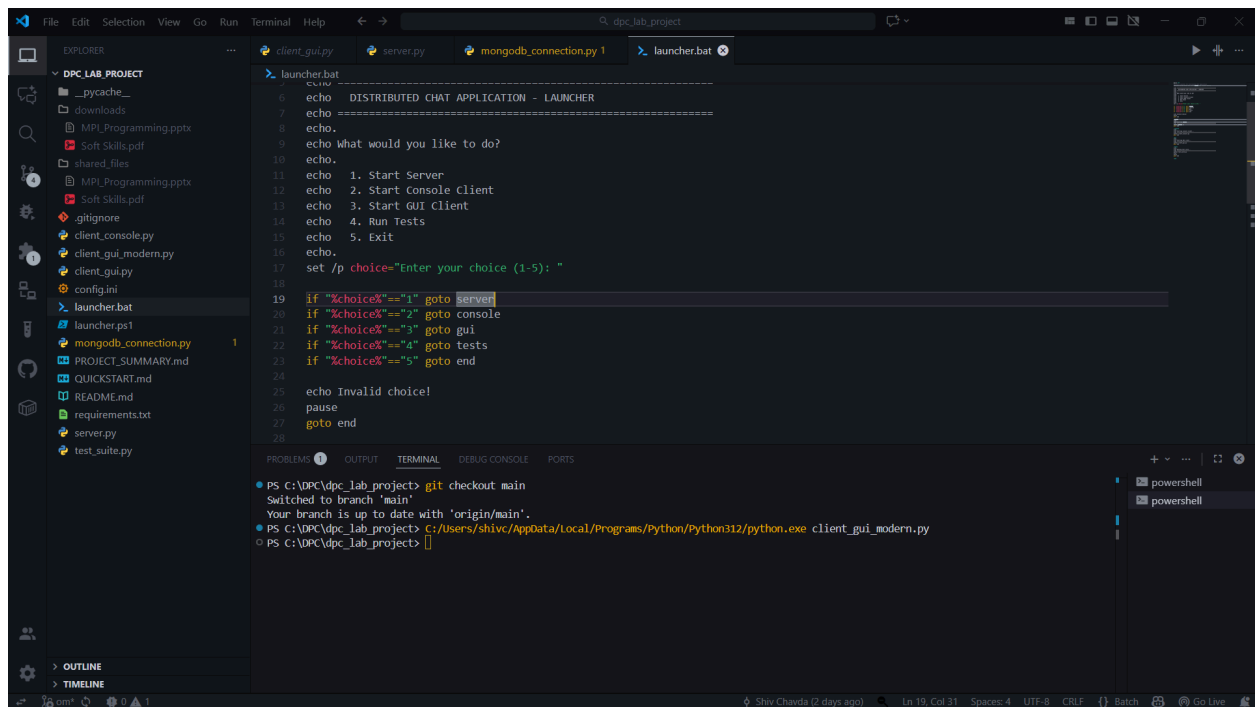


CS 401

DPC Project

Shiv Chavda
Om Vasani
Ameya Naik

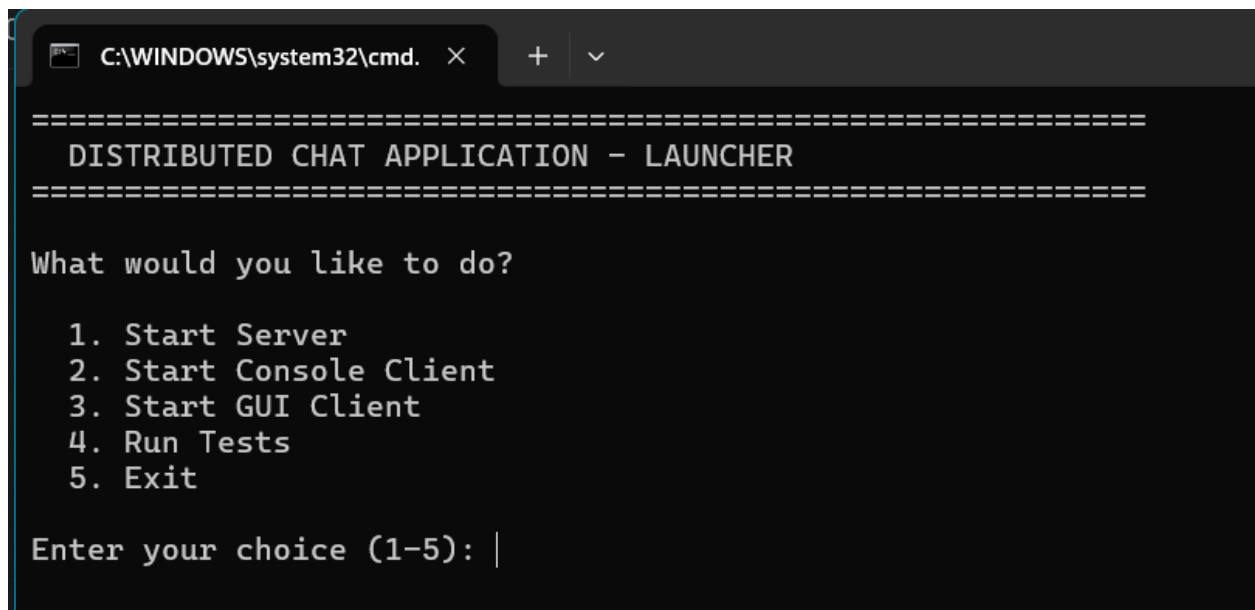


The screenshot shows the Visual Studio Code editor interface. The Explorer pane on the left displays the project structure for 'DPC LAB PROJECT', including files like _pycache_, downloads, MPL_Programming.pptx, Soft Skills.pdf, shared_files, client_console.py, client_gui_modern.py, client_gui.py, config.ini, launcher.bat, launcher.ps1, mongodb_connection.py, PROJECT_SUMMARY.md, QUICKSTART.md, README.md, requirements.txt, server.py, and test_suite.py. The main editor area shows the 'launcher.bat' file with the following content:

```
1 echo
2 echo DISTRIBUTED CHAT APPLICATION - LAUNCHER
3 echo =====
4 echo What would you like to do?
5 echo.
6 echo 1. Start Server
7 echo 2. Start Console Client
8 echo 3. Start GUI Client
9 echo 4. Run Tests
10 echo 5. Exit
11 echo.
12 set /p choice="Enter your choice (1-5): "
13
14 if "%choice%"=="1" goto server
15 if "%choice%"=="2" goto console
16 if "%choice%"=="3" goto gui
17 if "%choice%"=="4" goto tests
18 if "%choice%"=="5" goto end
19
20 echo Invalid choice!
21 pause
22 goto end
```

The TERMINAL pane at the bottom shows the following commands and output:

```
PS C:\DPC\dpc_lab_project> git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
PS C:\DPC\dpc_lab_project> C:\Users\shivc\AppData\Local\Programs\Python\Python312\python.exe client_gui_modern.py
PS C:\DPC\dpc_lab_project> |
```



The screenshot shows a Windows Command Prompt window titled 'C:\WINDOWS\system32\cmd.'. The output of the 'launcher.bat' script is displayed as follows:

```
=====
DISTRIBUTED CHAT APPLICATION - LAUNCHER
=====

What would you like to do?

1. Start Server
2. Start Console Client
3. Start GUI Client
4. Run Tests
5. Exit

Enter your choice (1-5): |
```

```
C:\WINDOWS\system32\cmd. x + v
=====
DISTRIBUTED CHAT APPLICATION - LAUNCHER
=====

What would you like to do?

1. Start Server
2. Start Console Client
3. Start GUI Client
4. Run Tests
5. Exit

Enter your choice (1-5): 1

Starting server...
=====
DISTRIBUTED CHAT SERVER WITH FILE SHARING
=====
Host: 0.0.0.0
Port: 5000
File Storage: C:\DPC\dpc_lab_project\shared_files
=====

[SERVER] Listening on 0.0.0.0:5000
[SERVER] Waiting for connections...

|
```

Distributed Chat Client

Connect to the lab server to start chatting and sharing files.

Server Host
Usually 127.0.0.1 when running the server locally.

127.0.0.1

Port
Use the same port the server is listening on.

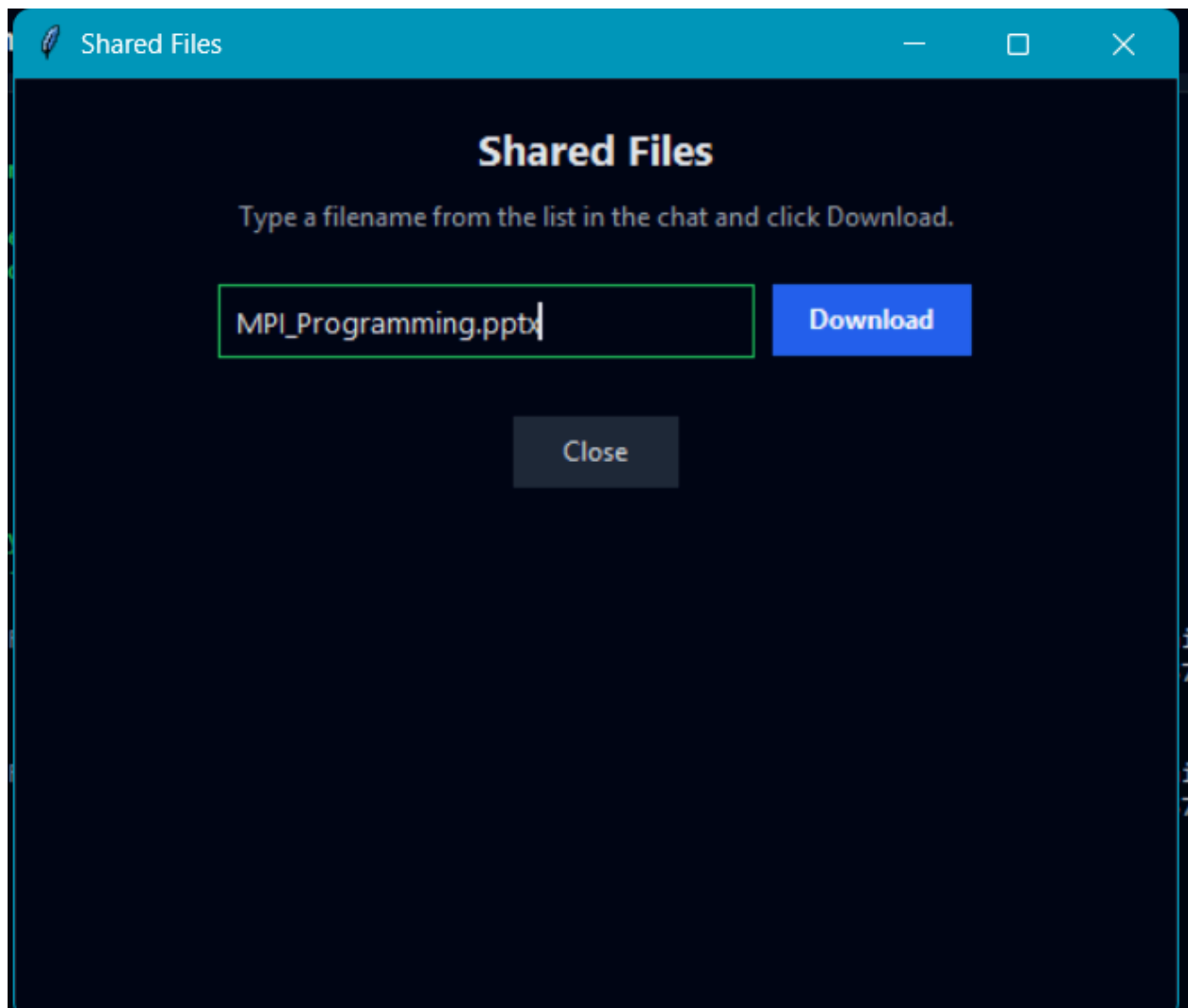
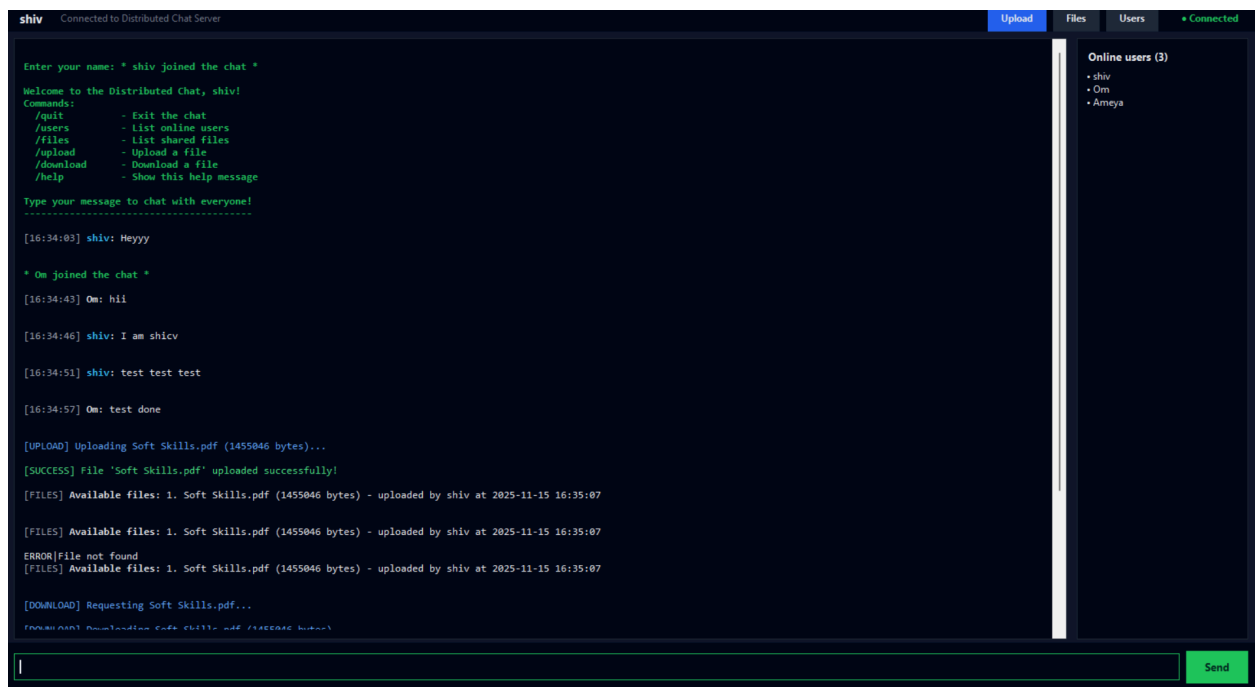
5000

Display Name
This name will appear in the chat for other users.

Connect to Server

What you can do

- Real-time group chat with everyone connected.
- Upload files so others can download them.
- See who is online with `/users`.
- List shared files with `/files`.



Enter your name: * shiv joined the chat *
Welcome to the Distributed Chat, shiv!
Commands:
/quit - Exit the chat
/users - List online users
/files - List shared files
/upload - Upload a file
/download - Download a file
/help - Show this help message
Type your message to chat with everyone!

[FILES] Available files: 1. Soft Skills.pdf (1455046 bytes) - uploaded by shiv at 2025-11-15 16:35:07
2. MPI_Programming.pptx (270720 bytes) - uploaded by Om at 2025-11-15 16:37:01

[FILES] Available files: 1. Soft Skills.pdf (1455046 bytes) - uploaded by shiv at 2025-11-15 16:35:07
2. MPI_Programming.pptx (270720 bytes) - uploaded by Om at 2025-11-15 16:37:01

[DOWNLOAD] Requesting MPI_Programming.pptx...
[DOWNLOAD] Downloading MPI_Programming.pptx (270720 bytes)...
[SUCCESS] Downloaded MPI_Programming.pptx to downloads\MPI_Programming.pptx

Success

File downloaded to:
downloads\MPI_Programming.pptx

OK

Online users (3)
• Om
• Ameya
• shiv

shiv Connected to Distributed Chat Server

UploadFilesUsers+ Connected

[16:34:03] shiv: Heyyy

* Om joined the chat *
[16:34:43] Om: hi!

[16:34:46] shiv: I am shiv

[16:34:51] shiv: test test test

[16:34:57] Om: test done

[UPLOAD] Uploading Soft Skills.pdf (1455046 bytes)...
[SUCCESS] File 'Soft Skills.pdf' uploaded successfully!
[FILES] Available files: 1. Soft Skills.pdf (1455046 bytes) - uploaded by shiv at 2025-11-15 16:35:07

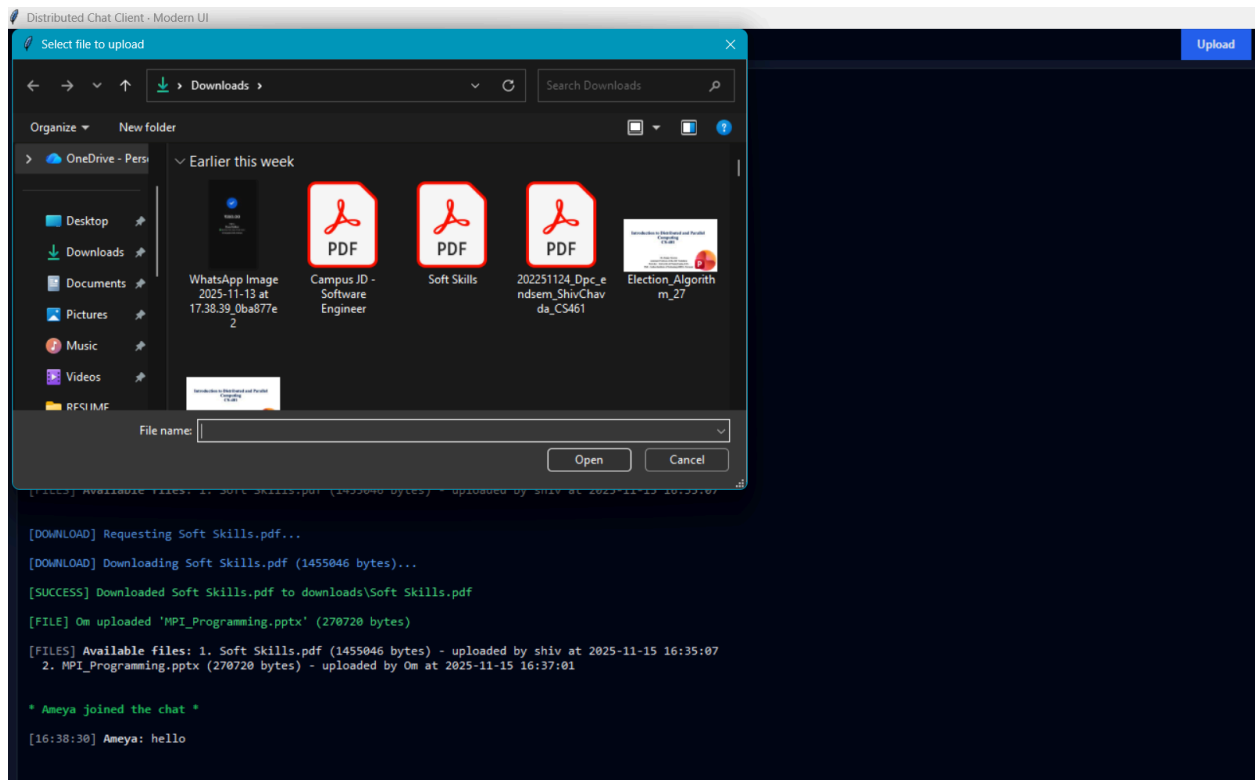
[FILES] Available files: 1. Soft Skills.pdf (1455046 bytes) - uploaded by shiv at 2025-11-15 16:35:07
ERROR[File not found
[FILES] Available files: 1. Soft Skills.pdf (1455046 bytes) - uploaded by shiv at 2025-11-15 16:35:07

[DOWNLOAD] Requesting Soft Skills.pdf...
[DOWNLOAD] Downloading Soft Skills.pdf (1455046 bytes)...
[SUCCESS] Downloaded Soft Skills.pdf to downloads\Soft Skills.pdf
[FILE] Om uploaded 'MPI_Programming.pptx' (270720 bytes)
[FILES] Available files: 1. Soft Skills.pdf (1455046 bytes) - uploaded by shiv at 2025-11-15 16:35:07
2. MPI_Programming.pptx (270720 bytes) - uploaded by Om at 2025-11-15 16:37:01

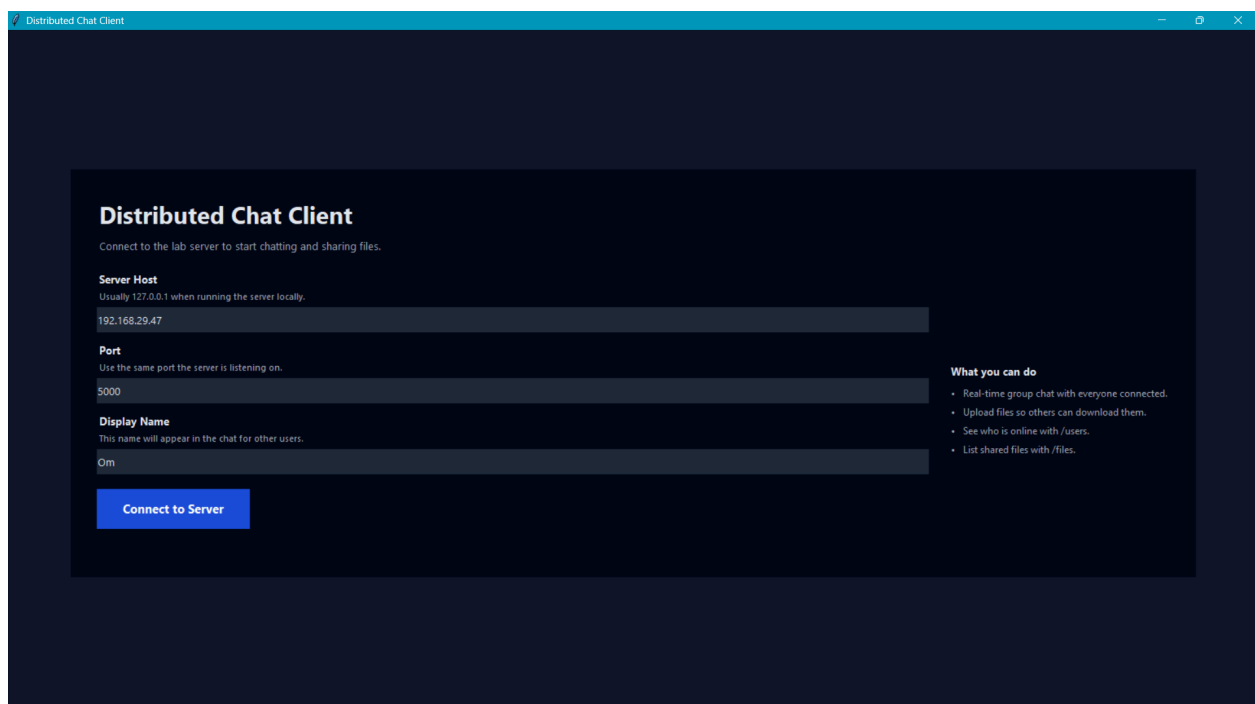
* Ameya joined the chat *
[16:38:30] Ameya: hello

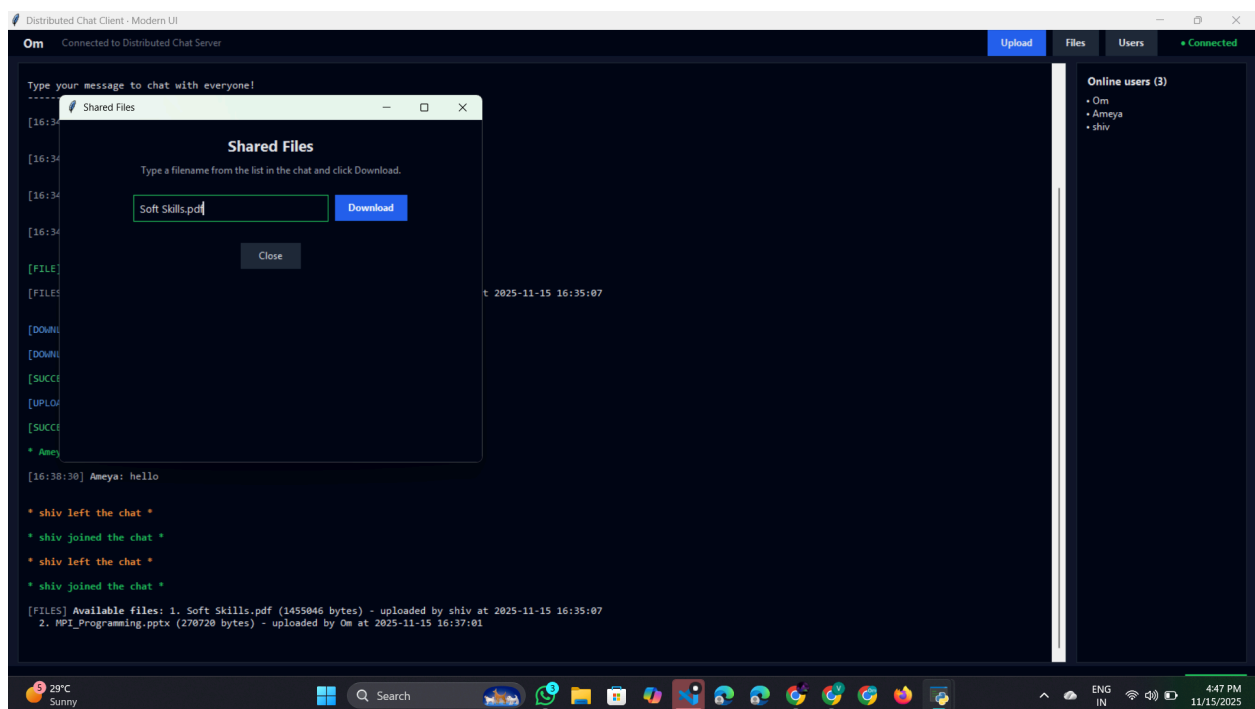
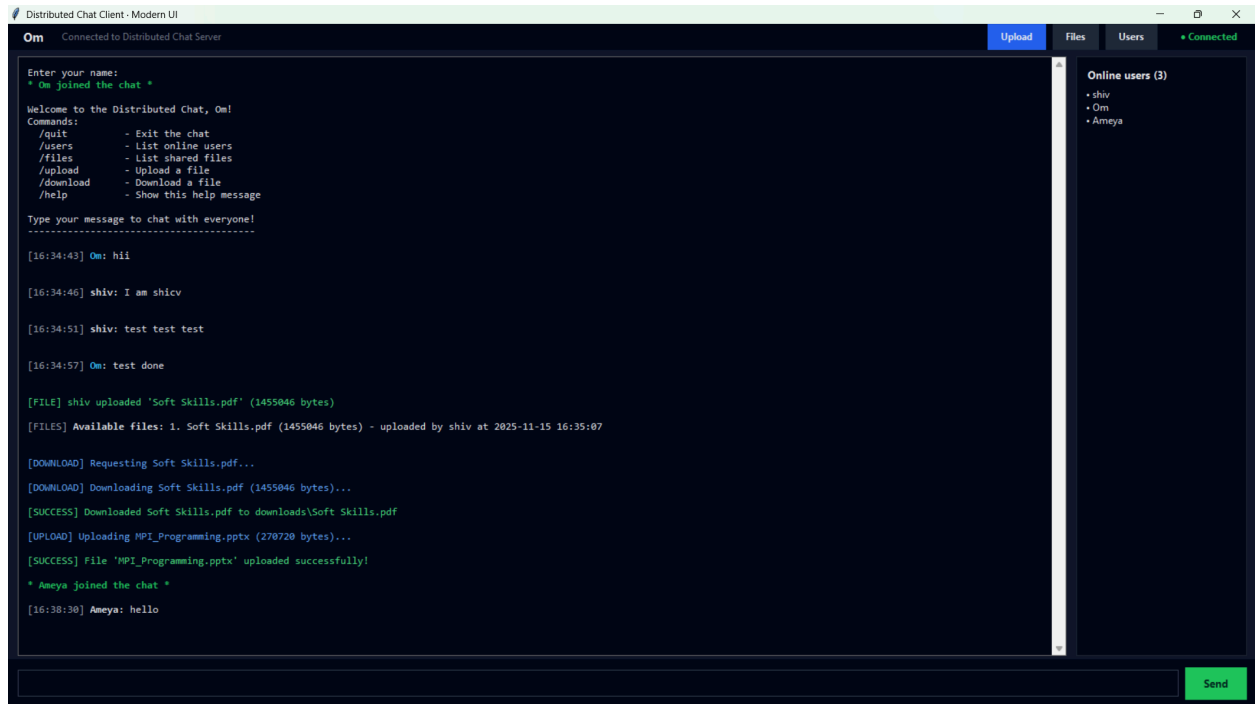
Online users (3)
• shiv
• Om
• Ameya

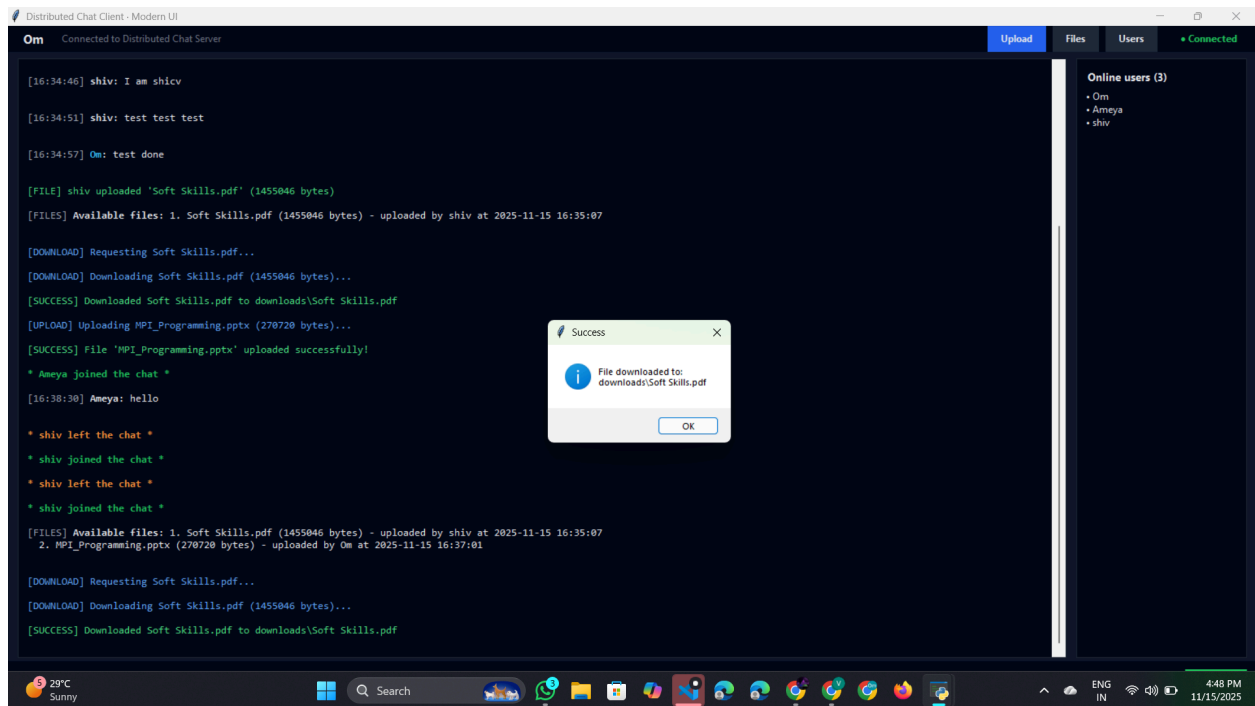
Send



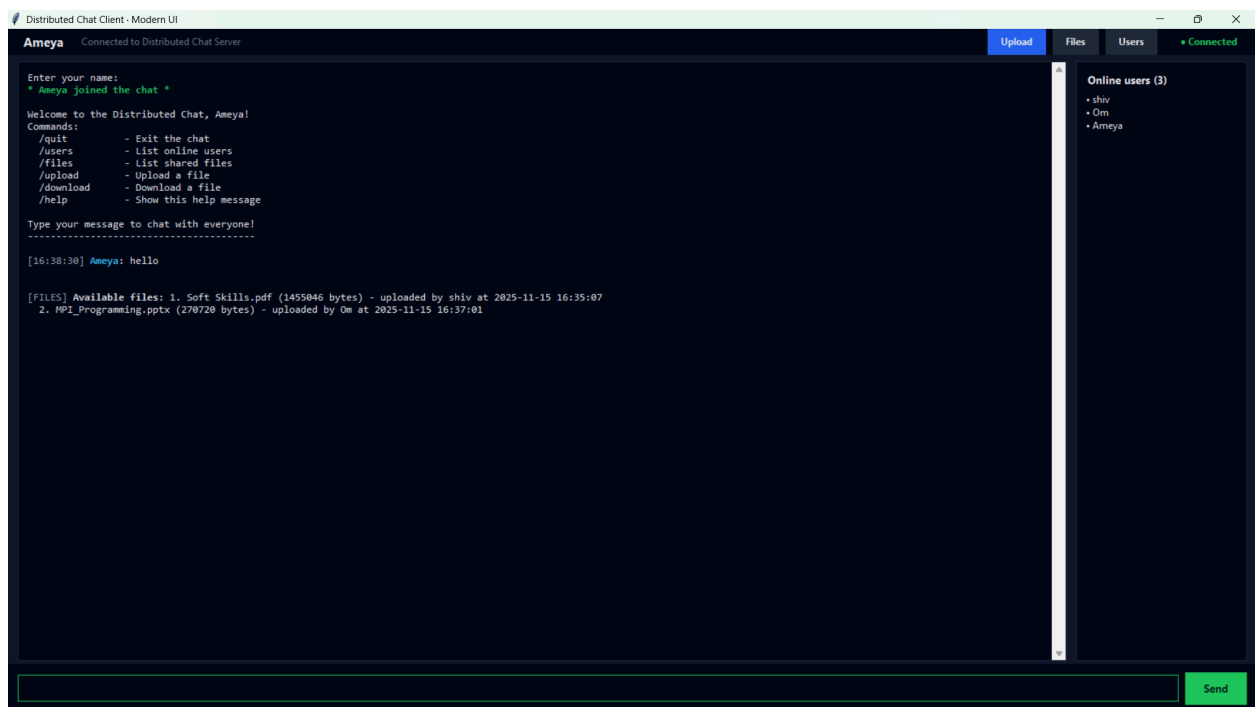
Om's client







Ameya's client



SERVER:-

```
C:\WINDOWS\system32\cmd. X + v
Enter your choice (1-5): 1

Starting server...
=====
DISTRIBUTED CHAT SERVER WITH FILE SHARING
=====
Host: 0.0.0.0
Port: 5000
File Storage: C:\DPC\dpc_lab_project\shared_files
=====

[SERVER] Listening on 0.0.0.0:5000
[SERVER] Waiting for connections...

[JOIN] shiv connected from ('127.0.0.1', 60219)
[LEAVE] shiv disconnected
[JOIN] shiv connected from ('127.0.0.1', 60223)
[CHAT] shiv: Heyyy
[JOIN] Om connected from ('192.168.29.28', 49297)
[CHAT] Om: hii
[CHAT] shiv: I am shivc
[CHAT] shiv: test test test
[CHAT] Om: test done
[FILE] Upload request from shiv
[FILE] Waiting for metadata from shiv...
[FILE] Received metadata: Soft Skills.pdf|1455046
[FILE] File: Soft Skills.pdf, Size: 1455046 bytes
[FILE] Sent READY acknowledgment to shiv
[FILE] Receiving Soft Skills.pdf (1455046 bytes) from shiv...
```

```
C:\WINDOWS\system32\cmd. X + v

[FILE] Requested file: /users
[ERROR] File '/users' not in shared files list
[FILE] Download request from shiv
[FILE] Waiting for filename from shiv...
[FILE] Requested file: Soft Skills.pdf
[FILE] Sent file info: OK|1455046
[FILE] Waiting for READY acknowledgment from shiv...
[FILE] Sending Soft Skills.pdf (1455046 bytes) to shiv...
[FILE] Download progress: 1048576/1455046 bytes (72.1%)
[FILE] Download progress: 1455046/1455046 bytes (100.0%)
[FILE] ✓ Soft Skills.pdf sent successfully to shiv
[FILE] Download request from Om
[FILE] Waiting for filename from Om...
[FILE] Requested file: Soft Skills.pdf
[FILE] Sent file info: OK|1455046
[FILE] Waiting for READY acknowledgment from Om...
[FILE] Sending Soft Skills.pdf (1455046 bytes) to Om...
[FILE] Download progress: 1048576/1455046 bytes (72.1%)
[FILE] Download progress: 1455046/1455046 bytes (100.0%)
[FILE] ✓ Soft Skills.pdf sent successfully to Om
[FILE] Upload request from Om
[FILE] Waiting for metadata from Om...
[FILE] Received metadata: MPI_Programming.pptx|270720
[FILE] File: MPI_Programming.pptx, Size: 270720 bytes
[FILE] Sent READY acknowledgment to Om
[FILE] Receiving MPI_Programming.pptx (270720 bytes) from Om...
[FILE] Progress: 270720/270720 bytes (100.0%)
[FILE] ✓ MPI_Programming.pptx uploaded successfully by Om
[JOIN] Ameya connected from ('192.168.29.28', 50109)
[CHAT] Ameya: hello
```