## **Use Cases**

## 1. Client Use Cases

- 1.1. As a user, I can log in to the messaging system through a GUI client application by providing my username and password.
- 1.2. If the username and password is not correct, the system will tell me "Invalid username/password" and prompt me to log back in.
- 1.3. Once I've logged in, I can see all the conversations I'm participating in.
- 1.4. I can find other users on the system to send messages to.
- 1.5. I can create a group message with multiple participants.
- 1.6. I can send messages directly to another user.
- 1.7. I can send messages to a group of users.
- 1.8. I can receive messages for any conversation I am a part of
- 1.9. I can log out of the system.
- 1.10. When I log in, I can see all the messages in all the conversations I am a participant in, including messages sent while I was logged out.
- 1.11. As an IT user, I can request to see a list of all conversations and the participants of each conversation on the system.
- 1.12. As an IT user, I can request to see the contents of any conversation on the server.
- 1.13. As a user, if my network connection breaks, I am logged out of the server and prompted to sign back in.

## 2. Server Use Cases

- 2.1. When the server receives a new message, that message is logged to the appropriate conversation's log file.
- 2.2. When the server receives a message from a user, the server forwards the message to all participants in the conversation to which the message is being sent.
- 2.3. When the server receives a message for a recipient who is logged off, it will forward the message to the recipient when they log in.
- 2.4. Upon a new login request, the server will request a username and password from the user.
- 2.5. After receiving the username and password, the server will compare the password to the password of the requested user if it exists.
  - 2.5.1. If the password matches the password of the provided username, the user is signed in to the system.
  - 2.5.2. If the password does not match the password, or if the username does not exist in the system, the server refuses to log the user in.
- 2.6. When a client requests to view a conversation, the server validates that the user is in fact an IT user.
  - 2.6.1. If the validation is successful, the server sends the contents of the conversation to the IT user.
  - 2.6.2. If the validation fails, the server does not respond to the invalid request.