

Chat_server.py

File Edit Selection View Go Run Terminal Help

EXPLORER

NO FOLDER OPENED

You have not yet opened a folder.

Open Folder

Opening a folder will close all currently open editors. To keep them open, add a folder instead.

You can clone a repository locally.

Clone Repository

To learn more about how to use Git and source control in VS Code read our docs.

chat_server.py x chat_client.py

```
C:\Users\232423> Videos> chat_server.py > ...
31 def handle_client(client_sock):
32     user_list = , .join(r {dep} {nm} for dep, nm in clients.values())
33     client_sock.send(f"[{timestamp}] Connected users: {user_list}".encode())
34     continue
35
36     # Format full message
37     full_msg = f"[{timestamp}] {department} {name}: {msg}"
38     print(full_msg)
39
40     # Save message to log file
41     with open(LOG_FILE, "a") as log:
42         log.write(full_msg + "\n")
43
44     # Broadcast to other clients
45     broadcast(full_msg, client_sock)
46
47 except Exception as e:
48     print(f"Error with client {clients.get(client_sock, '')}: {e}")
49
50 finally:
51     # Clean up after client disconnects
52     if client_sock in clients:
53         left_msg = f"[{clients[client_sock][0]}] {clients[client_sock][1]} left the chat."
54         print(left_msg)
55         broadcast(left_msg, client_sock)
56         del clients[client_sock]
57     client_sock.close()
58
59 def start_server():
60     """
61     Start the TCP server and listen for connections.
62     """
63     server = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
64     server.bind((HOST, PORT))
65     server.listen()
66
67 PS C:\Users\232423> python chat_server.py
C:\Python312\python.exe: can't open file 'C:\Users\232423\chat_server.py': [Errno 2] No such file or directory
PS C:\Users\232423> cd C:\Users\232423\Videos
PS C:\Users\232423\Videos> python chat_server.py
Server started on 127.0.0.1:5555
[]
```

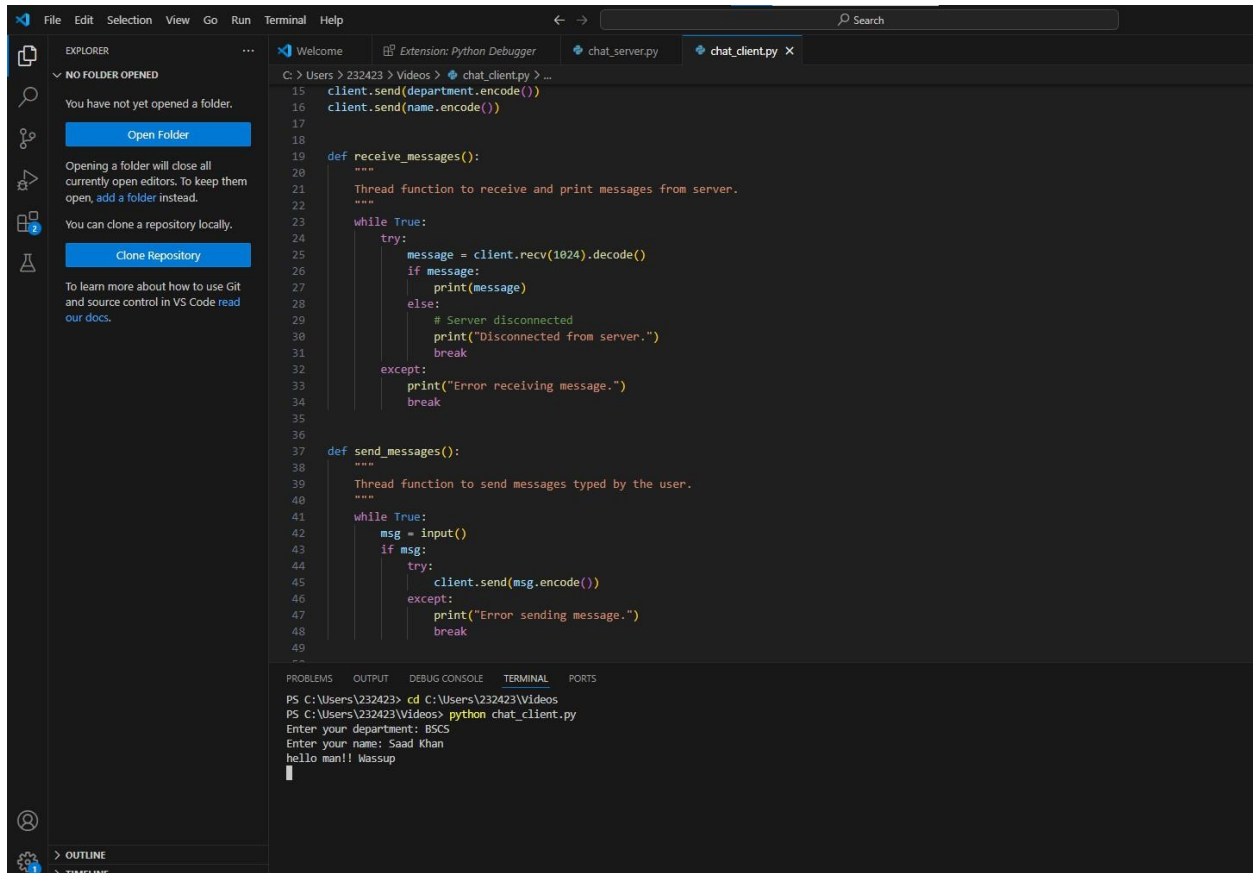
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\232423> python chat_server.py
C:\Python312\python.exe: can't open file 'C:\Users\232423\chat_server.py': [Errno 2] No such file or directory
PS C:\Users\232423> cd C:\Users\232423\Videos
PS C:\Users\232423\Videos> python chat_server.py
Server started on 127.0.0.1:5555
[]

> OUTLINE
> TIMELINE

0 0 0 0

Chat_client.py



The screenshot shows the Visual Studio Code interface. The Explorer sidebar on the left indicates 'NO FOLDER OPENED' with buttons for 'Open Folder' and 'Clone Repository'. The main editor area displays the `chat_client.py` file with the following Python code:

```
15 client.send(department.encode())
16 client.send(name.encode())
17
18
19 def receive_messages():
20     """
21     Thread function to receive and print messages from server.
22     """
23     while True:
24         try:
25             message = client.recv(1024).decode()
26             if message:
27                 print(message)
28             else:
29                 # Server disconnected
30                 print("Disconnected from server.")
31                 break
32         except:
33             print("Error receiving message.")
34             break
35
36
37 def send_messages():
38     """
39     Thread function to send messages typed by the user.
40     """
41     while True:
42         msg = input()
43         if msg:
44             try:
45                 client.send(msg.encode())
46             except:
47                 print("Error sending message.")
48                 break
49
50
```

The terminal window at the bottom shows the execution of the script:

```
PS C:\Users\232423> cd C:\Users\232423\Videos
PS C:\Users\232423\Videos> python chat_client.py
Enter your department: BSCS
Enter your name: Saad Khan
hello man!! Wassup
```

ON CLIENT END:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\232423> cd C:\Users\232423\Videos
PS C:\Users\232423\Videos> python chat_client.py
Enter your department: BSCS
Enter your name: Saad Khan
hello man!! Wassup
█
```

ON SERVER END

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\232423> python chat_server.py
C:\Python312\python.exe: can't open file 'C:\\Users\\232423\\chat_server.py': [Errno 2] No such file or directory
PS C:\Users\232423> cd C:\Users\232423\Videos
PS C:\Users\232423\Videos> python chat_server.py
Server started on 127.0.0.1:5555
New connection from ('127.0.0.1', 56967)
BSCSSaad Khan hello man!! Wassup joined the chat.
█
```

USER CONNECTED /LIST:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\232423> cd C:\Users\232423\Videos
PS C:\Users\232423\Videos> python chat_client.py
Enter your department: BSCS
Enter your name: Saad Khan
hello man!! Wassup
/list
[2025-07-01 23:24:02] Connected users: BSCSSaad Khan hello man!! Wassup
█
```

AFTER CTRL+C LEFT THE CHAT

```
New connection from ('127.0.0.1', 56967)
BSCSSaad Khan hello man!! Wassup joined the chat.
Error with client ('BSCSSaad Khan', 'hello man!! W
BSCSSaad Khan hello man!! Wassup left the chat.
```

ON CLIENT END:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\232423> cd C:\Users\232423\Videos
PS C:\Users\232423\Videos> python chat_client.py
>>
Enter your department: Finance
Enter your name: Khan Saad
hello
```

ON SERVER END

```
New connection from ('127.0.0.1', 57100)
FinanceKhan Saad hello joined the chat.
```

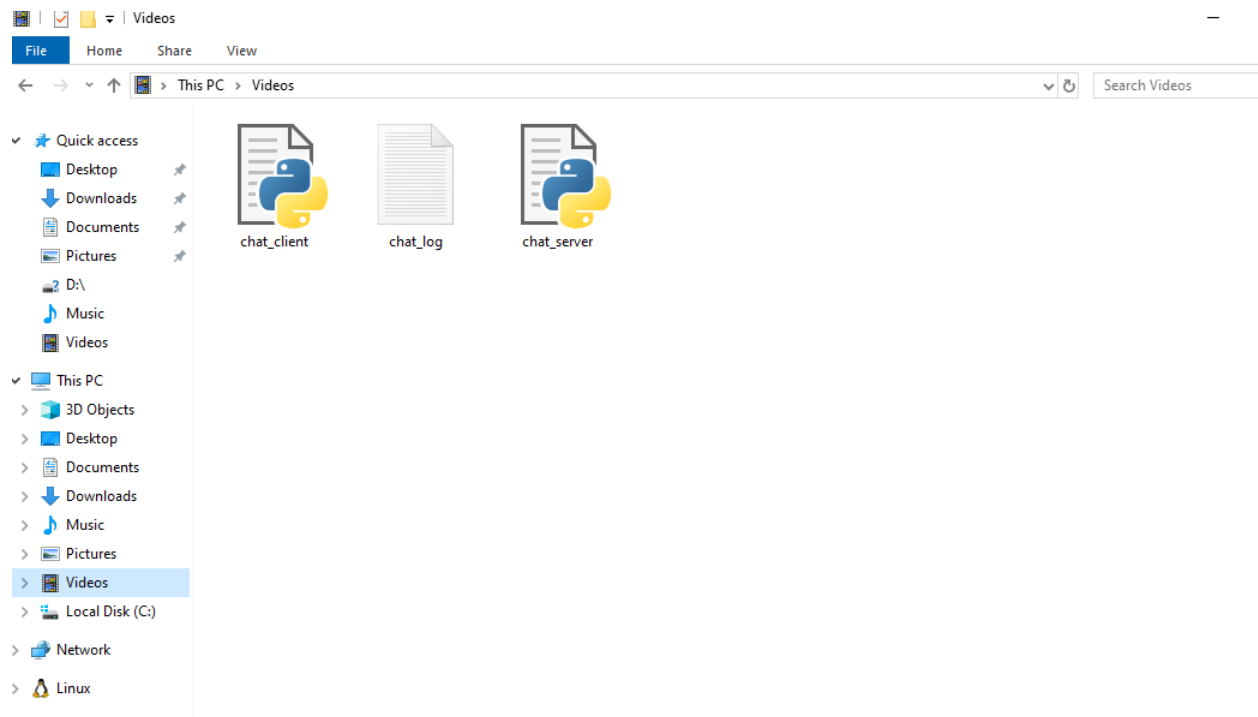
USER CONNECTED /LIST:

```
Enter your name: Khan Saad
hello
/list
[2025-07-01 23:26:55] Connected users: FinanceKhan Saad hello
```

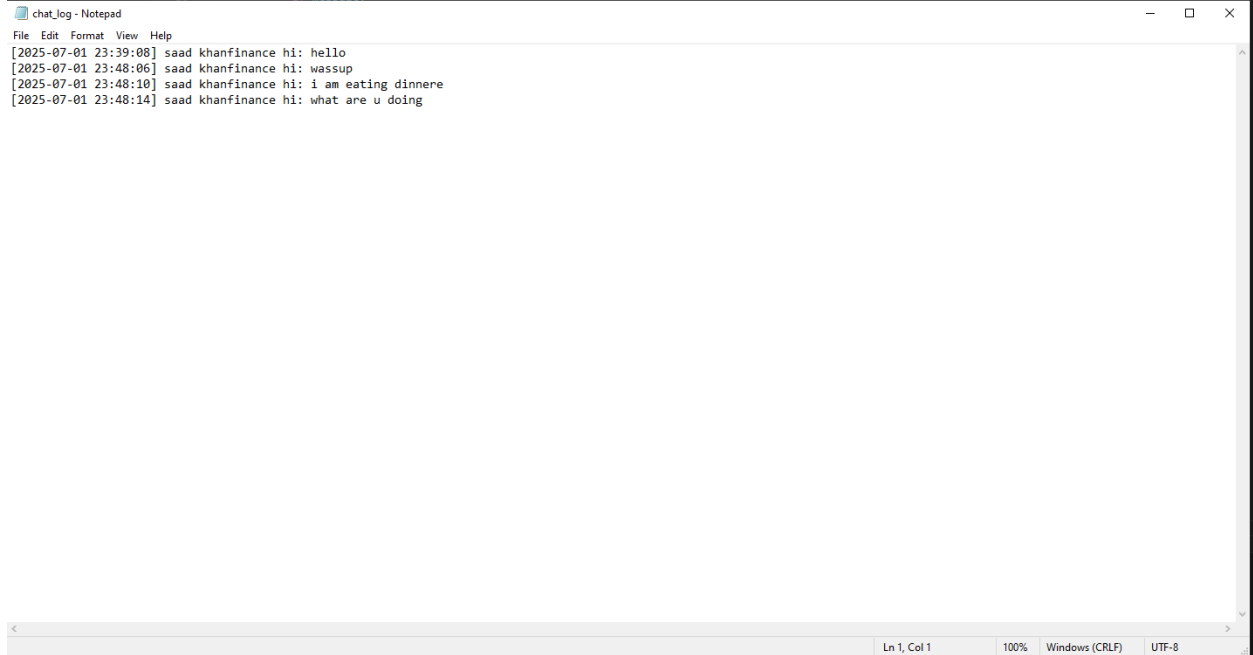
AFTER CTRL+C LEFT THE CHAT

```
New connection from ('127.0.0.1', 57100)
FinanceKhan Saad hello joined the chat.
Error with client ('FinanceKhan Saad', 'hello'): [WinError 10054] An existing connection was forcibly closed by the remote host
FinanceKhan Saad hello left the chat.
```

CHAT LOG



```
New connection from ('127.0.0.1', 57241)
saad khanfinance hi joined the chat.
[2025-07-01 23:39:08] saad khanfinance hi: hello
[2025-07-01 23:48:06] saad khanfinance hi: wassup
[2025-07-01 23:48:10] saad khanfinance hi: i am eating dinnere
[2025-07-01 23:48:14] saad khanfinance hi: what are u doing
█
```



chat_log - Notepad

File Edit Format View Help

```
[2025-07-01 23:39:08] saad khanfinance hi: hello
[2025-07-01 23:48:06] saad khanfinance hi: wassup
[2025-07-01 23:48:10] saad khanfinance hi: i am eating dinnere
[2025-07-01 23:48:14] saad khanfinance hi: what are u doing
```

Ln 1, Col 1 100% Windows (CRLF) UTF-8