

# Requirements Specification Report

By:- Assignwise

## Abstract

The Mango Tree messaging app is a cutting-edge software development project targeted towards the youth and young adults demographic. It aims to deliver a user-friendly and engaging experience by offering a range of attractive features. The app's focus lies in simplicity, allowing easy registration and customization of user profiles. Efficient contact management ensures users can effortlessly connect with their friends and contacts.

One of the app's standout features is real-time messaging with support for multimedia, enabling users to share various types of content seamlessly. Timely notifications ensure that users are always informed of new messages and updates. Robust privacy controls empower users to manage their personal information and communication preferences securely.

The app goes beyond the standard messaging capabilities with advanced functionalities like voice and video calling, facilitating enhanced connectivity and communication between users. The app's interface is designed to be visually appealing, providing an attractive and enjoyable user experience.

Cross-platform compatibility across iOS and Android ensures that the app can cater to a broad audience, reaching a wide user base. Additionally, the inclusion of analytics capabilities enables the gathering of valuable insights to continually enhance and optimize the app's performance and features.

In summary, the Mango Tree messaging app is a revolutionary solution for the younger generation, offering a seamless, visually pleasing, and feature-rich platform for modern communication and connection.

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# 1. Introduction

The purpose of this document is to provide an overview of the messaging app being developed by Mango Tree. The document outlines the app's objectives, features, and target audience. It also describes the intended use of the app, its scope, and the key terms used throughout the development process.

## **Purpose**

The purpose of the messaging app is to cater specifically to the needs and preferences of youth and young adults. Mango Tree aims to create an engaging and seamless user experience with innovative features, including real-time messaging, multimedia support, voice and video calling, and privacy controls. The app's development is driven by the goal of providing a secure, intuitive, and visually appealing platform for youth to connect and communicate.

## **Intended Audience**

The messaging app is intended for youth and young adults, typically in the age range of 13 to 30 years old. The target audience includes individuals who are tech-savvy, value efficient communication, and seek an interactive platform to connect with friends and acquaintances.

## **Intended Use**

The primary use of the messaging app is to enable users to communicate with friends, family, and other contacts in real-time. Users can send text messages, multimedia content, and make voice and video calls, fostering meaningful connections. The app is intended for personal use and to facilitate social interactions among the youth demographic.

## **Product Scope**

The messaging app's scope encompasses the development of a feature-rich application that supports iOS and Android platforms. It will allow users to register easily, create customizable profiles, and manage contacts efficiently. The app will prioritize user privacy and data security through robust measures such as end-to-end encryption and privacy controls. Additional features include timely notifications for new messages and friend requests, an intuitive user interface, and analytics capabilities for performance improvement.

## 2. Primary research and data gathering

Mango Tree can use a variety of approaches and strategies to collect primary research and data for the messaging app aimed at young people in order to gain insightful information from the target market.

<b>D&amp;B Software – Interview Plan</b>			
<b>System:</b> Messaging App		<b>Project reference:</b> MO/SU/13	
<b>Participants:</b> Sabina Rana (Mango Tree) Sudha Thapa Magar (Mango Tree) Pappu Prasad Yadav (Developer)			
<b>Date:</b> 08/02/2023	<b>Time:</b> 11:30 AM	<b>Duration:</b> 60 minutes	<b>Place:</b> Mango Tree
<b>Purpose of Interview:</b> For the Mango Tree software development company, a preliminary discussion was held to identify issues and requirements surrounding a messaging app.			
<b>Agenda:</b> <ul style="list-style-type: none"><li>• Current issues, mainly client ordering, and any other concerns</li><li>• Current protocols</li><li>• Basic concepts</li><li>• Follow-up actions</li><li>• Other business matters</li></ul>			
<b>Documents to be brought to interview:</b> <ul style="list-style-type: none"><li>• Current catalogue</li><li>• Any documents relating to current procedures</li></ul>			

## Questionnaire

### 1. Which functionalities do you believe are crucial for a messaging app to attract the younger demographic?

- **Emojis and Stickers:** Young users often enjoy expressing themselves through emojis, stickers, and GIFs.
- **Multimedia Sharing:** The ability to share images, videos, and memes is crucial for engaging conversations.
- **Interactive Features:** Polls, reactions, and interactive games can make the app more entertaining.
- **Social Integration:** Integration with other social media platforms can facilitate easy sharing of content.
- **Customization:** Allowing users to customize chat themes and backgrounds can add a personal touch.

### 2. How much emphasis do you place on the ease of signing up and personalizing your user profile within a messaging app?

- Emphasis on easy registration and personalization is vital, as younger users expect a quick onboarding process and the ability to express their individuality through customizable profiles. A seamless and fun sign-up process can help attract and retain users.

### 3. When it comes to sharing various forms of media while messaging, what types of content do you find yourself inclining towards?

- Young users often prefer sharing a wide range of media, including funny memes, short videos, music, and selfies. Having a messaging app that supports quick and easy sharing of these types of content can enhance user engagement.

### 4. In terms of message alerts and friend requests, how frequently would you ideally like to be notified?

- The ideal frequency of notifications can vary among users. Offering customizable notification settings, where users can choose the level of alerts they want for messages and friend requests, would be a considerate approach.

**5. What sort of privacy safeguards do you anticipate from a messaging app to ensure the security of your information?**

- Young users are increasingly concerned about privacy. Implementing end-to-end encryption, robust user data protection, and giving users control over who can contact them can help ensure their information's security.

**6. To what extent do you value the availability of features such as voice and video calling for your communication requirements?**

- Voice and video calling features are important, as they provide users with more diverse communication options. While messaging is crucial, having the ability to switch to real-time voice or video conversations adds depth to the app's functionality.

**7. What are your anticipations concerning the user interface and navigational aspects of a messaging app?**

- The user interface should be intuitive and visually appealing. Clear and simple navigation, well-organized chat lists, and easily accessible features contribute to a positive user experience. A clean and modern design is likely to resonate well with the younger demographic.

**8. Do you lean towards a messaging application that functions seamlessly on both iOS and Android devices?**

- Ensuring seamless functionality on both iOS and Android devices is essential for reaching a wider user base. Young users often use a variety of devices, so having cross-platform compatibility can enhance the app's popularity and convenience.

### **3. Understanding the business, the organization and its systems**

#### **Business**

Mango Tree is a software development company with a focus on creating innovative and cutting-edge software solutions. They cater to various industries and aim to provide custom software solutions that meet the unique needs of businesses.

#### **Organization**

Mango Tree consists of a team of experienced developers and designers. The team collaborates to develop software solutions, including the messaging app for youth. They prioritize seamless user experiences and emphasize user privacy and security in their products.

#### **Messaging App for Youth**

The messaging app under development is specifically designed for youth and young adults. It aims to cater to their needs and preferences by offering features like easy registration, customizable profiles, and efficient contact management.



## 4. Finding and Analysis

### a. Easy Registration

The app will have a straightforward and user-friendly registration process to get new users onboard quickly.

### b. Customizable Profiles

Users will have the ability to personalize their profiles to reflect their individuality and interests.

### c. Real-Time Messaging

The app will support real-time messaging, enabling users to have smooth and instant communication.

### d. Multimedia Support

Users can exchange multimedia content, such as images, videos, and audio, to enhance their communication experience.

### e. Timely Notifications

The app will keep users informed about new messages and friend requests through timely notifications.

### f. Privacy and Security

The development team will implement robust security measures, including end-to-end encryption and privacy controls, to safeguard user data.

### g. Voice and Video Calling

The app will offer advanced functionalities like voice and video calling to allow users to connect through various mediums.

### h. Visually Appealing Interface

The app will have an aesthetically pleasing and intuitive interface to enhance user satisfaction and ease of navigation.

### i. Cross-Platform Compatibility

The app will be compatible with both iOS and Android platforms, reaching a broader user base.

### j. Analytics Capabilities

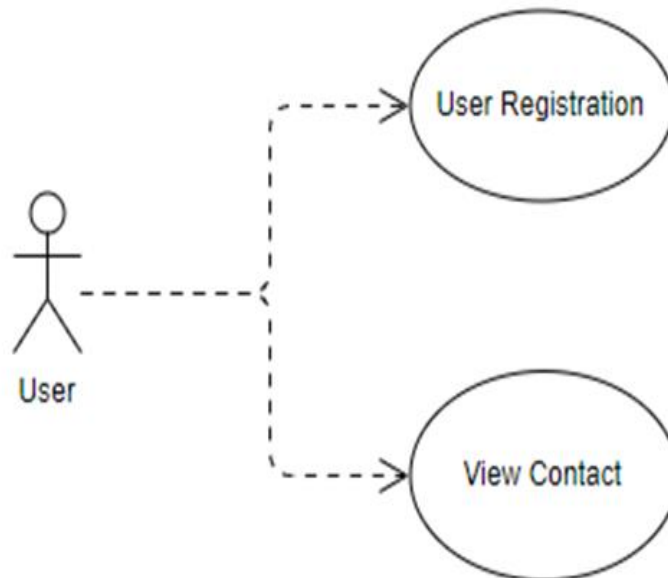
The app will include analytics features to gain valuable insights into user behavior and performance for continuous improvement.

### k. Monetization Options

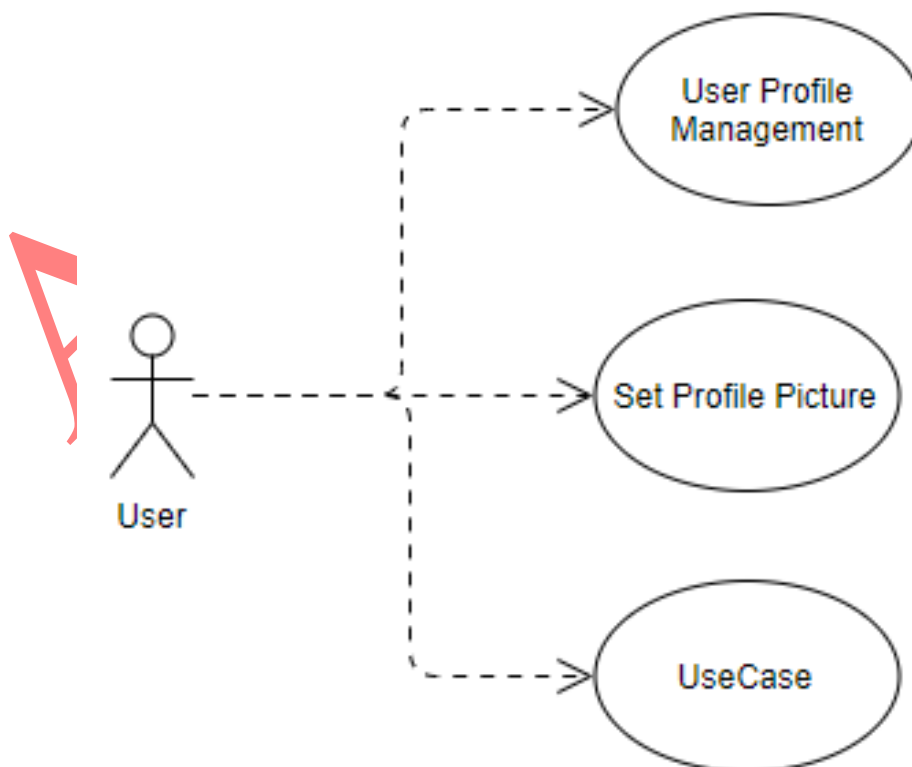
The development team will explore various monetization options, such as in-app purchases or ads, to generate revenue streams from the app if desired.

## 5. Use Cases Diagram

### User Registration



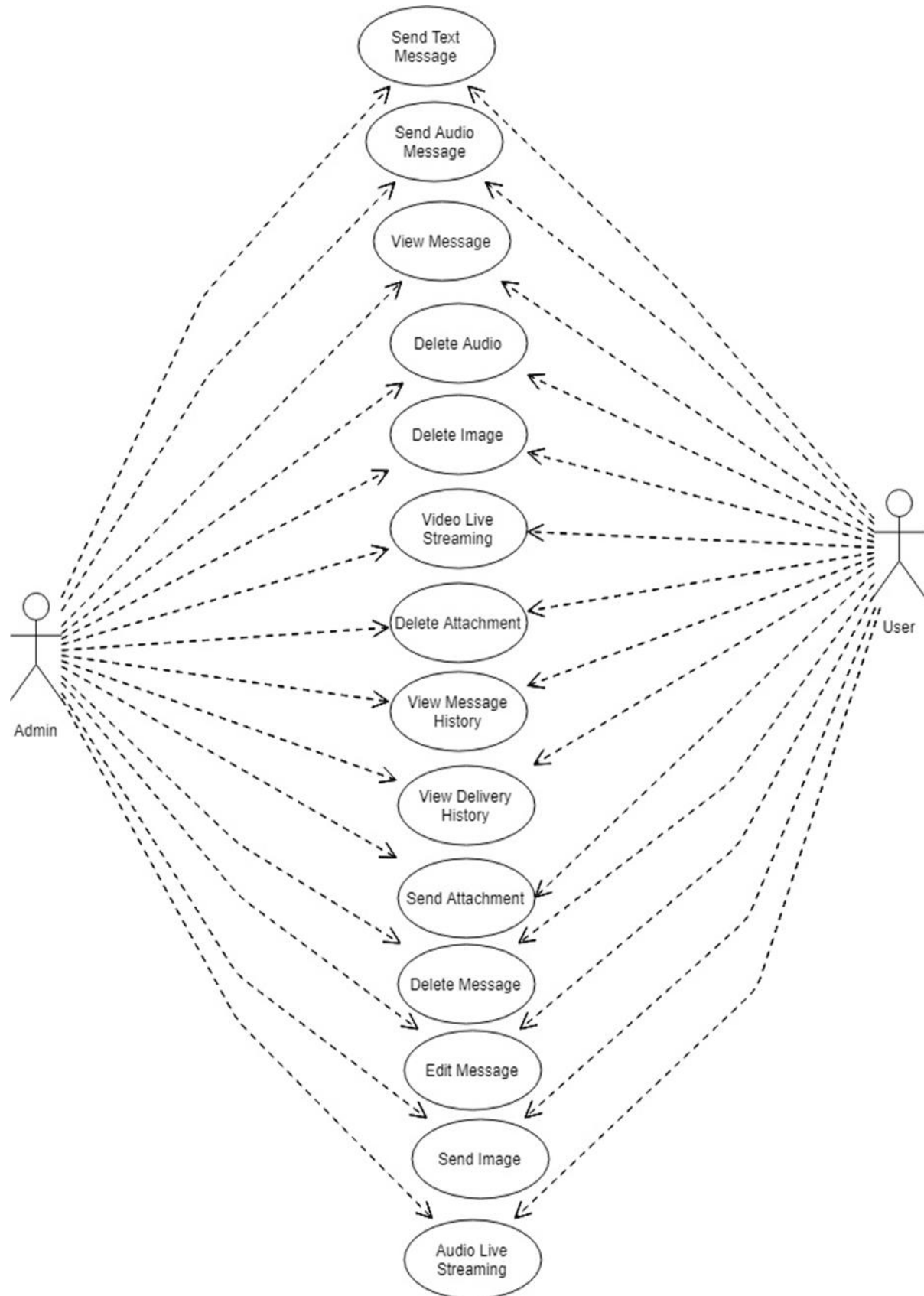
### User Profile Management



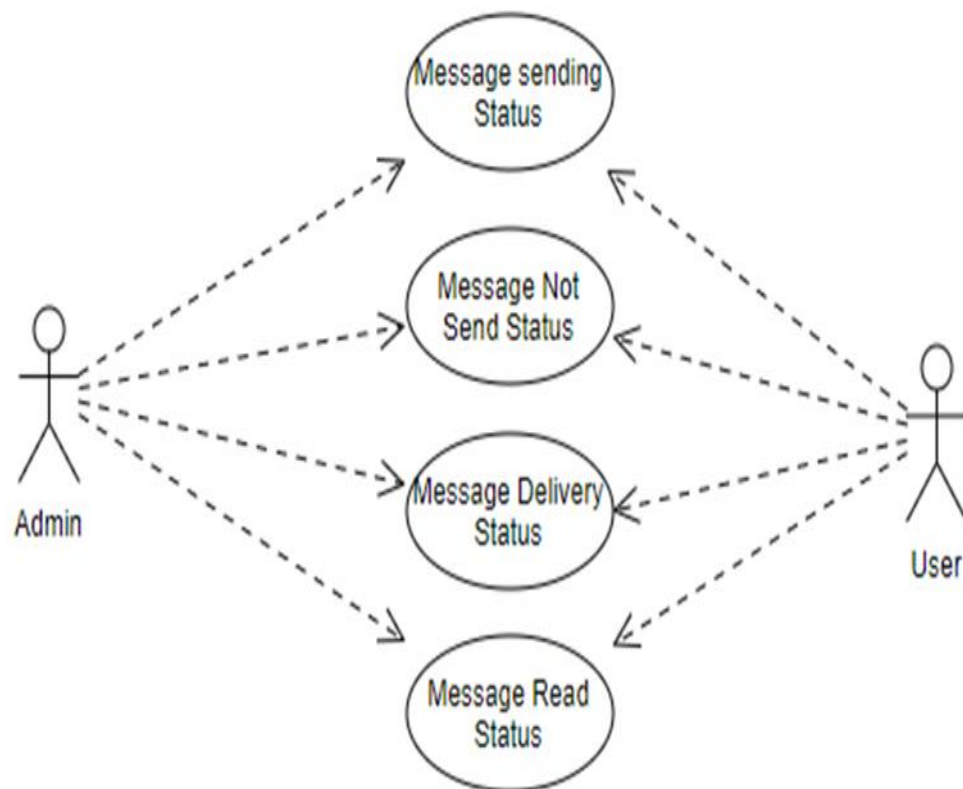
## User Profile Management



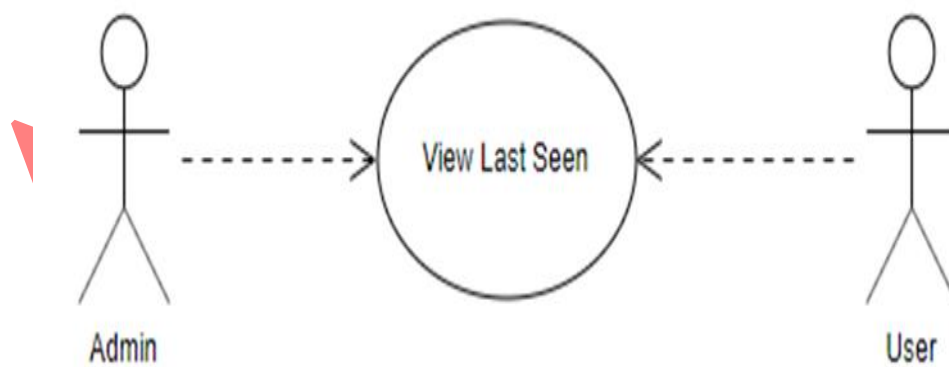
## Send Message



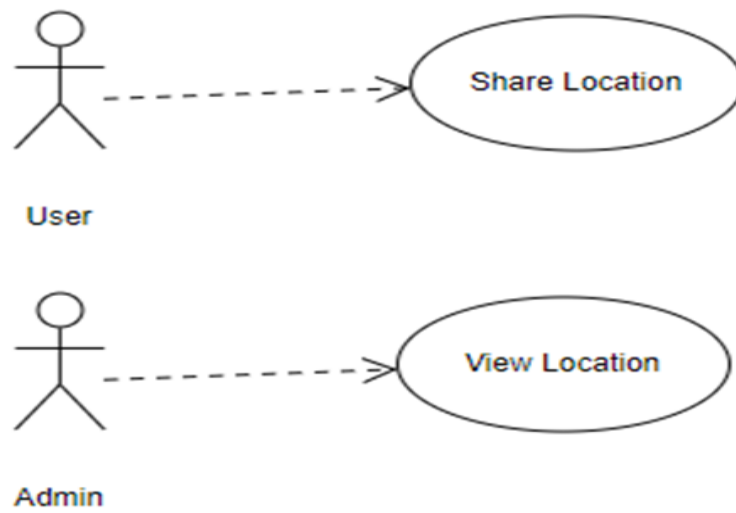
## Message Status



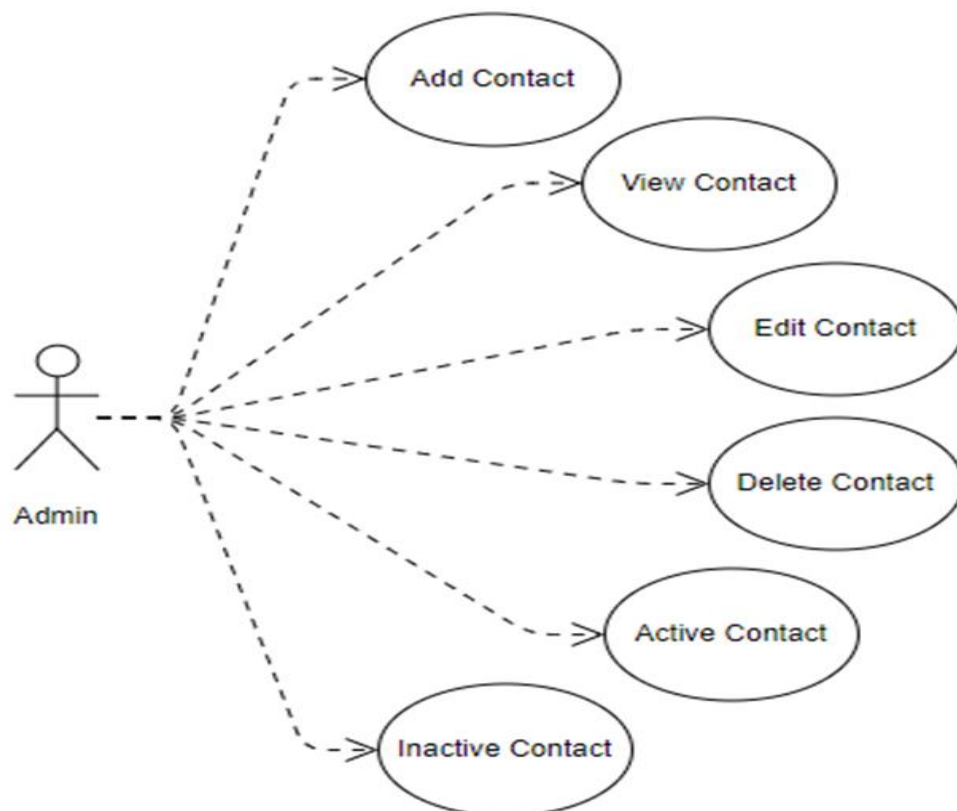
## Last seen



## Location Service



## Contacts



## **6. Functional Requirements**

### **a. User Registration**

Admin User names, valid, unique cellphone numbers, and designations will be added by users to the online web application. A legitimate phone number must be used by the user to register for the program. A phone number registration popup must appear once the user installs the application. If the user's phone number has already been added to the system, they can log in. The application ought to end if the user skips this stage.

### **b. Adding New Contacts**

In order to add a new contact, the admin user must provide a user name, a genuine, unique mobile number, and a designation.

### **c. Send Message**

Any contact on the user's IM contact list need to be able to receive instant messages from the user. By showing a tick next to the message sent, the user should be informed when the communication is successfully delivered to the intended recipient.

### **d. Send Attachments & Live Streaming**

The user should have the option to send audio, video, and image attachments as well as live audio and video streaming, and an inline document viewer should be available so that users may view pdf and word attachments. The software must support the following audio formats: mp3 wav The program should support the following video types: avi, mp4, flv, and gif The program should handle the following image types: jpg and png. The system will be able to deliver all files, but only files compatible with a certain mobile device will be able to see them.

### **e. Broadcast Message**

Groups of contacts should be able to be created by the user. To these groups, users ought to be allowed to broadcast messages.

### **f. Message Status**

The user must be able to learn if the message they sent was read by the intended recipient. Two ticks must appear next to the message read to indicate that the receiver has read it.

### **g. Location Services**

The GPS coordinator in the IM app must allow admin to obtain data on user location. Any user's most recent six months of location history should be accessible to administrators.

## **Enhancement Requests**

### **a. Last Seen**

The client has asked for the user to be able to see the time and date that his or her contact last used the application.

### **b. User Profile**

The user should be allowed to customize their status and profile image.

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## 7. Non-functional Requirements

### a. Performance

For real-time messaging to happen without interruptions, the app needs to have low latency and quick reaction times. It must be able to manage numerous concurrent users and messages without noticeably degrading its performance. To avoid exhausting the user's device, the program should be streamlined to use the least amount of device resources (CPU, memory, and battery).

### b. Scalability

The program should be scalable to handle an expanding user base and rising communications volume without necessitating substantial infrastructure upgrades. As the user load grows, it should offer horizontal scaling to add extra servers or nodes.

### c. Reliability

In order to prevent frequent interruptions of customers' access to the messaging service, the app should have high availability. In the event of problems, it ought to have a reliable backup and data recovery system.

### d. Security

To make sure that communications and multimedia material are secure and cannot be intercepted during transmission, end-to-end encryption should be used. In order to stop unwanted access to user accounts and data, user authentication and authorization methods must be in place. Common security risks like SQL injection, cross-site scripting (XSS), and other vulnerabilities should not be exploited by the application.

### e. Privacy

Users of the app should have control over their privacy settings, allowing them to choose who can view and get in touch with them. Personal data about users should be managed with strict privacy safeguards in compliance with all relevant data protection laws.

### f. Usability

In order to meet the tastes and expectations of children and young people, the user interface should be simple and easy to use. To assist new users in signing up and configuring their account, the app should offer clear instructions and onboarding.

### g. Maintainability

To support future upgrades and enhancements, the software codebase should be well-organized, modular, and maintained. Proper documentation for the app's architecture, APIs, and codebase should be supplied.

## 8. Conclusion

In conclusion, the Software Requirements Specification (SRS) document is of paramount importance for the successful development of Mango Tree's messaging app for youth. By fully describing the app's functionality and performance expectations, the SRS serves as a blueprint that guides the development team throughout the project. It ensures a clear understanding of what the app needs to achieve and how it will interact with various components and users in real-world scenarios.

An accurately defined SRS reduces development time and cost, as it minimizes the likelihood of misunderstandings or incomplete features. Moreover, it plays a critical role in maintaining the quality of the final product by preventing delayed deliveries, inefficient resource utilization, and potential functionality gaps. By adhering to the key characteristics of an effective SRS—objectively correct, unambiguous, complete, consistent, verifiable, and more—the development team can avoid potential pitfalls and deliver a messaging app that meets the unique needs and preferences of youth and young adults. The SRS should comprehensively cover all functional, non-functional, interface, and performance requirements to ensure the app's success in delivering an engaging, secure, and visually appealing user experience across iOS and Android platforms. With continuous improvement through analytics capabilities, Mango Tree can refine the app's features and cater to an ever-evolving user base while exploring suitable monetization strategies.

## 9. Reference List

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1 August, 2023 07:00 PM
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2 August, 2023 08:45 PM

**MARKING SCHEME**  
**Requirement Specification Report**  
**EC3114 SOFTWARE MODELLING AND ANALYSIS**

<b>Individual Candidate Marking Sheet</b>	<b>Assignment: 10%</b>
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**Candidate Name :** \_\_\_\_\_

**Student ID:** \_\_\_\_\_

<b>Assessment Criteria</b>	<b>Maximum Mark</b>	<b>Candidate mark</b>
<b>Introduction</b>	<b>5</b>	
<b>Primary research and data gathering</b>	<b>5</b>	
<b>Understanding the business, the organization and its systems</b>	<b>10</b>	
<b>Finding and analysis</b>	<b>5</b>	
<b>Use case diagram</b>	<b>5</b>	
<b>Functional requirements</b>	<b>5</b>	
<b>Non-Functional requirements</b>	<b>5</b>	
<b>Conclusion</b>	<b>5</b>	
<b>Reference List</b>	<b>5</b>	
<b>Total</b>	<b>50</b>	
<b>Weightage</b>	<b>10%</b>	