LOVELY PROFESSIONAL UNIVERSITY

Open-Source Technologies

A Project Report on Topic

Using any Open Source Software transfer the files from server to client. Explore other options for this open-source software.

Computer science & engineering

Submitted to

Rajeshwar Sharma

LOVELY PROFESSSIONAL UNIVERSITY

PHAGWARA,

PUNJAB, 144411

Submitted by:

Navlesh kumar singh

11903852

Roll no. 09

Github Link

https://github.com/Navlesh5214/INT301

OBJECTIVE

The main purpose is to Use any Open Source Software to transfer the files from server to client.

There are many open source software options available for transferring files from a server to a client such as:-

SCP (Secure Copy): SCP is a command-line tool used to transfer files securely between servers and clients over SSH (Secure Shell) connections. It is available on most Unix-based systems and is easy to use. To transfer a file from a server to a client using SCP, use the following command: *scp /path/to/file username@destination:/path/to/destination*
Replace "username" with the username of the client machine, and "destination" with the IP address or hostname of the client machine. You will also need to enter the password for the client machine when prompted.

Rsync: Rsync is a command-line tool used for synchronizing files between servers and clients. It is available on most Unix-based systems and can transfer files efficiently, even over slow or unreliable network connections. To transfer a file using rsync, use the following command: *rsync -avz /path/to/file username@destination:/path/to/destination*

Replace "username" with the username of the client machine, and "destination" with the IP address or hostname of the client machine. The "-avz" options specify that rsync should transfer the file in archive mode, which preserves file permissions and other metadata, and should compress the data during the transfer to save bandwidth.

WinSCP: WinSCP is a free and open source FTP and SFTP client for Windows. It offers a graphical user interface and supports all major file transfer protocols.

Cyberduck: Cyberduck is a free and open source FTP, SFTP, WebDAV, and cloud storage browser for Mac and Windows. It offers a user-friendly interface and supports a wide range of file transfer protocols.

We are going to use **Filezilla** software FileZilla is a free, open source FTP (File Transfer Protocol) client that can be used to transfer files between servers and clients. It is available for Windows, Mac, and Linux operating systems. To use FileZilla, you will need to install it on both the server and client machines, and then connect to the server using the FTP protocol. You can then transfer files between the two machines using a drag-and-drop interface.

DESCRIPTION

FileZilla is a free, open-source FTP (File Transfer Protocol) client software that allows users to upload and download files from FTP servers. It is available for Windows, macOS, and Linux operating systems.

FileZilla supports FTP, SFTP (SSH File Transfer Protocol) and provides a user-friendly graphical interface for easy file management. It also supports drag and drop functionality, bookmarks, and remote file editing. Additionally, FileZilla includes features such as site manager, speed limits, and remote file search. Overall, FileZilla is a popular and reliable FTP client that is widely used by both beginners and advanced users.

FILE TRANSFER PROTOCOL

File Transfer Protocol (FTP) is a standard network protocol used to transfer files from one host to another over a TCP/IP-based network, such as the Internet. FTP allows users to transfer files between computers or servers in a reliable and secure manner.

FTP operates on a client-server architecture, where the user (client) connects to a server using an FTP client software. The FTP client can access files stored on the remote server and download or upload files as needed. The client sends commands to the server, such as requesting a list of available files or transferring a file to the server. The server responds to these commands and carries out the requested actions.

FTP supports both ASCII and binary file formats and can be used for both text and binary files. It also supports various authentication and encryption mechanisms to ensure the security of data transfers. While FTP is an older protocol, it is still widely used for transferring files, particularly for large files or large groups of files.

- **HOW DOES FTP WORK?**

FTP (File Transfer Protocol) works on a client-server model where a client computer connects to an FTP server to transfer files between the two devices.

Here is a brief overview of how FTP works:

Establishing a Connection: The FTP client establishes a connection to the FTP server using the IP address or hostname of the server, along with a username and password for authentication.

Navigating to a Directory: Once the connection is established, the FTP client navigates to a specific directory on the server where files are located.

Uploading or Downloading Files: Once in the correct directory, the FTP client can upload or download files from the server. To upload a file, the client sends a PUT command with the filename and path. To download a file, the client sends a GET command with the filename and path.

Closing the Connection: Once the file transfer is complete, the client can close the connection to the FTP server.

FTP uses two channels for communication: the command channel and the data channel. The command channel is used for sending commands from the client to the server, while the data channel is used for transferring files between the two devices.

FTP also supports various authentication and encryption mechanisms, including username and password authentication, SSL/TLS encryption, and SSH File Transfer Protocol (SFTP), which provides secure file transfer over SSH.

SCOPE

The main purpose of FileZilla software is to provide a convenient and easy-to-use FTP client for users to transfer files between their local computer and remote servers. FTP is a commonly used protocol for transferring files over the internet and is often used by web developers and designers to upload their websites and files to web servers. With FileZilla, users can upload and download files from FTP servers, as well as manage their files remotely.

FileZilla is a feature-rich FTP client software that offers a wide range of capabilities to its users. Here are some of the main features of FileZilla:

Supports Multiple Protocols: FileZilla supports FTP, SFTP, and FTPS protocols, making it a versatile option for users who need to transfer files securely over the internet.

User-friendly Interface: FileZilla has an easy-to-use interface that allows users to navigate through their local files and remote servers with ease. The interface displays detailed information about the status of file transfers, making it easy to monitor the progress of uploads and downloads.

Drag and Drop Functionality: FileZilla enables users to drag and drop files between their local computer and remote servers, making file transfer quick and easy.

Site Manager: FileZilla's site manager allows users to save their frequently used FTP sites, making it easy to connect to them later without having to remember login credentials.

File Editing: FileZilla allows users to edit remote files directly, using a built-in editor or an external editor of their choice. This is useful for web developers who need to make changes to their website's files on the server.

Transfer Queue: FileZilla has a transfer queue that allows users to manage multiple file transfers simultaneously. Users can prioritize transfers, pause, or cancel them as needed.

Bookmarks: FileZilla lets users create bookmarks for frequently used local and remote directories, making it easy to access them in the future.

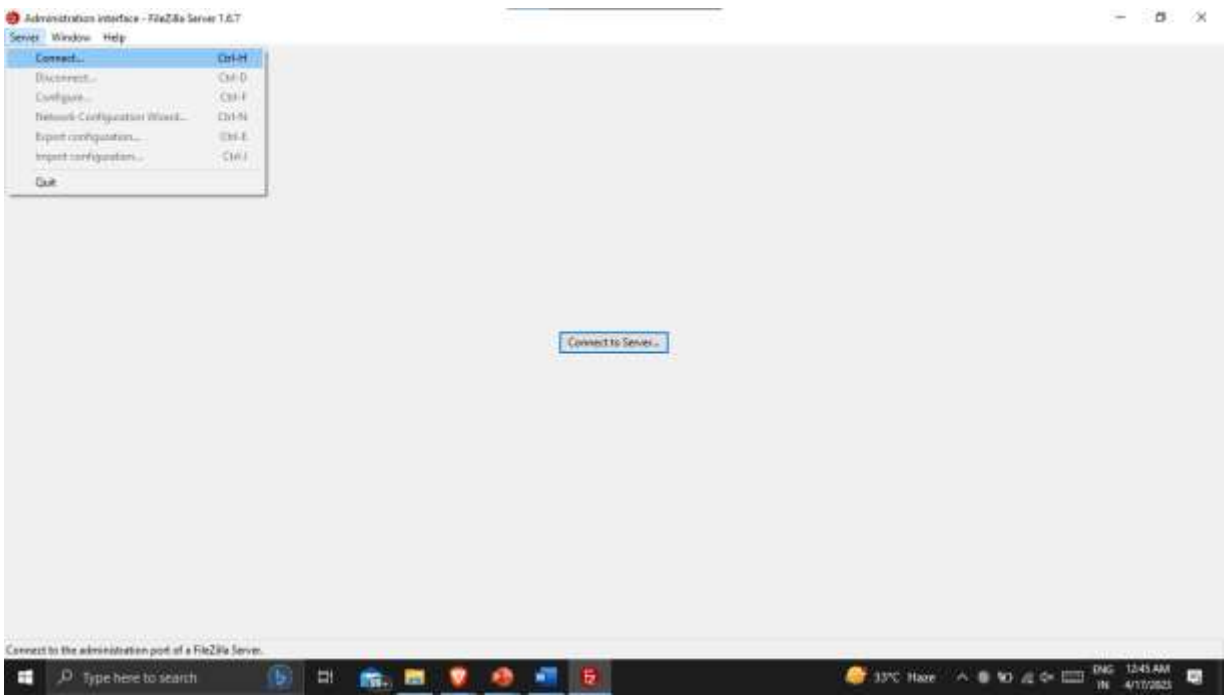
Speed Limits: FileZilla allows users to set speed limits on file transfers, ensuring that transfers do not consume all available bandwidth and slow down other internet activities.

Remote File Search: FileZilla has a remote file search feature that allows users to search for specific files on their remote servers without having to browse through directories manually.

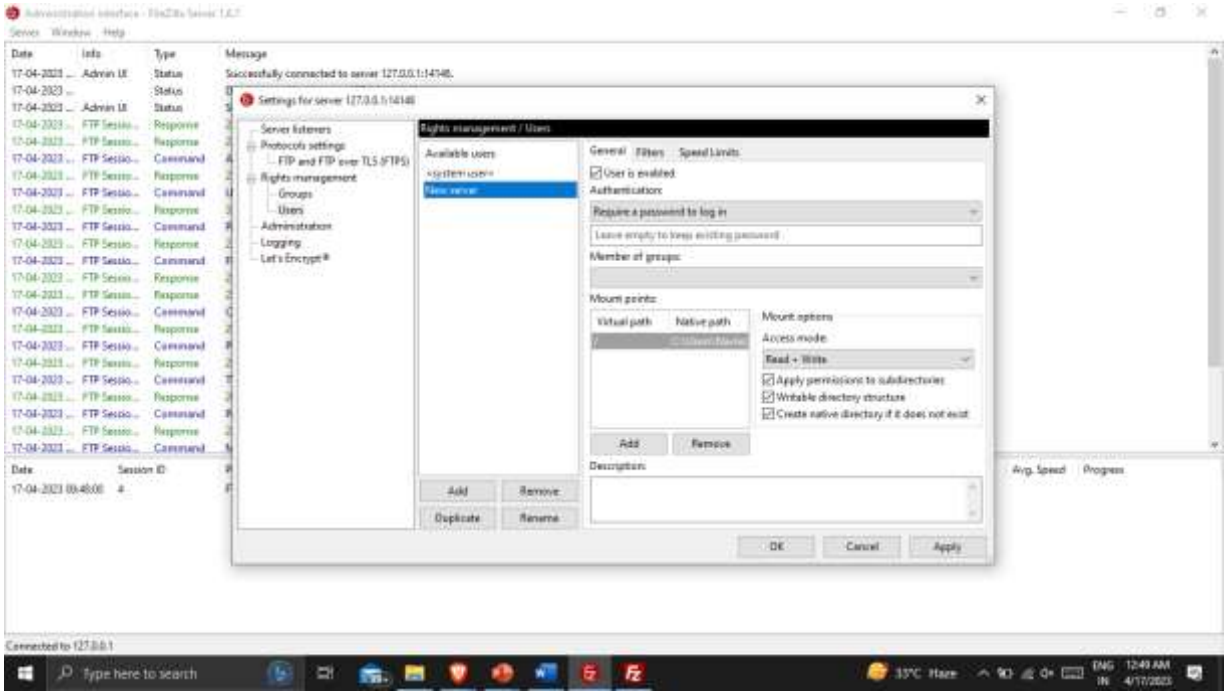
Overall, FileZilla is a versatile and feature-rich FTP client that offers a range of capabilities to its users. Its user-friendly interface, drag-and-drop functionality, and support for multiple protocols make it a popular choice for transferring files securely over the internet.

Project Snapshots

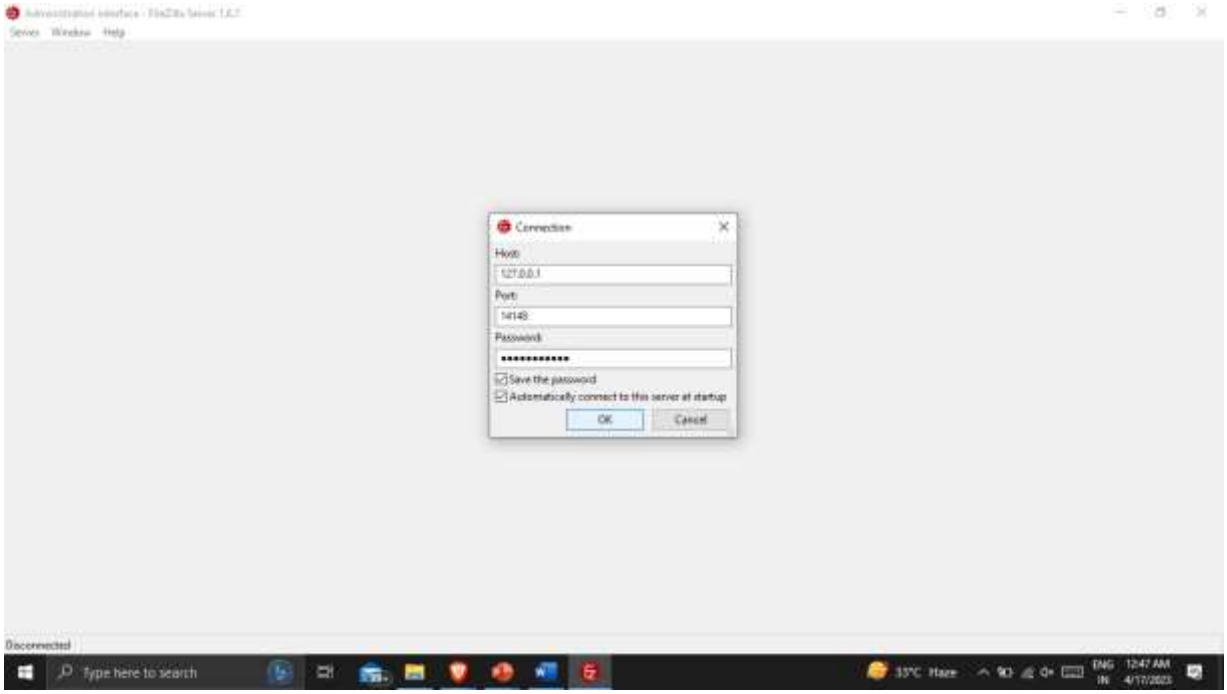
1. Download and install Filezilla server and application on your system. It is available for Windows, Mac, and Linux operating systems.
2. Launch Filezilla server ad connect to a server.



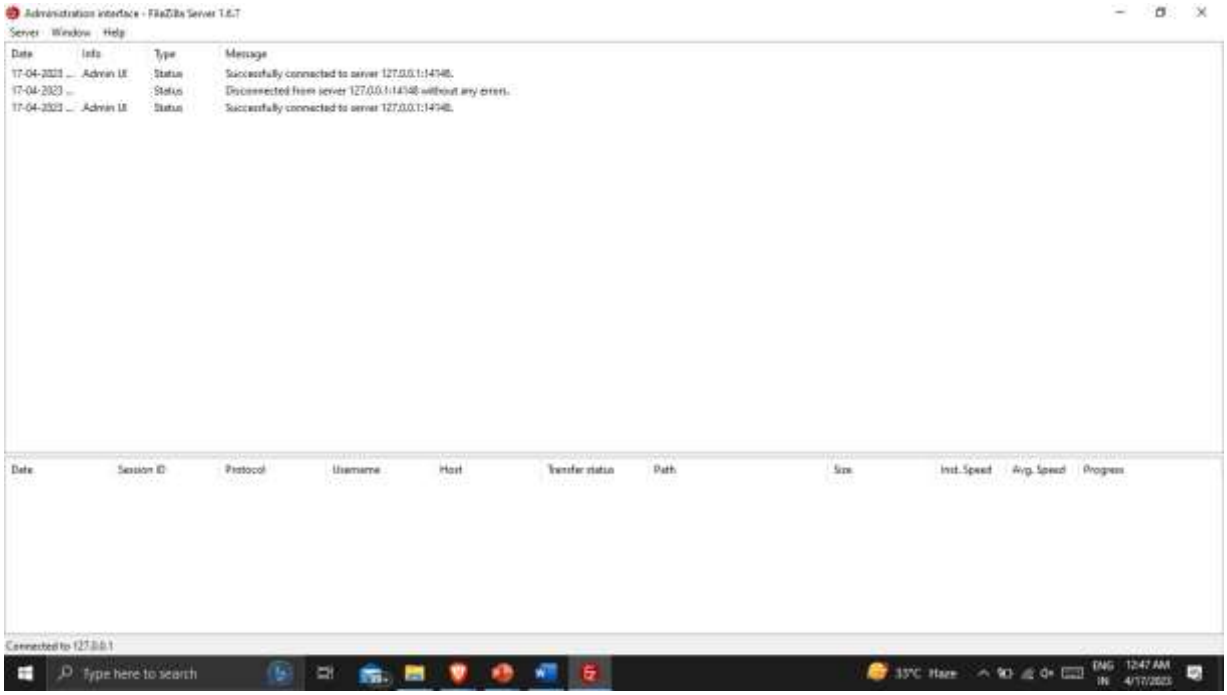
3. Configure the details of server.



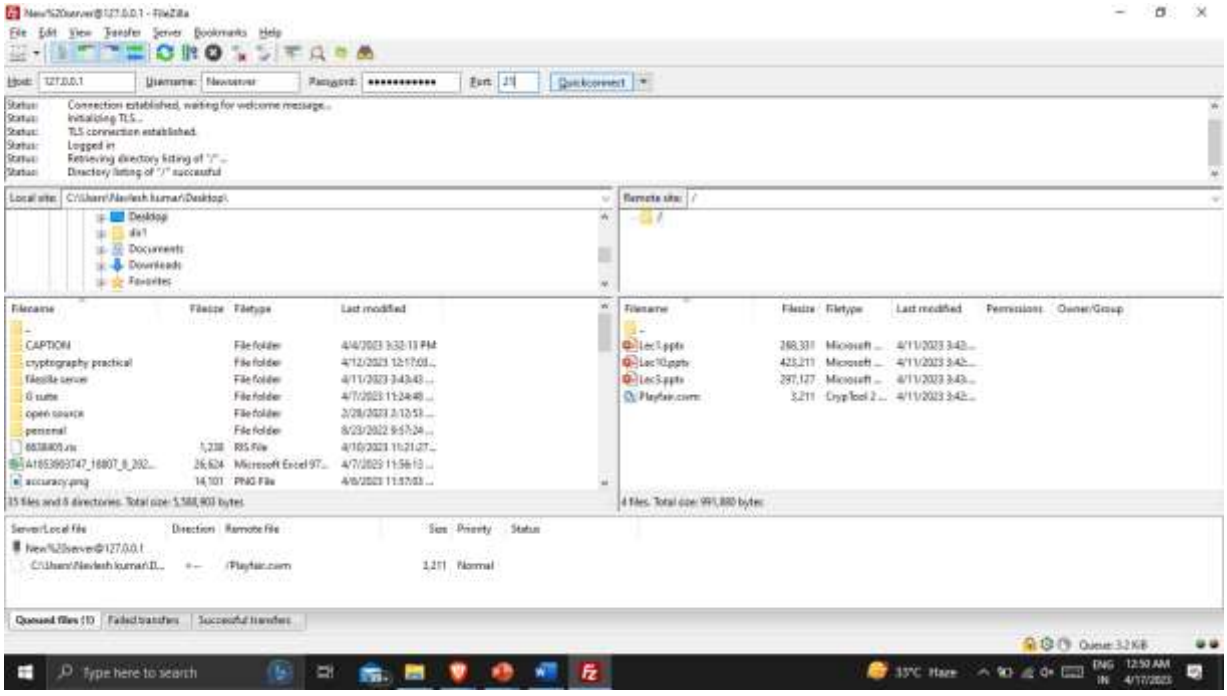
4. Connect to the configured server.



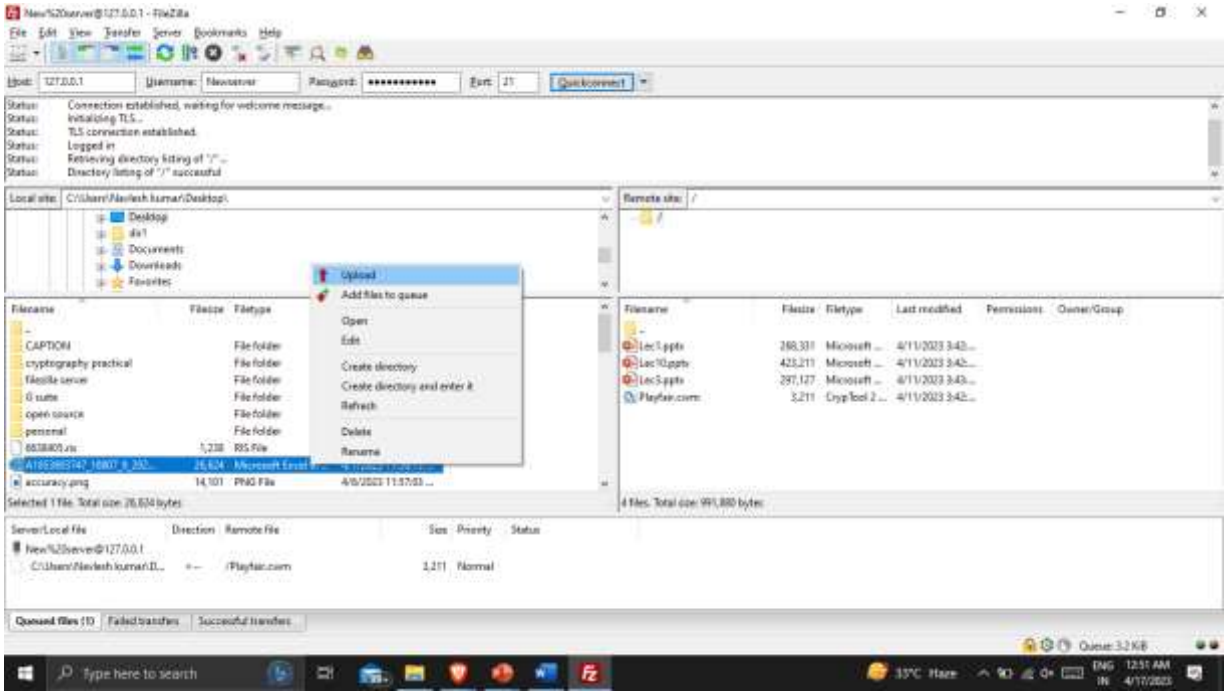
5. Filezilla server successfully connected.



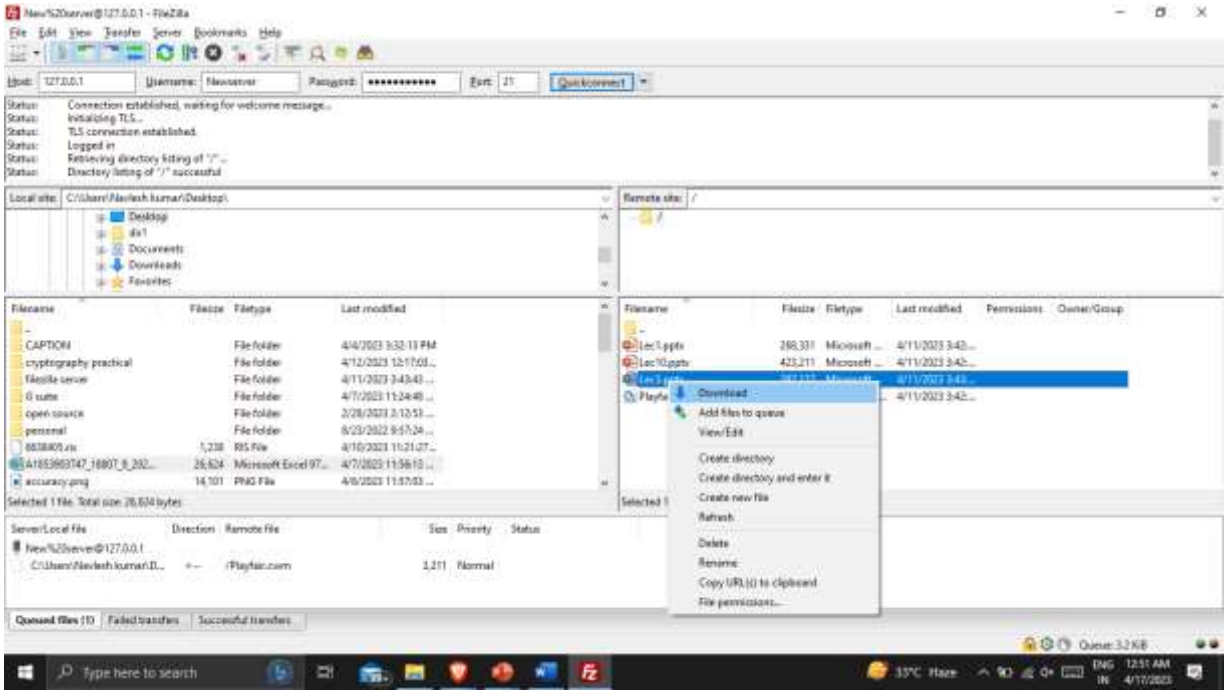
6. Enter the details of server like host address, username and password and connect to the server.



7. File can be uploaded from local computer to server.



8. File is transferred from server location to local computer.



CONCLUSION

In conclusion, FileZilla software is to provides convenient and easy-to-use FTP client for users to transfer files between their local computer and remote servers. FileZilla supports FTP, SFTP (SSH File Transfer Protocol), and FTPS (FTP over SSL/TLS) protocols and provides a user-friendly graphical interface for easy file management. It also supports drag and drop functionality, bookmarks, and remote file editing. Additionally, FileZilla includes features such as site manager, speed limits, and remote file search. FTP is a commonly used protocol for transferring files over the internet and is often used by web developers and designers to upload their websites and files to web servers. With FileZilla, users can upload and download files from FTP servers, as well as manage their files remotely. FileZilla's user-friendly interface and support for multiple protocols make it a popular choice for both beginners and advanced users who need to transfer files securely and efficiently.