CSCI 3428 - Software Requirements Specification

Group 4

Wednesday 23rd October 2019

1 Introduction

1.1 Purpose

The program is intended to allow users to communicate with each other via text and images through instant messaging. It distinguishes itself from other messaging platforms by prioritising accessibility (by being tailored to the individual needs of each of the users), as well as ease-of-use and simplicity. It hopes to respond to the need for simple and accessible web-based services for use by the elderly.

1.2 Intended Audience

The program is being custom-designed for three residents of the Northwood Long-Term Care facility in Halifax, Nova Scotia. While the program's functionality is similar in nature to any other messaging platform, and can therefore be exploited by a wider user-group, its design will be constrained according to the needs of the three residents, and will be driven based on the feedback we receive from the residents during the testing and prototype phase.

1.3 Intended Use

The program is intended to be used as a text- and image- based communication platform. It will not include functionality for voice or video communication between users, however it might implement accessibility features that allow the users to interact with the program by voice, depending on their specific needs.

2 Description

This section is still under development

2.1 User Needs

This section is still under development

3 System Features and Requirements

3.1 External Interface Requirements

3.1.1 User Interfaces

There are two primary user-interfaces that the users will interact with. The first is a log-in screen, which allows us to distinguish between users, and gives each user access to their own conversation list. Depending on the user's needs, it may not be required to use a password to authenticate the log-in. The second is the conversation panel, which lists on the left all active conversations that user has. The currently selected conversation appears on the right, and allows the user to scroll through their entire conversation history, as well as toggle between viewing the entire conversation, and only the images they have sent or received. This toggle is activated by clicking the image icon that appears in the top-right corner of the chat window.

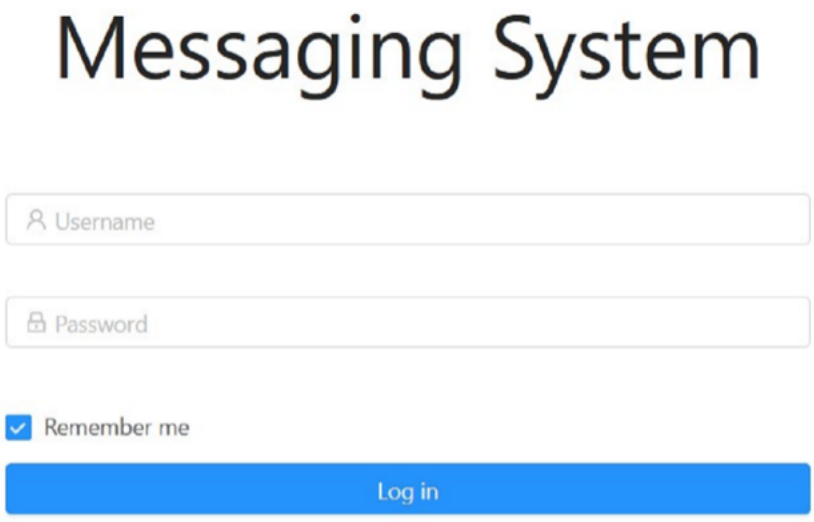

Figure 1: Log-In Page

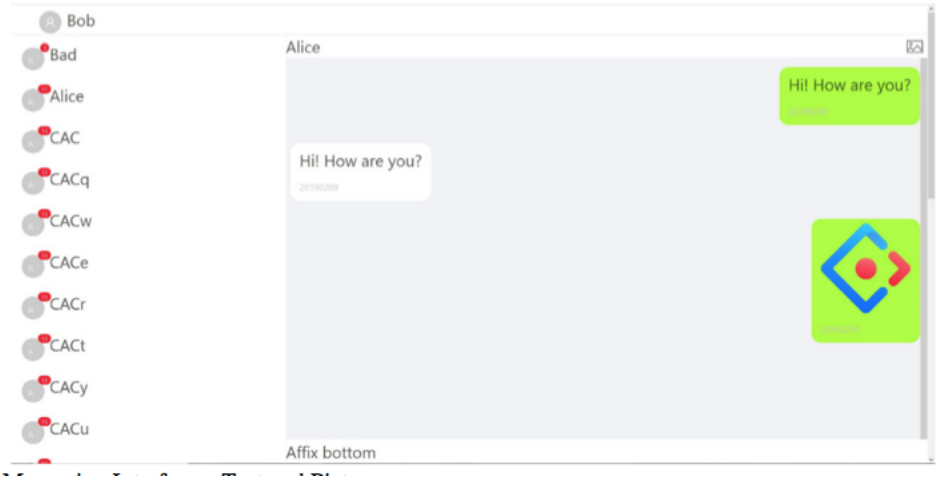

Figure 2: Conversation Panel

3.1.2 Software Interfaces

The product will be browser-based, and therefore can be used on any hardware with a browser that supports the implementation languages. The product will communicate with a MySQL database that will be hosted on the `ugdev.cs.smu.ca` server.

3.1.3 Communication Interfaces

To make use of the product, an active internet connection is required. The MySQL database will be hosted on the `ugdev.cs.smu.ca` server.

3.2 Functional Requirements

3.2.1 Essential

1. Authenticate and log-in user into system
2. Allow user to choose and change who they communicate with
3. Allow user to send text messages to others
4. Allow user to send images to others
5. Allow user to receive text messages from others
6. ALlow user to receive images from others
7. Display error message if connection to server fails
8. Enable user to log-out of system

3.2.2 Desirable

1. Allow user to access a settings page
2. Allow user to change font size for messaging interface

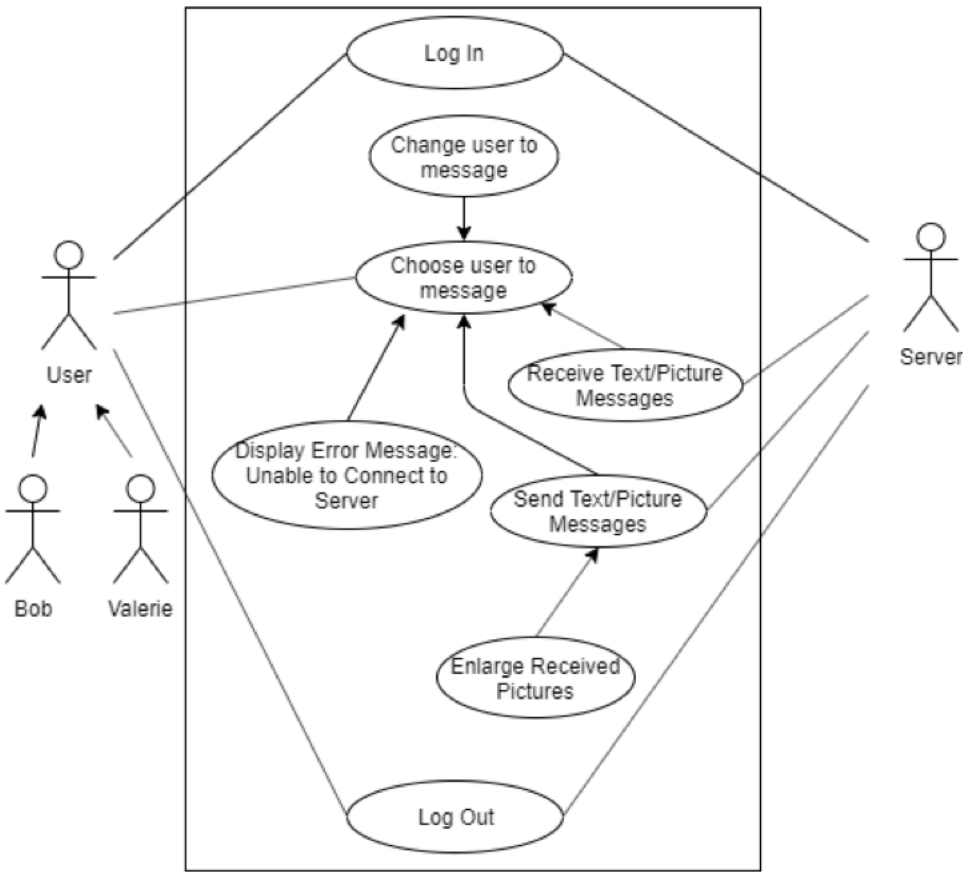

Figure 3: Use-case diagram

3.2.3 Optional

1. Allow user to change background colour of messaging interface
2. Allow user to change text colour of messaging interface

3.3 Performance Requirements

The messaging system will be browser-based, and run from the `ugdev.cs.smu.ca` server. Initial load time will be dependent on the internet connection available to the user, and the stability of the hosting server. The performance will additionally be marginally dependent on the hardware available to the user to interact with the program.

3.4 Design Constraints

Users must have access to a modern web browser (e.g. Google Chrome, Mozilla Firefox, Safari, or Internet Explorer) that is able to support the program. This includes being compatible with HTML5, CSS3, and being able to run JavaScript- or Python-based scripts. Additionally, the user will need an active internet connection to be able to make use of the program. From the development perspective, the program is constrained according to

compatibility with the `ugdev.cs.smu.ca` server. That includes using databases that are available to be installed on the server.