# The ChocAn Simulator

Requirements Document

Table of Contents

1 Introduction [3](#__RefHeading___Toc195405503)

1.1 Purpose and Scope [3](#__RefHeading___Toc195405504)

1.2 Target Audience [3](#__RefHeading___Toc195405505)

1.3 Terms and Definitions 4

2 Product Overview [5](#__RefHeading___Toc195405507)

2.1 Users and Stakeholders [5](#__RefHeading___Toc195405508)

2.1.1 Fei Xie [5](#__RefHeading___Toc195405509)

2.1.2 Bin Lin [5](#__RefHeading___Toc195405510)

2.1.3 Chat User [5](#__RefHeading___Toc195405510)

2.2 Use cases [6](#__RefHeading___Toc195405511)

2.2.1 <Use Case 1> [6](#__RefHeading___Toc195405512)

2.2.2 <Use Case 2> [6](#__RefHeading___Toc195405513)

2.2.3 <Use Case 3> [7](#__RefHeading___Toc195405514)

3 Functional Requirements [8](#__RefHeading___Toc195405515)

3.1 Member Validation [8](#__RefHeading___Toc195405516)

3.1.1 Validation [8](#__RefHeading___Toc195405517)

3.1.2 File [8](#__RefHeading___Toc195405518)

3.2 Send Message [8](#__RefHeading___Toc195405519)

3.3 Edit Profile [8](#__RefHeading___Toc195405520)

4 Nonfunctional Requirements [9](#__RefHeading___Toc195405521)

4.1 Security [9](#__RefHeading___Toc195405522)

4.1.1 Privacy [9](#__RefHeading___Toc195405523)

4.1.2 Password Info [9](#__RefHeading___Toc195405524)

4.2 Performance [9](#__RefHeading___Toc195405525)

4.3 Usability [9](#__RefHeading___Toc195405526)

5 Milestones and Deliverables [10](#__RefHeading___Toc195405527)

5.1 Test Plan [10](#__RefHeading___Toc195405528)

5.1.1 Message Feature [10](#__RefHeading___Toc195405529)

5.1.2 Multi-Users [10](#__RefHeading___Toc195405530)

5.2 Final Project and Deliverable 10

# Introduction

I have been assigned to create a chat application for users to communicate. This document will go through test plans for this project. This document will also explain the goals and purpose for the application. The following document will contain non-functional and functional requirements for users. Each of these things will be detailed throughout the following document.

## Purpose and Scope

The goal and purpose for this document is attain the correct requirements for users and the chat application. We are being assigned to create a way for users to communicate with each other over real time on the internet. This software is being asked to be implanted by a single individual.

The document will contain credentials for users and identifying user privileges. For example, those who monitor the server/activities will have the ability to see sensitive info about chat users. This is a nonfunctional requirement. Nonfunction and functional requirements will be discussed in section 4.

Below you will find terms and definitions that will be discussed throughout the documentation. Cases of how users and the server communicates with one another will also be outlined. This will show how everything ties into one another.

## Target Audience

This section will discuss users who will be referring to this document. It will also be talking about different kinds of users who will be using this chat application. In section 2 many kinds of users will be introduced who will be involved with the chat application. Use cases will be outlined in such a way that involves admin and regular chat users that interact with the system.

## Terms and Definitions

|  |  |
| --- | --- |
| Java | A programming language |
| Server | Program that provides service to other devices such as computers |

# Product Overview

This software application will allow many users to interact over the web with each other on a server. Users such as the chat members will be able to use this application and receive messages from each other in real time. Other users such as admin will be able to change user data and see activities.

## Users and Stakeholders

This section will outline different users and who the stakeholders are. Stakeholders are those involved and who will be affected by the overall result of this software. Chat members are those who will receive service from the application.

### Fei Xie

Fei Xie will oversee the project for this application. He will also make sure expectations are all satisfied to the best. Feedback and improvements will be expected.

### Bin Lin

Bin will test the system and make sure it is suitable for use. Bin will also establish training and support needed for the project to be efficient.

### Chat Users

Clients who will be using the application and interacting with each other. They will be receiving service from the software.

## Use cases

The purpose of this section will detail user interaction with the system. Three use cases will be used. All actions will involve the chat users as the actor in these cases. The uses cases will explain actions and interactions between chat users and the server.

### Use Case 1

**Actors** - Chat user

**Description**

For the someone to be a chat user he/she must have/create an account. The account will be created by a choosing a username and password. This connects with the server to see if the username is available and if the password meets qualifications. If the user has an account, then he/she can logon with the username and password. The server will verify the username and password if a match is found.

**Preconditions**

User logs in system or creates account.

**Postcondition**

User is verified and enabled to use application features

### Use Case 2

**Actors** – Chat user

**Description**

For the chat user to message other users he/she must logon and have at least one other user be online on the application.

**Preconditions**

User logs in system or creates account with username and password. There must be at least one other user online. The server must be up and running.

**Postcondition**

User is verified and enabled to messages other users who are online.

### Use Case 3

**Actor** – Chat user

**Description**

The chat user will be able to receive one on one messages from another user.

**Preconditions**

Both users are logged in the server. One of the users will double table the other’s name in the chat window.

**Postcondition**

Users are connected by double tapping and a new window will pop up. The user will be notified by the new chat window every time a new message is sent by the sender.

# Functional Requirements

This section will discuss functional requirements for the application. The functional requirements will be about how the software functions and runs during usage. Functional requirements will also explain services that the system provides.

## Member Validation

The system will be able to validate users from the input and from file.

### Validating

The user will enter information such as username and password. This will allow the system to find if such a user exists. If a username and password match is found then the user is validated. If no match is found the user will be denied entry or prompt to create an account.

### File

The system will be able to display user information such as username and online status from the file that is connected to the matched username and password.

## Send Message

Users will be able to send chat requests to each other. Users will not receive requests if they are not online.

## Edit Profile

Users will be able to change profile information once they logon. Profile information will include things such as password, location and about me section.

# Nonfunctional Requirements

The purpose of this section is to outline the nonfunctional requirements for the application. Properties and characteristics of the system will be discussed which will be nonfunctional requirements. These requirements will be used outline how the system should behave.

## Security

The system will be able to protect users from unauthorized access to profiles. The system will also maintain important information such as all user passwords and protect them. Lastly the system will be secured and protected from attacks and be able to provide service during such situations.

### Privacy

The system will store information about the user such as messages sent between users. Information about users will be kept private. Unauthorized users will not be able to gain access to such information.

### Password Info

The system will keep track of the passwords of each user. Each password will be only known to the authorized user. Passwords can only be reset by system requests and correct answers to matching security questions. Passwords cannot be obtained.

## Performance

The system will be able to process messages sent between users within seconds. The system will also be able to allow access to users who are authorized and reset passwords in seconds.

## Usability

Users with 2 hours of training will master the major functions of this application.

# Milestones and Deliverables

Milestones and Deliverables will outline for us important deadlines to remember.

Some of these things include test planning and completing the required assignments for this project.

## Test Plan

The following document will give us a general idea for testing the project. The project will be tested for best performance and results.

### Message Feature

The messaging feature for the project will be tested so that it provides the best accuracy and speed.

### Multi-Users

During the testing of the project the system should be able to handle many users on the server at once. This test will help determine the amount of workload for system for many users.

## Final Deliverable and Project report

All the work that has been completed will be submitted for evaluation. The evaluation will help improve the project. This is the goal.