

COMP 4300 A1 Testing Report

Dillan Veranga

7887818

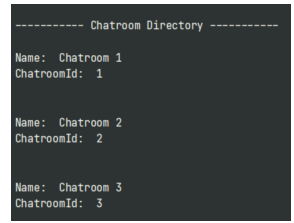

This program was tested both through unit testing and manual testing. The unit test suite is written in python with unittest in the file 'messenger_tests.py'. The unit tests generally test the server, manual testing tests client output.

Get Chatrooms:

Unit Testing:

Test Case	Expected Behaviour	Actual Behaviour.
Get Chatrooms when there are no Chatrooms.	Server should return a response with an empty array.	Test passed. Returned empty array.
Get Chatrooms when there are one or more Chatrooms. Unit test tests three Chatrooms.	Server should return a response with an array with the three Chatroom objects.	Test passed. Returned array with the three Chatroom objects.

Other Testing:


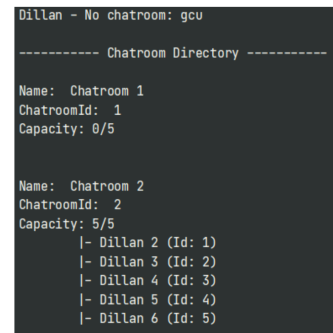
Test Case	Expected Behaviour	Actual Behaviour
Get Chatroom output is correct with existing Chatrooms.	Should list all Chatrooms and their Ids with a "Chatroom Directory" separator.	Lists all Chatrooms and their Ids with a "Chatroom Directory" separator. 
Get Chatroom output is correct with no existing Chatrooms.	Should list no Chatrooms with a "Chatroom Directory" separator and the text "No available chatrooms".	"Chatroom Directory" separator and the text "No available chatrooms". 

Get Chatroom Users:

Unit Testing:

Test Case	Expected Behaviour	Actual Behaviour
Get Chatrooms when there are no Chatrooms.	Server should return a response with an empty array.	Test passed. Returned empty array.
Get Chatrooms when there are one or more Chatrooms. Unit test tests three Chatrooms.	Server should return a response with an array with the three Chatroom objects. The connected Users and capacity is included in the Chatroom object.	Test passed. Returned an array with the three Chatroom objects. The connected Users and capacity were included in the Chatroom object.

Other Testing:

Test Case	Expected Behaviour	Actual Behaviour
Get Chatroom output is correct with existing Chatrooms and no users in the Chatrooms.	Should list all Chatrooms and their Ids with a "Chatroom Directory" separator. Under each Chatroom is 0/5 and no Users.	Lists all Chatrooms and their Ids with a "Chatroom Directory" separator. Under each Chatroom is 0/5 and no Users.  <pre>Dillan - No chatroom: gcu ----- Chatroom Directory ----- Name: TestChatroom ChatroomId: 1 Capacity: 0/5</pre>
Get Chatroom output is correct with existing Chatrooms and users in the Chatrooms.	Should list all Chatrooms and their Ids with a "Chatroom Directory" separator. Under each Chatroom is the numUsers/5 and the list of Users in it.	For 5 users in a Chatroom, lists all Chatrooms and their Ids with a "Chatroom Directory" separator. 5/5 and the list of the 5 Users in it.  <pre>Dillan - No chatroom: gcu ----- Chatroom Directory ----- Name: Chatroom 1 ChatroomId: 1 Capacity: 0/5 Name: Chatroom 2 ChatroomId: 2 Capacity: 5/5 - Dillan 2 (Id: 1) - Dillan 3 (Id: 2) - Dillan 4 (Id: 3) - Dillan 5 (Id: 4) - Dillan 6 (Id: 5)</pre>

Create Chatroom:

Unit Testing:

Test Case	Expected Behaviour	Actual Behaviour
Create a Chatroom.	Chatroom should be created with the given name. Chatroom Id should differ from other Chatrooms.	Test passed. Chatroom has given name and is given unique Id.
Create a Chatroom with the same name as an existing Chatroom.	Chatroom should be created with the given name. Chatroom names do not have to be unique. Chatroom Ids should be different.	Test passed. Chatroom has given name and is given unique Id.

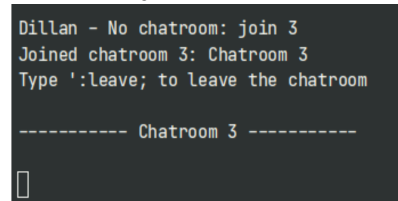
Other Testing:

Test Case	Expected Behaviour	Actual Behaviour
Create Chatroom.	Appears in the Chatroom list with correct Id and name with default no Users and 0/5 capacity.	Appears in the Chatroom list with correct Id and name with default no Users and 0/5 capacity. <pre>Dillan - No chatroom: create TestChat Created Chatroom TestChat (id: 1) Dillan - No chatroom: gcu ----- Chatroom Directory ----- Name: TestChat ChatroomId: 1 Capacity: 0/5</pre>

Join Chatroom:

Test Case	Expected Behaviour	Actual Behaviour
Join an existing Chatroom that has capacity.	Chatroom is joined. The user should have been returned Chatroom Id and name. User should take up 1 space in the Chatroom and appear in the Chatroom user list.	Test passed. Chatroom Id and name was returned. Took up space in Chatroom and appeared in Chatroom user list.
Join a Chatroom that does not exist	Chatroom is not joined. The user should have been returned -1 and an empty string.	Test passed. Returned -1 and an empty string.
Join a Chatroom that is full.	Chatroom is not joined. The user should have been returned 0 and an empty string. User should not take up space in the Chatroom and not appear in the Chatroom user list.	Test passed. Returned 0 and an empty string. User does not take up space in the Chatroom and does not appear in the Chatroom user list.
Join a Chatroom that Client previously left and has space.	Chatroom is joined. The user should have been returned Chatroom Id and name. User should take up 1 space in the Chatroom and appear in the Chatroom user list.	Test passed. Chatroom Id and name was returned. Took up space in Chatroom and appeared in Chatroom user list.

Other Testing:

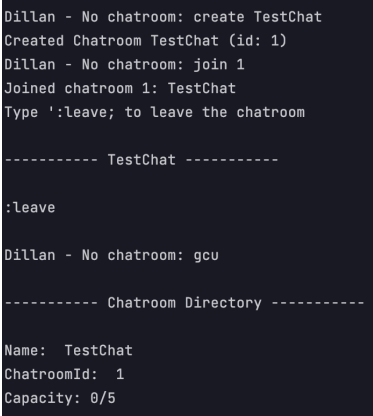
Test Case	Expected Behaviour	Actual Behaviour
Joining Chatroom.	Should take User out of Client portal and into a Chatroom. Displays the name of the Chatroom joined.	Takes User out of Client portal and into a Chatroom. Displays the name of the Chatroom joined. 

Leave Chatroom:

Unit Testing:

Test Case	Expected Behaviour	Actual Behaviour
Leave a Chatroom.	Chatroom should be left. The User should not show up in the Chatroom user list and space should be freed.	Test passed. User does not show up in Chatroom user list and space was freed.

Other Testing:


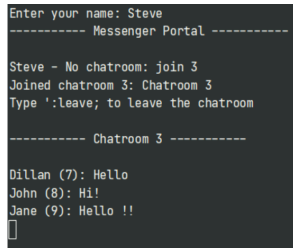
Test Case	Expected Behaviour	Actual Behaviour
Leave a Chatroom.	Chatroom should be left. The User should be taken back to the Client portal and can enter commands. The User should not show up in the Chatroom user list and space should be freed.	User taken back to Client portal and can use commands. Space is freed in the Chatroom as User is not in the list.  <pre>Dillan - No chatroom: create TestChat Created Chatroom TestChat (id: 1) Dillan - No chatroom: join 1 Joined chatroom 1: TestChat Type ':leave; to leave the chatroom ----- TestChat ----- :leave Dillan - No chatroom: gcu ----- Chatroom Directory ----- Name: TestChat ChatroomId: 1 Capacity: 0/5</pre>

Send/Recieve Message:

Unit Testing:

Test Case	Expected Behaviour	Actual Behaviour
Test send and receive messages. (One client to one client) Requires two clients in the same chatroom.	Client 1 sends a message, Client 2 receives the message and their chat array should have Client 1's message. Client 2 sends a message, Client 1 receives the message and their chat array should have both messages.	Test passed. Sent messages are received and sent to the other Client in the Chatroom.
Test send and receive messages. (Full chatroom of 5 clients) Requires five clients in the same chatroom.	All Clients send a message, all Clients should recieve the message and their chat arrays should have all messages in order.	Test passed. Sent messages are received and sent to other Clients in the Chatroom.

Other Testing:

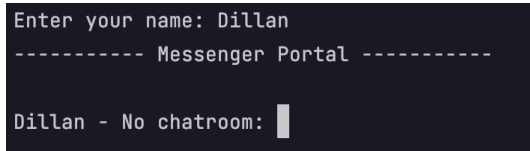
Test Case	Expected Behaviour	Actual Behaviour
Send message in a Chatroom with other clients.	Other clients in the Chatroom should receive the messages. The name and Id of the sender should be next to the sent message.	Other clients in the Chatroom receive the messages. The name and Id of the sender is next to the sent message. 
Join Chatroom when messages have previously been sent.	The past messages should be displayed for the joiner only. The name and Id of the sender should be next to the sent message.	The past messages are displayed for the joiner only. The name and Id of the sender are next to the sent message. 

Client Initialization:

Unit Testing:

Test Case	Expected Behaviour	Actual Behaviour
First Client joins.	Client should be given Id = 0.	Test passed. New Client was given User with Id = 0.
Multiple Clients join.	Clients should all have unique Ids, sequential starting from Id = 0.	Test passed. Each new Client was given a unique Id in sequential order starting from 0.

Other Testing:

Test Case	Expected Behaviour	Actual Behaviour
Initial connection.	Should connect to server and prompt the User for their display name. This name should be displayed in the Client portal upon initialization.	Connects to server and prompts the User for their display name. This name is displayed in the Client portal upon initialization. 
Client Portal.	User should initially be taken to the Client portal and displays "Messenger Portal".	User is initially taken to the Client portal and Portal displays "Messenger Portal". 