Functional Specification Report

By:- Assignwise

Abstract

This research delves into the creation of a Matrimonial App, a digital tool designed to revolutionize the way people find life partners. In a world marked by rapid technological advancements and changing social dynamics, this paper outlines the essential features and qualities needed to develop such an app, ensuring it meets the diverse needs of its users.

The main goal of this app is to bridge the gap created by physical distances and busy lifestyles, making it easier for individuals to form meaningful, long-lasting relationships. It envisions a modern platform that simplifies the often complex journey of finding a life partner by harnessing the power of technology. The paper provides a detailed exploration of the Matrimonial App's features, using clear use case examples and graphics to illustrate how the app facilitates user interactions, from setting up an account and creating a profile to connecting with potential partners and arranging safe in-person meetings.

Ultimately, this research serves as a blueprint for developing a Matrimonial App that not only meets the technological demands of the digital age but also respects the deeply personal and emotional aspects of forging lasting connections. It paves the way for a platform that could redefine how people form lifelong bonds in a technology-driven society, addressing both functional and non-functional requirements, gathering user feedback, and demonstrating practical use cases.

Contents

1. Introduction

This document presents the concept of a Matrimonial App designed to help individuals find their life partners efficiently and securely. The app aims to revolutionize the way people search for suitable partners in today's digital age. It outlines the app's objectives, features, and target audience, as well as its intended use, scope, and key terms used throughout the development process.

Purpose

The primary purpose of the Matrimonial App is to provide a modern and user-friendly platform for individuals seeking life partners. In a world where technology plays a vital role in our lives, this app aims to simplify and enhance the matchmaking process. It strives to connect people with shared interests, values, and preferences for a life-long relationship.

Intended Audience

The Matrimonial App is designed for individuals of various age groups who are looking for serious, committed relationships. The target audience includes people who are tech-savvy, value efficient partner search, and seek a safe and interactive platform to connect with potential life partners.

2. Primary research and data gathering

Questionnaire

1. **What is your preferred method of communication when initially connecting with potential matches on a matrimonial app? (Text chat, voice calls, video calls, etc.)**
  ➢ I prefer to start with text chat when connecting with potential matches on a matrimonial app. It allows for a comfortable initial interaction.

2. **How important is the availability of a mobile app version of the matrimonial platform to you?**
  ➢ Having a mobile app version is crucial to me as it offers convenience and accessibility while on the go.

3. **What role does cultural compatibility play in your choice of a potential life partner through a matrimonial app?**
  ➢ Cultural compatibility is important to me, as it helps ensure that we share common values, traditions, and expectations within our relationship.

4. **Do you believe in the effectiveness of artificial intelligence and algorithms in matchmaking on matrimonial apps? Why or why not?**
  ➢ I believe that AI and algorithms can be effective in matchmaking if they are well-designed and take into account user preferences. They can help streamline the process and provide more relevant matches.

5. **How do you feel about the idea of matrimonial apps using background checks and identity verification to enhance user safety?**
  ➢ I strongly support the use of background checks and identity verification on matrimonial apps. It adds an extra layer of security and trust, which is crucial when looking for a life partner online.

6. **Have you ever faced any instances of harassment or unwanted advances while using matrimonial apps? If yes, how do you think such situations could be better addressed?**
  ➢ Yes, I have encountered unwanted advances. These situations could be better addressed by implementing stricter reporting and moderation systems to protect users from harassment.

7. What would you consider a successful outcome when using a matrimonial app to find a life partner?

➢ A successful outcome for me would be finding a compatible life partner with whom I share a deep connection, trust, and the potential for a lifelong commitment.

Interview

D&B Software – Interview Plan			
System: Matrimonial App		**Project reference:** MO/SU/13	

Participants: Sabina Rana (Matrimonial App)
       Sudha Thapa Magar (Matrimonial App)
       Pappu Prasad Yadav (Developer)			

Date: 08/02/2023	**Time:** 11:30 AM	**Duration:** 60 minutes	**Place:** Matrimmmonial App
Purpose of Interview: An first dialogue was made to identify the challenges, learn about their experiences, and give suggestions for app upgrades for the Matrimonial App.			
Agenda: • Current issues, mainly client ordering, and any other concerns • Current protocols • Basic concepts • Follow-up actions • Other business matters			
Documents to be brought to interview: • Current catalogue • Any documents relating to current procedures			

3. Understanding the business, the organization and its systems

Matrimonial App is a pioneering tech startup dedicated to revolutionizing the matchmaking landscape. Their focus lies in crafting a user-friendly and secure platform for forging meaningful connections. With a penchant for innovation, Matrimonial App aims to reshape traditional partner search methods, adapting them to the digital age.

The company thrives on a dynamic workforce, blending tech-savvy developers, creative designers, and adept customer service representatives. Collaboration and creativity are embedded in their work culture, resulting in dynamic software solutions that cater to evolving user needs.

Matrimonial App's matchmaking app caters primarily to singles aged 18 to 35, aiming to simplify the partner search process. By offering streamlined registration, customizable profiles, and efficient interaction management, the app is tailored to resonate with the preferences and demands of today's youth. Security and privacy are paramount, with stringent measures in place to safeguard user information and ensure a safe digital environment.

4. Finding and Analysis

a. Easy Registration
  i.   Simple sign-up process with minimal required information.
  ii. Option to sign up using existing social media accounts for convenience.

b. Customizable Profiles
  i.   Ability to add a profile picture.
  ii. Personalized bio or description.
  iii. Option to add interests and hobbies to showcase individuality.

c. Real-Time Messaging
  i.   Instant messaging for quick and seamless conversations.
  ii. Read receipts to know when your messages are seen.

d. Multimedia Support
  i.   Send and receive photos, videos, and voice messages.
  ii. Easily share media files within chats.

e. Timely Notifications
  i.   Receive pop-up notifications for new messages.
  ii. Get alerted when someone sends a friend request.

f. Privacy and Security
  i.   Messages and data are kept private with strong encryption.
  ii. Customize privacy settings to control who can see your information.

g. Voice and Video Calling
  i.   Make free voice and video calls with friends.
  ii. Enjoy high-quality audio and video conversations.

h. Visually Appealing Interface
  i.   User-friendly design with easy-to-use buttons and menus.
  ii. Pleasant color schemes and visuals for an enjoyable experience.

i.Cross-Platform Compatibility
  i. Use the app on both iPhone and Android devices.
  ii. Stay connected with friends regardless of their device.

j. Analytics Capabilities

    i.   Track your usage statistics, like how many messages you send.

    ii.   Understand your activity patterns with charts and graphs.
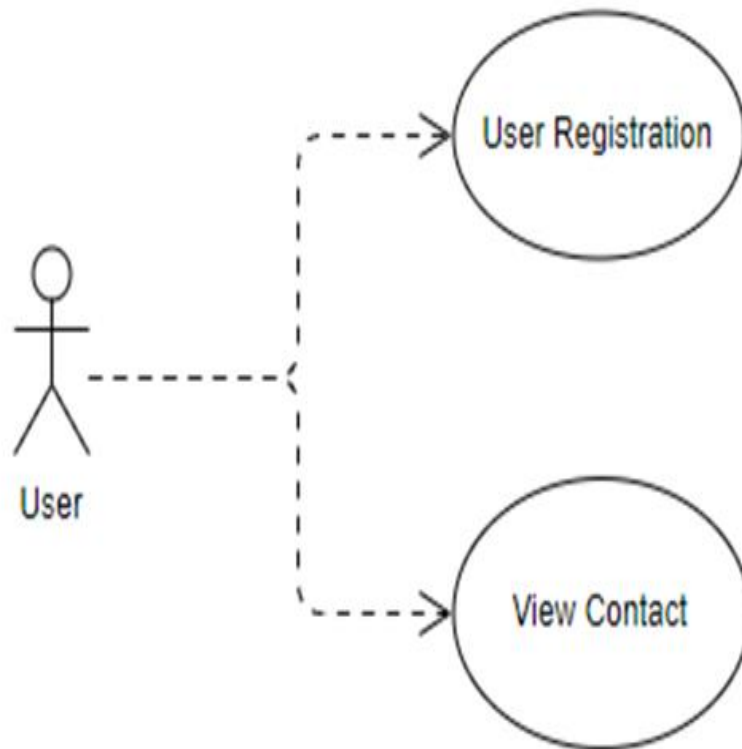
k. Monetization Options

    i.   Earn rewards or virtual items through in-app purchases.

    ii.   Explore occasional ads for a free app or opt for an ad-free experience with a purchase.

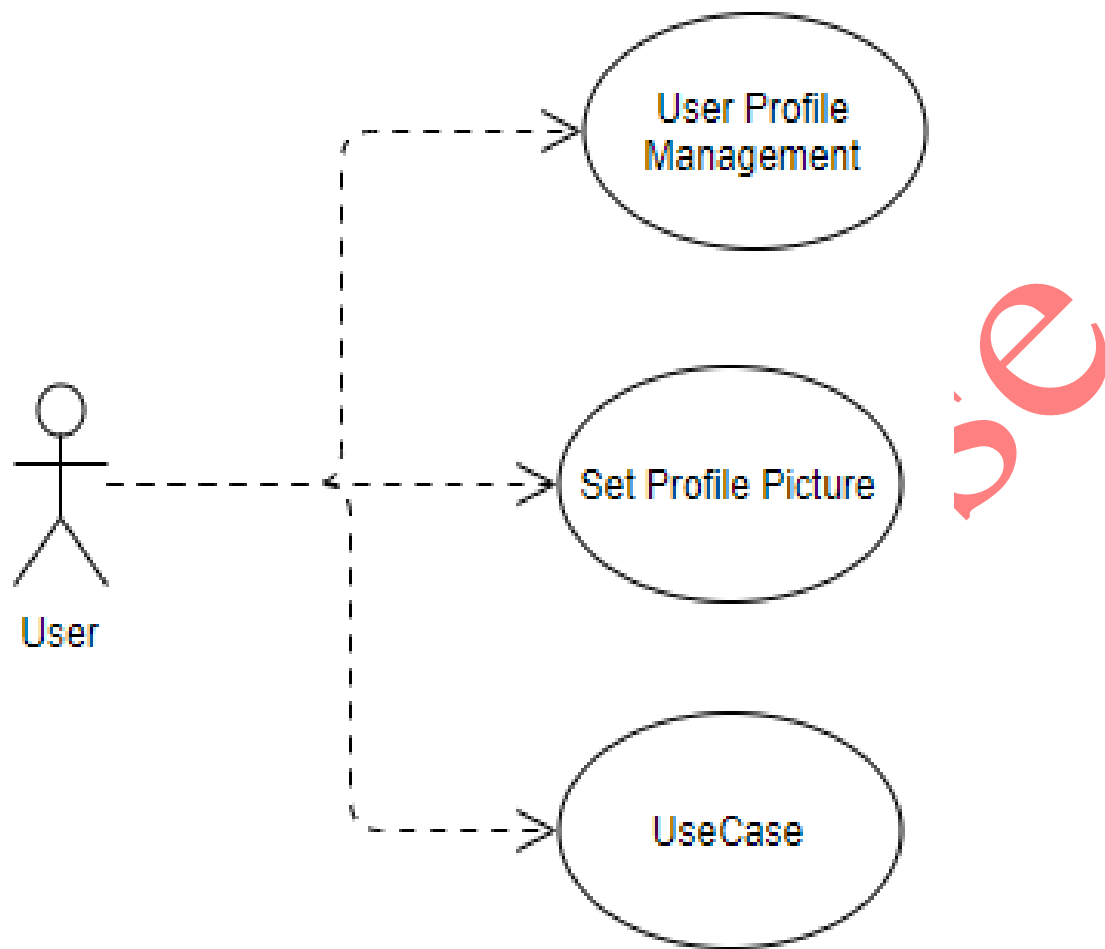# 5. Use Cases Diagram

User Registration

User Registration:- The user begins by registering on the app by providing their name, age, and contact details.

View Contact:- Users can view the contact details of their matches or connections.

Set Status:- Users can set a status message on their profiles to share updates or information with others.
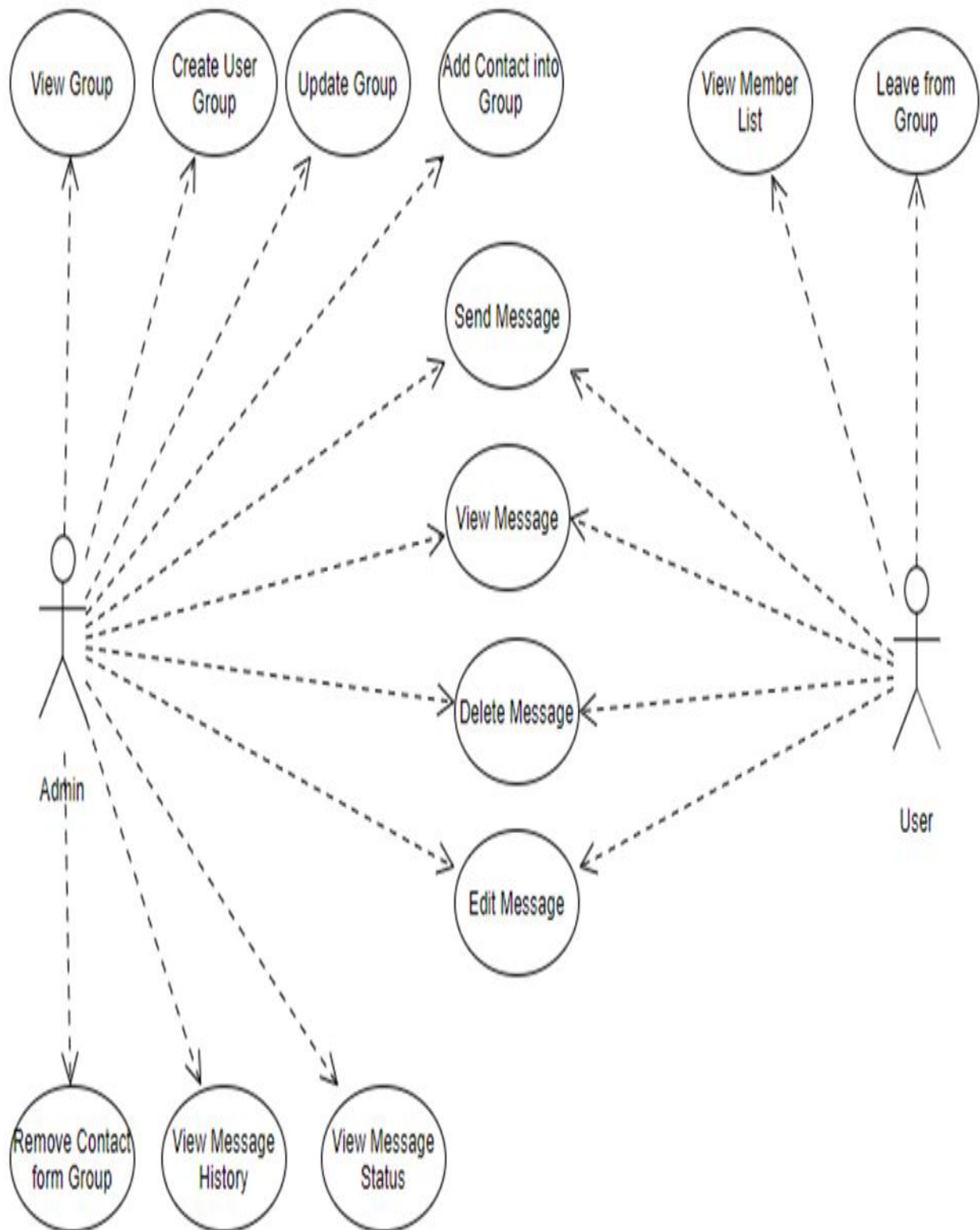
User Profile Management

Update User Profile:- Users have the option to update their profile information, such as adding or modifying their education details and other personal information.

Set Profile Picture:- Users can set or change their profile picture to showcase themselves.

User Profile Management

Send Message:- Users can send text messages to their matches or connections through the app's messaging feature.
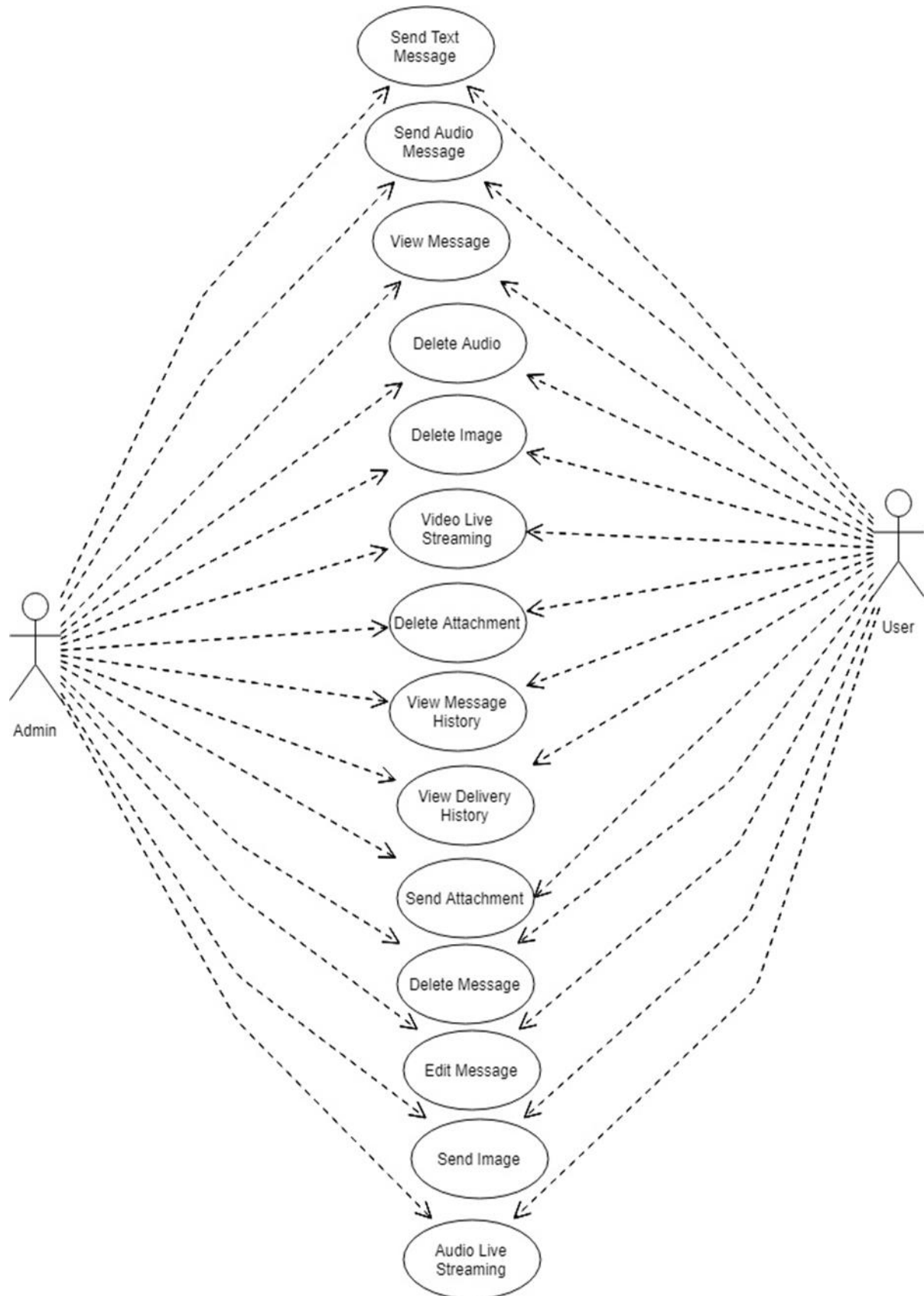
View Message:- Users can view messages they have received from their matches or connections.

View Message History:- Users can access the history of their past messages with matches or connections.

View Message Status:- Users can check the status of the messages they have sent, such as whether they have been delivered or read.

Send Message

Send Audio Message:- Users can send audio messages to their matches or connections.

Edit Message:- Users can edit the content of a message they have sent.

Delete Message:- Users can delete individual messages from their conversation.

Delete Audio:- Users can delete audio messages from their conversation.

Send Image:- Users can send images to their matches or connections.

Delete Image:- Users can delete images they have sent from their conversation.

Audio Live Streaming:- Users can initiate or participate in live audio streaming sessions.

Video Live Streaming:-Users can initiate or participate in live video streaming sessions.

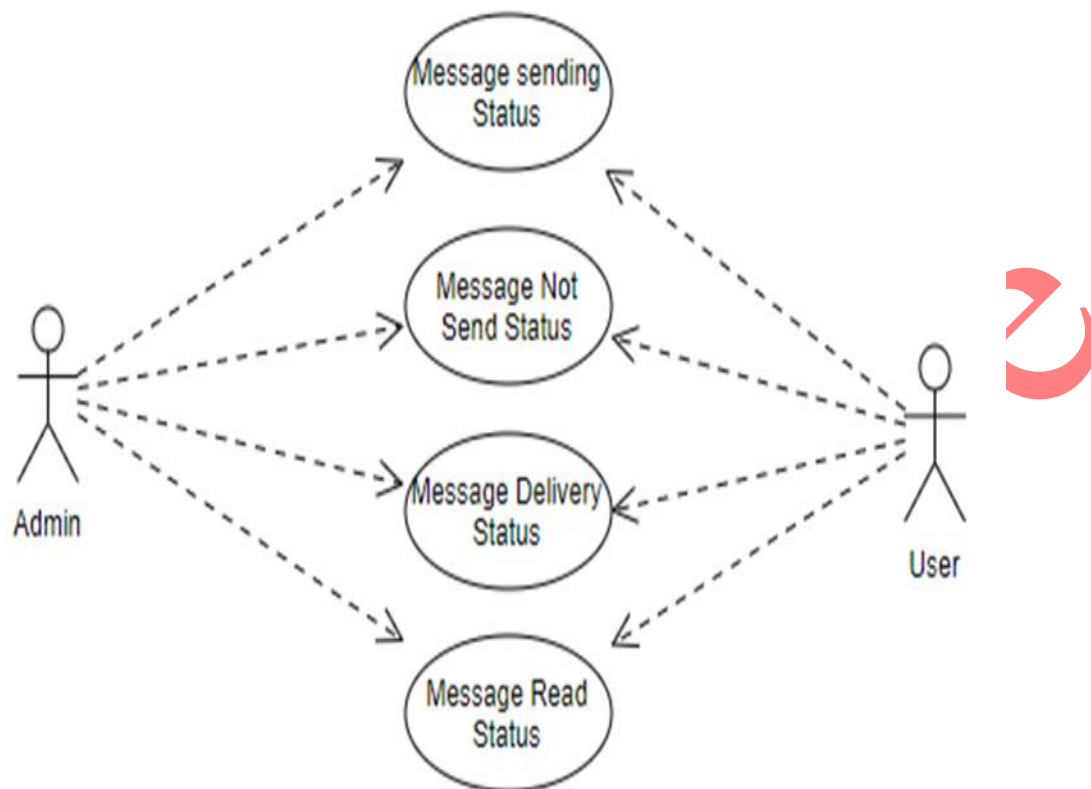**Send Attachment:-** Users can send attachments or files to their matches or connections.

Delete Attachment:- Users can delete attachments or files they have sent.

View Message History:- After viewing the contact details, users can access the message history with their matches to review past conversations.

View Delivery History:- Users can also check the delivery history of messages they have sent to ensure they have been successfully delivered.

Message Status

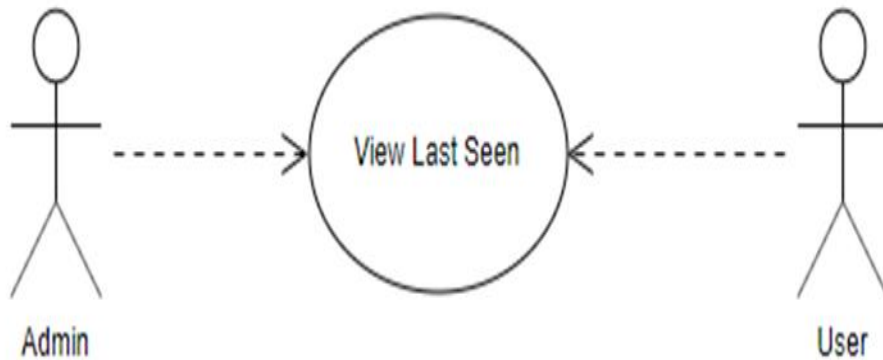
Message Sending Status:- Users can receive notifications or information about the status of messages they have sent.

Message Not Send Status:- Users can be informed if a message they attempted to send was not successfully delivered.

Message Delivery Status:- Users can see if a message they sent has been successfully delivered to the recipient.

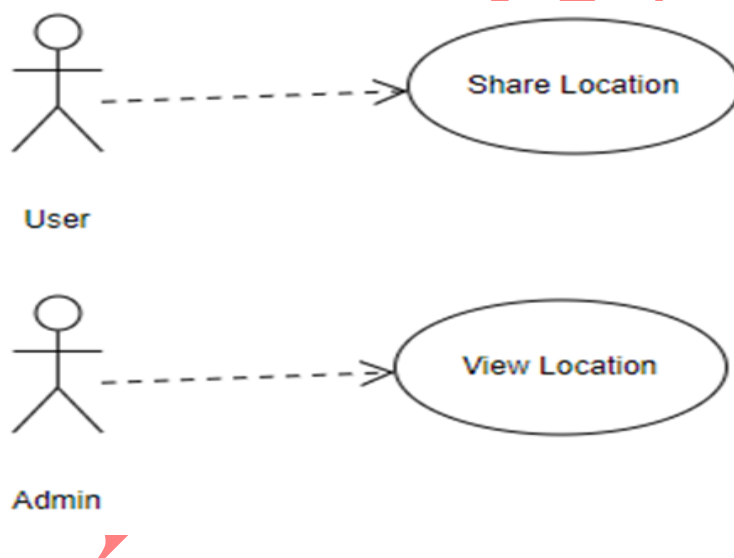**Message Read Status:-** Users can know when a message they sent has been read by the recipient.

Last seen

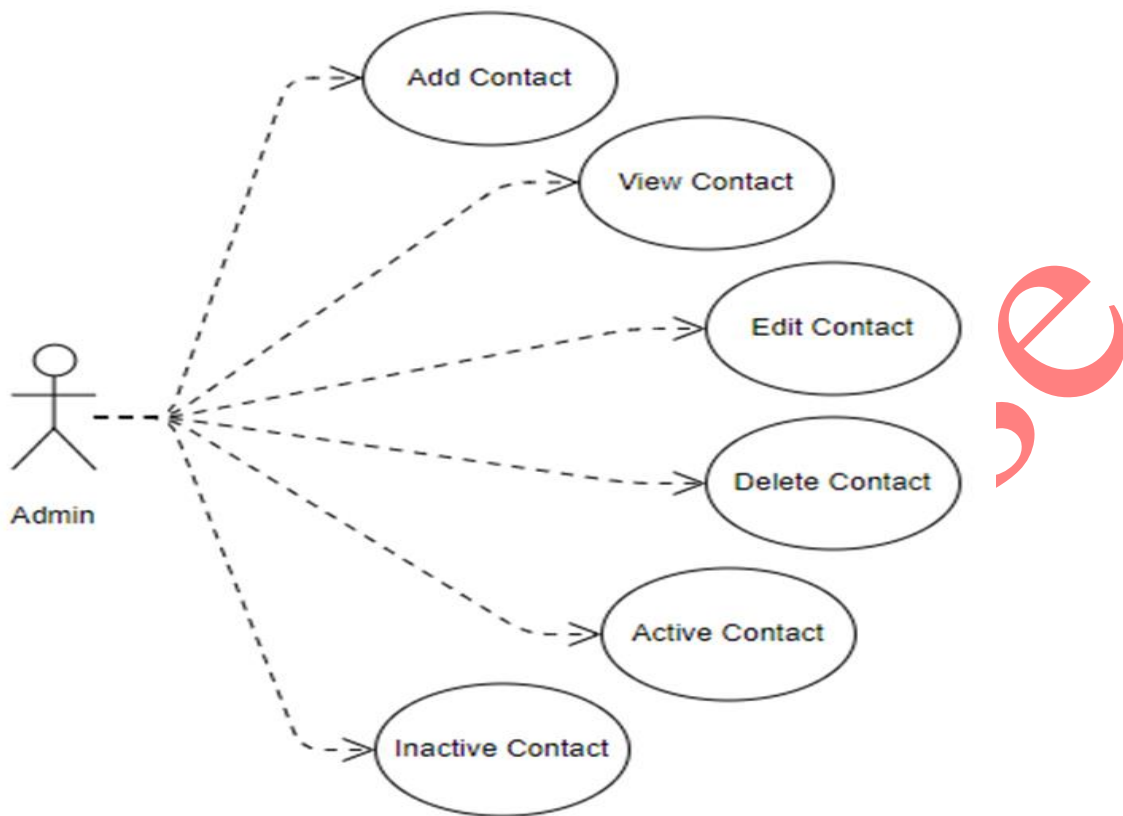**View Last Seen:-** Users can see when their matches or connections were last active on the app.

Location Service

Share Location:- Users can share their real-time location with their matches or connections.

View Location:- Users can view the location shared by their matches or connections.

Contacts

Add Contact:- Users can add new contacts to their list, potentially for referring matches to friends or family.

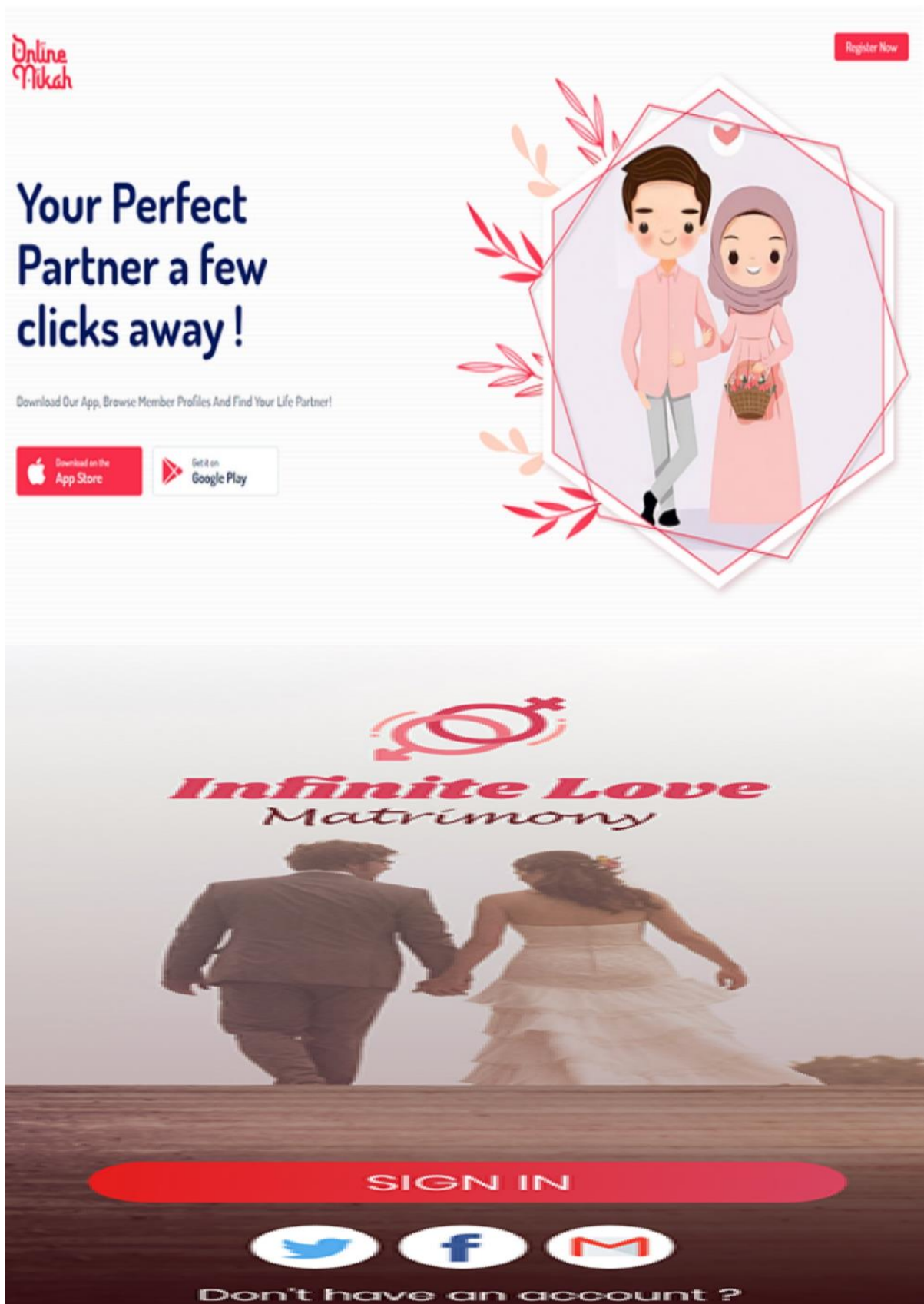**View Contact List:-** Users can access their list of contacts or connections they have added.

Update Contact:- Users can update or edit contact information as needed.

Activate Contact:- Users can reactivate or mark contacts as active again if they were previously marked as inactive.

Inactive Contact:- Users can mark contacts as inactive, indicating that they are no longer active users.

6. UI Design

7. Functional Requirements

User Registration:- To get started with the online web application, users will need to register. During registration, users must provide a valid and unique username, along with a legitimate phone number. Upon installation of the application, a phone number registration popup will prompt the user. If the provided phone number has not been previously registered in the system, users can proceed with registration. However, if the phone number is already in use, the user will be directed to log in or exit the application.

Adding New Contacts:- Admin users can add new contacts to the system. To do so, they must input a unique and valid mobile number, along with a username and designation for the contact.

Sending Messages:- Users can send instant messages to any contact on their IM contact list. The system will indicate successful message delivery with a tick mark next to the sent message.

Sending Attachments & Live Streaming:- Users have the option to send audio, video, and image attachments, as well as engage in live audio and video streaming. The application also provides an inline document viewer for viewing PDF and Word attachments. Supported audio formats include MP3 and WAV, while supported video types include AVI, MP4, FLV, and GIF. The program can handle JPG and PNG image formats. Compatibility with the recipient's mobile device will determine whether the files can be viewed.

Broadcast Messages:- Users can create groups of contacts and send broadcast messages to these groups.

Message Status:- Users can check if their sent messages have been read by the intended recipient. Two ticks will appear next to the message to indicate that it has been read.

Location Services:- The IM app includes GPS coordinates to allow administrators to access user location data. The system stores the most recent six months of location history for any user.

Enhancement Requests

Last Seen:- Users will have the ability to see the date and time when their contacts last used the application.

User Profile:- Users can customize their status and profile image.

Additional Information:- Users can also provide additional information such as age, education, occupation, and hobbies in their user profiles.

8. Non-functional Requirements

Performance:- In order to facilitate uninterrupted real-time messaging, the application must prioritize low latency and swift response times. It should efficiently handle a substantial load of concurrent users and messages while minimizing its impact on device resources (CPU, memory, and battery) to ensure a seamless user experience.

Scalability:- The application should possess the capability to effortlessly accommodate a growing user base and increasing communication volumes without necessitating significant infrastructure upgrades. It should offer horizontal scalability, allowing for the addition of additional servers or nodes as user demands expand.

Reliability:- High availability is paramount to prevent frequent disruptions in customer access to the messaging service. The application should incorporate a robust backup and data recovery system to swiftly address any issues that may arise.

Security:- To guarantee the security of communications and multimedia content during transmission, the application must implement end-to-end encryption. Additionally, robust user authentication and authorization methods should be in place to thwart unauthorized access to user accounts and data.

Privacy:- User privacy should be a central concern, granting users control over their privacy settings to determine who can view and contact them. The application should adhere to stringent data protection regulations, ensuring the responsible management of users' personal data.

Usability:- The user interface should prioritize simplicity and user-friendliness, catering to the preferences and expectations of both children and young adults. Clear instructions and onboarding processes should be provided to assist new users in registering and configuring their accounts.

Maintainability:-To facilitate future upgrades and enhancements, the software codebase should be well-structured, modular, and actively maintained. Comprehensive documentation covering the application's architecture, APIs, and codebase should be readily available to support ongoing development efforts.

9. Conclusion

In conclusion, the development of a contemporary matrimonial application signifies a significant leap forward in how people forge connections and discover life partners. This application offers a pragmatic, efficient, and secure solution to the age-old quest for love and companionship in today's world, where personal interactions may be limited and conventional methods may no longer be as effective.

With this app, users can easily create comprehensive profiles, set preferences, and explore potential matches. The inclusion of connection scores and indicators further enhances the matchmaking process, enabling users to make more informed decisions about whom to connect with. In a rapidly changing technological landscape, this marriage app demonstrates how innovation can be harnessed to fulfill fundamental human desires. It empowers individuals to take charge of their journey toward finding a life partner while upholding stringent standards of user privacy and security.

Ultimately, the heartwarming success stories of users who have discovered love and happiness through this app serve as a reassuring testament to the positive impact that technology can have on our most intimate and cherished aspects of life.

9. Reference List

1. University Slides
   2 September, 2023 07:00 PM

2. Introduction Software Requirements Specification
   https://www.scaler.com/topics/software-engineering/srs/
   2 September, 2023 08:25 PM

3. Understanding the business, theorganization and its systems
   https://www.techtarget.com/searchsoftwarequality/definition/software-requirements-specification
   2 September, 2023 08:45 PM

4. Use case diagram
   https://app.diagrams.net/
   3 September, 2023 09:15 PM

5. UI Design
   https://www.canva.com/photo-editor/
   3 September, 2023 10:30 PM

6. Functional and Non - Functional requirements
   https://www.geeksforgeeks.org/functional-vs-non-functional-requirements/
   4 September, 2023 08:45 PM

11. Appendices

Appendix A: Introduction

This appendix outlines the definitions for key terms related to our matrimonial app project. The "Matrimonial App" is a mobile application tailored for those in search of life partners. "Matchmaking" refers to the process of uniting compatible individuals for potential long-term relationships. Our target audience consists of "tech-savvy" individuals, proficient in digital platforms, who will utilize our "Platform" to interact and find their ideal "Life partner" for a committed and enduring relationship.

Appendix B: Questionnaire Responses

This appendix outline key insights from user preferences and experiences on matrimonial apps. Users predominantly favor text chat for initial contact, emphasizing the importance of convenience through mobile apps. Cultural compatibility and trust in AI for matchmaking are paramount. There's a unanimous call for stringent background checks to ensure safety, while addressing unwanted advances requires stricter reporting mechanisms. Success on these platforms is distinctly defined as finding a compatible life partner.

Appendix C: D&B Software Interview Plan

This appendix outlines the interview plan for D&B Software's discussion with Matrimonial App representatives to identify challenges and provide suggestions for app upgrades.

Appendix D: Understanding the Business

This appendix provides information about Matrimonial App, its focus on innovation, workforce, and target audience.

Appendix E: Finding and Analysis

This section outlines the key features and functionalities of the Matrimonial App.

Appendix F: Use Cases Diagram

This diagram illustrates the primary use cases of the Matrimonial App, including user registration, profile management, messaging, and location services.

Appendix G: UI Design

The appendix for the UI design includes supplementary materials such as wireframes, user personas, usability test results, and design iterations. These resources provide additional context and documentation to support the main design process and help ensure the successful implementation of the user interface.

Appendix H: Functional Requirements

This section details the functional requirements of the Matrimonial App, including user registration, adding contacts, sending messages, and more.

Appendix I: Enhancement Requests

This appendix lists enhancement requests for the Matrimonial App, including features like last seen status and additional user profile information.

Appendix J: Non-functional Requirements

This section specifies the non-functional requirements of the Matrimonial App, covering aspects like performance, scalability, security, privacy, usability, maintainability, and reliability.

Appendix K: Conclusion

The final appendix summarizes the significance of the Matrimonial App in modernizing the matchmaking process and highlights its positive impact on users' lives.

MARKING SCHEME
Functional Specification Report
EC3114 SOFTWARE MODELLING AND ANALYSIS

Individual Candidate Marking Sheet	Assignment: 15%

Candidate Name : _____

Student ID: _____

Assessment Criteria	Maximum Mark	Candidate mark
Abstract	5	
Introduction	5	
Primary research and data gathering	10	
Understanding the business, the organization and its systems	10	
Finding and analysis	10	
Use case diagram	10	
UI Design	10	
Functional requirements	10	
Non-Functional requirements	10	
Conclusion	5	
Reference List	10	
Appendices	5	
Total	100	
Weightage	15%	