

Software Requirements Specification (SRS) Document

Prattle Messaging

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Table Of Content:

1. Introduction

1.1 Purpose

1.2 Scope

1.3 Definition, Acronyms, & Abbreviations

1.4 Reference

1.5 Definitions and Acronyms

2. Overall Description

2.1 Product perspective

2.2 Product function

2.3 User characteristics

2.4 Constraints

3. System Features and Requirements

3.1 Functional Requirements

3.2 Nonfunctional Requirements

1. Introduction

1.1 Purpose

The purpose of the project is to provide a service where users can message each other or specific groups effectively and securely. The intended audience is individuals who work in a team environment or groups who need to manage projects, events, or work in a team environment.

1.2 Scope

Prattle Messaging will allow individuals to create an account and login into the system to securely message other users or groups using the platform. The objective of the software is to provide users another messaging alternative that focuses on privacy and security of instant messages. In all, the goal is to provide efficient communication.

1.3 Definition, Acronyms, & Abbreviations

- User: The person, or persons, who operate or interact directly with the product. The user(s) and the moderator(s) are often not the same people with others.
- Moderator: A user who is the admin of groups or parties.
- Groups: Communication parties made up of many users and moderators.
- User's Circle: Any groups or users affiliated with the individual.
- Government Agency: Any government department.
- FCC: Federal Communication Commission
- CALEA: Commission on Accreditation for Law Enforcement Agencies
- Parental Control: A service feature that allows users to watch and set flags for messages with inappropriate content.

1.4 Reference

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4. IEEE Std 730.1-1995, IEEE Guide for Software Quality Assurance Planning. IEEE Std 828-1998
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8. IEEE Std 1002-1987 (Reaff 1992), IEEE Standard Taxonomy for Software Engineering Standards
9. IEEE Std 1012-1998, IEEE Standard for Software Verification and Validation.
10. IEEE Std 1012a-1998, IEEE Standard for Software Verification and Validation: Content Map to IEEE/EIA 12207.1-1997.4
11. IEEE Std 1016-1998, IEEE Recommended Practice for Software Design Descriptions.
12. IEEE Std 1028-1997, IEEE Standard for Software Reviews
13. IEEE Std 1042-1987 (Reaff 1993), IEEE Guide to Software Configuration Management.
14. IEEE P1058/D2.1, Draft Standard for Software Project Management Plans, dated 5 August 1998
15. IEEE Std 1058a-1998, IEEE Standard for Software Project Management Plans: Content Map to IEEE/EIA 12207.1-1997
16. IEEE Std 1074-1997, IEEE Standard for Developing Software Life Cycle Processes.
17. IEEE Std 1233, 1998 Edition, IEEE Guide for Developing System Requirements Specifications

1.5 Overview

The Software Requirement Specification (SRS) contains the overall description of Prattle Messaging, it's perspective, functions, the characteristics of users, and it contains brief constraints of the system.

Additionally, the SRS provides insights of the functional and non-functional requirements. The SRS is meant to provide an understanding of the purpose of the system and is organized as described above.

2. Overall Description

2.1 Product perspective

The product is an independent and totally self-contained system. It is not an extension to an existing product or system.

2.2 Product function

The product major function is instant messaging between users and groups. Though the major function is instant messaging, the product put emphasis on security and efficiency. Addition to the major functions are add-ons that will allow the product to be efficient to users of the system.

2.3 User characteristics

The intended user of the system are individuals who desires secure and efficient communication to other users and parties/groups. Those individual educational levels can vary between High School to Doctorate and their experience in team communication or people-to-people communication can be minimal.

2.4 Constraints

The system is constrained by the United States service and the United States rules when it comes to liabilities with the FCC and Homeland Security. The platform provides some support for CALEA, the United States government rules on communications. The platform is also constrained by the request of subpoenas by government officials or agencies.

3. System Features and Requirements

3.1 Functional Requirements

- The service must allow for users
- The service must allow for groups.
- The service must allow users to join groups.
- The service must allow users to create groups.
- The service must allow each group to have a moderator.
- The service must allow moderators to accept, invite, remove users or groups from the group.
- The service must allow users to invite other users into the group.
- The service must allow communication between other users and users
- The service must allow communication between other users and groups
- The service must be able to send the government agency a copy of the communication traffic as we get it if requested by the government agency.
- The service must allow a user to create and send private messages.
- The service must allow a user the option to be searched by the public or by a private user/group.
- The service must allow for the user to send simple text messages to another user and reply to those messages.
- The service shall allow users to set a status for other users to see who's online.
- The service must oblige to the United States service and are subject to United States rules and regulations.
- The service must provide some support for CELEA.
- The service must allow for a third-party language (English, Spanish, & French) tool.
- The system must allow for the keeping/copying of messages.(persistence)

3.2 Nonfunctional Requirements

- The system should allow users to create a private message that cannot be forwarded, cut, or paste. (They must be encrypted during transport and storage.)
- The system should allow all keywords (aka hashtags) in messages so users may categorize them.
- The system should have an option to schedule meetings/events and ask for RSVPs.
- The system must allow for logins from secure third-parties services like Google, Husky, and LinkedIn.
- The service must be able to have a user set parental control and flags for messages with inappropriate content.
- The service shall allow users to join a group with more than 1 moderator
- The service shall allow groups to be made up of at least 1 user.
- The service shall allow moderators to delete their groups
- The service shall allow moderators to add a new moderator to the group.
- The service shall allow moderators to set additional security such as a password to the group.
- The service shall allow users to set icons and have personalities for other users to see.
- The services shall allow users to follow as many users as they choose.
- The service shall allow users to receive updates on their followed users list.
- The service shall allow users to select a communication channel where they have encrypted channels and one-time pads.
- The service shall allow messages sent in the one-time pad to delete itself in 5 seconds after being read.
- The service shall allow users to recall/delete messages. (Messages that have not been read should be deleted or not delivered.)
- The service shall allow the users to set a preference based on which unread messages can be recalled/deleted.
- The service shall allow sent messages to be queued if the user's status is not online and received in order once the receiving user is online.

- The service shall allow for messages to be time-stamped based on the sender's local time.
- The service shall allow users to find out who is connected within their circles.
- The service shall allow the copying of messages to be forwarded to other users.
- The service shall allow the tracking of forwarded messages.
- The service shall allow for messages to be translated to other languages that the receiver prefers.
- The service shall allow poll messages in groups to be created by a user.
- The service shall allow poll messages in groups to be expired after an expiration time defined by the creator of the poll
- The system should be capable of supporting a few hundred/thousand users.
- The system should allow users/groups to report other users to the moderators of the groups.
- The system shall allow the moderator to decide if his/her approval is needed for a user/group to join the group.
- The system shall allow messages to be wrapped with the from and to IP addresses.
- The system shall allow the government to know when a user(Person Of Interest) logs into the system.
- The system shall allow users to reply to a subset of people in the group or just the original sender.
- The system shall not allow the user to know if they are being watched by a government agency.