**Chat Simulation**

**Pseudo Code**

Class User:

Properties:

username

password

Class Registration:

Properties:

users: list

Methods:

Signup(username, password):

for each user in users:

if username matches user.username:

return "User already exists"

create new User object with provided username and password

add new User object to users list

return "Registered successfully"

Login(user\_name, user\_password):

for each user in users:

if user\_name matches user.username and user\_password matches user.password:

return "Login successful"

return "Invalid username or password"

Class Sender:

Properties:

username

Class Message:

Properties:

sender

content

timestamp

Class Room:

Properties:

name

users: dictionary

messages: list

Methods:

remove\_user(username):

if username exists in users dictionary:

remove user from users dictionary

add\_user(user):

add user to users dictionary with username as key

send\_message(sender, content):

create new Message object with sender, content, and timestamp

add new Message object to messages list

display\_messages():

for each message in messages list:

print message with timestamp, sender's username, and content

Class ChatSystem:

Properties:

rooms: dictionary

Methods:

create\_room(room\_name):

if room\_name does not exist in rooms dictionary:

create new Room object with provided room\_name

add new Room object to rooms dictionary

print "Room 'room\_name' created successfully!"

else:

print "Room 'room\_name' already exists!"

join\_room(user, room\_name):

room = get room from rooms dictionary based on room\_name

if room exists:

add user to room using room's add\_user method

print "'user.username' joined 'room\_name' room."

else:

print "Room 'room\_name' does not exist!"

exit\_room(user, room\_name):

room = get room from rooms dictionary based on room\_name

if room exists:

remove user from room using room's remove\_user method

print "'user.username' exited 'room\_name' room."

else:

print "Room 'room\_name' does not exist!"

verify\_user(room\_name):

room = get room from rooms dictionary based on room\_name

if room exists:

return "true"

else:

return "false"

login\_system = Registration()

chat\_system = ChatSystem()

while True:

Display login system menu

Get user's selection

if selection is '1' (Registration):

Get username and password

Call Signup method of login\_system with username and password

Print response

elif selection is '2' (Login):

Get username and password

Call Login method of login\_system with username and password

If login is successful:

Display user menu

Get user's selection

Repeat user actions until '6' (Exit) is selected

elif selection is 'e' (Exit):

End the program

else:

Print "Invalid Selection"