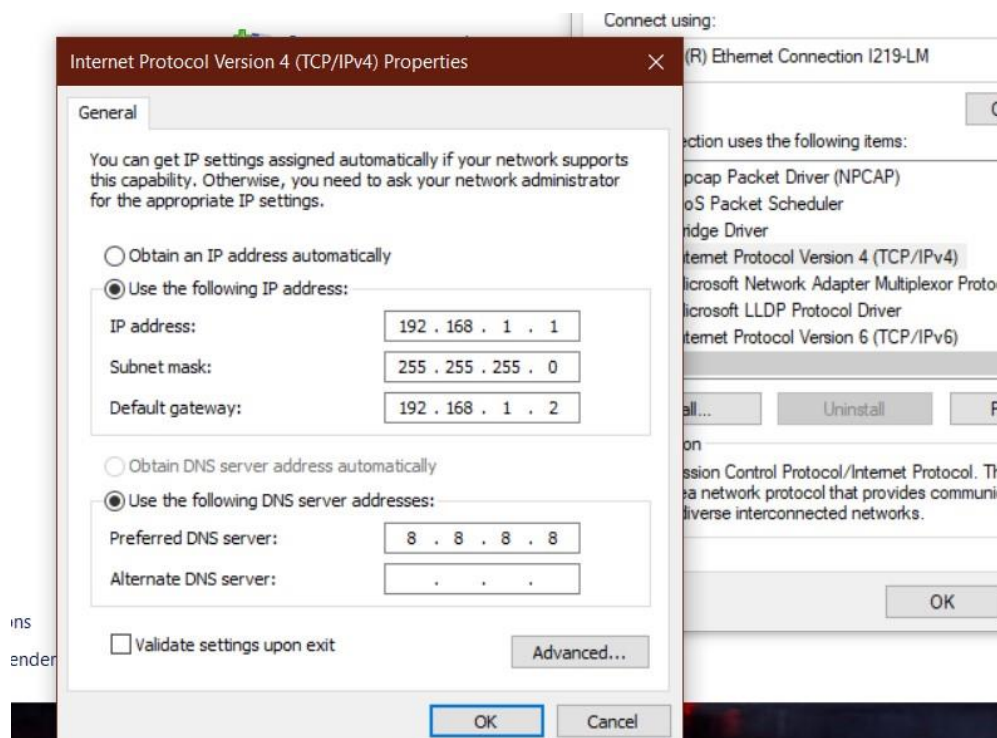


Now click on the **Properties** Button, it will prompt a new screen.

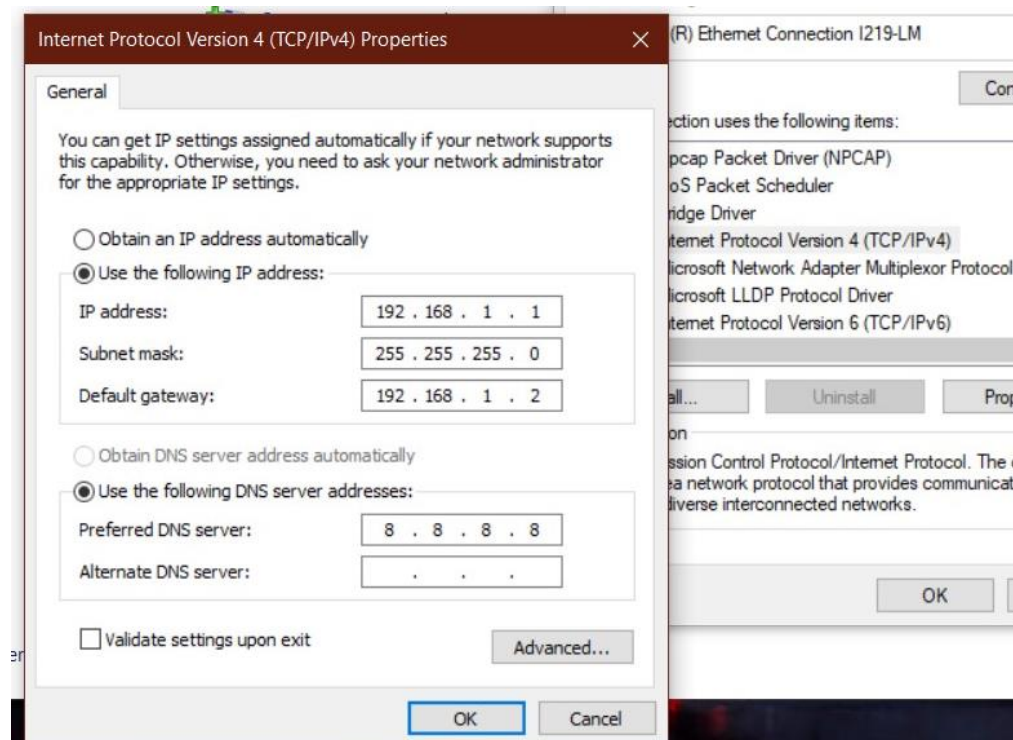


Now select the highlighted Selection to continue. And double click on it and it will prompt a new screen. In this we will be adding the Ip Address of our Devices.

Laptop 1:

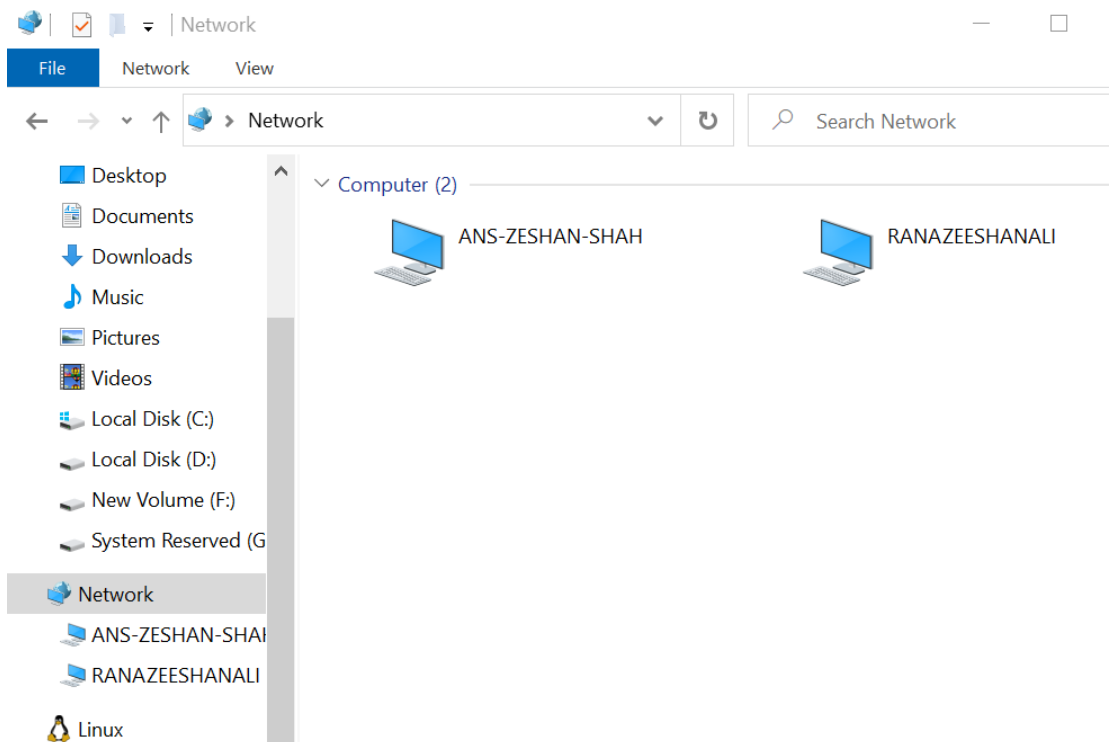
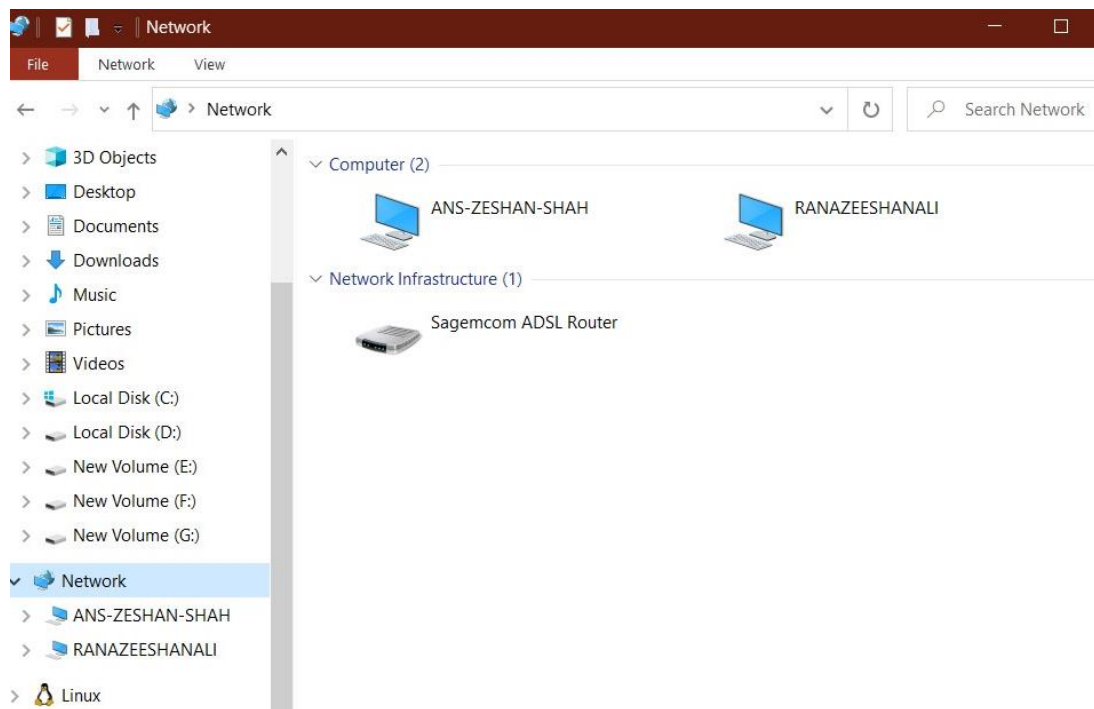


Laptop 2:



After adding values, click ok, ok and close button with respective screens.

Now the Computer are Connected To Each Other and now they can communicate with each other.



Now we have access of each other's Computers/Laptops.

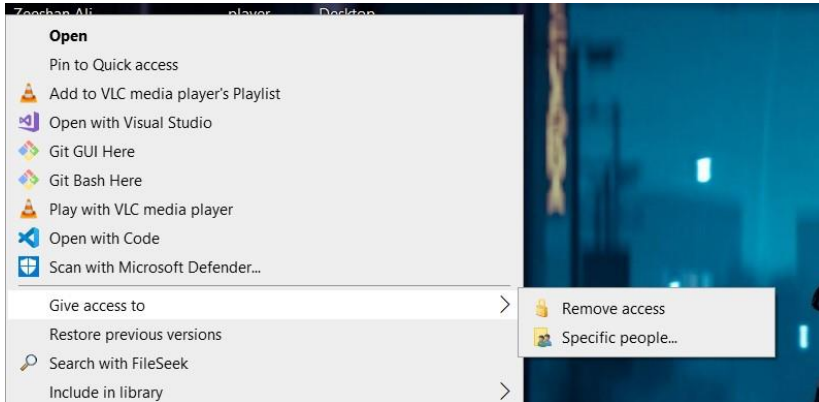
Now

Laptop 1:

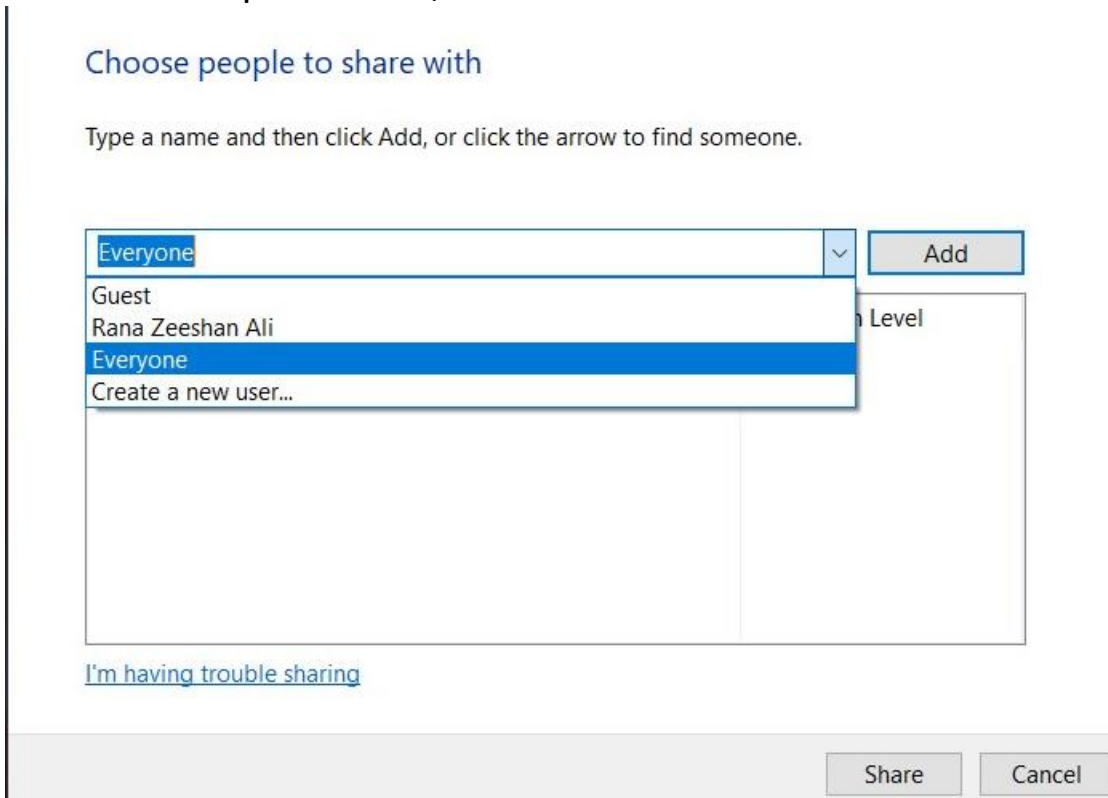
Creates Folder and add some images in it.



To share the folder with specific persons, so open like that.



Now Add the permission, where and whom can have access to it.



Choose people to share with

Type a name and then click Add, or click the arrow to find someone.

Name	Permission Level
Everyone	Read/Write
Rana Zeeshan Ali	Owner

[I'm having trouble sharing](#)

Now, add the permission to file or folder that a user can read/write and then click on share button.

Your folder is shared.

You can [e-mail](#) someone links to these shared items, or [copy](#) and paste the links into another app.

Individual Items

Zeeshan_Pc_Shared-Folder
 \\DESKTOP-V487A3D\\Users\\Rana Zeeshan Ali\\Desktop\\Zeeshan_Pc_Shared-Folder

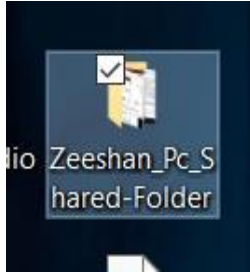
[Shared items aren't accessible when your computer is asleep.](#)

[Show me all the network shares on this computer.](#)

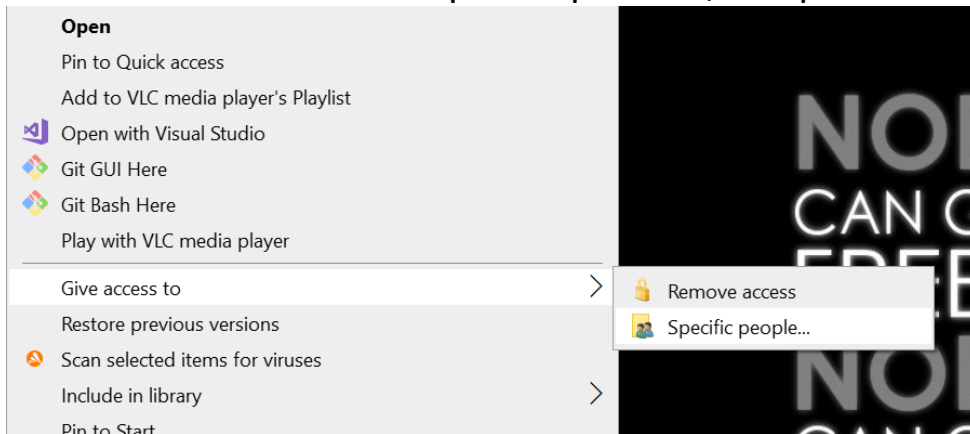
The folder is being shared and has accessible to Laptop 2.

Laptop 2:

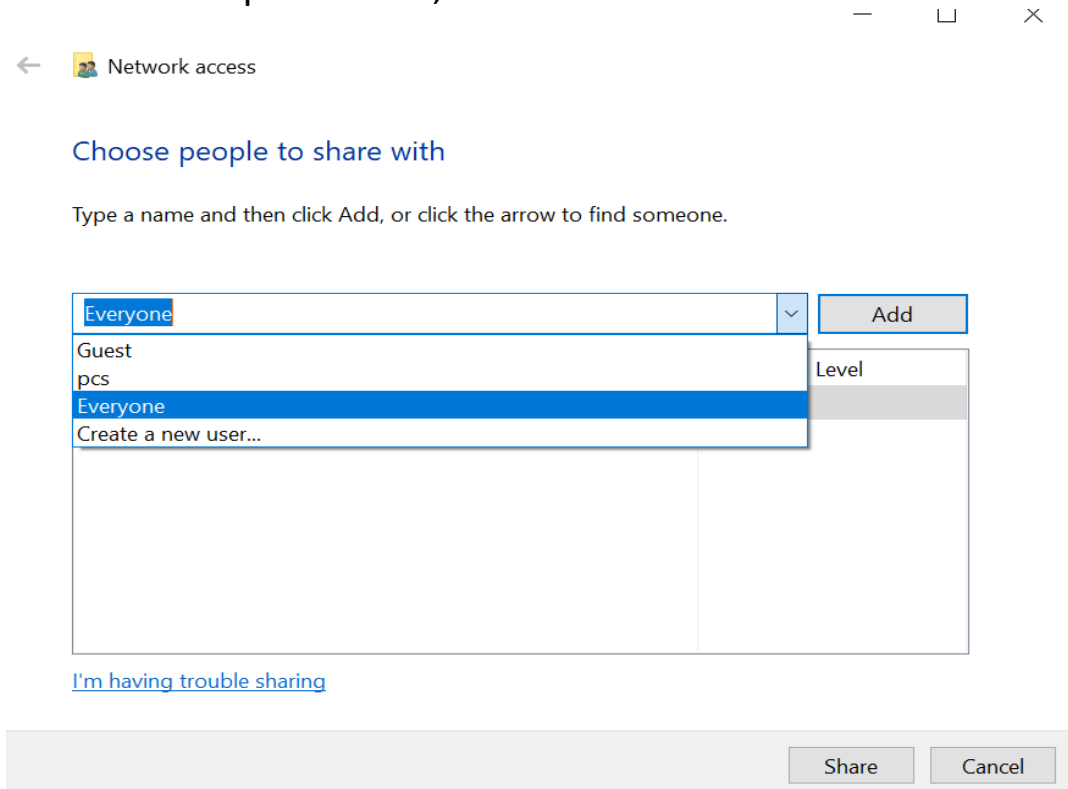
Creates Folder and add some images in it.



To share the folder with specific persons, so open like that.



Now Add the permission, where and whom can have access to it.



Choose people to share with

Type a name and then click Add, or click the arrow to find someone.

Name	Permission Level
Everyone	Read/Write
pcs	Owner

Read

✓ Read/Write

Remove

[I'm having trouble sharing](#)

Share


Cancel

Now, add the permission to file or folder that a user can read/write and then click on share button.

Your folder is shared.

You can [e-mail](#) someone links to these shared items, or [copy](#) and paste the links into another app.

Individual Items

 Ans_Pc_Shared-Folder
\\ANS-ZESHAN-SHAH\Users\pcs\Desktop\Ans_Pc_Shared-Folder

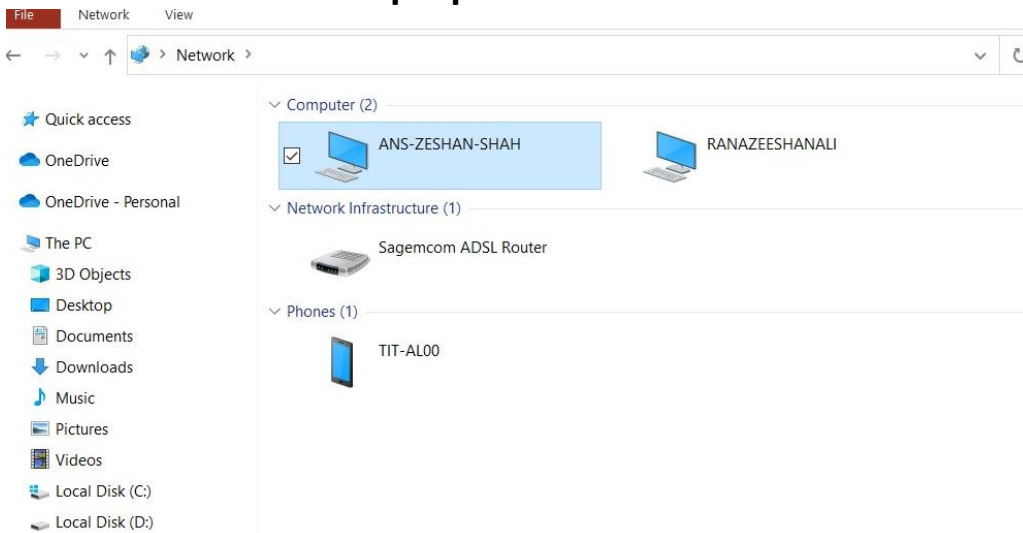
 [Shared items aren't accessible when your computer is asleep.](#)

[Show me all the network shares on this computer.](#)

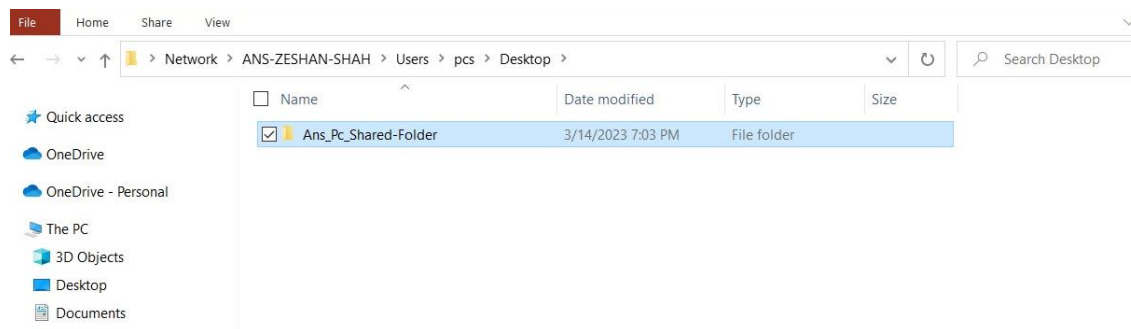
Done

The folder is being shared and has accessible to Laptop 1.

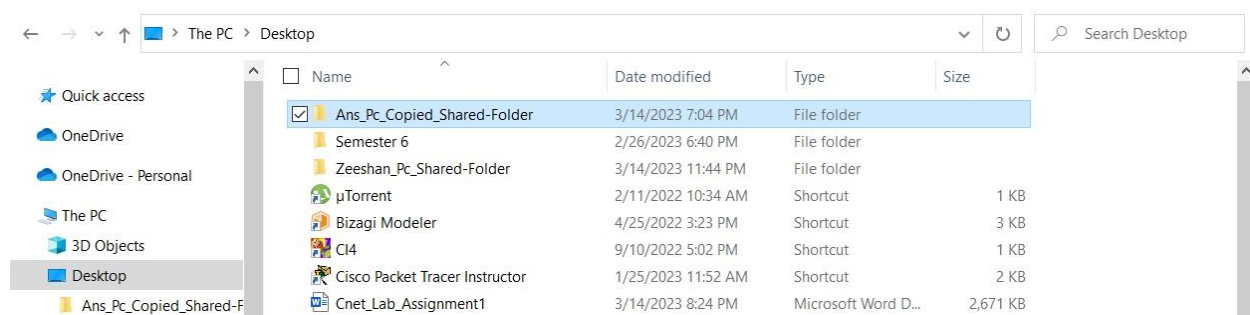
To Access a Folder of 2nd Laptop:



Select that laptop or device and click on it.



By following the path `..Device Name//Users//pcs//Desktop//` after this you will find out the folder or files which are shared with that laptop.



Now, I have copied the share folder and paste it to my desktop due to accessibility of the sharing that folder.