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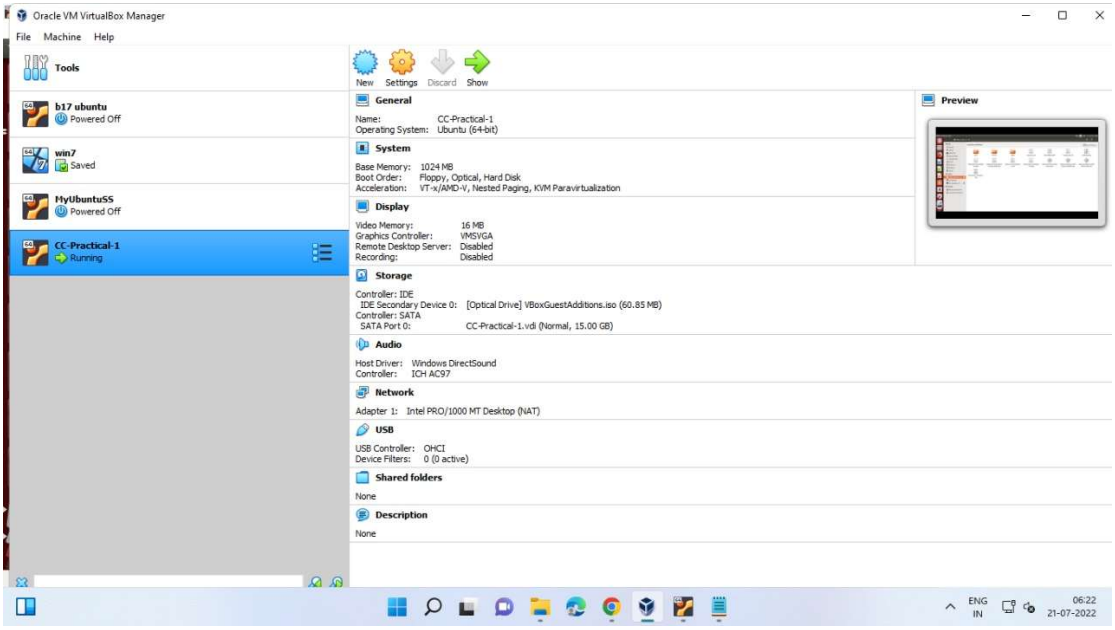
Section: A
Semester: VII
Batch: A1

Aim: Demonstrate implementation of Para-Virtualization using Oracle Virtual Box and Guest OS.

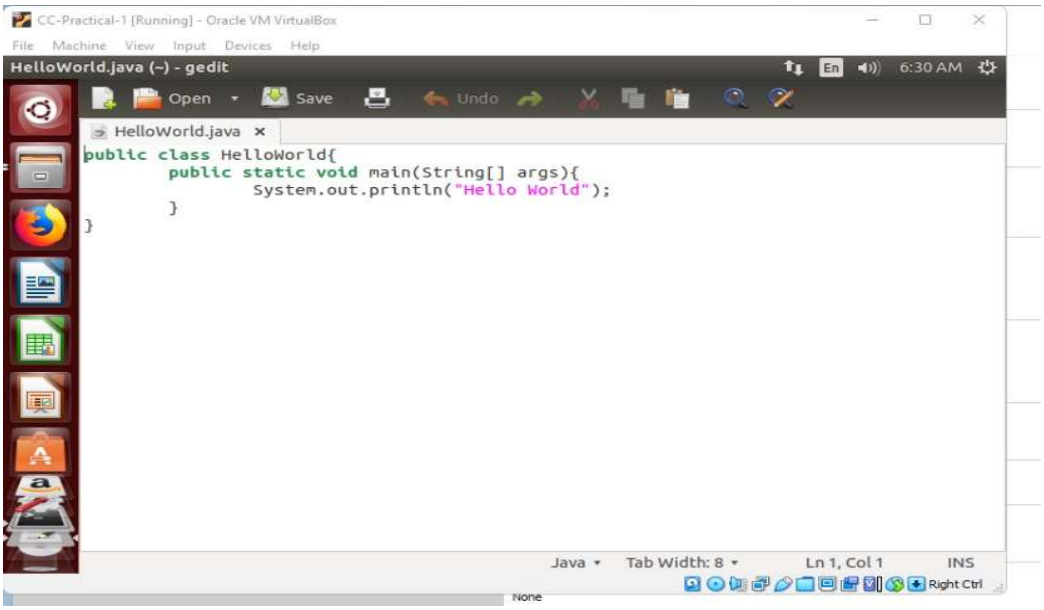
Output:

1. **Install Oracle Virtual Box with different flavors of Linux on top of Windows OS.**

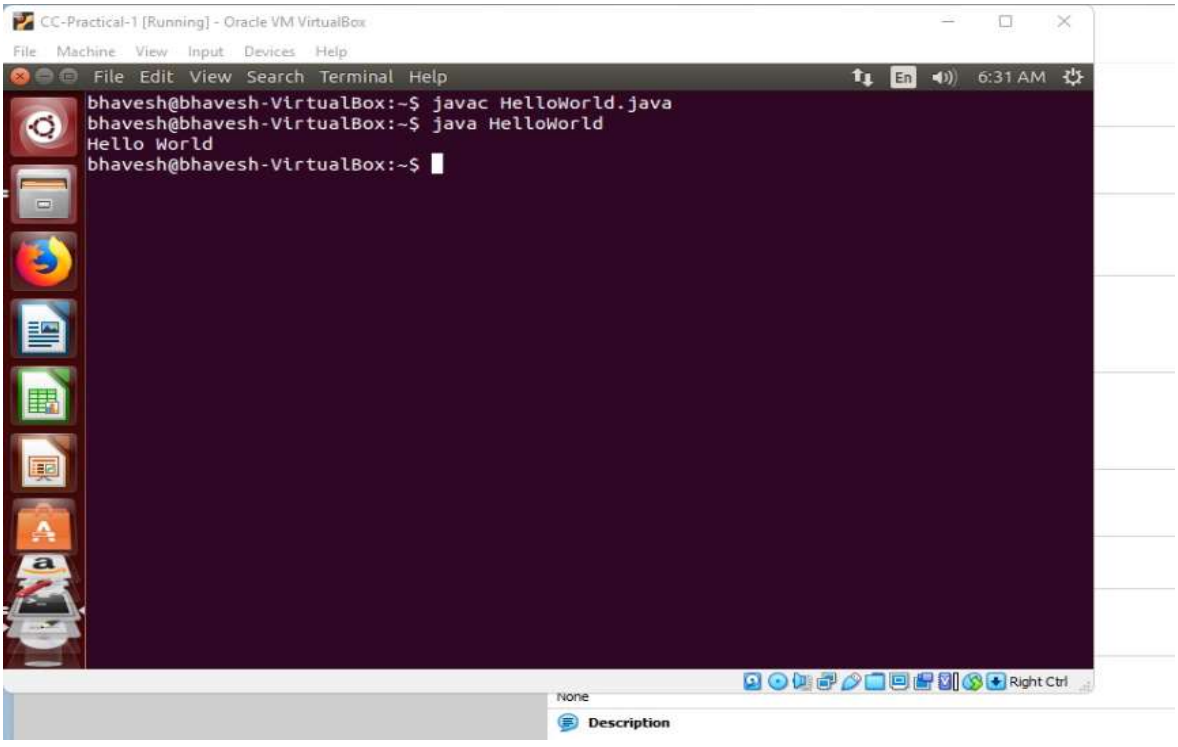
2. **To find the procedure to run virtual machines of different configurations and check how many virtual machines can be utilized at a particular time. Install Windows XP or 7 as a second Virtual Machine.**



Installation of Oracle VM Virtual Box and creation of Virtual Machine named “CC Practical-1” which contains Linux OS and win 7 which contains windows 7 OS.



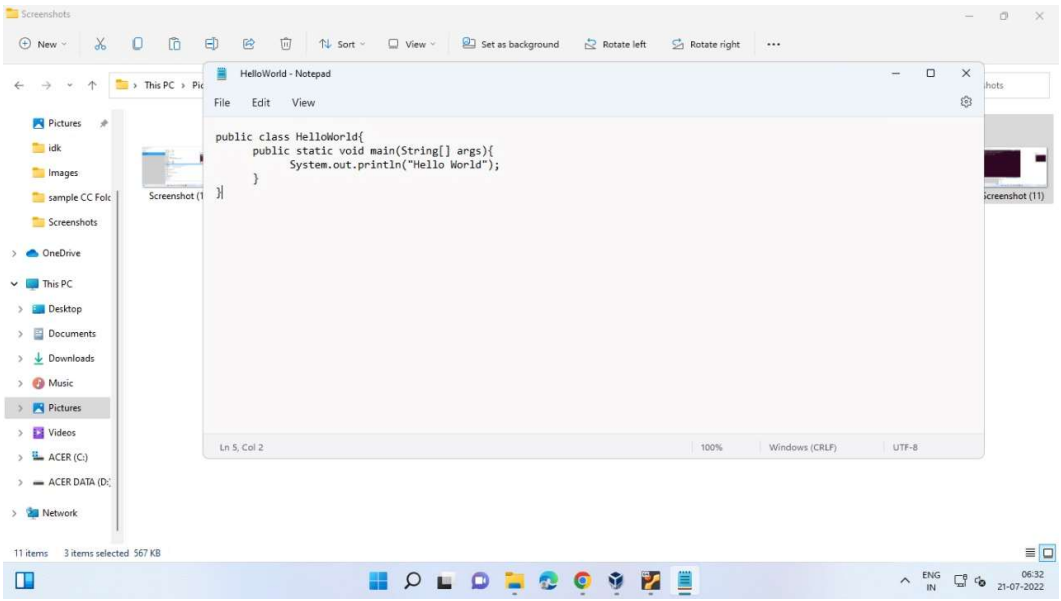
Creating a java program in Linux (Guest OS)



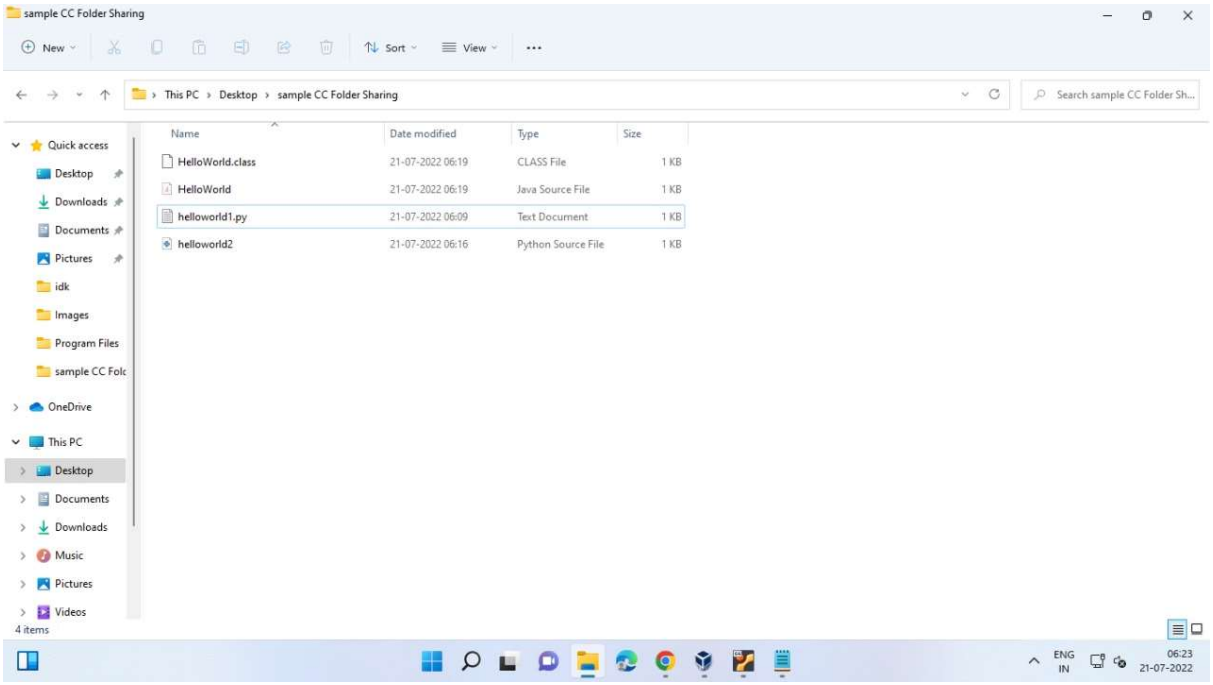
Running a Java Program in Linux (Guest OS)

3. Perform file transfer between the two VMs using any (or all) of the following options:

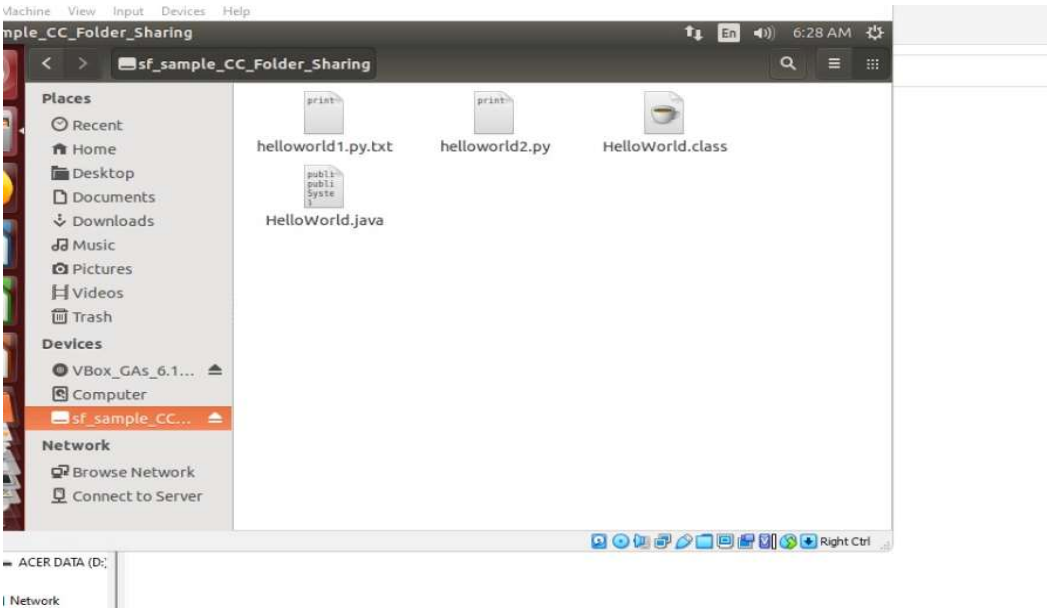
a. FTP - File Transfer Protocol
b. Network Sharing
c. Web Hosting - Using Apache Server
d. VirtualBox Built-In Option



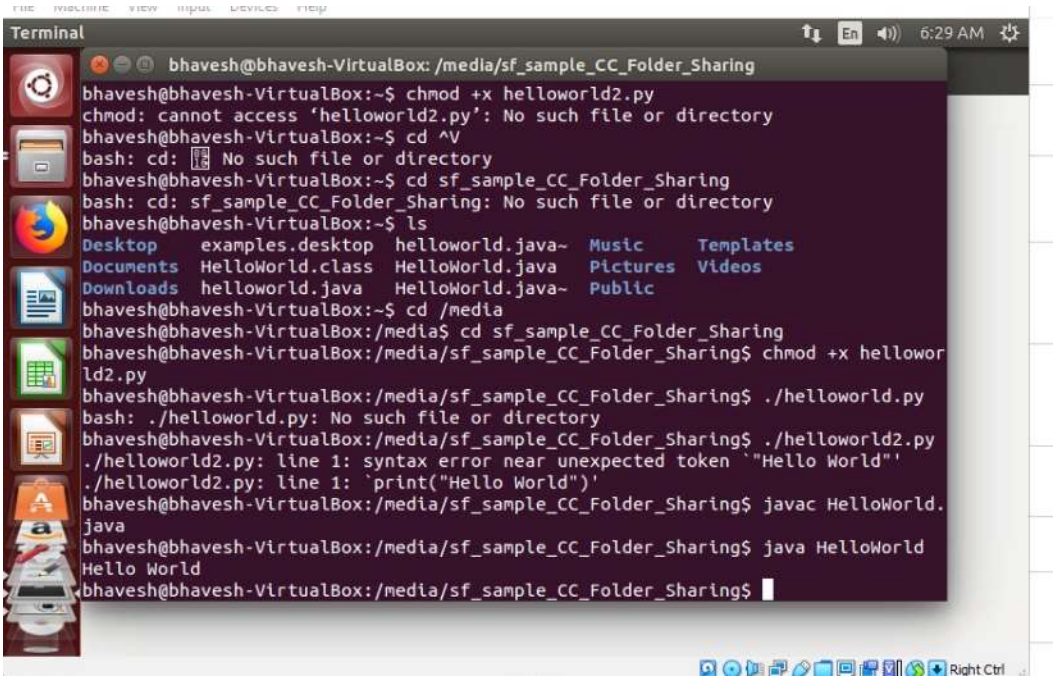
Creating a sample java program in Windows (Host OS)



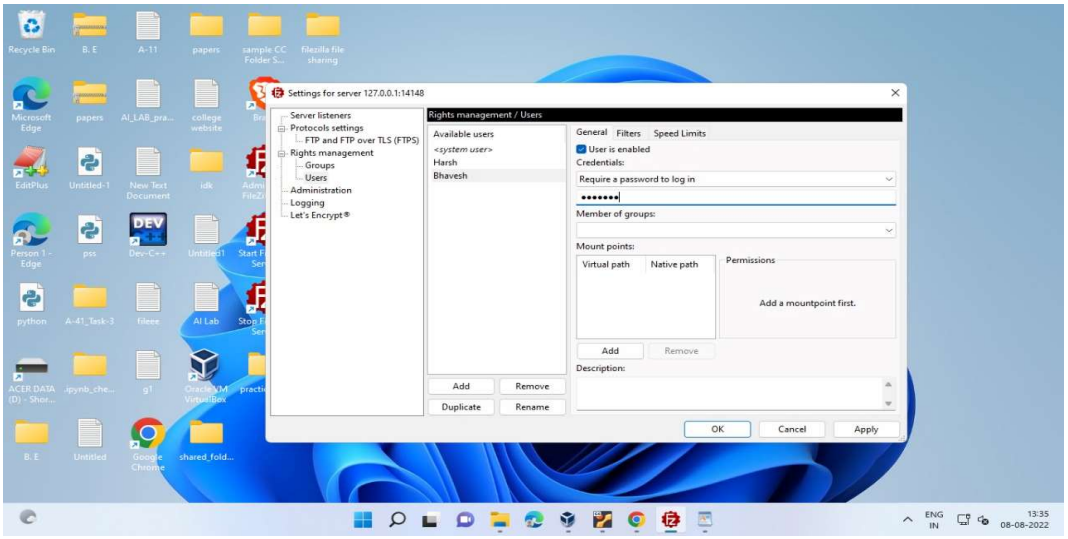
Folder present in Windows (Host OS) that is to be shared with the Linux (Guest OS)



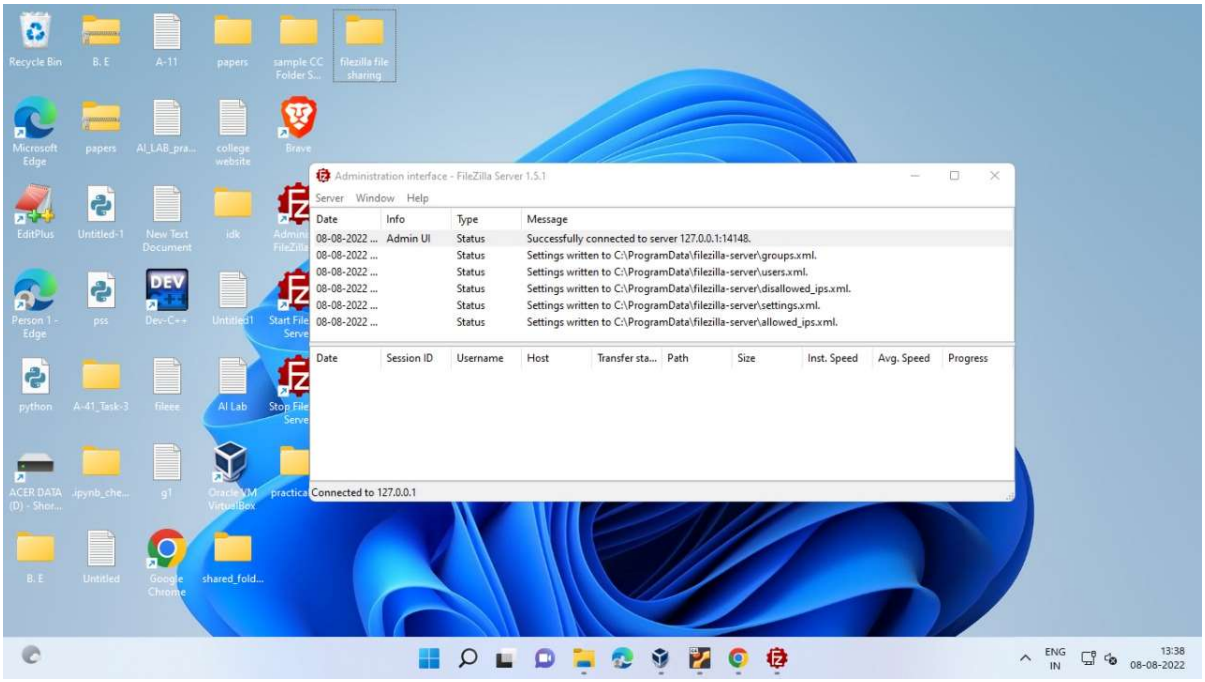
Folder shared with the Linux (Guest OS) from Windows (Host OS)



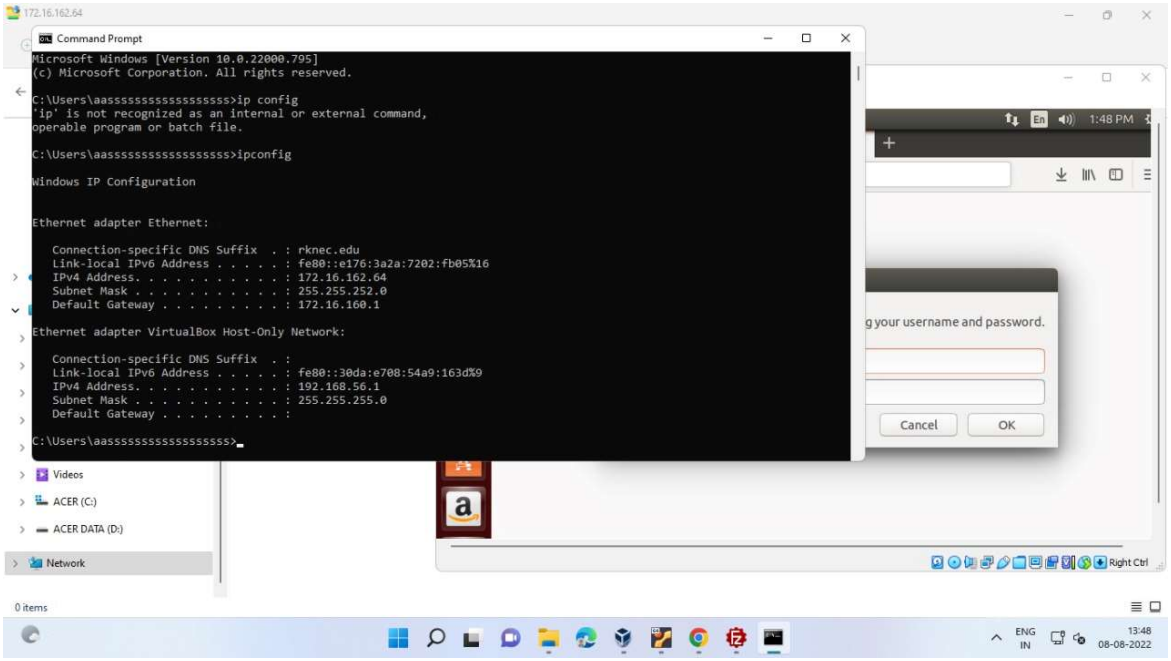
Running the java program from a folder which is shared from Windows (Host OS) with Linux (Guest OS)



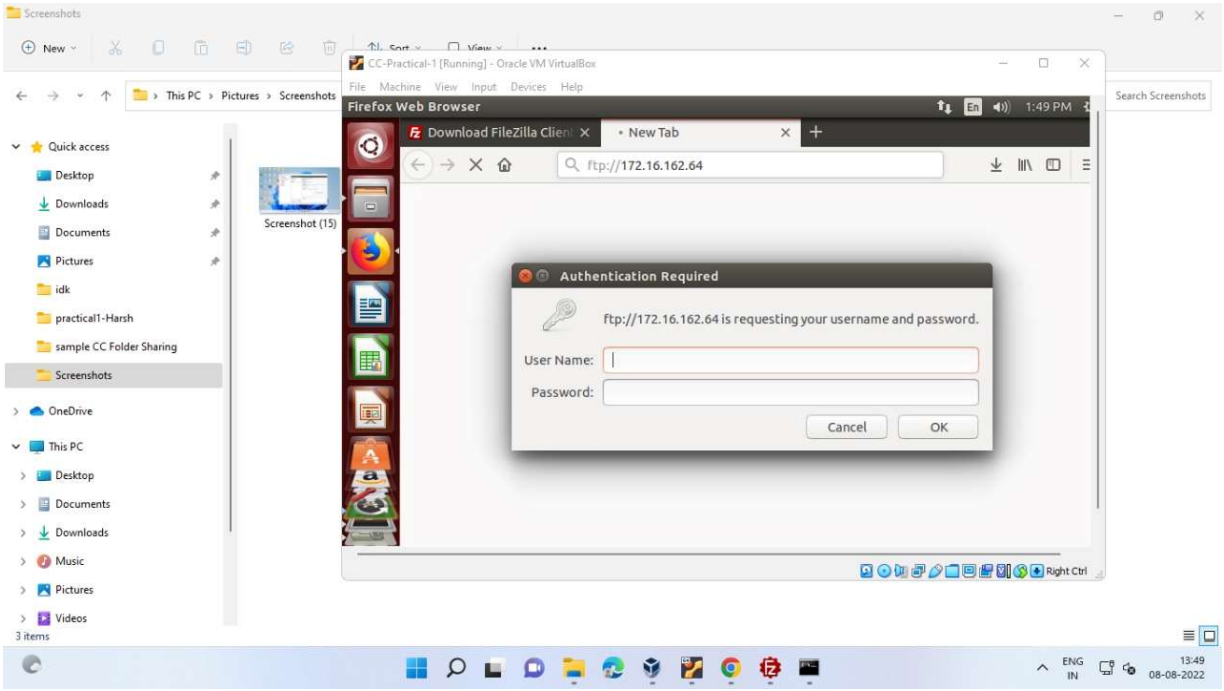
Installing Filezilla Server, creating a new user in filezilla server along with the path of the folder to be shared with Linux (Guest OS)



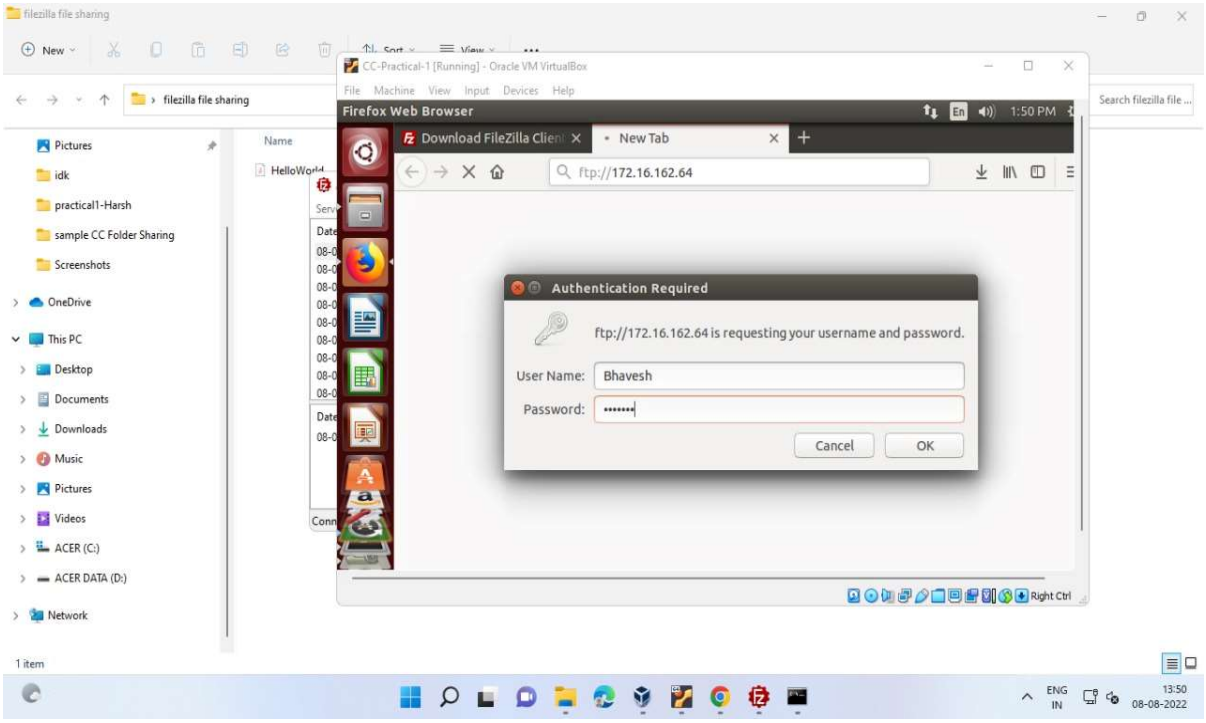
Confirming if the filezilla server is running or not.



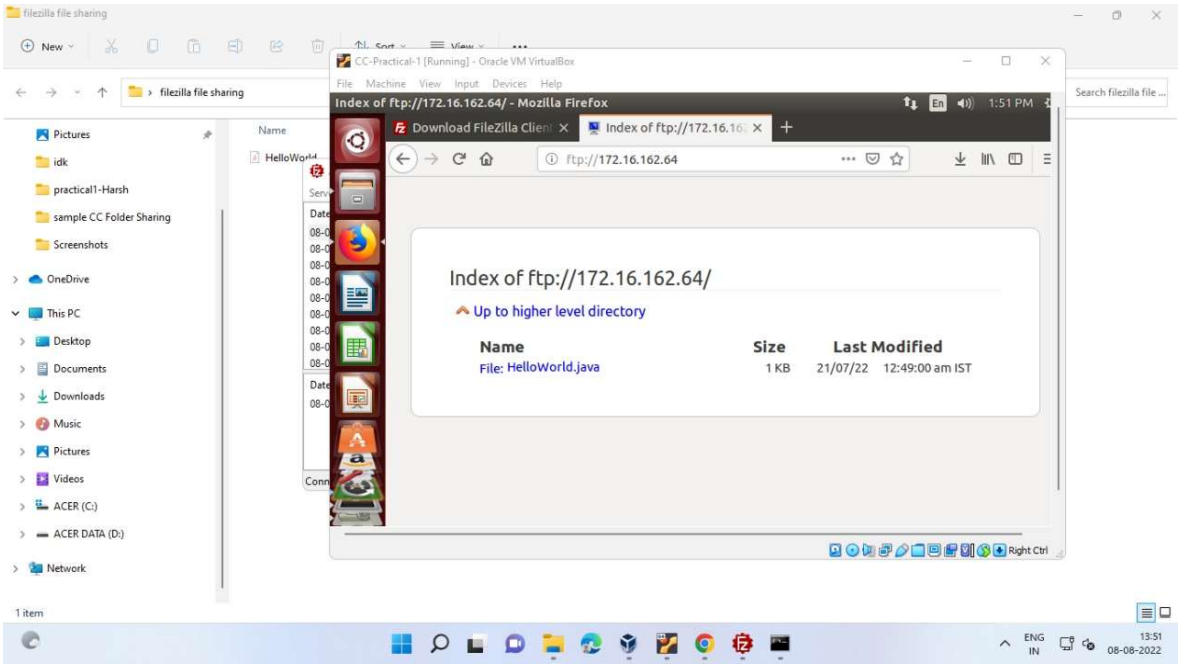
Checking the IP address of the Windows (Host OS)



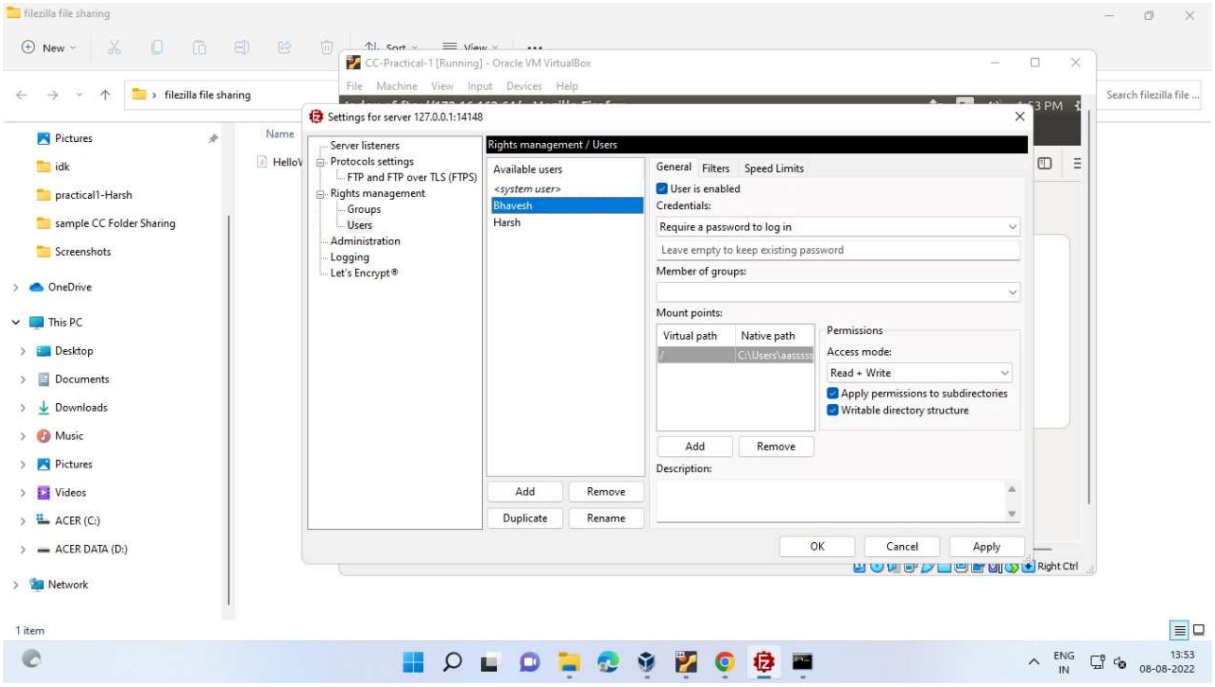
Opening the IP address in Linux (Guest OS) to access the shared folder



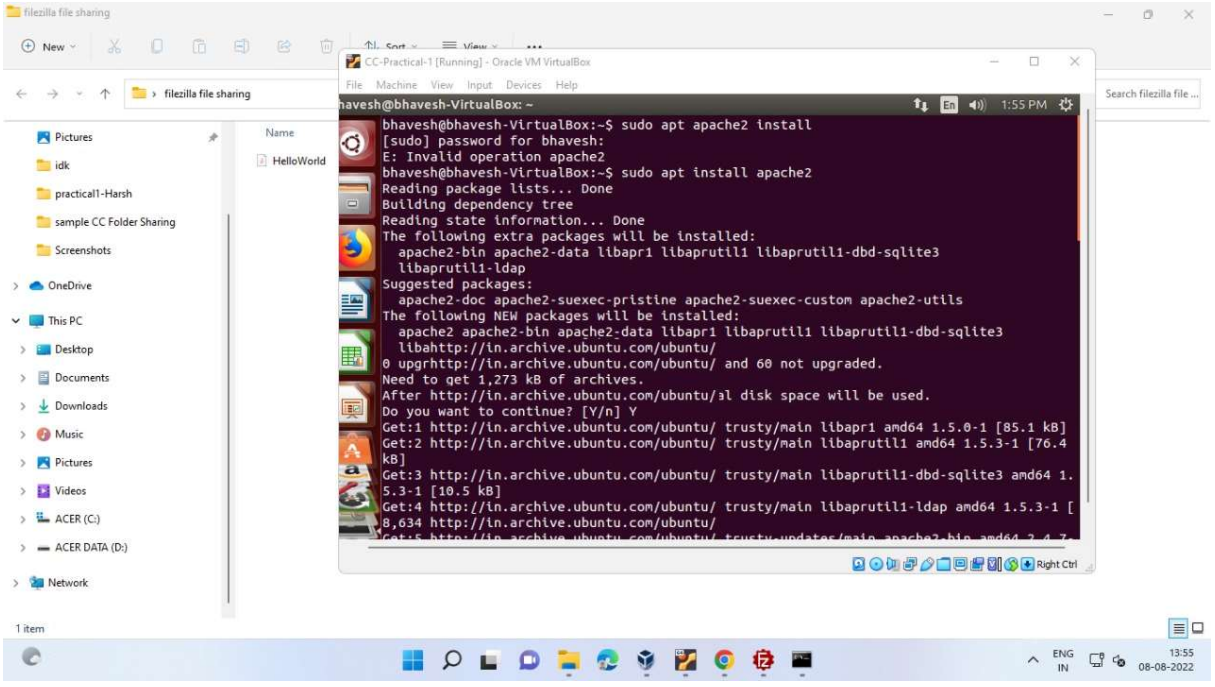
Entering the credentials to access the shared folder



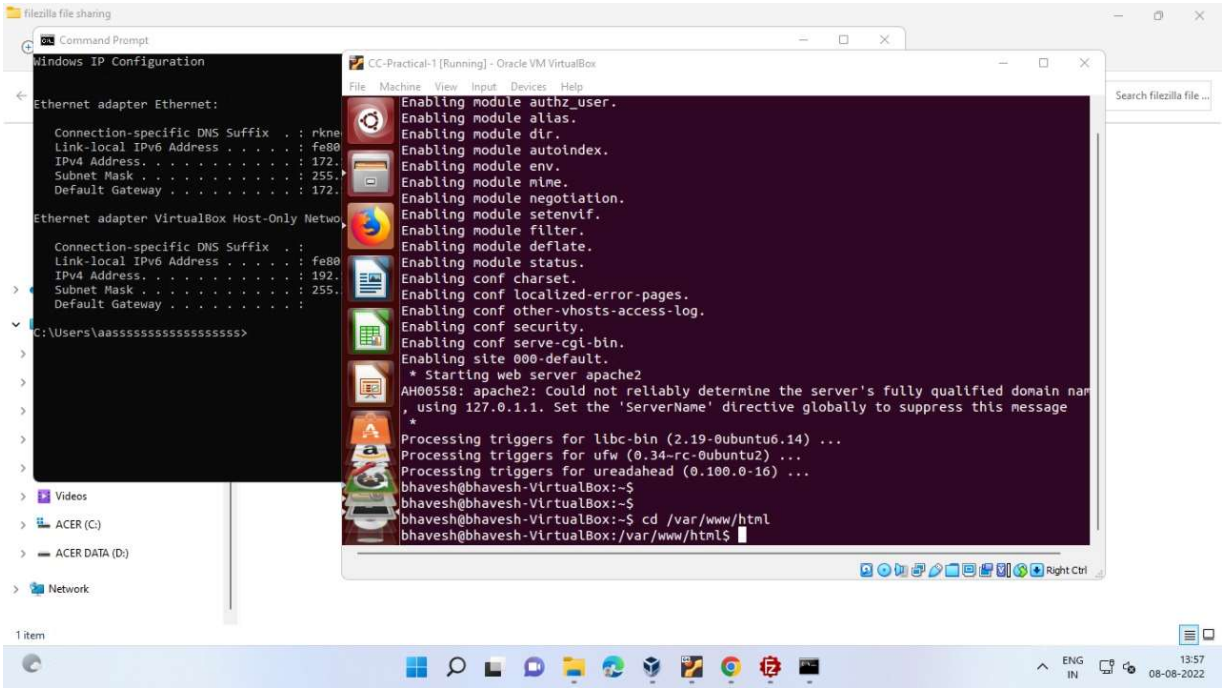
Viewing the files in the shared folder



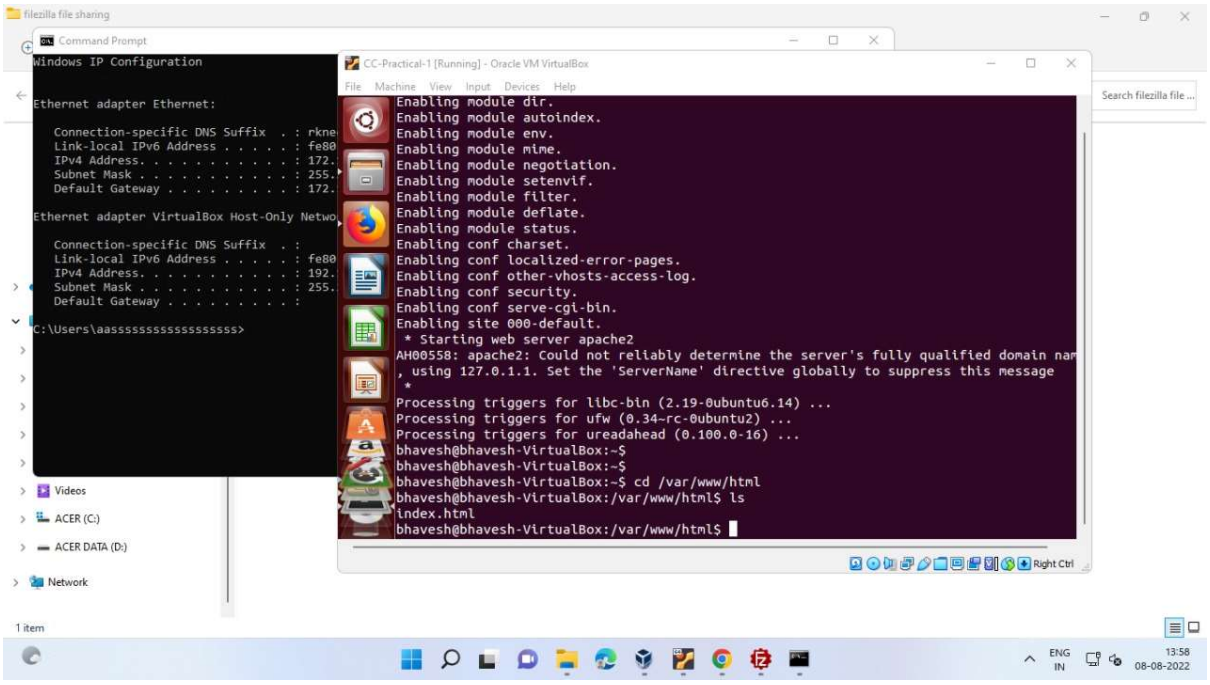
Checking the user in the filezilla server of the Windows (Host OS)



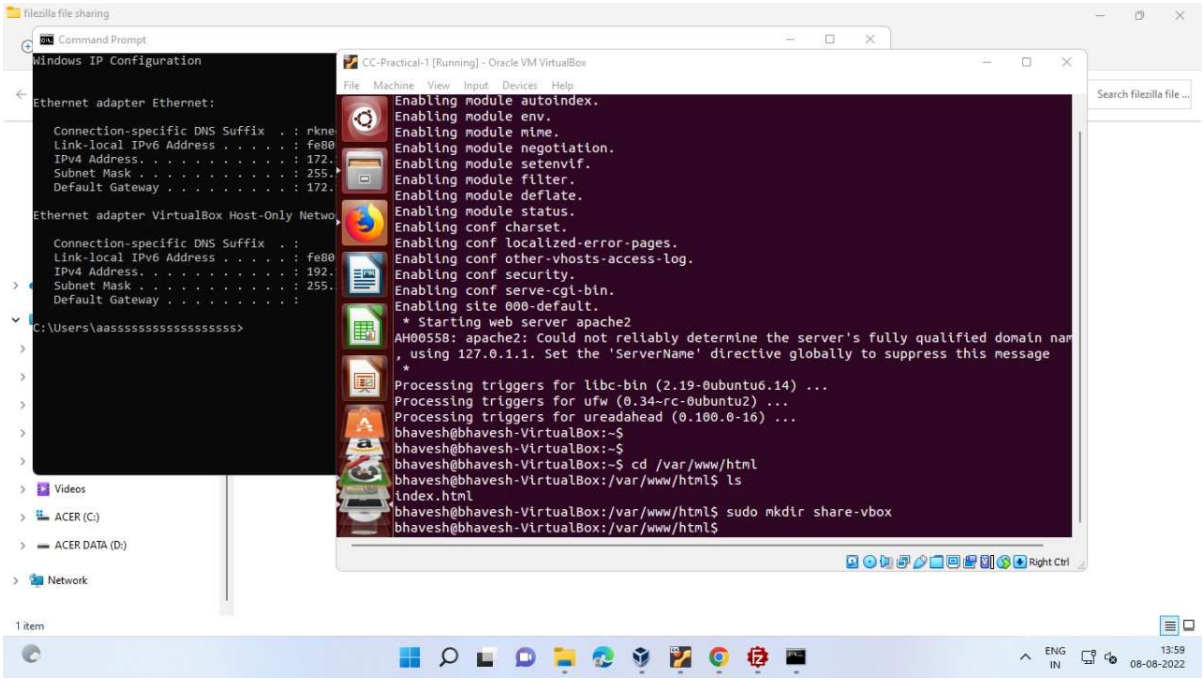
Installing apache2 in Linux (Guest OS)



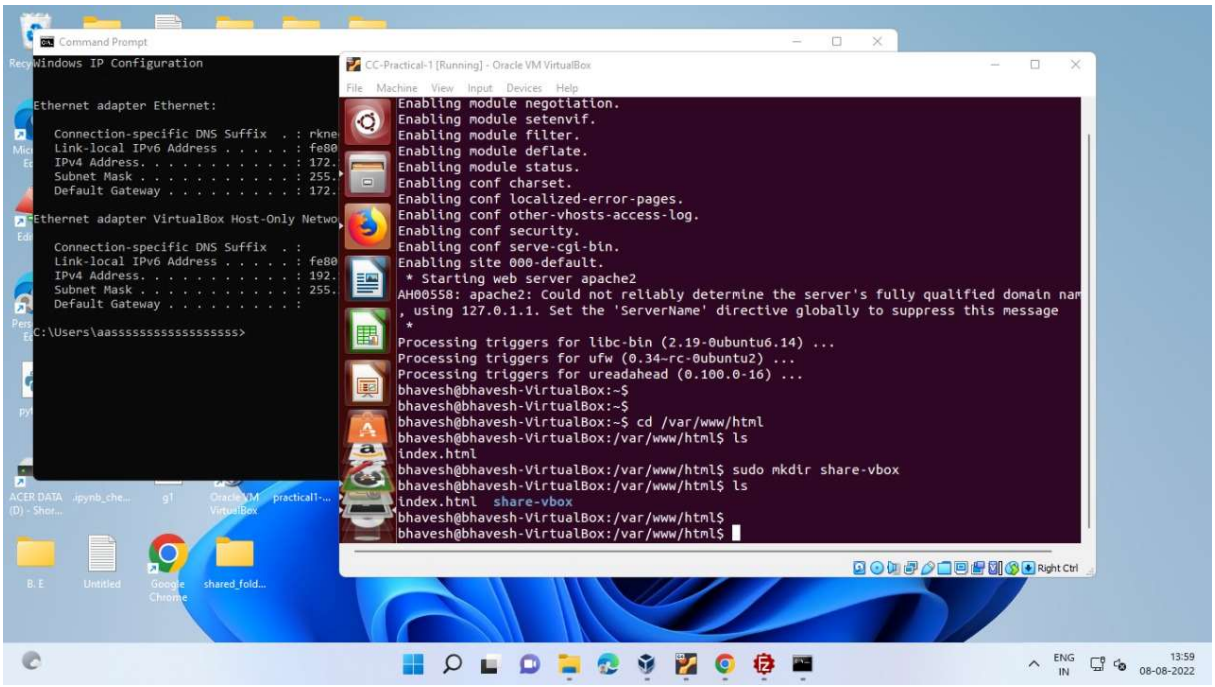
Changing the folder to var/www/html



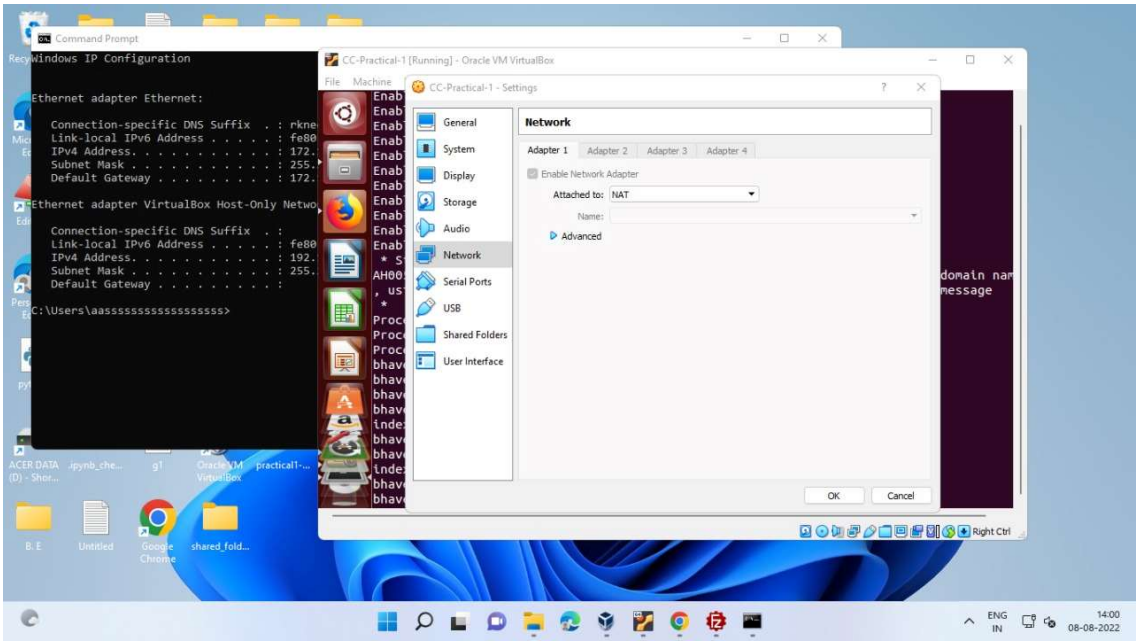
Checking the files present in var/www/html folder



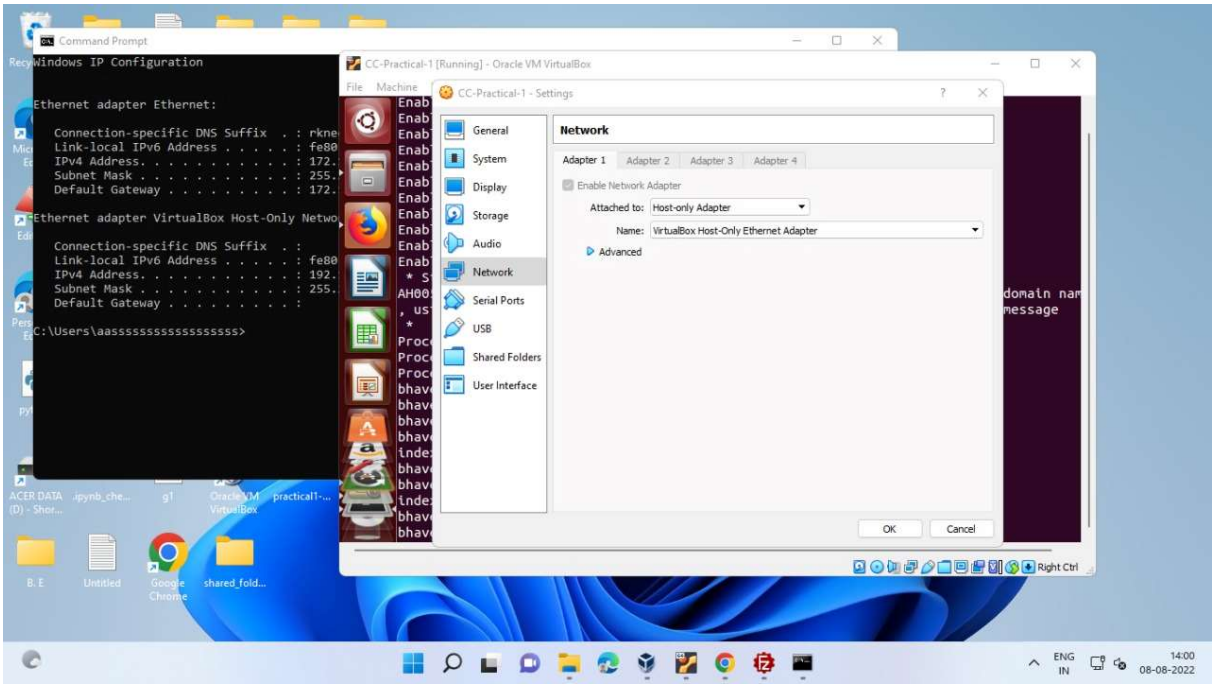
Creating a new folder share-vbox in var/www/html in Linux (Guest OS)



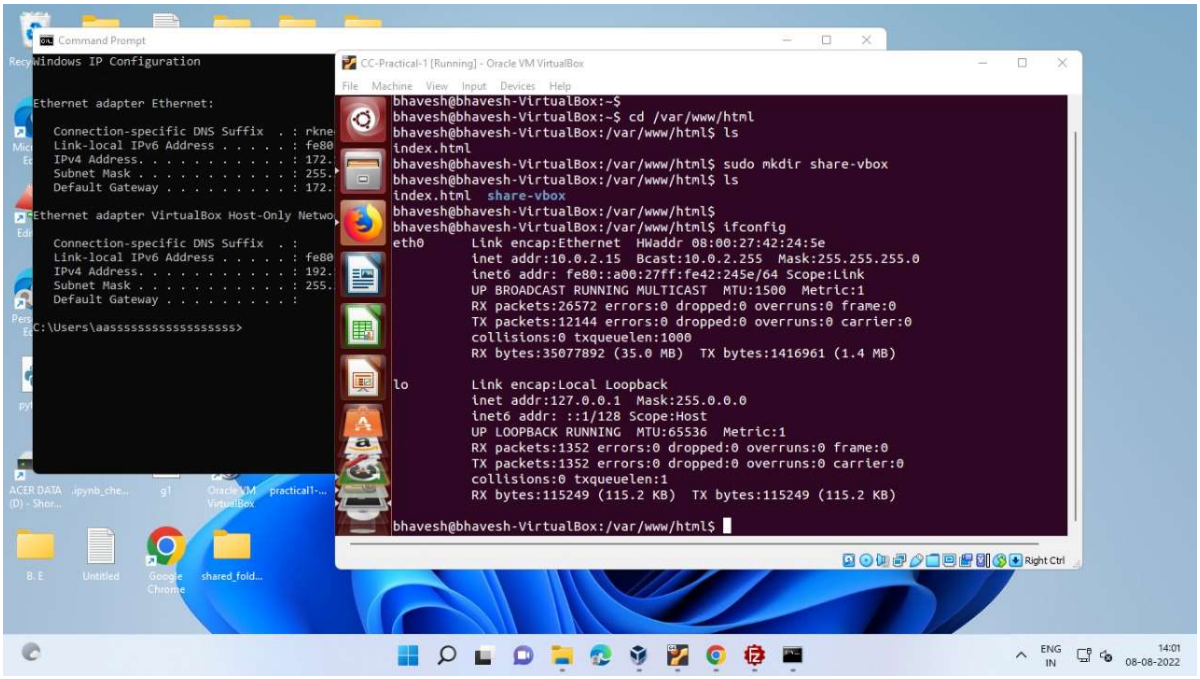
Checking the files present in var/www/html folder



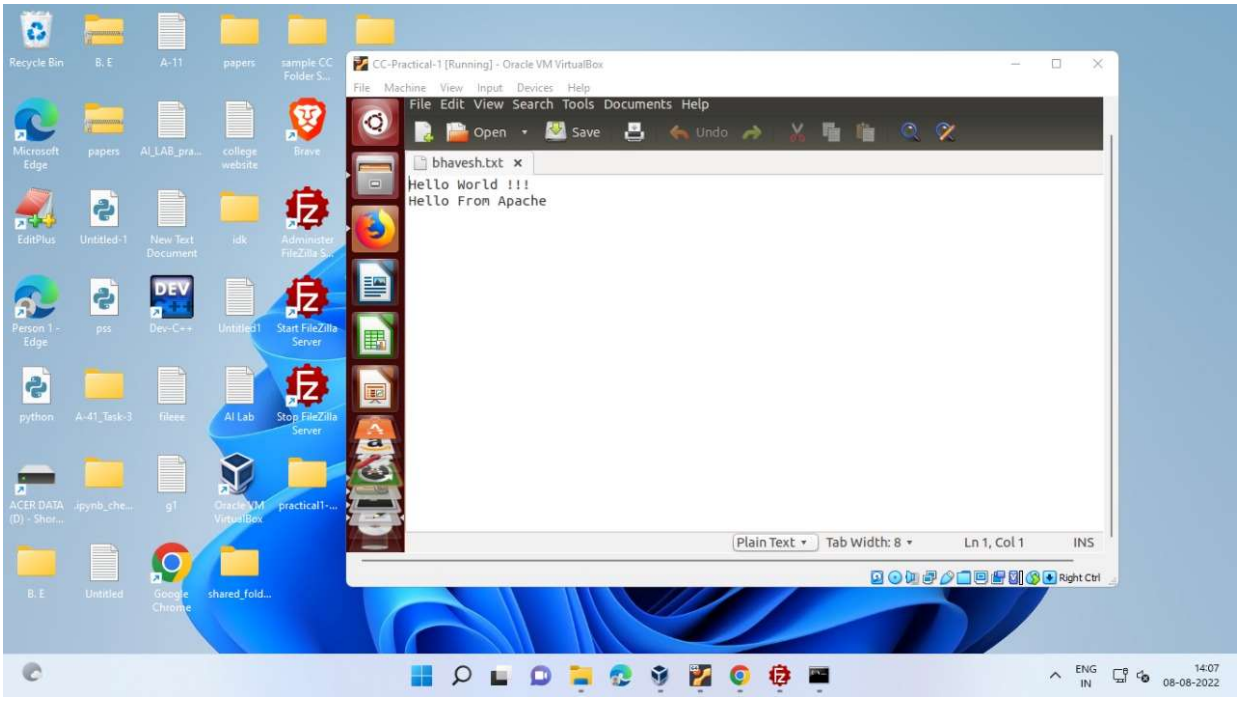
Checking the adapter attached of the virtual machine



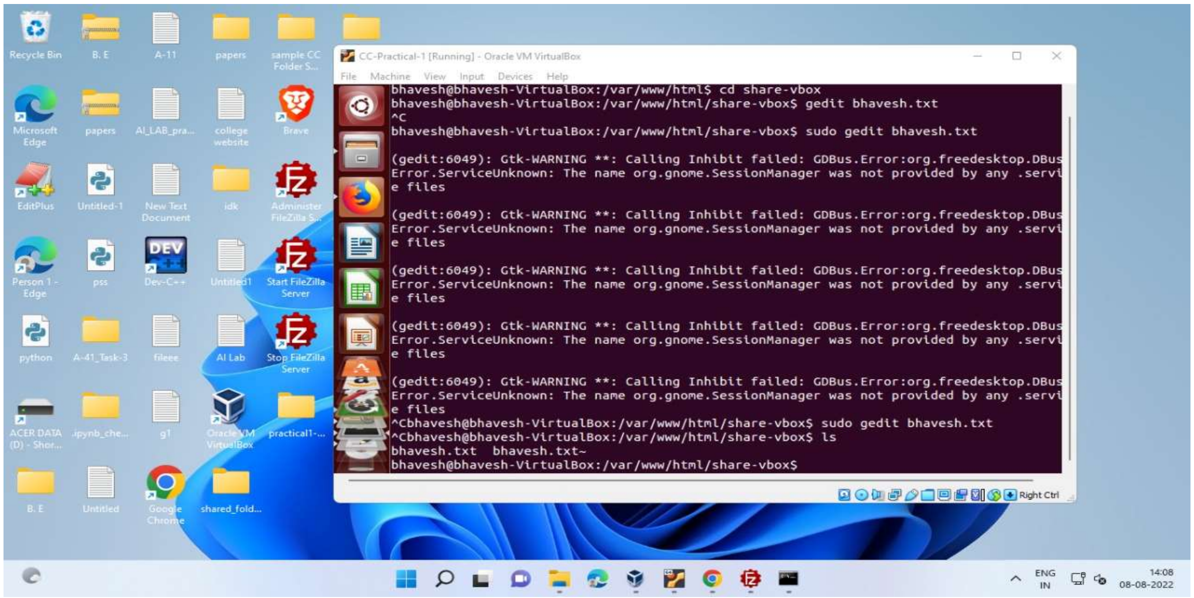
Changing the network adapter attached to Host-only adapter of the virtual machine



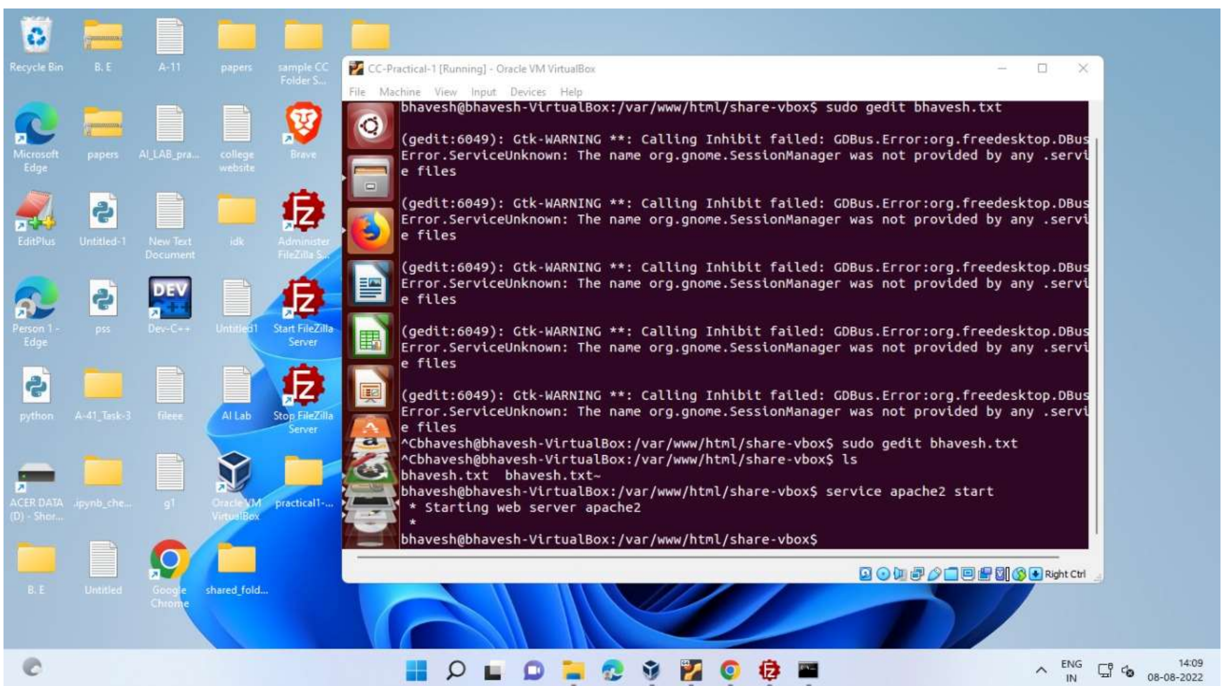
Checking the IP address of the Linux (Guest OS)



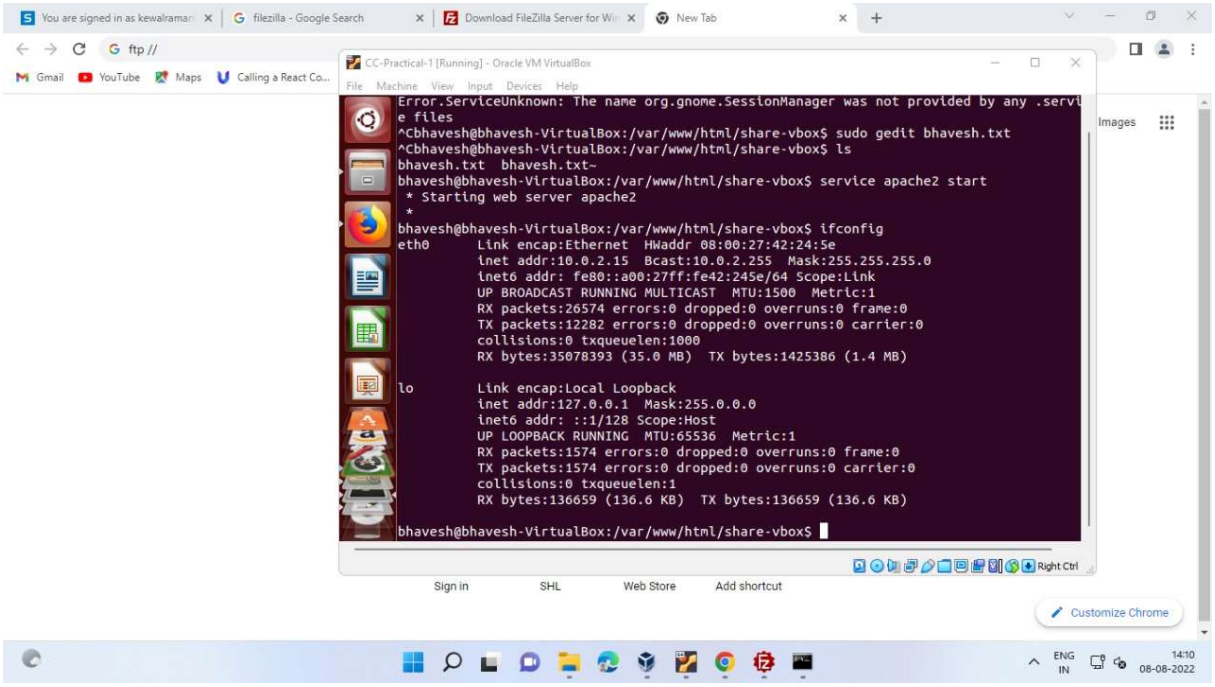
Creating sample text file in share-vbox folder in Linux (Guest OS) to share it with the Windows (Host OS)



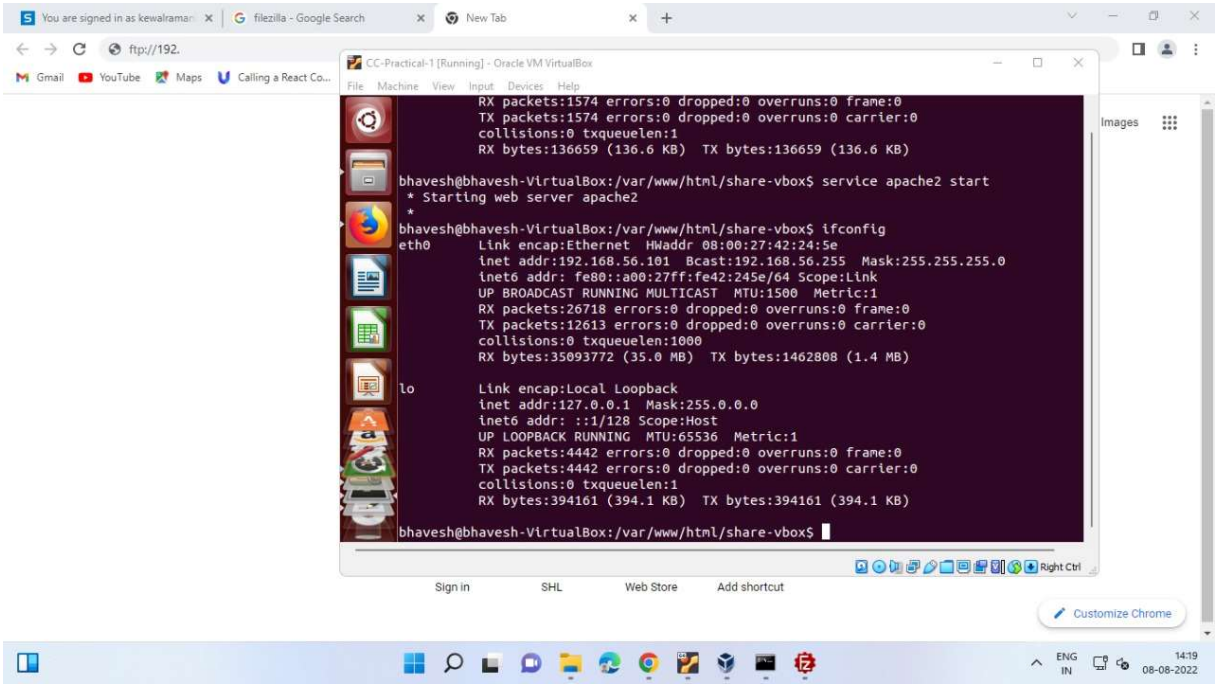
Checking the files present in the share-vbox folder in Linux (Guest OS)



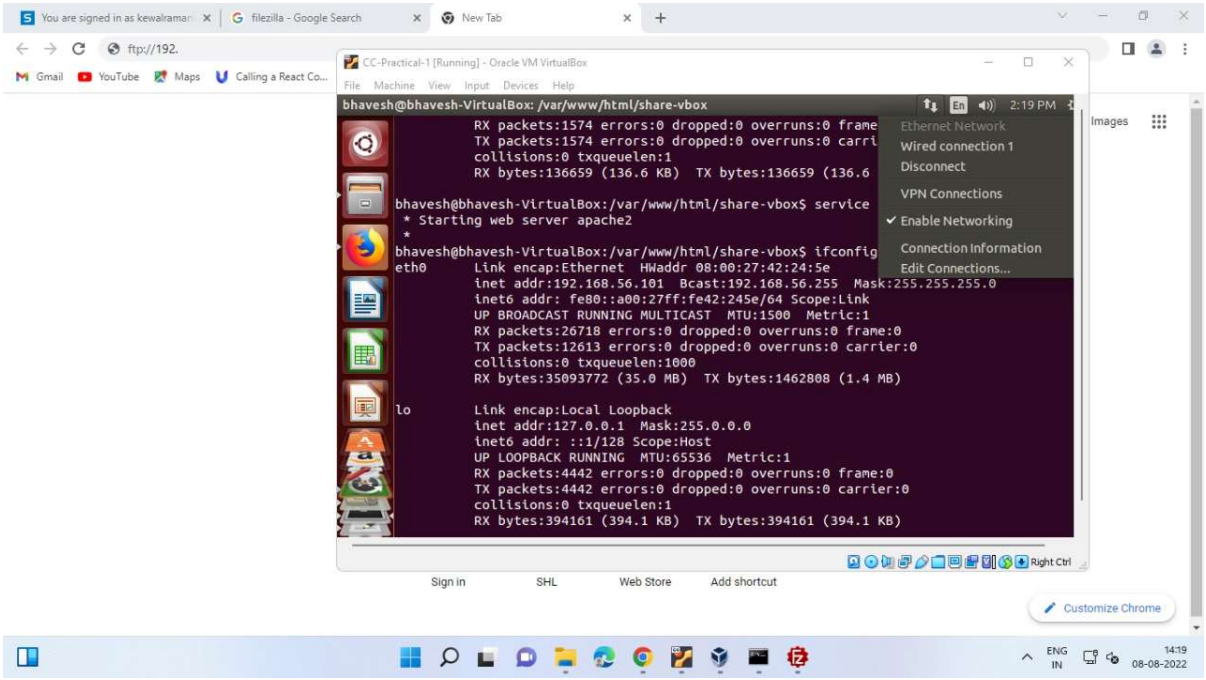
Starting the apache2 service in the Linux (Guest OS)



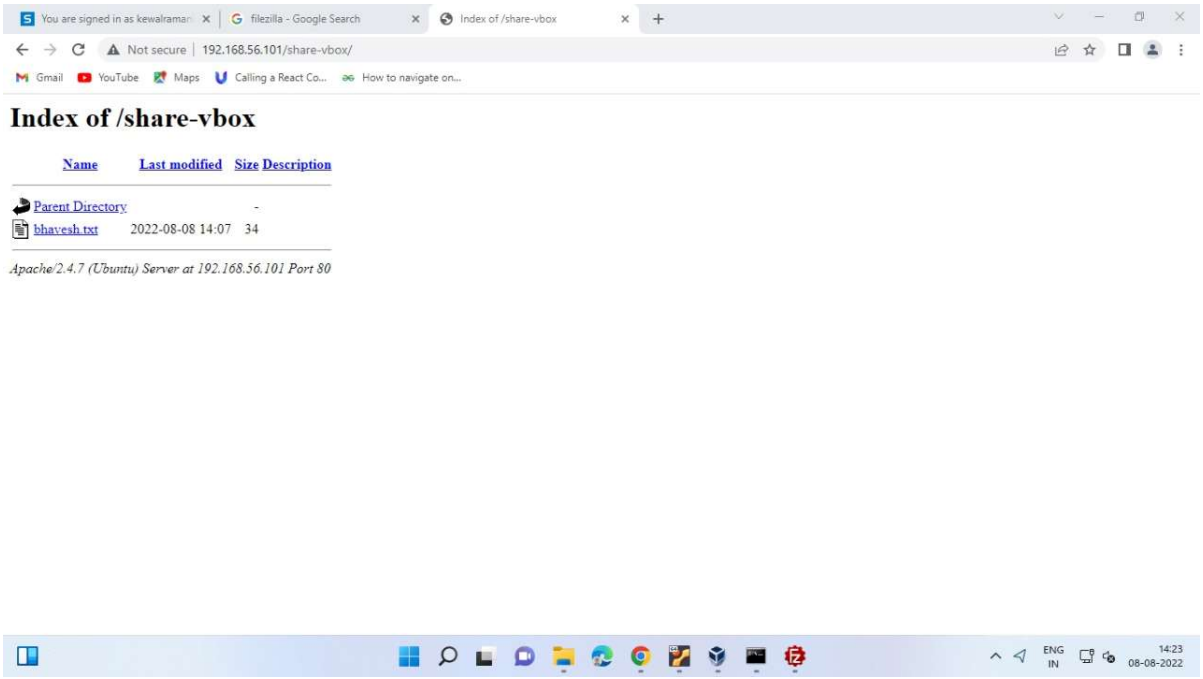
Checking the IP address of the Linux (Guest OS) to access the files of the shared folder



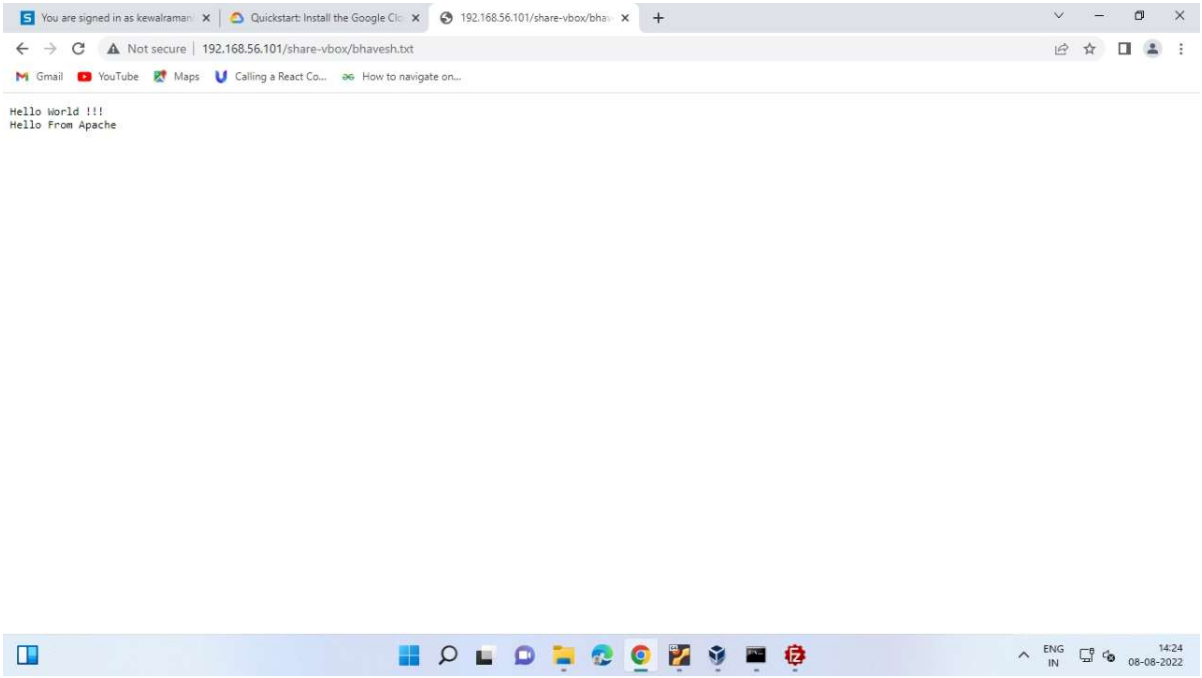
Checking the IP address of the Linux (Guest OS) to access the files of the shared folder



Enabling the Networking of the Linux (Guest OS)



Viewing the shared folder in Windows (Host OS) using the IP address of the Linux (Guest OS)



Viewing the content present in the file which is present in the shared folder.

Conclusion:

In this Practical, we learnt about Virtualization along with its types. We implemented Para-Virtualization using Oracle VirtualBox. Para-virtualization is an effective way to improve performance in a virtualized environment. By allowing the guest operating system to access the underlying hardware directly, para-virtualization can eliminate the need for costly emulation and translation layers. This can result in a significant performance boost, especially for I/O-intensive applications. We also tried file sharing using Apache and Filezilla Server.