**CSE 3310-002**

**Test Report**

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| **ID** | **Requirement** | **Reason for Revision** | **Test Case** |
| R001 | SuperChat shall have a ncurses GUI |  |  |
| R002 | Each line in SuperChat shall be no more than 144 characters |  | TC01 |
| R003 | Each line in SuperChat shall be terminated by a carriage return |  | TC01, TC02 |
| R004 | The selected "Chat Room" shall be the destination for the input text |  | TC01, TC02 |
| R005 | All users of a selected "Chat Room" shall receive all messages sent to it |  | TC01, TC02 |
| R006 | All users shall be able to see a list of all other users currently online and which "Chat Room" they have selected |  | TC01, TC02 |
| R007 | Once a user joins SuperChat, they shall stay on the list of users so long as the SuperChat network stays online |  | TC02 |
| R008 | If a user's local SuperChat is terminated they shall be listed as "Offline" on the user list for all other SuperChat users |  | TC02 |
| R009 | SuperChat shall support at least 15 concurrent users |  | TC02 |
| R010 | SuperChat shall have a default "Chat Room" called "Public" that cannot be deleted |  | TC01 |
| R011 | SuperChat shall only support a maximum of 10 "Chat Rooms" |  | TC01 |
| R012 | SuperChat "Chat Rooms" shall be able to be renamed by any User |  | TC01 |
| R013 | If a "Chat Room" is not selected by any user for more than 5 minutes its name shall be blanked out |  | TC01 |
| R014 | Every user shall have a "Nick" which identifies them to other users |  | TC01, TC02 |
| R015 | SuperChat shall ask the user to enter a "Nick", which can be a max of 8 characters, the first time that user runs SuperChat | MODIFIED due to necessity of a limited nick size | TC01, TC02 |
| R016 | SuperChat shall set the first "Nick" as default and use that "Nick" on all subsequent invocations |  | TC01, TC02 |
| R017 | The user shall be able to change their "Nick" |  | TC01 |
| R018 | The user shall fill out a free text field with information about themselves that can be no longer than 250 characters | DELETED due to removal of R019 |  |
| R019 | Users shall be able to see other users' User Information | DELETED due to lack of support from the IDL |  |
| R020 | SuperChat shall generate a UUID for the user once they enter their "Nick" | MODIFIED due to removal of R019 | TC01, TC02 |
| R021 | SuperChat shall consume memory linearly in relation to the ammount of instances running at one time on a given machine |  |  |
| R022 | SuperChat shall be able to communicate to other instances of SuperChat |  | TC02 |
| R023 | SuperChat shall use the OpenSplice Pub/Sub middleware to enable interoperability |  |  |
| R024 | SuperChat shall inform users that a new user is online within 2 seconds |  | TC02 |
| R025 | SuperChat shall inform users that a user has gone offline within 2 seconds |  | TC02 |
| R026 | SuperChat shall run on Linux systems |  |  |
| R027 | Users shall be able to see a list of all the Chat Rooms by entering the :PCR command | MODIFIED due to inability to use the function keys | TC01 |
| R028 | Users shall be able to see the list of all users by entering the :PUR command | MODIFIED due to inability to use the function keys | TC01, TC02 |
| R029 | Users shall be able to change their Nick by entering the :CNK [name] command with [name] as their desired nick | MODIFIED due to inability to use the function keys | TC01 |
| R030 | Users shall be able to exit SuperChat by entering the :EXT command | MODIFIED due to inability to use the function keys | TC01, TC02 |
| R031 | Users shall be able to change their selected Chatroom by entering the :CCR # command with # as their desired chatroom number | ADDED due to need to change chatrooms | TC02 |
| R032 | Users shall be able to view a list of all user commands by entering the “:PHP” command | ADDED due to need to show the users the user commands | TC01 |

Test Case 1 (TC01):

1. User launches SuperChat for the first time
   1. Expected: SuperChat asks the user to enter a Nick.
2. Using the keyboard the user types in “Lawrence” and presses the enter key
   1. Expected: The message box will not allow any more characters to be entered because the nick can only be max 8 characters long
   2. Expected: SuperChat generates a UUID for the user, creates a superchatdata.txt file where the user launched SuperChat, and stores the UUID and Nick in that file.
   3. SuperChat displays the user commands in the side box
3. User tries to type over 144 characters into the message box.
   1. Expected: The message box can only hold 144 characters and therefore stops echoing typed characters into the message box at 144 characters.
4. User presses the enter key
   1. Expected: The message box is cleared and the typed message is sent to the selected chatroom, which is Public. Since the user is in the Public chatroom the chat box will display the message to the user
5. User types “:PUR” into the message box and presses the enter key
   1. Expected: SuperChat displays the list of users indicating the chatroom those users have selected.
6. User types “:PHP” into the message box and presses the enter key
   1. Expected: SuperChat displays the list of user commands
7. User types “:PCR” into the message box and presses the enter key
   1. Expected: SuperChat displays the list of chatrooms, including the chatroom index and its associated name.
8. User types “:NCR 3 Java” into the message box and presses the enter key
   1. Expected: The chatroom with an index of 3 will now have the name “Java”
9. User waits for 5 minutes
   1. Expected: Since no user is in chatroom 3, the name will be blanked out after 5 minutes.
10. User types “:NCR 0 C++” into the message box and presses the enter key
    1. Expected: SuperChat ignores the command and the Public chatroom, with an index of 0, is not renamed.
11. User types “:CNK Bill” into the message box and presses the enter key
    1. Expected: The user’s nick will be changed to “Bill” and the superchatdata.txt file will be modified to reflect this change.
12. User types “:EXT” into the message box and presses the enter key
    1. Expected: SuperChat closes.
13. User launches SuperChat again
    1. Expected: SuperChat does not ask the user to enter a nick and instead sets it to “Bill”
14. User types “Hello” into the message box and presses the enter key
    1. Expected: The chat box displays the message “Hello” and identifies it as being sent by “Bill”.

Test Case 2 (TC02):

1. Returning User 1 launches SuperChat
   1. Expected: SuperChat does not ask User 1 to enter a nick and instead sets it to the nick which is saved in the superchatdata.txt file
2. User 1 types “:PUR” into the message box and presses the enter key
   1. Expected: SuperChat displays the list of users indicating the chatroom those users have selected. Currently only User 1 should be displayed
3. New User 2 launches SuperChat for the first time
   1. Expected: SuperChat asks User 2 to enter a Nick.
4. User 2 types “Tommy” into the message box and presses the enter key
   1. Expected: SuperChat generates a UUID for the user, creates a superchatdata.txt file where the user launched SuperChat, and stores the UUID and Nick in that file.
   2. User 1 shall see a message in the chat box indicating “Tommy” is online within 2 seconds of User 2 entering their nick.
   3. User 1 will also now see “Tommy” displayed in the list of users.
5. User 2 types “Hello” into the message box and presses enter
   1. Expected: User 1 and User 2 will see the message in the chat box
6. User 2 types “:CCR 2” and presses the enter key
   1. Expected: User 2’s selected chatroom will change from 0 to 2
   2. User 1 will see User 2’s chatroom number change from 0 to 2 in the list of users
7. User 1 types “Hello” into the message box and presses the enter key
   1. Expected: User 1 will see the message in the chat box but User 2 will not
8. User 2 types “:EXT” into the message box and presses the enter key
   1. Expected: SuperChat will close for User 2
   2. User 1 will see that User 2 has been set to OFFLINE in the list of users
   3. User 1 will see a message in the chat box indicating “Tommy” is now offline within 2 seconds of User 2’s SuperChat closing.
9. User 2 launches SuperChat again
   1. Expected: SuperChat does not ask User 2 to enter a nick and instead sets it to the nick which is saved in the superchatdata.txt file
   2. User 1 will see that “Tommy” is now in chatroom 0 and no new users have been added to the list of users.
10. Users 3-15 launch SuperChat for first time
    1. Expected: Once Users 3-15 enter their nick they will appear on the list of users
    2. All users will be able to send messages and receive messages sent to their selected chatroom

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| **Defect Description** | **Found by** | **Resolved by** |
| Attempting to name Chatroom 12 will result in naming Chatroom 1, instead of being ignored. | Attempting to show how naming Chatroom 12 results in the command being ignored | Requiring there to be a blank space before and after the location where the chatroom number should be in the command “:NCR # [name]” |
| When printing a nick of size NICK\_SIZE\_MAX it is followed by random erroneous characters | Entering a nick of size NICK\_SIZE\_MAX and then sending a message | Replacing the ncurses function wprintw() with a similar function addnstr() |
| When printing a message of size MESSAGE\_SIZE\_MAX it is followed by random erroneous characters | Entering a message of size MESSAGE\_SIZE\_MAX and then sending it | Replacing the ncurses function wprintw() with a similar function addnstr() |

**Summary:**

Through testing, SuperChat has shown to fulfill all of its functional requirements. All the errors that were found have been fixed and SuperChat is fully compliant with the requirements that are able to be tested. We are not able to accurately test requirement R021 so any errors with that requirement cannot be found at this time. Our users are able to use SuperChat to its fullest extent.