Functionality Implementation

Functionality 1: REGISTER

Client side: an infinity for loop until messages received using recev() function from sever side indicates registration success. First set buffer with "REGISTER", then get user input for name and password and append to buffer, then use send() function to send buffer to sever.
Server side: Extract name and password from buffer by delimiter ':'. Use isNewUser(name) function to check if it is new user.
For subcase that it is new user: allocate memory for the first free space in listOfUsers[] array and set corresponding attributes of user_info_t struct. Create .txt file with user's name as filename and broadcast welcome message as well as send registration success message to the new user.
For subcase that it is existing user: first check password, then change the user state and read the .txt file corresponding to the user and finally broadcast the welcome message.

Functionality 2: WHO

Server side: loop through the existing users in listOfUsers[] array and concatenate all the user names into the common-separated ToClient[] array as buffer and send it to the requesting client indicated by pfds[i].fd using send() function.
Client side: send input buffer with "WHO" in main loop that runs infinitly to get user input until interrupt. pthread created after the registration loop runs function infinitely until interrupt for receiving the data from server side using recev() function and then print it out.

Functionality 3: EXIT

Server side: Broadcast the leave message to the other users, then change the state of this user to offline, finally close the socket and remove the socket from pfds[].
Client side: send input buffer with "EXIT" in main loop that runs infinitly to get user input until interrupt. Then use pthread_join() function to wait for the thread we create for receiving messages from server side to terminate. In the thread function we check return value of recev() function, if return value is 0, then we close the file descriptor FD and use pthread_exit(NULL) to terminate the thread. After that use sigsuspend() to pause the program and we can use Ctrl+C to terminate the client.

Functionality 4: Direct Message

Server side: we get the send user name using get_username(pfds[i].fd) function and extract the receive user name and message from buffer received from client side using delimiter ':'. Then we get the destination socket using get_sockfd(destname). After that we check destination socket value to indicate whether destination user exist or not. In case the user exist, we send to the user's socket fd directly if the user is online. Otherwise, we open the

user's .txt file and write message to the .txt file.

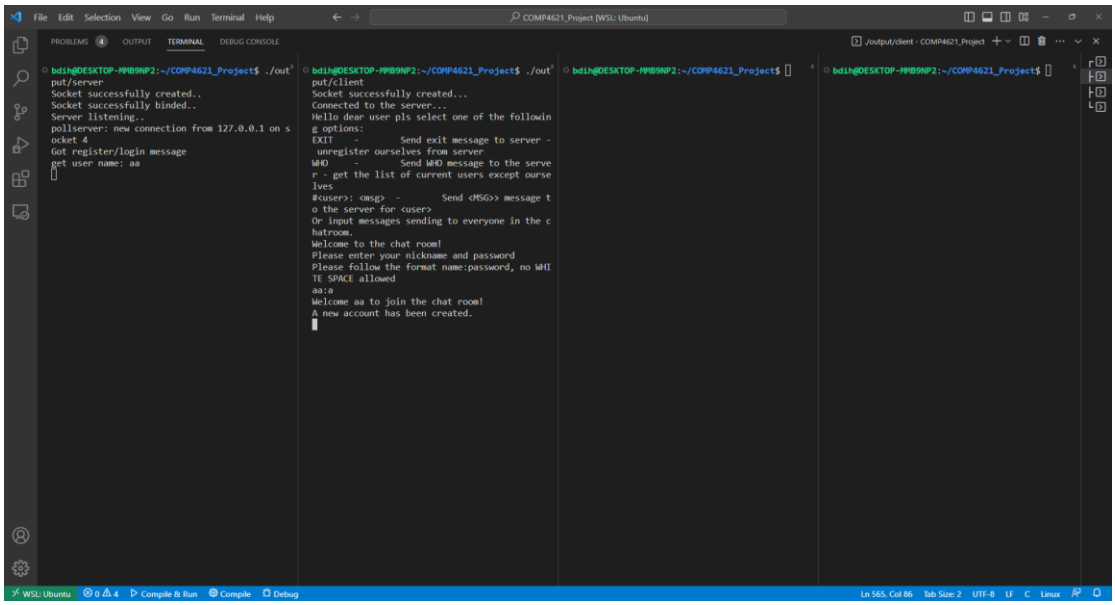
Client side: send input buffer with direct message in main loop that runs infinitly to get user input until interrupt. pthread created after the registration loop runs function infinitely until interrupt for receiving the data from server side using recev() function and then print it out.

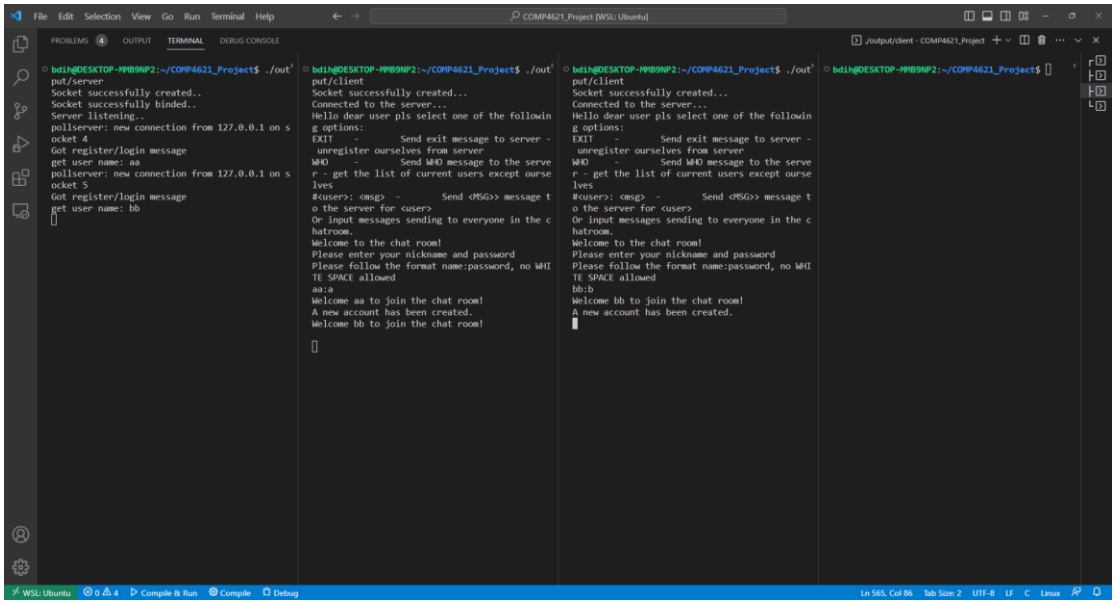
Functionality 5: Broadcast Message

Server side: loop through the existing users in listOfUsers[] array and send buffer received from client side to user that is online (by checking 'state' field value) and not the sender(by compare 'sockfd' field value to pfds[i].fd).

Client side: send input buffer with broadcast message in main loop that runs infinitly to get user input until interrupt. pthread created after the registration loop runs function infinitely until interrupt for receiving the data from server side using recev() function and then print it out.

Test Case Screenshots




bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$ ./output/server
Socket successfully created..
Socket successfully binded..
Server listening..
pollserver: new connection from 127.0.0.1 on socket 4
Got register/login message
get user name: aa
pollserver: new connection from 127.0.0.1 on socket 5
Got register/login message
get user name: bb
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$ ./output/client
Socket successfully created...
Connected to the server...
Hello dear user pls select one of the following options:
EXIT - Send exit message to server - unregister ourselves from server
WHO - Send WHO message to the server - get the list of current users except ourselves
#<user>: <msg> - Send <MSG>> message to the server for <user>
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
aa:a
Welcome aa to join the chat room!
A new account has been created.
Welcome bb to join the chat room!
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$ ./output/client
Socket successfully created...
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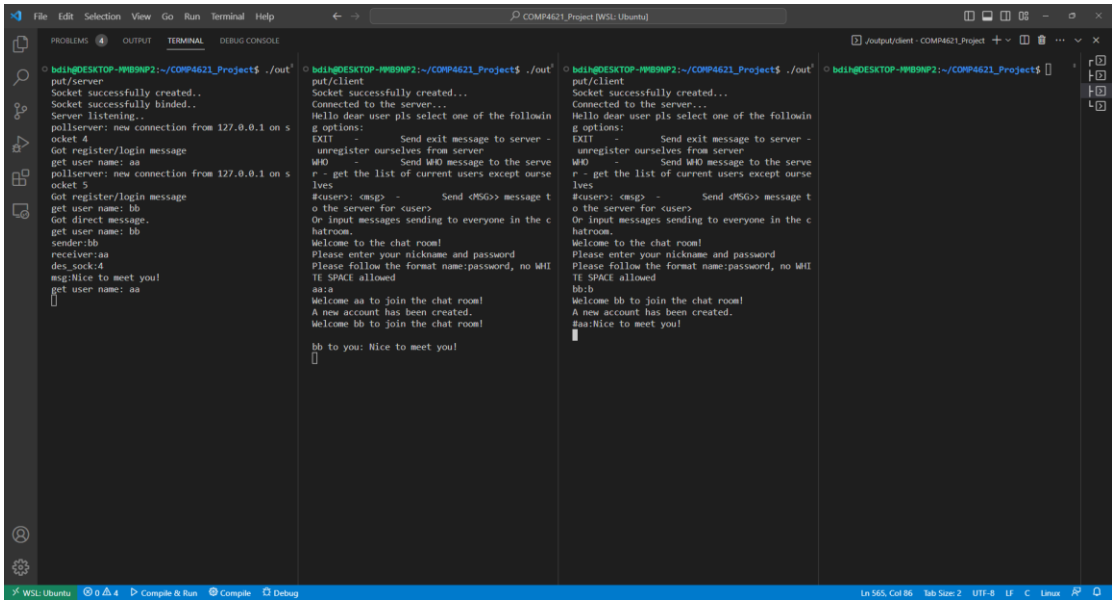
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
bb:b
Welcome bb to join the chat room!
A new account has been created.
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$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Got register/login message
get user name: bb
Got direct message.
get user name: bb
sender:bb
receiver:aa
des_sock:4
msg:Nice to meet you!
get user name: aa
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$ ./output/client
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Welcome bb to join the chat room!
bb to you: Nice to meet you!
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Welcome bb to join the chat room!
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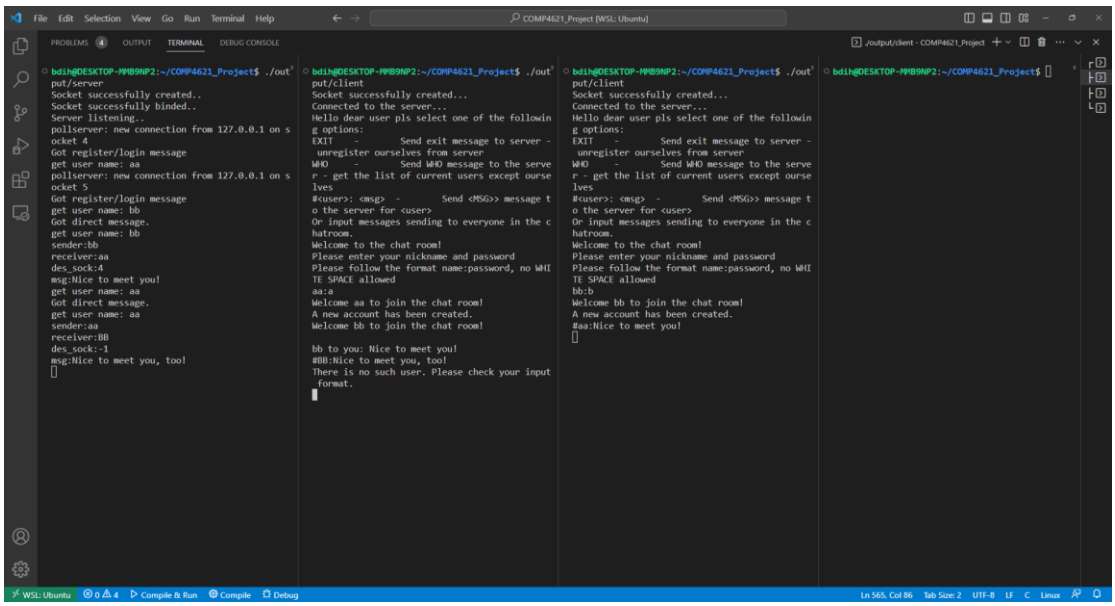
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get user name: bb
Got direct message.
get user name: bb
sender:bb
receiver:aa
des_sock:4
msg:Nice to meet you!
get user name: aa
Got direct message.
get user name: aa
sender:aa
receiver:BB
des_sock:-1
msg:Nice to meet you, too!
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Welcome aa to join the chat room!
A new account has been created.
Welcome bb to join the chat room!
bb to you: Nice to meet you!
#BB:Nice to meet you, too!
There is no such user. Please check your input format.
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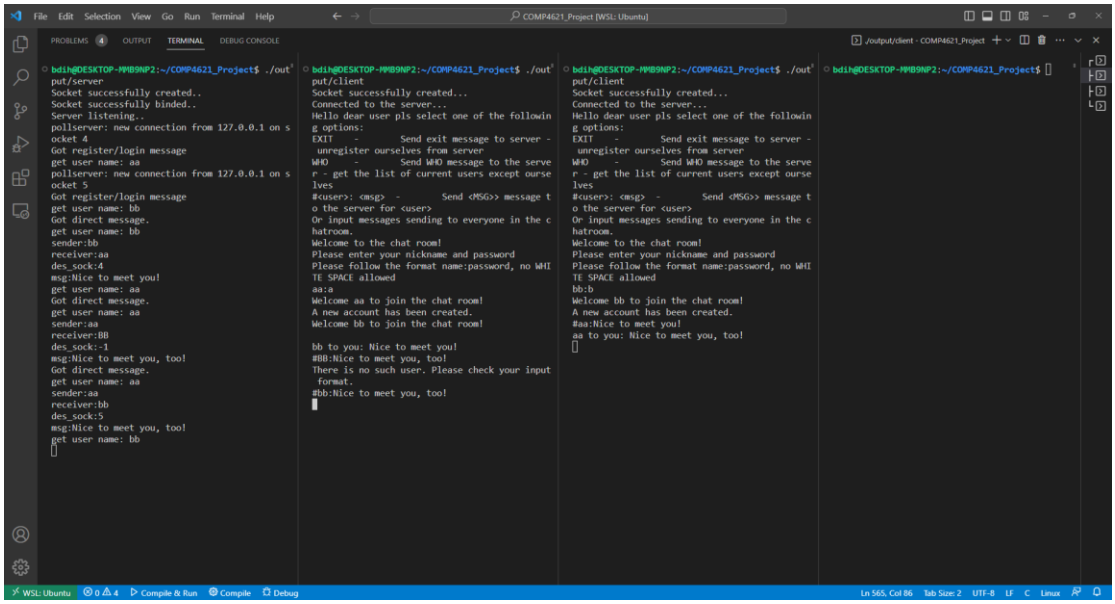
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Got register/login message
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Got direct message.
get user name: bb
sender:bb
receiver:aa
des_sock:4
msg:Nice to meet you!
get user name: aa
Got direct message.
get user name: aa
sender:aa
receiver:BB
des_sock:-1
msg:Nice to meet you, too!
Got direct message.
get user name: aa
sender:aa
receiver:bb
des_sock:5
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Welcome bb to join the chat room!
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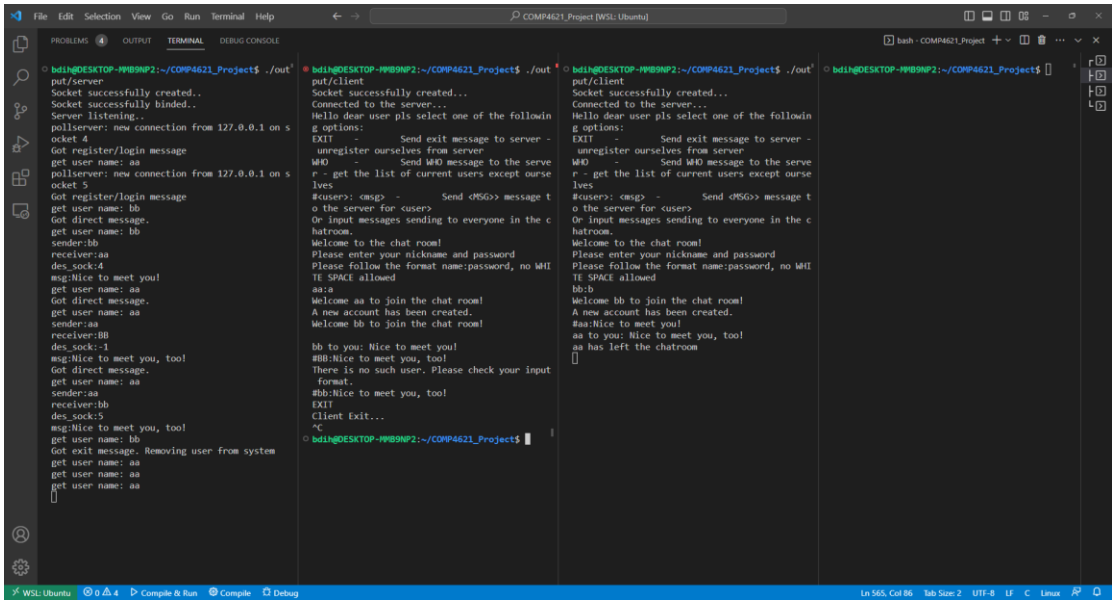
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Got direct message.
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receiver:aa
des_sock:4
msg:Nice to meet you!
get user name: aa
Got direct message.
get user name: aa
sender:aa
receiver:BB
des_sock:-1
msg:Nice to meet you, too!
Got direct message.
get user name: aa
sender:aa
receiver:bb
des_sock:5
msg:Nice to meet you, too!
get user name: bb
Got exit message. Removing user from system
get user name: aa
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EXIT
Client Exit...
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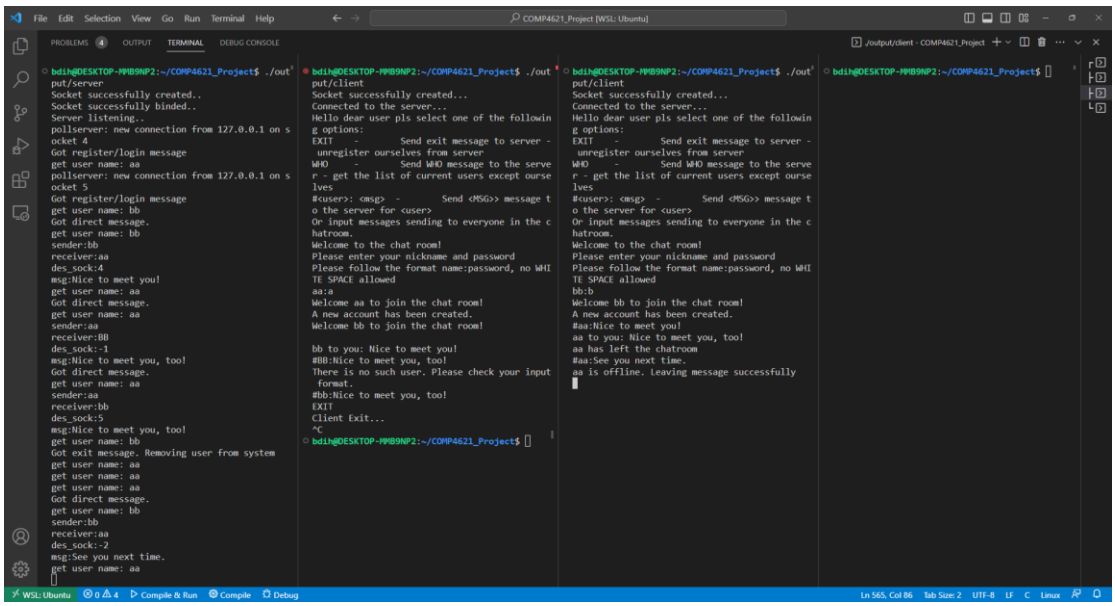
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get user name: bb
sender:bb
receiver:aa
des_sock:4
msg:Nice to meet you!
get user name: aa
Got direct message.
get user name: aa
sender:aa
receiver:BB
des_sock:-1
msg:Nice to meet you, too!
Got direct message.
get user name: aa
sender:aa
receiver:bb
des_sock:5
msg:Nice to meet you, too!
get user name: bb
Got exit message. Removing user from system
get user name: aa
get user name: aa
get user name: aa
Got direct message.
get user name: bb
sender:bb
receiver:aa
des_sock:-2
msg:See you next time.
get user name: aa
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#BB:Nice to meet you, too!
There is no such user. Please check your input format.
#bb:Nice to meet you, too!
EXIT
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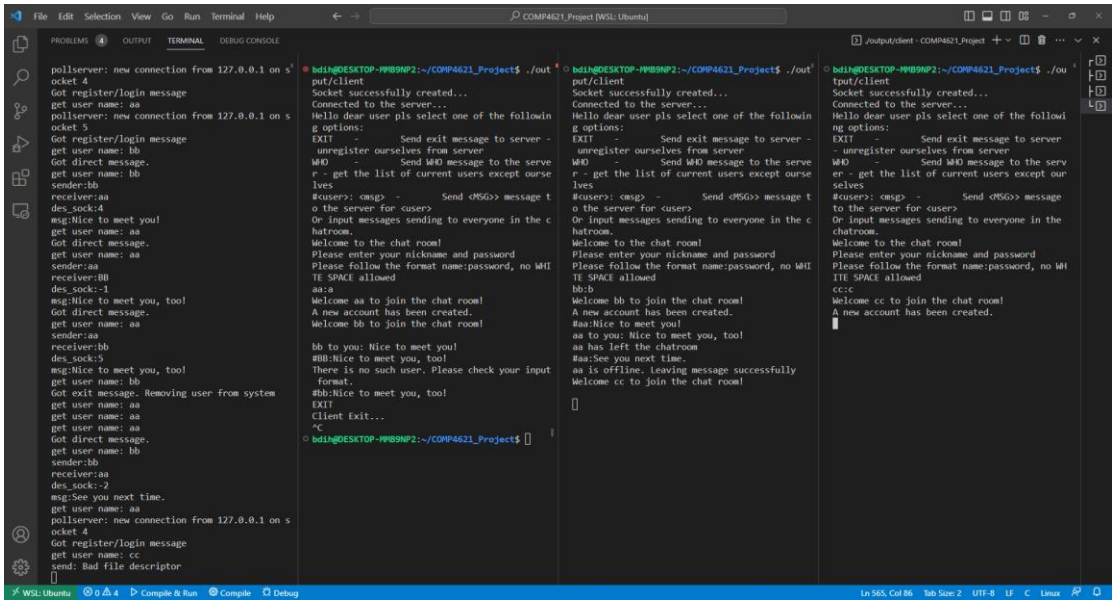
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
bb:b
Welcome bb to join the chat room!
A new account has been created.
#aa:Nice to meet you!
aa to you: Nice to meet you, too!
aa has left the chatroom
#aa:See you next time.
aa is offline. Leaving message successfully
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$


File Edit Selection View Go Run Terminal Help
COMP4621_Project [WSL: Ubuntu]
PROBLEMS 4 OUTPUT TERMINAL DEBUG CONSOLE
/output/client - COMP4621_Project
pollserver: new connection from 127.0.0.1 on socket 4
Got register/login message
get user name: aa
pollserver: new connection from 127.0.0.1 on socket 5
Got register/login message
get user name: bb
Got direct message.
get user name: bb
sender:bb
receiver:aa
des_sock:4
msg:Nice to meet you!
get user name: aa
Got direct message.
get user name: aa
sender:aa
receiver:BB
des_sock:-1
msg:Nice to meet you, too!
Got direct message.
get user name: aa
sender:aa
receiver:bb
des_sock:5
msg:Nice to meet you, too!
get user name: bb
Got exit message. Removing user from system
get user name: aa
get user name: aa
get user name: aa
Got direct message.
get user name: bb
sender:bb
receiver:aa
des_sock:-2
msg:See you next time.
get user name: aa
pollserver: new connection from 127.0.0.1 on socket 4
Got register/login message
get user name: cc
send: Bad file descriptor
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$ ./output/client
Socket successfully created..
Connected to the server...
Hello dear user pls select one of the following options:
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Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
aa:a
Welcome aa to join the chat room!
A new account has been created.
Welcome bb to join the chat room!
bb to you: Nice to meet you!
#BB:Nice to meet you, too!
There is no such user. Please check your input format.
#bb:Nice to meet you, too!
EXIT
Client Exit...
^C
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$
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Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
bb:b
Welcome bb to join the chat room!
A new account has been created.
#aa:Nice to meet you!
aa to you: Nice to meet you, too!
aa has left the chatroom
#aa:See you next time.
aa is offline. Leaving message successfully
Welcome cc to join the chat room!
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$ ./output/client
Socket successfully created..
Connected to the server...
Hello dear user pls select one of the following options:
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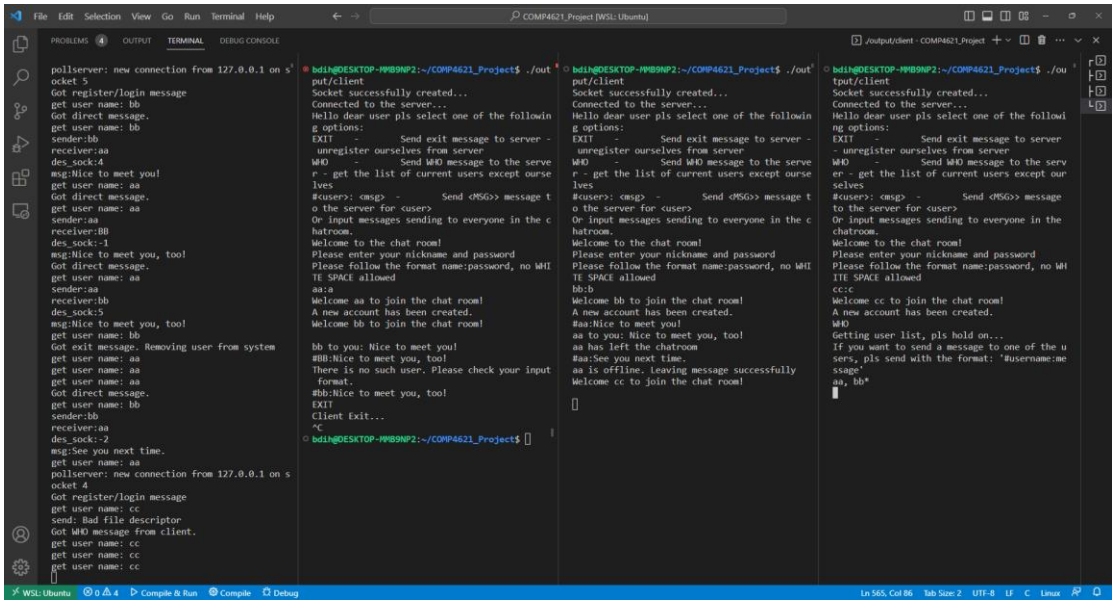
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
cc:c
Welcome cc to join the chat room!
A new account has been created.
WSL: Ubuntu 0 4 Compile & Run Compile Debug
Ln 565, Col 86 Tab Size: 2 UTF-8 LF C Linux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PROBLEMS 4 OUTPUT TERMINAL DEBUG CONSOLE
/output/client - COMP4621_Project
pollserver: new connection from 127.0.0.1 on socket 5
Got register/login message
get user name: bb
Got direct message.
get user name: bb
sender:bb
receiver:aa
des_sock:4
msg:Nice to meet you!
get user name: aa
Got direct message.
get user name: aa
sender:aa
receiver:BB
des_sock:-1
msg:Nice to meet you, too!
Got direct message.
get user name: aa
sender:aa
receiver:bb
des_sock:5
msg:Nice to meet you, too!
get user name: bb
Got exit message. Removing user from system
get user name: aa
get user name: aa
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get user name: bb
sender:bb
receiver:aa
des_sock:-2
msg:See you next time.
get user name: aa
pollserver: new connection from 127.0.0.1 on socket 4
Got register/login message
get user name: cc
send: Bad file descriptor
Got WHO message from client.
get user name: cc
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Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
aa:a
Welcome aa to join the chat room!
A new account has been created.
Welcome bb to join the chat room!
bb to you: Nice to meet you!
#BB:Nice to meet you, too!
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aa to you: Nice to meet you, too!
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#aa:See you next time.
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Welcome cc to join the chat room!
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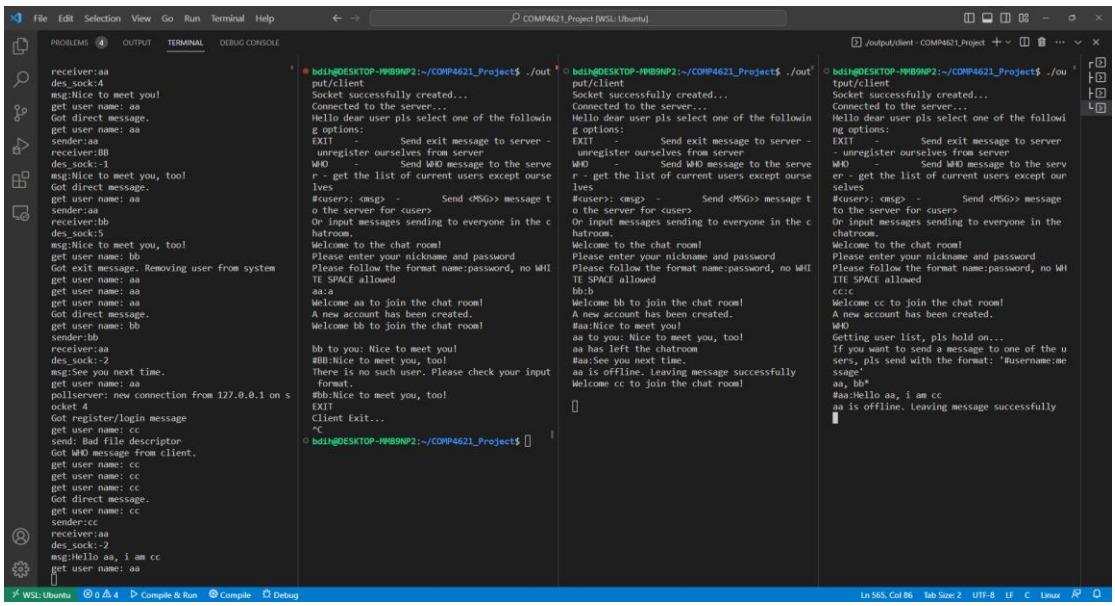
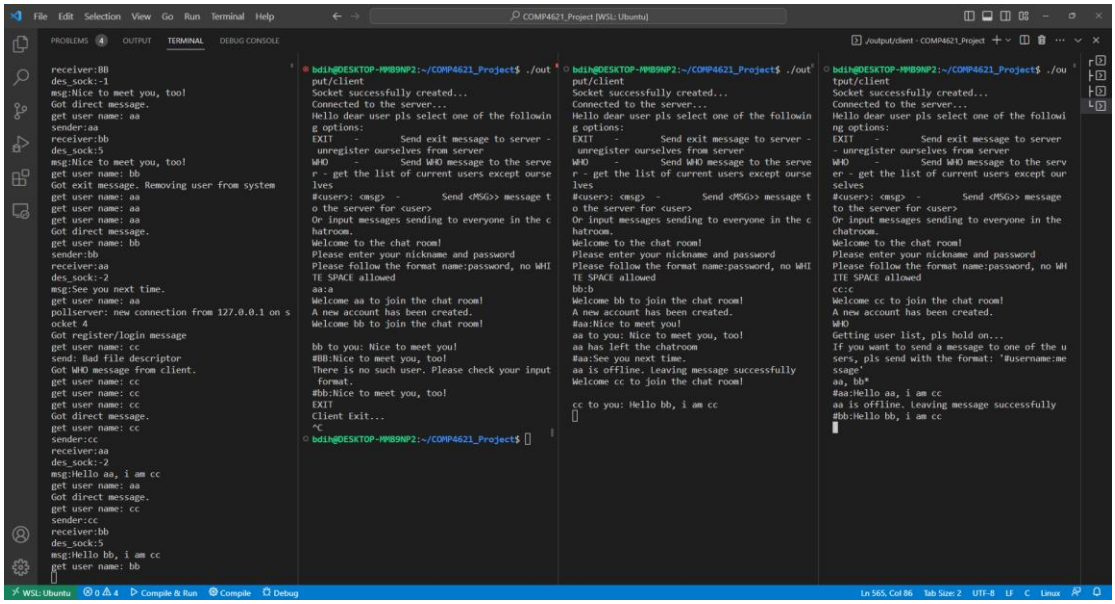
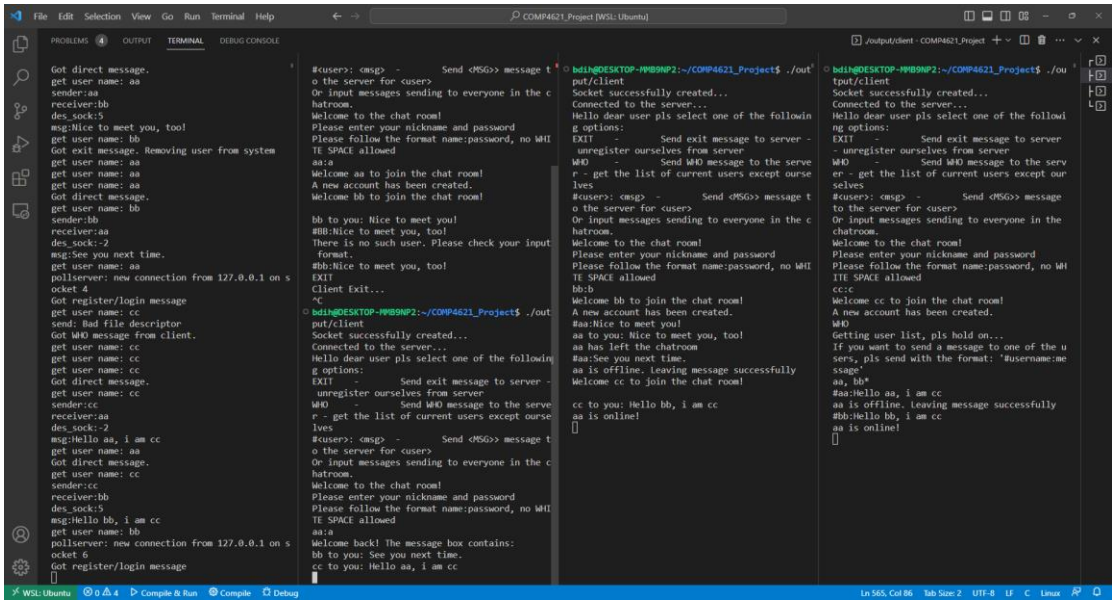
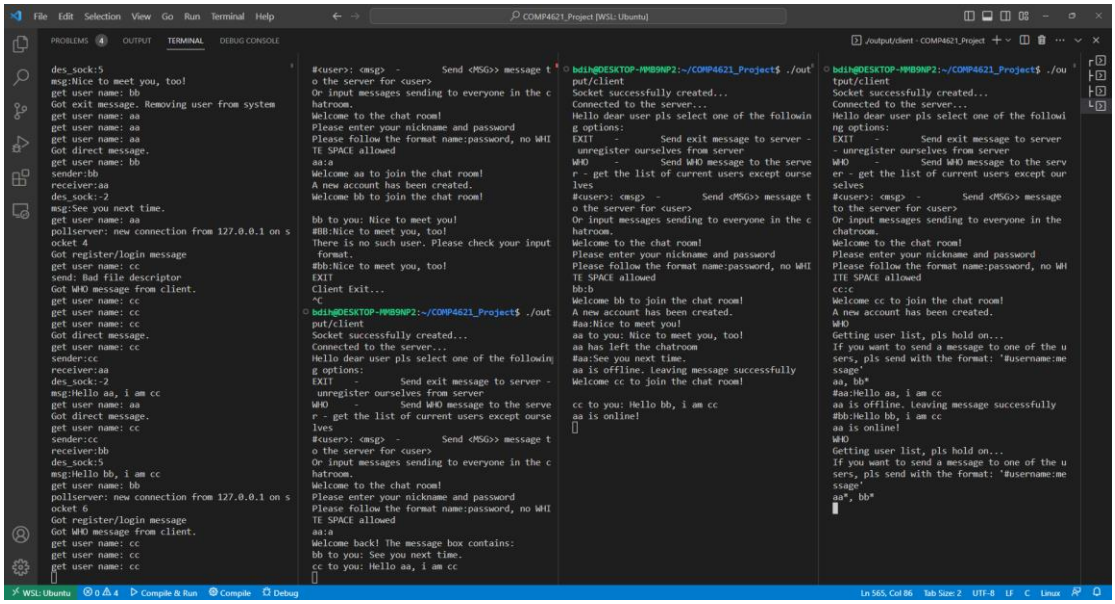
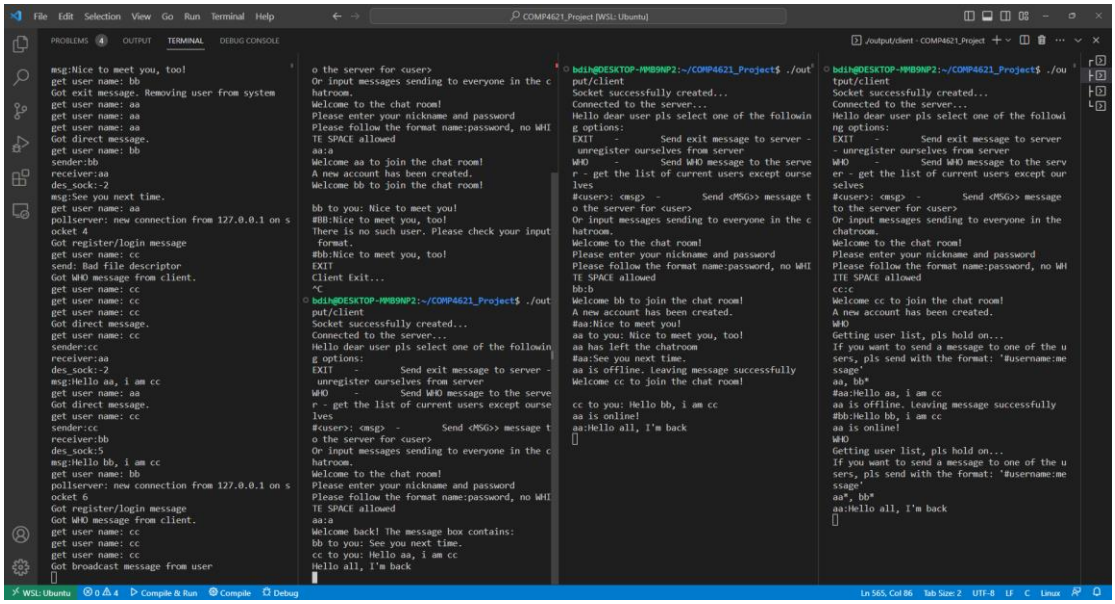
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
cc:c
Welcome cc to join the chat room!
A new account has been created.
WHO
Getting user list, pls hold on...
If you want to send a message to one of the users, pls send with the format: '#username:message'
aa, bb*
WSL: Ubuntu 0 4 Compile & Run Compile Debug
Ln 565, Col 86 Tab Size: 2 UTF-8 LF C Linux


File Edit Selection View Go Run Terminal Help
COMP4621_Project [WSL: Ubuntu]
PROBLEMS 4 OUTPUT TERMINAL DEBUG CONSOLE
/output/client - COMP4621_Project
receiver:aa
des_sock:4
msg:Nice to meet you!
get user name: aa
Got direct message.
get user name: aa
sender:aa
receiver:BB
des_sock:-1
msg:Nice to meet you, too!
Got direct message.
get user name: aa
sender:aa
receiver:bb
des_sock:5
msg:Nice to meet you, too!
get user name: bb
Got exit message. Removing user from system
get user name: aa
get user name: aa
get user name: aa
Got direct message.
get user name: bb
sender:bb
receiver:aa
des_sock:-2
msg:See you next time.
get user name: aa
pollserver: new connection from 127.0.0.1 on socket 4
Got register/login message
get user name: cc
send: Bad file descriptor
Got WHO message from client.
get user name: cc
get user name: cc
get user name: cc
Got direct message.
get user name: cc
sender:cc
receiver:aa
des_sock:-2
msg:Hello aa, i am cc
get user name: aa
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$ ./output/client
Socket successfully created..
Connected to the server...
Hello dear user pls select one of the following options:
EXIT - Send exit message to server - unregister ourselves from server
WHO - Send WHO message to the server - get the list of current users except ourselves
#<user>: <msg> - Send <MSG>> message to the server for <user>
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
aa:a
Welcome aa to join the chat room!
A new account has been created.
Welcome bb to join the chat room!
bb to you: Nice to meet you!
#BB:Nice to meet you, too!
There is no such user. Please check your input format.
#bb:Nice to meet you, too!
EXIT
Client Exit...
^C
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$ ./output/client
Socket successfully created..
Connected to the server...
Hello dear user pls select one of the following options:
EXIT - Send exit message to server - unregister ourselves from server
WHO - Send WHO message to the server - get the list of current users except ourselves
#<user>: <msg> - Send <MSG>> message to the server for <user>
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
bb:b
Welcome bb to join the chat room!
A new account has been created.
#aa:Nice to meet you!
aa to you: Nice to meet you, too!
aa has left the chatroom
#aa:See you next time.
aa is offline. Leaving message successfully
Welcome cc to join the chat room!
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$ ./output/client
Socket successfully created..
Connected to the server...
Hello dear user pls select one of the following options:
EXIT - Send exit message to server - unregister ourselves from server
WHO - Send WHO message to the server - get the list of current users except ourselves
#<user>: <msg> - Send <MSG>> message to the server for <user>
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
cc:c
Welcome cc to join the chat room!
A new account has been created.
WHO
Getting user list, pls hold on...
If you want to send a message to one of the users, pls send with the format: '#username:message'
aa, bb*
#aa:Hello aa, i am cc
aa is offline. Leaving message successfully
WSL: Ubuntu 0 4 Compile & Run Compile Debug
Ln 565, Col 86 Tab Size: 2 UTF-8 LF C Linux


File Edit Selection View Go Run Terminal Help
COMP4621_Project [WSL: Ubuntu]
PROBLEMS 4 OUTPUT TERMINAL DEBUG CONSOLE
/output/client - COMP4621_Project
receiver:BB
des_sock:-1
msg:Nice to meet you, too!
Got direct message.
get user name: aa
sender:aa
receiver:bb
des_sock:5
msg:Nice to meet you, too!
get user name: bb
Got exit message. Removing user from system
get user name: aa
get user name: aa
get user name: aa
Got direct message.
get user name: bb
sender:bb
receiver:aa
des_sock:-2
msg:See you next time.
get user name: aa
pollserver: new connection from 127.0.0.1 on socket 4
Got register/login message
get user name: cc
send: Bad file descriptor
Got WHO message from client.
get user name: cc
get user name: cc
get user name: cc
Got direct message.
get user name: cc
sender:cc
receiver:aa
des_sock:-2
msg:Hello aa, i am cc
get user name: aa
Got direct message.
get user name: cc
sender:cc
receiver:bb
des_sock:5
msg:Hello bb, i am cc
get user name: bb
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$ ./output/client
Socket successfully created...
Connected to the server...
Hello dear user pls select one of the following options:
EXIT - Send exit message to server - unregister ourselves from server
WHO - Send WHO message to the server - get the list of current users except ourselves
#<user>: <msg> - Send <MSG>> message to the server for <user>
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
aa:a
Welcome aa to join the chat room!
A new account has been created.
Welcome bb to join the chat room!
bb to you: Nice to meet you!
#BB:Nice to meet you, too!
There is no such user. Please check your input format.
#bb:Nice to meet you, too!
EXIT
Client Exit...
^C
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$ ./output/client
Socket successfully created...
Connected to the server...
Hello dear user pls select one of the following options:
EXIT - Send exit message to server - unregister ourselves from server
WHO - Send WHO message to the server - get the list of current users except ourselves
#<user>: <msg> - Send <MSG>> message to the server for <user>
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
bb:b
Welcome bb to join the chat room!
A new account has been created.
#aa:Nice to meet you!
aa to you: Nice to meet you, too!
aa has left the chatroom
#aa:See you next time.
aa is offline. Leaving message successfully
Welcome cc to join the chat room!
cc to you: Hello bb, i am cc
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$ ./output/client
Socket successfully created...
Connected to the server...
Hello dear user pls select one of the following options:
EXIT - Send exit message to server - unregister ourselves from server
WHO - Send WHO message to the server - get the list of current users except ourselves
#<user>: <msg> - Send <MSG>> message to the server for <user>
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
cc:c
Welcome cc to join the chat room!
A new account has been created.
WHO
Getting user list, pls hold on...
If you want to send a message to one of the users, pls send with the format: "#username:message'
aa, bb*
#aa:Hello aa, i am cc
aa is offline. Leaving message successfully
#bb:Hello bb, i am cc
WSL: Ubuntu 0 4 Compile & Run Compile Debug
Ln 565, Col 86 Tab Size: 2 UTF-8 LF C Linux


File Edit Selection View Go Run Terminal Help
COMP4621_Project [WSL: Ubuntu]
PROBLEMS 4 OUTPUT TERMINAL DEBUG CONSOLE
/output/client - COMP4621_Project
Got direct message.
get user name: aa
sender:aa
receiver:bb
des_sock:5
msg:Nice to meet you, too!
get user name: bb
Got exit message. Removing user from system
get user name: aa
get user name: aa
get user name: aa
Got direct message.
get user name: bb
sender:bb
receiver:aa
des_sock:-2
msg:See you next time.
get user name: aa
pollserver: new connection from 127.0.0.1 on socket 4
Got register/login message
get user name: cc
send: Bad file descriptor
Got WHO message from client.
get user name: cc
get user name: cc
get user name: cc
Got direct message.
get user name: cc
sender:cc
receiver:aa
des_sock:-2
msg:Hello aa, i am cc
get user name: aa
Got direct message.
get user name: cc
sender:cc
receiver:bb
des_sock:5
msg:Hello bb, i am cc
get user name: bb
pollserver: new connection from 127.0.0.1 on socket 6
Got register/login message
#<user>: <msg> - Send <MSG>> message to the server for <user>
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
aa:a
Welcome aa to join the chat room!
A new account has been created.
Welcome bb to join the chat room!
bb to you: Nice to meet you!
#BB:Nice to meet you, too!
There is no such user. Please check your input format.
#bb:Nice to meet you, too!
EXIT
Client Exit...
^C
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$ ./output/client
Socket successfully created...
Connected to the server...
Hello dear user pls select one of the following options:
EXIT - Send exit message to server - unregister ourselves from server
WHO - Send WHO message to the server - get the list of current users except ourselves
#<user>: <msg> - Send <MSG>> message to the server for <user>
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
aa:a
Welcome back! The message box contains:
bb to you: See you next time.
cc to you: Hello aa, i am cc
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$ ./output/client
Socket successfully created...
Connected to the server...
Hello dear user pls select one of the following options:
EXIT - Send exit message to server - unregister ourselves from server
WHO - Send WHO message to the server - get the list of current users except ourselves
#<user>: <msg> - Send <MSG>> message to the server for <user>
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
bb:b
Welcome bb to join the chat room!
A new account has been created.
#aa:Nice to meet you!
aa to you: Nice to meet you, too!
aa has left the chatroom
#aa:See you next time.
aa is offline. Leaving message successfully
Welcome cc to join the chat room!
cc to you: Hello bb, i am cc
aa is online!
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$ ./output/client
Socket successfully created...
Connected to the server...
Hello dear user pls select one of the following options:
EXIT - Send exit message to server - unregister ourselves from server
WHO - Send WHO message to the server - get the list of current users except ourselves
#<user>: <msg> - Send <MSG>> message to the server for <user>
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
cc:c
Welcome cc to join the chat room!
A new account has been created.
WHO
Getting user list, pls hold on...
If you want to send a message to one of the users, pls send with the format: "#username:message'
aa, bb*
#aa:Hello aa, i am cc
aa is offline. Leaving message successfully
#bb:Hello bb, i am cc
aa is online!
WSL: Ubuntu 0 4 Compile & Run Compile Debug
Ln 565, Col 86 Tab Size: 2 UTF-8 LF C Linux


File Edit Selection View Go Run Terminal Help
COMP4621_Project [WSL: Ubuntu]
PROBLEMS 4 OUTPUT TERMINAL DEBUG CONSOLE
/output/client - COMP4621_Project
des_sock:5
msg:Nice to meet you, too!
get user name: bb
Got exit message. Removing user from system
get user name: aa
get user name: aa
get user name: aa
Got direct message.
get user name: bb
sender:bb
receiver:aa
des_sock:-2
msg:See you next time.
get user name: aa
pollserver: new connection from 127.0.0.1 on socket 4
Got register/login message
get user name: cc
send: Bad file descriptor
Got WHO message from client.
get user name: cc
get user name: cc
get user name: cc
Got direct message.
get user name: cc
sender:cc
receiver:aa
des_sock:-2
msg:Hello aa, i am cc
get user name: aa
Got direct message.
get user name: cc
sender:cc
receiver:bb
des_sock:5
msg:Hello bb, i am cc
get user name: bb
pollserver: new connection from 127.0.0.1 on socket 6
Got register/login message
Got WHO message from client.
get user name: cc
get user name: cc
get user name: cc
#<user>: <msg> - Send <MSG>> message to the server for <user>
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
aa:a
Welcome aa to join the chat room!
A new account has been created.
Welcome bb to join the chat room!
bb to you: Nice to meet you!
#BB:Nice to meet you, too!
There is no such user. Please check your input format.
#bb:Nice to meet you, too!
EXIT
Client Exit...
^C
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$ ./output/client
Socket successfully created...
Connected to the server...
Hello dear user pls select one of the following options:
EXIT - Send exit message to server - unregister ourselves from server
WHO - Send WHO message to the server - get the list of current users except ourselves
#<user>: <msg> - Send <MSG>> message to the server for <user>
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
aa:a
Welcome back! The message box contains:
bb to you: See you next time.
cc to you: Hello aa, i am cc
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$ ./output/client
Socket successfully created...
Connected to the server...
Hello dear user pls select one of the following options:
EXIT - Send exit message to server - unregister ourselves from server
WHO - Send WHO message to the server - get the list of current users except ourselves
#<user>: <msg> - Send <MSG>> message to the server for <user>
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
bb:b
Welcome bb to join the chat room!
A new account has been created.
#aa:Nice to meet you!
aa to you: Nice to meet you, too!
aa has left the chatroom
#aa:See you next time.
aa is offline. Leaving message successfully
Welcome cc to join the chat room!
cc to you: Hello bb, i am cc
aa is online!
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$ ./output/client
Socket successfully created...
Connected to the server...
Hello dear user pls select one of the following options:
EXIT - Send exit message to server - unregister ourselves from server
WHO - Send WHO message to the server - get the list of current users except ourselves
#<user>: <msg> - Send <MSG>> message to the server for <user>
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
cc:c
Welcome cc to join the chat room!
A new account has been created.
WHO
Getting user list, pls hold on...
If you want to send a message to one of the users, pls send with the format: "#username:message'
aa, bb*
#aa:Hello aa, i am cc
aa is offline. Leaving message successfully
#bb:Hello bb, i am cc
aa is online!
WSL: Ubuntu 0 4 Compile & Run Compile Debug
Ln 565, Col 86 Tab Size: 2 UTF-8 LF C Linux


File Edit Selection View Go Run Terminal Help
COMP4621_Project [WSL: Ubuntu]
PROBLEMS 4 OUTPUT TERMINAL DEBUG CONSOLE
/output/client - COMP4621_Project
msg:Nice to meet you, too!
get user name: bb
Got exit message. Removing user from system
get user name: aa
get user name: aa
get user name: aa
Got direct message.
get user name: bb
sender:bb
receiver:aa
des_sock:-2
msg:See you next time.
get user name: aa
pollserver: new connection from 127.0.0.1 on socket 4
Got register/login message
get user name: cc
send: Bad file descriptor
Got WHO message from client.
get user name: cc
get user name: cc
get user name: cc
Got direct message.
get user name: cc
sender:cc
receiver:aa
des_sock:-2
msg:Hello aa, i am cc
get user name: aa
Got direct message.
get user name: cc
sender:cc
receiver:bb
des_sock:5
msg:Hello bb, i am cc
get user name: bb
pollserver: new connection from 127.0.0.1 on socket 6
Got register/login message
Got WHO message from client.
get user name: cc
get user name: cc
get user name: cc
Got broadcast message from user
o the server for <user>
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
aa:a
Welcome aa to join the chat room!
A new account has been created.
Welcome bb to join the chat room!
bb to you: Nice to meet you!
#BB:Nice to meet you, too!
There is no such user. Please check your input format.
#bb:Nice to meet you, too!
EXIT
Client Exit...
^C
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$ ./output/client
Socket successfully created...
Connected to the server...
Hello dear user pls select one of the following options:
EXIT - Send exit message to server - unregister ourselves from server
WHO - Send WHO message to the server - get the list of current users except ourselves
#<user>: <msg> - Send <MSG>> message to the server for <user>
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
aa:a
Welcome back! The message box contains:
bb to you: See you next time.
cc to you: Hello aa, i am cc
Hello all, I'm back
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$ ./output/client
Socket successfully created...
Connected to the server...
Hello dear user pls select one of the following options:
EXIT - Send exit message to server - unregister ourselves from server
WHO - Send WHO message to the server - get the list of current users except ourselves
#<user>: <msg> - Send <MSG>> message to the server for <user>
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
bb:b
Welcome bb to join the chat room!
A new account has been created.
#aa:Nice to meet you!
aa to you: Nice to meet you, too!
aa has left the chatroom
#aa:See you next time.
aa is offline. Leaving message successfully
Welcome cc to join the chat room!
cc to you: Hello bb, i am cc
aa is online!
aa:Hello all, I'm back
bdih@DESKTOP-MMB9NP2:~/COMP4621_Project$ ./output/client
Socket successfully created...
Connected to the server...
Hello dear user pls select one of the following options:
EXIT - Send exit message to server - unregister ourselves from server
WHO - Send WHO message to the server - get the list of current users except ourselves
#<user>: <msg> - Send <MSG>> message to the server for <user>
Or input messages sending to everyone in the chatroom.
Welcome to the chat room!
Please enter your nickname and password
Please follow the format name:password, no WHITE SPACE allowed
cc:c
Welcome cc to join the chat room!
A new account has been created.
WHO
Getting user list, pls hold on...
If you want to send a message to one of the users, pls send with the format: '#username:message'
aa, bb*
#aa:Hello aa, i am cc
aa is offline. Leaving message successfully
#bb:Hello bb, i am cc
aa is online!
WHO
Getting user list, pls hold on...
If you want to send a message to one of the users, pls send with the format: '#username:message'
aa*, bb*
aa:Hello all, I'm back
WSL: Ubuntu
0 4
Compile & Run
Compile
Debug
Ln 565, Col 86
Tab Size: 2
UTF-8
LF
C
Linux