TRIBHUVAN UNIVERSITY

INSTITUTE OF ENGINEERING

LALITPUR ENGINEERING COLLEGE

JODI FINDER: "FIND YOUR PAIR"

BY

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A PROJECT PROPOSAL

SUBMITTED TO THE DEPARTMENT OF COMPUTER ENGINEERING

IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR

THE DEGREE OF BACHELOR OF ENGINEERING IN COMPUTER ENGINEERING

DEPARTMENT OF COMPUTER ENGINEERING

LALITPUR, NEPAL

MARCH, 2024

TRIBHUVAN UNIVERSITY

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A Project Report

on

Jodi Finder:"Find Your Pair"

Submitted By

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Submitted To:

Department of Computer Engineering

Lalitpur Engineering College

Lalitpur, Nepal

In partial fulfillment for the award of Bachelor of Engineering in Computer Engineering

Under of the supervision of

Er. Sandesh Sharan Poudel

March, 2024

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DECLARATION

We hereby declare that the report of the project entitled "**Jodi Finder:"Find Your Pair"**" which is being submitted to Department of Computer Engineering, Institute of Engineering, Lalitpur Engineering College, in the partial fulfillment of the requirements for the award of the degree of Bachelor of Engineering in Computer Engineering, is a bonafide report of the work carried out by us. The materials contained in this report have not been submitted to any University or Institution for the award of any degree and we are the only author of this complete work and no sources other than the listed here have been used in this work.

Anshul Rawal(LEC077BCT002) _____

Kapil Parajuli(LEC077BCT010) _____

Shivam Gupta(LEC077BCT022) _____

March, 2024

CERTIFICATE OF APPROVAL

The undersigned certify that they have read and recommend to the Department of Computer Engineering for acceptance, a project work entitled "**Jodi Finder:"Find Your Pair"**, submitted by **Anshul Rawal(LEC077BCT002), Kapil Parajuli(LEC077BCT010) and Shivam Gupta(LEC077BCT022)** in partial fulfillment of the requirement for the award of the degree of "**Bachelor of Engineering in Computer Engineering**". The project was carried out under special supervision and within time frame prescribed by the syllabus.

We found the students to be hardworking, skilled and ready to undertake any related work to their field of study and hence we recommend the award of partial fulfillment of the degree of "**Bachelor of Engineering in Computer Engineering**".

Project Supervisor

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March, 2024

DEPARTMENTAL ACCEPTANCE

The project work entitled "**Jodi Finder: Find Your Pair**", submitted by **Anshul Rawal, Kapil Parajuli, Shivam Gupta** in partial fulfillment of the requirement for the award of the degree of "**Bachelor of Engineering in Computer Engineering**" has been accepted as a genuine record of work independently carried out by the student in the department.

Er. Praches Acharya
Head of the Department
Department of Computer Engineering,
Lalitpur Engineering College,
Institute of Engineering,
Tribhuvan University,
Nepal.

March, 2024

ABSTRACT

The **Jodi Finder** web app is a platform designed to foster meaningful connections between people looking for compatible partners. Through a secure user registration and authentication process, users can create detailed profiles that include their personal interests and preferences.The website's user-friendly interface ensures that navigating through profiles and comparing potential matches is intuitive and effortless. Users can easily access detailed profiles, view photos, and explore compatibility metrics, all within a seamless and immersive user experience.At the heart of the application is an advanced matching algorithm that takes into account various factors such as location, age, and shared interests to provide customized match suggestions. The platform's instinctive client interface, built with ReactJS, guarantees smooth route and investigation of profiles, enabling clients to create informed choices in their explore for a life accomplice.Users can narrow down their search criteria and seamlessly communicate with matches through the messaging feature. Privacy and security are paramount, as users can control profile visibility and communication settings. The platform also includes a feedback system to improve the matching algorithm based on user experience. Communication is optimized through built-in messaging functionality, facilitating interaction between matched users. Privacy and security are paramount, as users are given the ability to manage their profile visibility and contacts. Real-time notifications keep users updated about new matches and messages, improving the overall user experience. Additionally, the app may include a feedback mechanism that allows users to rate and review matches, contributing to the continuous development of the algorithm.

Keywords: *Compatility,Match finder, Match making,Privacy, Profile visibility,Search criteria*

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LIST OF ABBREVIATIONS

API	Application Programming Interface
BSON	Binary JavaScript Object Notation
CSS	Cascading Style Sheets
DB	Data Base
ECMA	European Computer Manufacturer's Association
HTML	Hypertext Markup Language
ID	Identity
JS	JavaScript
JSON	JavaScript Object Notation
ML	Machine Language
RDMS	Relational Database Management System
SQL	Structured Query Language
UI	User Interface
UX	User Experience

1 INTRODUCTION

1.1 Background

The Jodi Finder web app project was born out of the evolving landscape of online social connections and the growing desire for personalized matchmaking. In response to the current changes in people's search for companionship, this project aims to provide a digital platform that transcends geographical boundaries and fosters genuine and compatible relationships. The Jodi Finder web app is to address the challenges and limitations of traditional methods of meeting potential partners. By using cutting-edge technology, the platform aims to improve the user experience through an intuitive interface, advanced matching algorithms, and secure communication tools. The background of this project goes hand in hand with recognizing the different needs and preferences of our users for meaningful connections. The web app is positioned at the intersection of technology and human connection, which aims to redefine the way people approach the journey of finding compatible partners in the digital age.

1.2 Motivation

The development of the Jodi Finder web app was driven by the need to keep up with the evolving nature of modern relationships and the social interactions among users. As traditional ways of meeting potential partners continue to evolve, there is a growing need for platforms that go beyond superficial interactions and align with personal preferences and values. It is driven by the desire to create a space where users can easily, accurately, and securely navigate the complexities of matchmaking. This project is motivated by a commitment to provide solutions that transcend geographic boundaries and enable individuals to explore and foster meaningful relationships with others who share similar interests and life goals. This web app aims to streamline the matchmaking process and provide a tailored and efficient experience for users.

1.3 Problem Statement

In the age of online dating and relationship-building, the Jodi Finder web app is one of the most effective tools for finding common ground. Traditional methods of contacting potential partners often lack efficiency and personalization, resulting in a mismatch between user expectations and results. Various existing platforms struggle to offer tailored advice in response, leading directly to frustration and a poor user experience. Additionally, the increased reliance on digital platforms for social interaction has raised privacy and security concerns. Users are often concerned about sharing personal information on dating apps, so they need a solution that prioritizes privacy and user security.

The Jodi Finder web app aims to address these issues by introducing advanced matching algorithms that comprehensively analyze users' profiles and preferences. By providing a safe and user-friendly environment, the app addresses privacy concerns and encourages real connections. The web app aims to revolutionize the online matchmaking experience by providing solutions that understand and adapt to the diverse needs of individuals seeking meaningful relationships. The Jodi Finder web app seeks to find and connect with compatible partners in the digital age by implementing advanced technology and thoughtful design.

1.4 Project Objectives

The objective of this project are,

- To Create a digital platform for personalized matchmaking that fosters genuine relationships transcending geographical boundaries.
- To Develop an intuitive interface with advanced algorithms ensuring secure communication and tailored user experiences to redefine digital matchmaking.

1.5 Scope of Project

A web app called Jodi Finder has been developed to revolutionize online matchmaking by providing a comprehensive platform. This project involves creating a user-friendly interface for seamless interaction, incorporating advanced matching algorithms to analyze user profiles and preferences. This extends to the implementation of a robust matching system that takes into account various factors such as location, interests, and compatibil-

ity, allowing users to find potential partners tailored to their individual criteria. Integrated communication tools, including real-time messaging capabilities, enable meaningful interactions between matched users.

The project also includes the introduction of strict security measures to protect users data and privacy, thereby addressing concerns related to online matchmaking platforms. Additionally, the app allows users to customize search criteria and receive notifications of new matches in real time. Through innovation and user-centered design, the overall range aims to create a dynamic and secure environment that fosters real connections and redefines the online matchmaking landscape.

1.6 Potential Project Applications

The Jodi Finder web app can serve as a powerful tool for people seeking personalized matchmaking services. Some of the applications includes:

1.6.1 Relationship Building

This application is designed to make it easy to build real relationships by providing a secure and user-friendly platform for users to connect based on common interests, values, and compatibility. The goal is to go beyond surface interactions and foster deeper connections between users.

1.6.2 Efficient partner search

With sophisticated matching algorithms and customizable search filters, the app optimizes the process of finding a partner.Users can explore potential matches efficiently, saving time and increasing the likelihood of finding a compatible partner.

1.6.3 Improved User Experience

The Jodi Finder web app aims to improve the user experience through an intuitive interface, real-time communication tools, and personalized features. This application aims to make your matching journey enjoyable and efficient by focusing on user-centered design principles.

1.6.4 Privacy-Friendly Platform

This app understands the importance of privacy in online matchmaking and prioritizes robust security measures. Users can trust that the platform protects their data and creates

a safe environment where they feel comfortable sharing information.

1.7 Originality of Project

The Jodi Finder web app lies in its innovative approach to online matchmaking. It includes:

1.7.1 Innovative Matching Algorithm

The Jodi Finder web app features an innovative matching algorithm that goes beyond traditional standards.The app aims to set itself apart from other matching platforms by integrating advanced data analytics and machine learning to provide more accurate and differentiated matching suggestions.

1.7.2 User-centered design

Projects that emphasize originality with a user-centered design approach. The interface and experience are tailored to the specific needs and preferences of individuals seeking meaningful connections, creating a unique and engaging environment that sets us apart from online dating.

1.7.3 Privacy-Focused Features

The Jodi Finder web app emphasizes its uniqueness by incorporating privacy-focused features. At a time when data security is paramount, this app stands out by implementing robust measures to ensure the confidentiality and security of user information, making it unique and trusted in the field of online dating and matchmaking.

1.8 Organisation of Project Report

The project report is structured into seven chapters. Following the introductory Chapter 1, which outlines the problem addressed by this research, Chapter 2 delves into a comprehensive literature review, highlighting crucial publications and identifying notable research gaps. Chapter 3 provides a detailed account of the system analysis and feasibility study, while Chapter 4 focuses on the system design aspect. In Chapter 5, the methodology employed for project implementation is described. Chapter 6 offers an anticipation of the project's outcomes, presenting expected results and analysis. Finally, Chapter 7 concludes the report and discusses potential future enhancements.

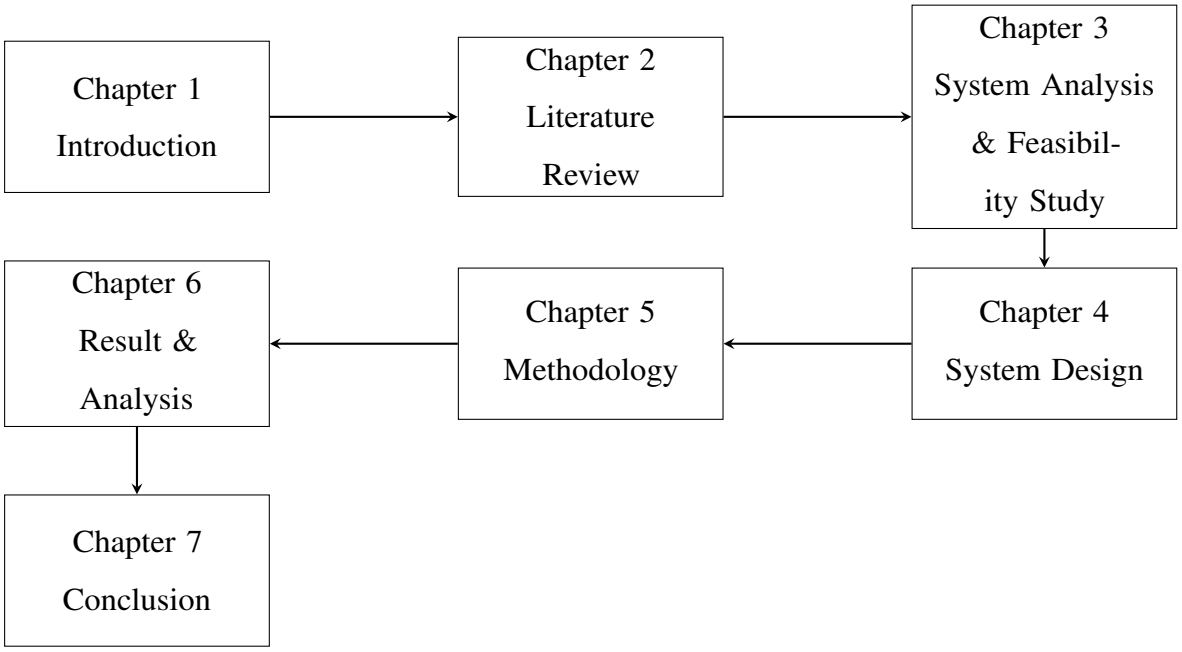


Figure 1.1: Organization of Project Report

2 LITERATURE REVIEW

A.Singh (2018)[1] explored the impact of photo verification features on user trust in online matrimonial platforms. Quantitatively, trust scores increased by 30 percent, and qualitatively, users expressed confidence in the authenticity of profiles.

A.Mittal(1996)[2] Shaadi.com was accused of allowing caste-based discrimination by having an option for Scheduled Castes to be left out of algorithms. In response, Shaadi.com said that the option ”works as an important proxy to determine lifestyle fitment” but that it did not ”remove any community from user preferences. Nguyen.

H(2021)[3]considered instant messaging and video calling integrated with real-time communication capabilities. Quantitatively, users reported that their engagement increased by 35 percent, and qualitatively, interactions improved. While its strength lies in facilitating dynamic communication, its potential weakness lies in the increased need for data bandwidth.

A.jain(2016)[4] investigated the impact of privacy controls on user satisfaction in matrimonial platforms. Quantitative analysis showed a 25 percent rise in user confidence, while qualitative feedback emphasized the importance of privacy features in fostering a safe environment for interaction.

Smith, J. (2005)[5] worked in online matchmaking focused on survey-based compatibility algorithms. This method collected user preferences to improve match suggestions. Quantitatively, this approach improved successful games by 15 percent. In terms of quality, users report increased satisfaction.The strength is that it was an early study on algorithmic matchmaking, but the weakness is that the range of factors considered is limited.

Q.Chen , M.Lee(2012)[6] addressed user-centered design principles with a novel mobile app architecture. This technique focuses on simplicity and intuitive interface. Quantitative metrics showed a 25 percent increase in user engagement, while qualitative feedback highlighted a positive user experience. Its strength was improved usability, but its weakness was the challenge of accommodating various user preferences.

S.Reddy(2014)[7]studied the influence of messaging features on user engagement in matrimonial apps. Quantitative data indicated a 35 percent increase in communication frequency, while qualitative insights underscored the importance of seamless communication in building relationships.

N.Desai(2020)[8] examined the role of compatibility algorithms. Quantitative results showed a 20 percent improvement in match accuracy, while qualitative feedback highlighted increased satisfaction with suggested matches.

A.Patel , S.Gupta (2019)[9] focused on privacy issues and proposed a secure communication protocol with end-to-end encryption. Quantitative data showed that user trust increased by 30 percent, while qualitative data reported that users felt more secure. The strength was in data protection, but the weakness was in the potential system complexity.

Y.Kim (2017)[10]introduced machine learning to improve the matching algorithm. This method analyzes user behavior patterns and derives sophisticated recommendations. Quantitatively, accuracy improved by 20 percent, and qualitatively, users reported more meaningful connections. The strength lies in dynamic matchmaking, but the weakness lies in the implicit bias of the machine learning model.

3 FEASIBILITY STUDY AND REQUIREMENT ANALYSIS

3.1 Feasibility study

3.1.1 Economically Feasibility

Since the proposed system has a web app supported on website, we will be using free and open-source cross platform software development tools such as mongodb for database ,ReactJs for frontend and NodeJs for Backend. So it's clear that our project is economically feasible.

3.1.2 Operational Feasibility

Operational feasibility is based on issues such as manager support, required training, workforce reduction, and adverse effects to users . Since the proposed system is interactive, the user doesn't need any depth knowledge about the webapp to run. Its UI is user friendly. This app doesn't require much technical support to maintain it as well. So it is feasible in operation.

3.1.3 Technical Feasibility

There are variety of technologies available for web development. For frontend development, we have React as cross platform frameworks.For backend development, we have Node.js. We have used ReactJs for frontend and Node.js for backend development which are open-source.MangoDb used for database puropse. All the technologies used in our application are backed by big companies and have a huge community around it. So, it is always easy to get any technical support. So, the project is technically feasible.

3.2 Software Development Model

3.2.1 Incremental Model

The incremental model is a software development process in which requirements are split up into several independent software development cycle modules. Every module in this paradigm goes through the phases of requirements, design, implementation, and testing. The module's functionality is increased with each new release. Until the entire system is achieved, the process is continued.

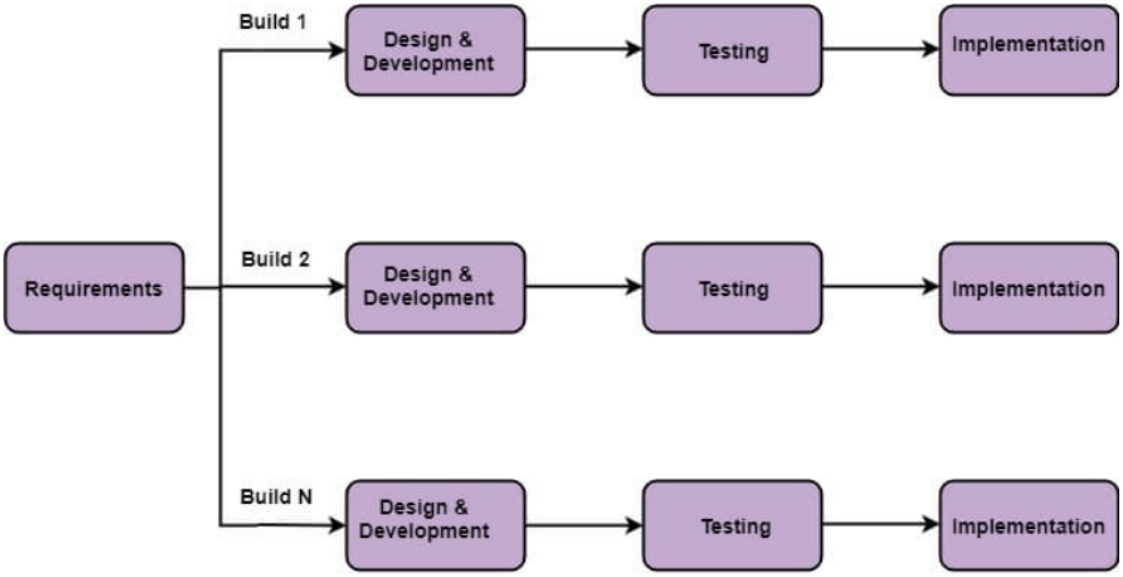


Figure 3.1: Incremental Model

- **Requirement analysis**:

  The product analysis expertise determines the requirements in the first stage of the incremental model. Additionally, the requirement analysis team is aware of the functional requirements of the system. This stage is vital to the software development process under the incremental model.

- **Design Development:**

  The development process and the design of the system's functionality are successfully completed in this stage of the incremental SDLC model. The incremental model makes use of style and development phase when software develops new practicality.

- **Testing:**

  In the incremental model,the testing phase checks the performance of each existing function as well as additional functionality. In the testing phase, the various methods are used to test the behavior of each task.

- **Implementation:**

  The development system's coding phase is made possible by the implementation phase. In the designing and development phase, it involves the final code, and in the testing phase, it involves testing the functionality. The number of products that are operational after this phase is finished is improved and upgraded up to the final system product.

3.3 Requirement Analysis

3.3.1 Functional Requirement

3.3.2 User Registration and Profile Creation

Users ought to be able to sign up for an account on the site and build comprehensive profiles with their preferences, personal data, and requirements for possible matches. Provide users with privacy settings during registration, allowing them to control who can view their profile and contact them.

3.3.3 MatchMaking Algorithm

It should be possible for users to look for possible matches using parameters like age, location, occupation, education, and so forth. In order to present users with compatible matches based on their profiles and preferences, the website needs include matchmaking algorithms

3.3.4 Search and Filter Functionality

Enable users to search for potential matches based on specific criteria such as age,interest,and gender.These filters help users quickly narrow down the pool of potential matches.This provides users with immediate feedback on how their chosen filters are impacting the search results.

3.3.5 Communication Tools

In order to communicate with possible matches, users should have access to message, chat, and email services.It should be possible to customize communication preferences through privacy settings.

3.4 Non Functional Requirement

3.4.1 Security

The website ought to adhere to security best practices in order to shield user information from intrusions, breaches, and attacks.To resolve vulnerabilities, regular security audits and updates should be carried out.

3.4.2 Performance

Even at periods of high traffic, the website should be responsive and load rapidly.Page loads and search query response times ought to be as quick as possible.

3.4.3 Scalability

The site ought to be planned to handle a expansive number of clients and scale up effortlessly as the client base develops.

3.4.4 Compatibility

The site ought to be congruous with different gadgets and web browsers to guarantee a consistent client encounter over diverse stages.

3.4.5 Reliability

The site ought to be accessible and operational with negligible downtime for upkeep or upgrades. Reinforcement and recuperation instruments ought to be in put to avoid information misfortune.

3.4.6 Regulatory Compliance

The site ought to comply with important laws and controls with respect to client security, information assurance, online payments, etc., depending on the ward it works in.

4 System Design And Architecture

4.1 Usecase Diagram

This Usecase diagram represents the navigation and interactions within a login system and profile management application. Each step corresponds to a specific user action or system response.The process begins with the user attempting to log in. They provide their credentials (such as username and password) to the server. The server verifies the user's credentials. If they are valid, the user gains access to the system.Once logged in, the user can manage their profile. This includes updating personal information, changing passwords, and adjusting settings.Users can communicate with each other through messaging. The server handles message delivery and ensures secure communication. When the user is done, they can log out, terminating their session.

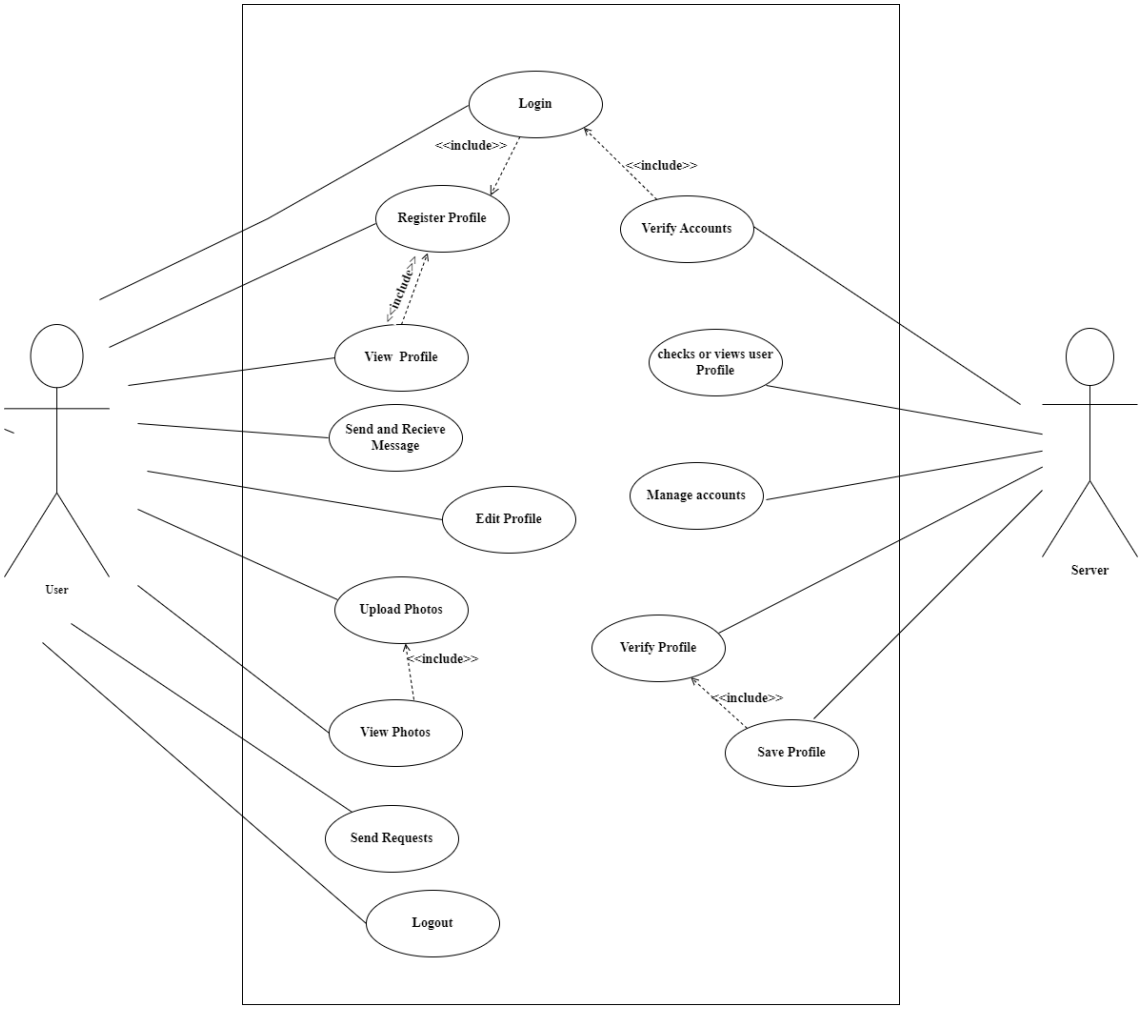


Figure 4.1: Use Case Diagram

4.2 Activity Diagram

The user starts by entering their credentials (username and password) into the login form.The system validates the credentials against a database or authentication service.If the credentials are correct, the user is granted access, and they proceed to the homepage.If the credentials are incorrect, the system displays an error message and prompts the user to try again.Once logged in, the user arrives at the homepage.Here are the available actions Clicking this option allows the user to see their profile information.Users can update their profile details (such as name, email, etc.) by selecting this option. If the user wants to modify their password, they can choose this action. Clicking this option logs the user out of the system.

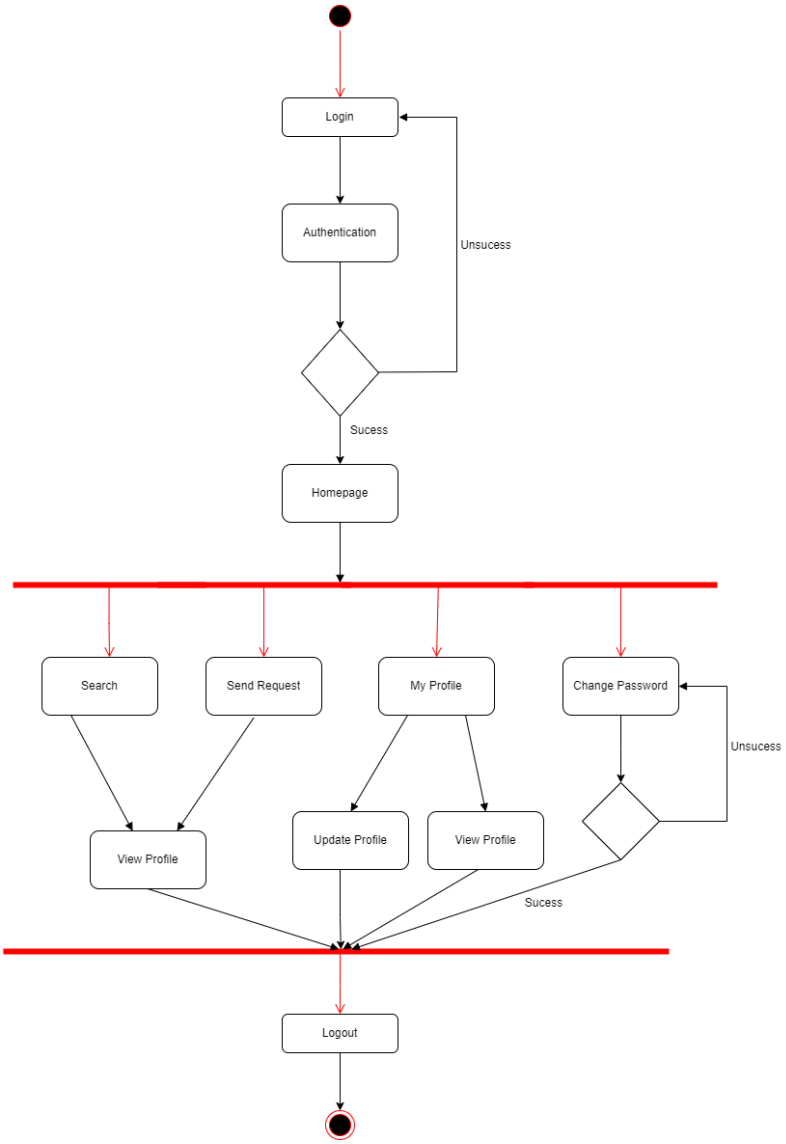


Figure 4.2: Activity Diagram

4.3 ER Diagram

Begins with user registration, where users provide their name, date of birth (DOB), gender, religion, and password. After successful registration, users can log in using their email credentials. Upon logging in, they are directed to the homepage, which features a navigation menu and a search bar. From the homepage, users can make requests or explore suggestions for potential matchups. Accepted matchups lead to chats via a messaging interface.

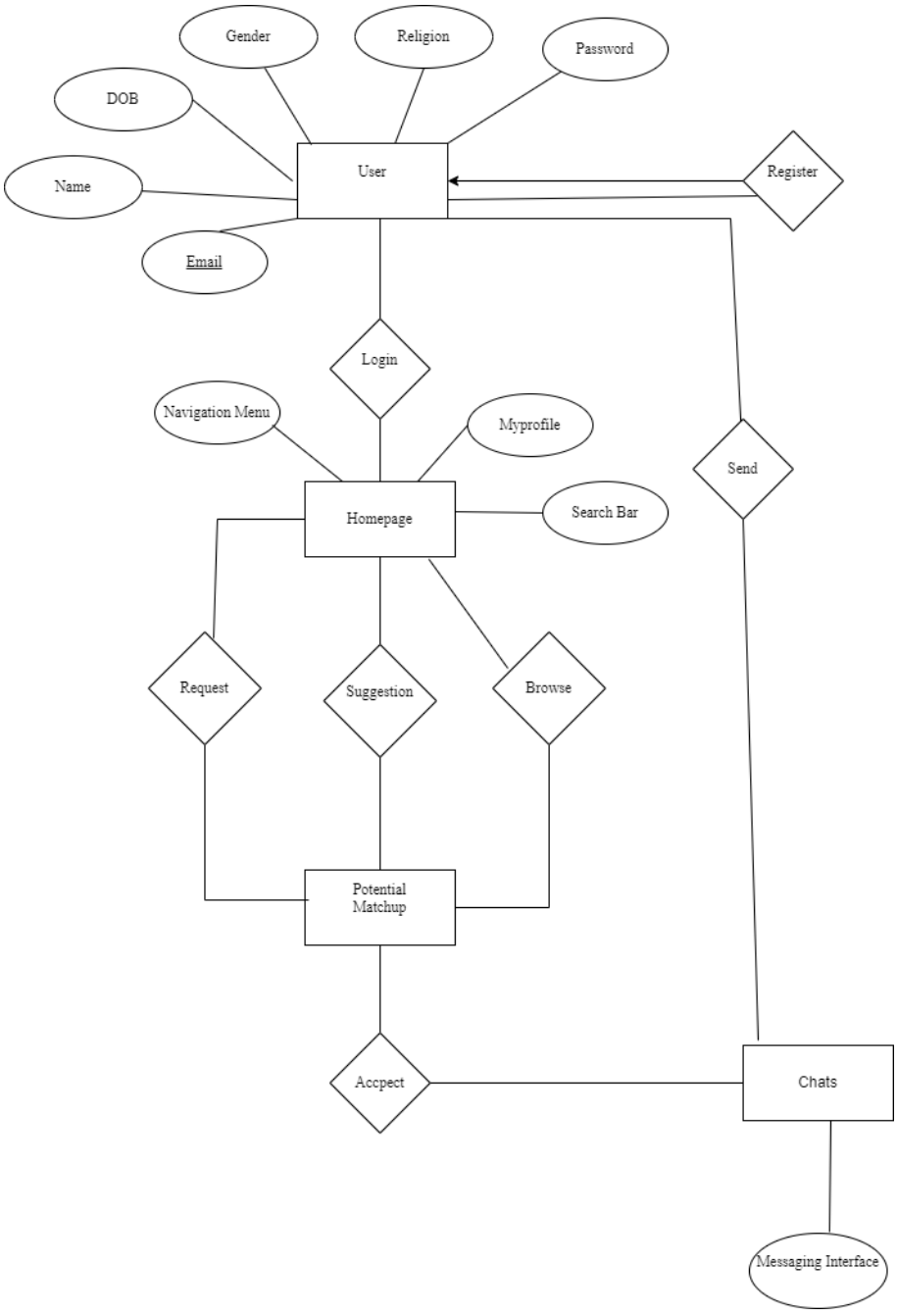


Figure 4.3: ER Diagram

4.4 Class Diagram

Represents a user account within the system. Contains attributes such as unique identifier for the user.The email address associated with the user. The user's login password (usually stored securely). An optional image chosen by the user. Indicates whether the user is active, inactive, or suspended.Facilitates communication between users.Includes the following components.The user initiating the request. The user receiving the request. Indicates whether the request is pending, accepted, or declined.

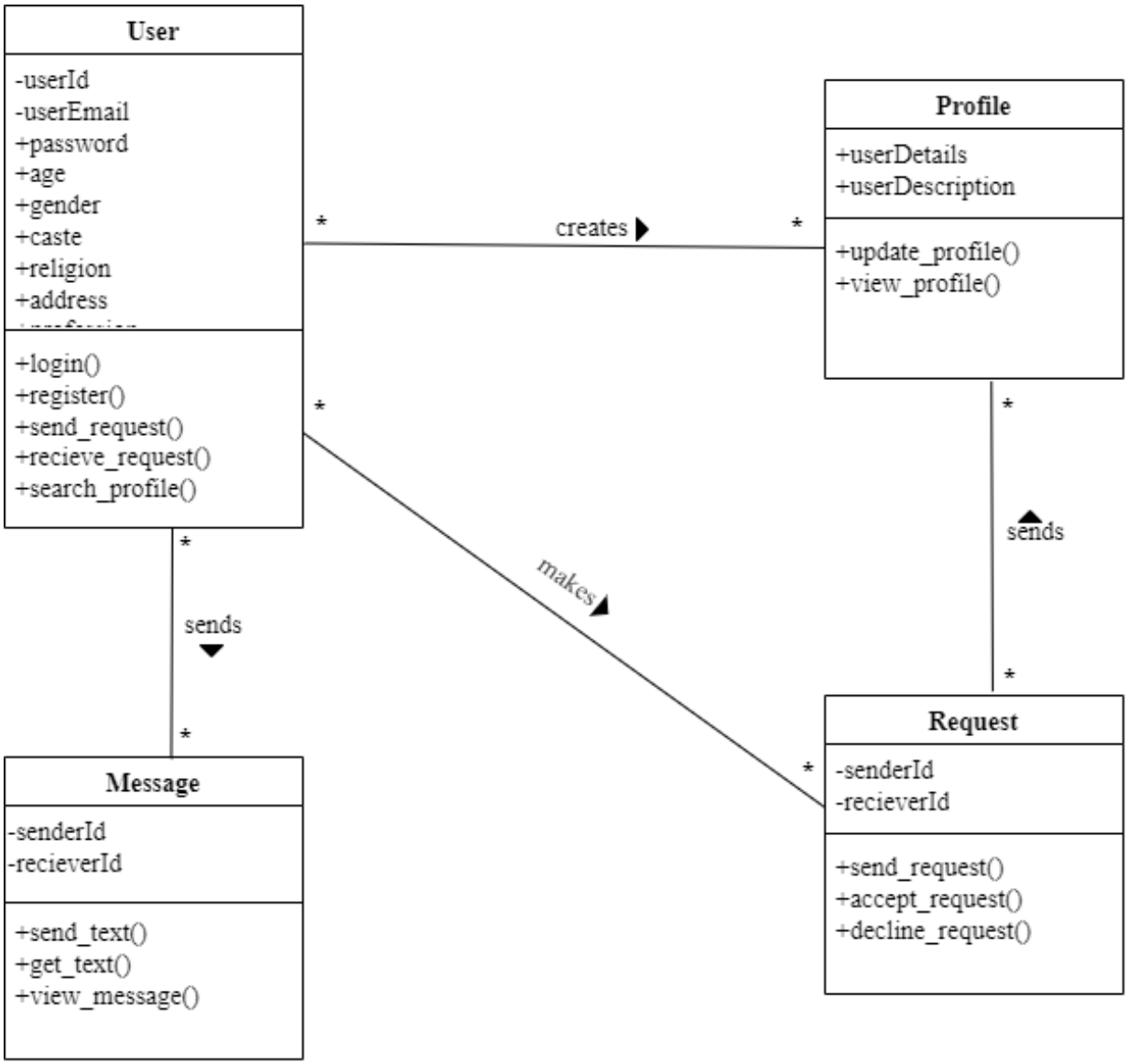


Figure 4.4: Class Diagram

4.5 DFD 0 Diagram

Here DFD0 diagram shows the overall system of ”JODI FINDER:FIND YOUR PAIR”.User begins by registering on the platform.They provide details such as their email address and user name.This step is essential for creating a user profile.After registration, users can log in using their email and password.Successful login grants access to the application’s features.Users can search for potential matches based on specific criteria.

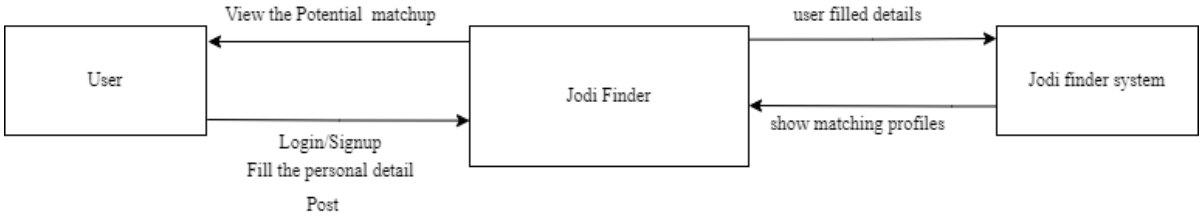


Figure 4.5: DFD 0 Diagram

4.6 DFD 1 Diagram

A new user begins by registering on the platform.They provide details such as their email address and user name.This step is essential for creating a user profile.After registration, users can log in using their email and password.Successful login grants access to the application's features.Users can search for potential matches based on specific criteria.The application likely provides options to filter by age, location, interests, and other relevant factors. Search results display profiles that match the user's preferences.Users can view detailed profiles of potential matches.They can edit and update their own profile information.Interactions include actions like sending messages, expressing interest, or saving profiles.

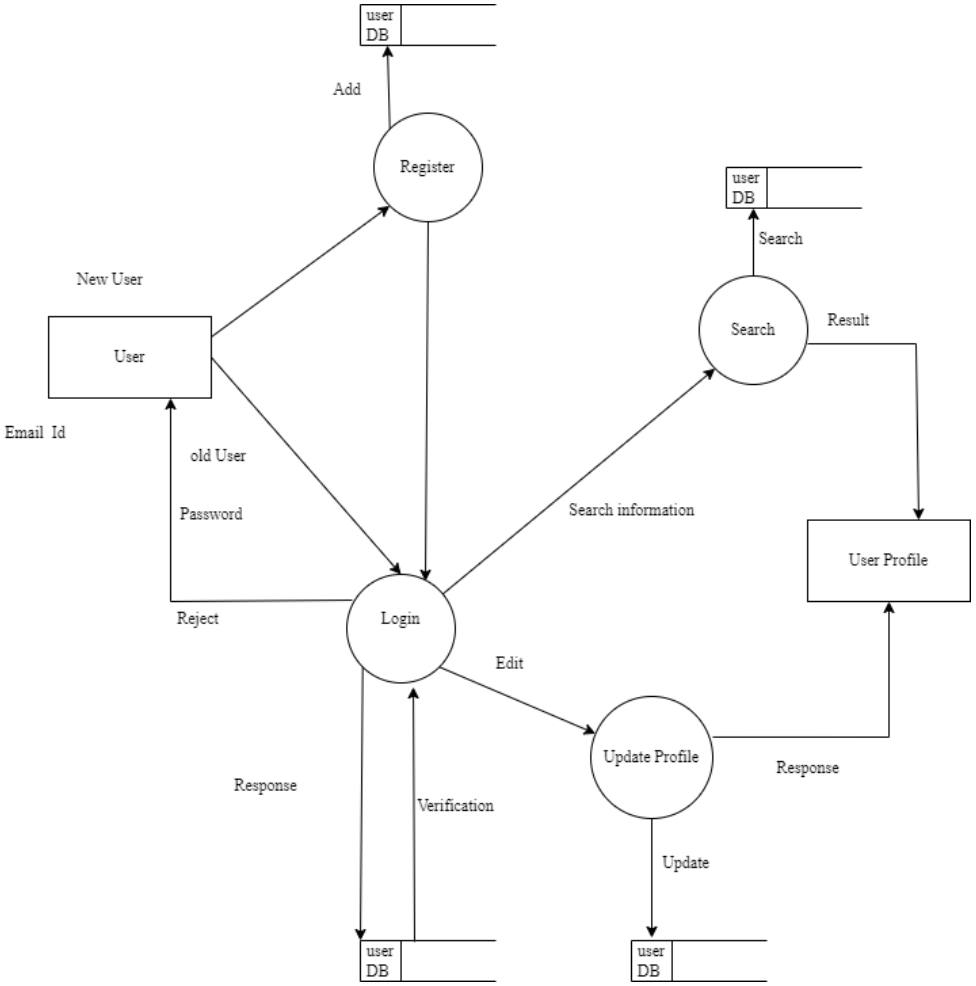


Figure 4.6: DFD 1 Diagram

5 METHODOLOGY

5.1 Theoretical Formulations

5.1.1 Matching Algorithm

The matching algorithm at the heart of the Jodi Finder web app represents a sophisticated and innovative approach to matching people based on compatibility. The algorithm uses advanced data analysis and takes into account various factors such as the user's profile, interests, geographical location, and preferences. This multi-layered approach allows the algorithm to generate highly accurate, personalized match suggestions that go beyond simple demographic criteria. Through continuous learning from user interactions and feedback, the matching algorithm evolves over time to refine its recommendations and improve the overall efficiency of the matching process. The result is a dynamic, adaptable system aimed at connecting users with like-minded people and ultimately facilitating genuine and meaningful connections in the ever-evolving landscape of online relationships.

5.1.2 Communication and Interaction

Communication and interaction is a key component when developing the Jodi Finder web app. These influence the way users interact with the platform and foster meaningful connections. Effective communication design involves presenting information to users in a way that is easy to understand, clear, and persuasive. For the Jodi Finder app, this includes creating engaging and informative content about your user profile, match suggestions, and platform features. Visual elements such as images and icons can be used to improve the communication of important messages. Additionally, the web app incorporate persuasive design principles derived from communication theory to encourage users to complete their profiles, participate in suggested matches, and actively participate in the matchmaking process. The focus of interaction design is on optimizing the user interface (UI) and user experience (UX) to make the app easy to use and navigate. This includes creating intuitive design elements such as buttons, menus, and navigation paths that seamlessly guide users through your app. Applying Donald Norman's design principles, such as affordances and feedback, can improve the clarity and responsiveness of your app's interface. Our interaction design also takes into account the user's emotional experience and strives to make the matching process fun.

5.2 System Block Diagram

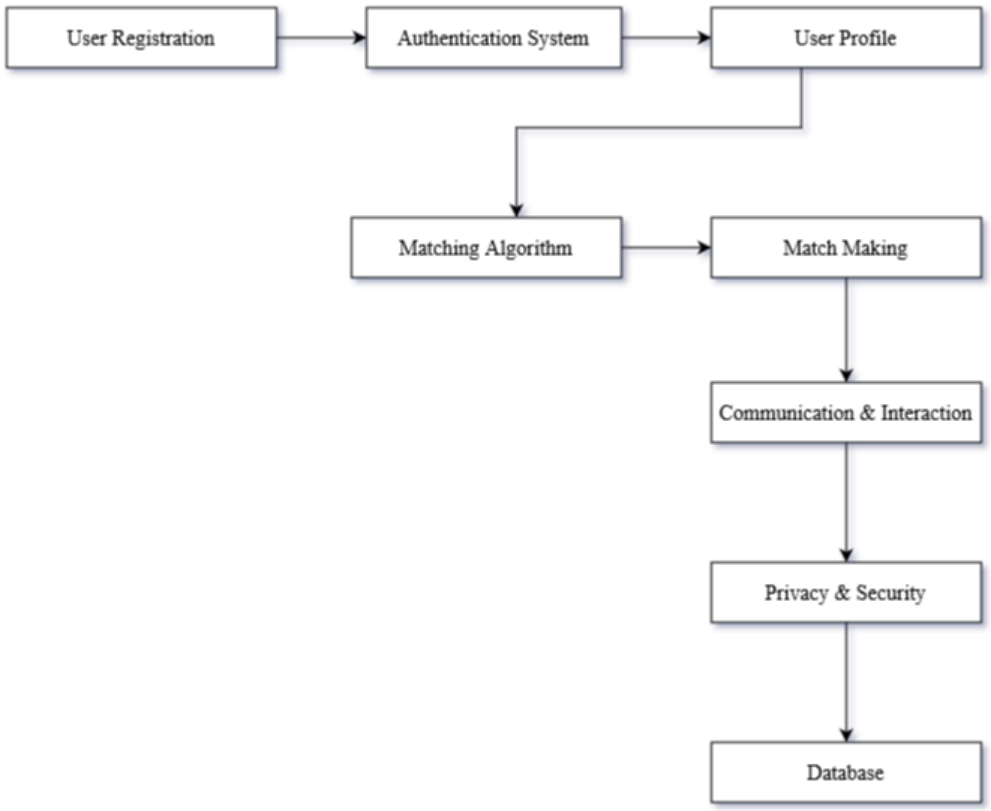


Figure 5.1: System Block Diagram

5.2.1 User Registration

User registration is an important step in the Jodi Finder web app. It allows individuals to create an account by providing basic information such as name, email address, and a strong password. Through this process, users have access to a personalized profile, matched with suggestions and communication features, which form the basis of interaction within the platform.

5.2.2 Authentication System

The Jodi Finder web app's authentication system is like a digital bouncer at your door. Checks whether a user is who they say they are before granting them access. Users enter a username and password, and sometimes an additional layer such as a verification code to ensure only authorized users can access the platform. This system protects users accounts and ensures the security of the Match Finder environment.

5.2.3 User Profile

The Jodi Finder web app user profile serves as your digital representation within the platform. It typically includes important information provided during registration, such as your name, age, and preferences. User profiles are a central component of matchmaking algorithms that use saved details to suggest potential matches based on compatibility.

5.2.4 Matching Algorithm

The matching algorithm at the heart of the Jodi Finder web app represents a sophisticated and innovative approach to matching people based on compatibility. The algorithm uses advanced data analysis and takes into account various factors such as the user's profile, interests, geographical location, and preferences. This multi-layered approach allows the algorithm to generate highly accurate, personalized match suggestions that go beyond simple demographic criteria.

5.2.5 Match-Making

Matchmaking in the Jodi Finder web app uses user data, preferences, and interests to suggest potential matches. Algorithms analyze this information to connect people with common interests, increasing the likelihood of meaningful connections. Continuous improvement is achieved through real-time updates and user feedback.

5.2.6 Communication and Interaction

Communication and interaction within the Jodi Finder web app is essential to achieving meaningful connections. Users interact through an easy-to-use interface, enter their preferences, view game suggestions, and communicate through a chat feature. Effective communication design aims to present information clearly, while interaction design aims to make the app easy to navigate.

5.2.7 Privacy and Security

Privacy and security are of paramount importance to the Jodi Finder web app to ensure user trust and privacy. Data protection measures include protecting user information so that individuals can control what data is shared. Security features such as encryption and secure data storage protect user data from unauthorized access.

5.2.8 Database

The Jodi Finder web application's database is a digital repository where user information, preferences, and interaction history are stored. It acts as the backbone and allows the app to retrieve and provide personalized gaming suggestions, manage user profiles, and store communication history. Essentially, the database is a behind-the-scenes engine that powers the matchmaking process and provides a structured storage system for your app's functionality.

5.3 Instrumentation Requirements

5.3.1 Hardware Tools

This web application simply requires our personal devices to function; it does not require any other hardware. We won't require any additional devices for development other than our computers. The project's hardware needs are simply too economically possible.

5.3.2 Software Tools

For Frontend

- **ReactJs**

  We have used Reactjs for our frontend to create a dynamic and interactive user experience.React encourages a modular approach to building UIs through the use of components. In the context of our website, we have components for displaying user profiles, search filters, etc. Each component can encapsulate its own logic, styling, and behavior, making the codebase more organized and maintainable.React only re-renders the components that are affected, rather than re-rendering the entire page. This can lead to better performance and a smoother user experience, especially when dealing with dynamic content such as real-time updates to user profiles or chat messages.React provides a mechanism for managing component

state, allowing you to store and update data within individual components. This can be useful for handling user interactions such as form submissions, filtering search results, or updating profile information

For Backend

- **NodeJs**

  We have used Nodejs for our Backend to run JavaScript code exterior of a web browser. It employments the V8 JavaScript motor, which is the same motor that powers Google Chrome, to execute code.Node.js empowers engineers to construct adaptable organize applications and is commonly utilized for building server-side applications, APIs (Application Programming Interfacing), real-time web applications, and more. It gives an event-driven, non-blocking I/O demonstrate, which makes it lightweight and productive, especially for dealing with a huge number of concurrent associations.

For DataBase

- **MongoDB**

  We have used MongoDB for data of its adaptability, versatility, and execution. Not at all like conventional social databases, MongoDB stores information in a adaptable, JSON-like organize known as BSON, encouraging the capacity of unstructured or semi-structured information. Its document-oriented approach permits for energetic construction plan, making it profoundly versatile to advancing information models. MongoDB exceeds expectations in high-performance situations, supporting different ordering strategies, sharding, and replication for proficient information capacity and recovery. With level scaling capabilities, MongoDB can disseminate information over numerous servers to handle expanding workloads and capacity requests.

5.4 Dataset Explanation

A record in the context of the Jodi Finder web app refers to a structured collection of information that the application uses for various purposes. This information may include your user profile, preferences, interaction history, and related data necessary for the effective operation of our matchmaking algorithms. Each user's data forms a data set within a data set, and the entire data set serves as the basis for generating personalized match suggestions. Data-sets are dynamic and evolve as users interact with your app, providing real-time updates and feedback. Additionally, datasets are a key component to improving the accuracy and efficiency of the matchmaking process in the long term. Privacy and security measures are of paramount importance when handling records to ensure the confidentiality and integrity of user information.

The JodiFinder Data-Sets consist of the database of users on the basis of their Age, Religion, Caste, Address and Education level

”s123@gmail.com”	”Suresh Bhandari”	”Bhramin”	”Nepalese”	19/2/1995
”r234@gmail.com”	”Ramesh shresta”	”Newar”	”Nepalese”	18/3/1996
”m345@gmail.com”	”Manisha Thakuri”	”Thakuri”	”Nepalese”	17/2/1997
”l745@gmail.com”	”Liza Karki”	”Bhramin”	”Nepalese”	11/5/1998
”k745@gmail.com”	”Kapil parajuli”	”Bhramin”	”Nepalese”	16/10/1999
”a345@gmail.com”	”Anshul Rawal”	”Chhetri”	”Nepalese”	12/7/2000
”s345@gmail.com”	”Sairojj prasai”	”Bhramin”	”Nepalese”	23/6/1994
”y345@gmail.com”	”Yasmini Gyawali”	”Bhramin”	”Nepalese”	13/4/2001
”y345@gmail.com”	”Yasmini sapkota”	”Bhramin”	”Nepalese”	14/11/2002

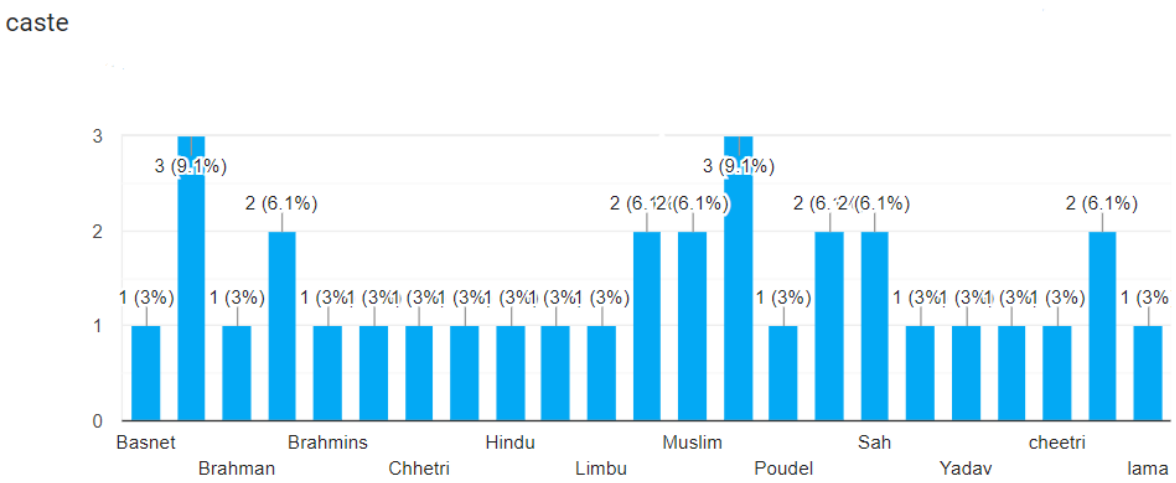


Figure 5.2: Dataset Collection of Caste

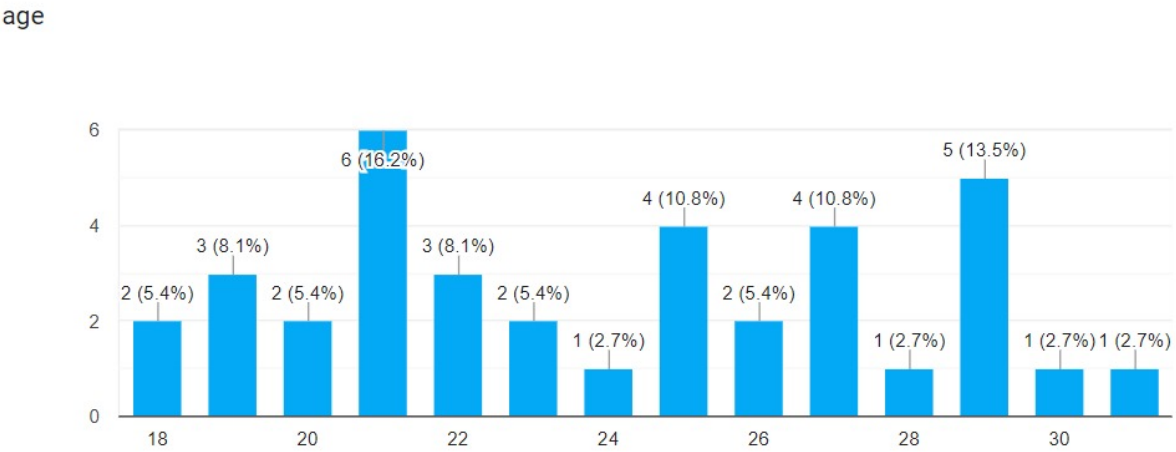


Figure 5.3: DataSet Collection of Age

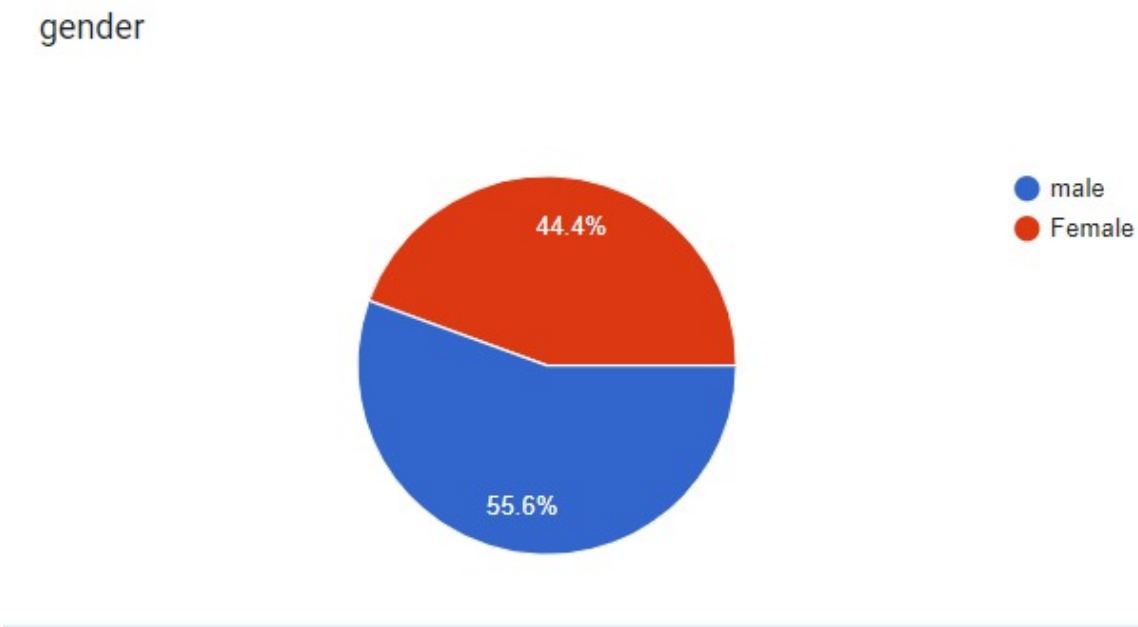


Figure 5.4: DataSet collection of Gender

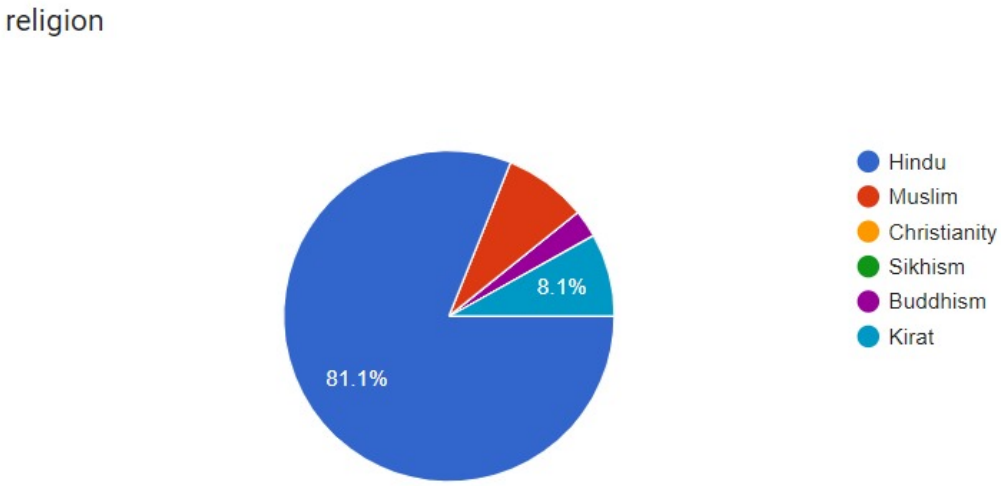


Figure 5.5: Dataset collection of Religion

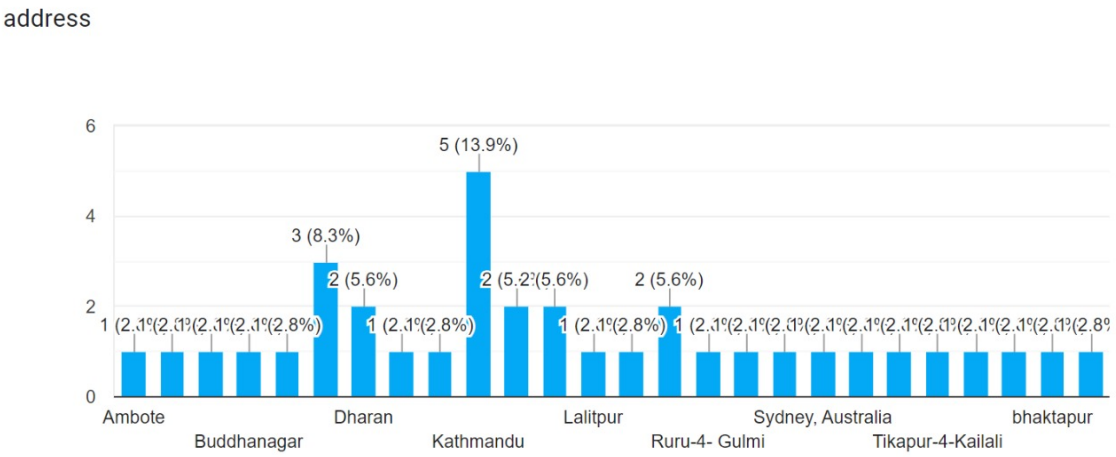


Figure 5.6: Dataset collection of Address

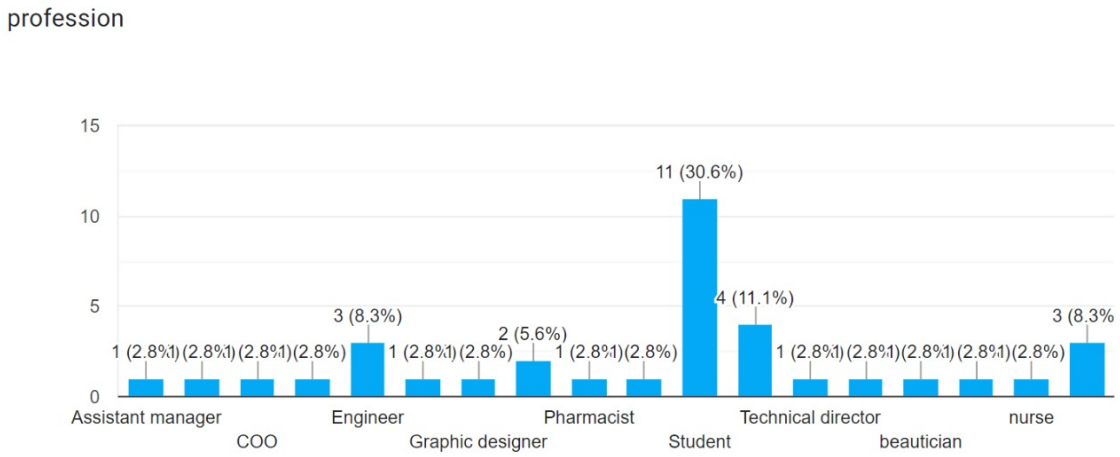


Figure 5.7: Dataset of Profession

5.5 Description of Algorithms

5.5.1 Matching Algorithm

In our project, we integrated a cutting-edge matching algorithm at the core of the Jodi Finder web app. This innovative approach to matching individuals was driven by advanced data analysis techniques, incorporating a diverse range of factors including user profiles, interests, geographical locations, and preferences. By employing a multi-layered methodology, our algorithm produced remarkably accurate and personalized match suggestions that transcended basic demographic criteria.

Our algorithm continuously learned and adapted from user interactions and feedback, ensuring that it evolved over time to refine its recommendations and enhance the overall efficiency of the matching process. This dynamic and adaptable system was designed to connect users with like-minded individuals, fostering genuine and meaningful connections in the ever-changing landscape of online relationships. Through the utilization of this sophisticated matching algorithm, our project aimed to revolutionize the way people connect and interacted online, providing users with a platform that facilitated authentic and fulfilling relationships based on compatibility and shared interests.

Furthermore, the integration of our advanced matching algorithm set our project apart by offering users a unique and unparalleled experience in the realm of online relationship platforms. Unlike traditional approaches that relied solely on surface-level characteristics, our algorithm delved deep into the intricacies of user preferences and behaviors to deliver highly tailored match suggestions.

- **Age:** In this criteria users are sorted and matched on the basis of their age.
- **Caste:** In this criteria users are sorted and matched on the basis of their Caste.
- **Religion:** In this criteria users are sorted and matched on the basis of their Religion.
- **Gender:** In this criteria users are sorted and matched on the basis of their Gender.
- **Location:** In this criteria users are sorted and matched on the basis of their Location.

5.6 Elaboration of Working Principle

The working principle of the Jodi Finder web app is to provide users with a seamless and intuitive platform for innovative approach to match people based on compatibility.

5.6.1 User Profile Creation

The process begins with the user creating detailed profiles, including information about their interests, values, and preferences.

5.6.2 Data Input

The algorithm collects and processes data from user profiles, taking into account factors such as height, religion, location, age, and established preferences.

5.6.3 Algorithm Analysis

The compiled data is analyzed by using advanced algorithms, which employs a multi-faceted approach to determine compatibility and generate potential matches.

5.6.4 Matching Criteria

The algorithm considers a variety of match criteria beyond basic demographics to provide a nuanced understanding of user compatibility.

5.6.5 Real-time learning

The system continuously learns from user interactions and feedback and adjusts match criteria over time to improve the accuracy of future recommendations.

5.6.6 Customizable Filters

Users can narrow down their preferences through customizable filters, allowing for a more personalized matchmaking experience.

5.6.7 Secure Communication

When matched, the app provides secure communication tools that allow users to interact and stay connected in a protected environment.

5.6.8 Data Protection

The operating principle ensures robust data protection measures, protects user data, and creates confidence in the platform's security efforts.

5.6.9 Dynamic Development

Matching algorithms dynamically evolve by adapting to user behavior and preferences, with the goal of continuously improving the overall efficiency of the matching process.

Flowchart of Working Principle

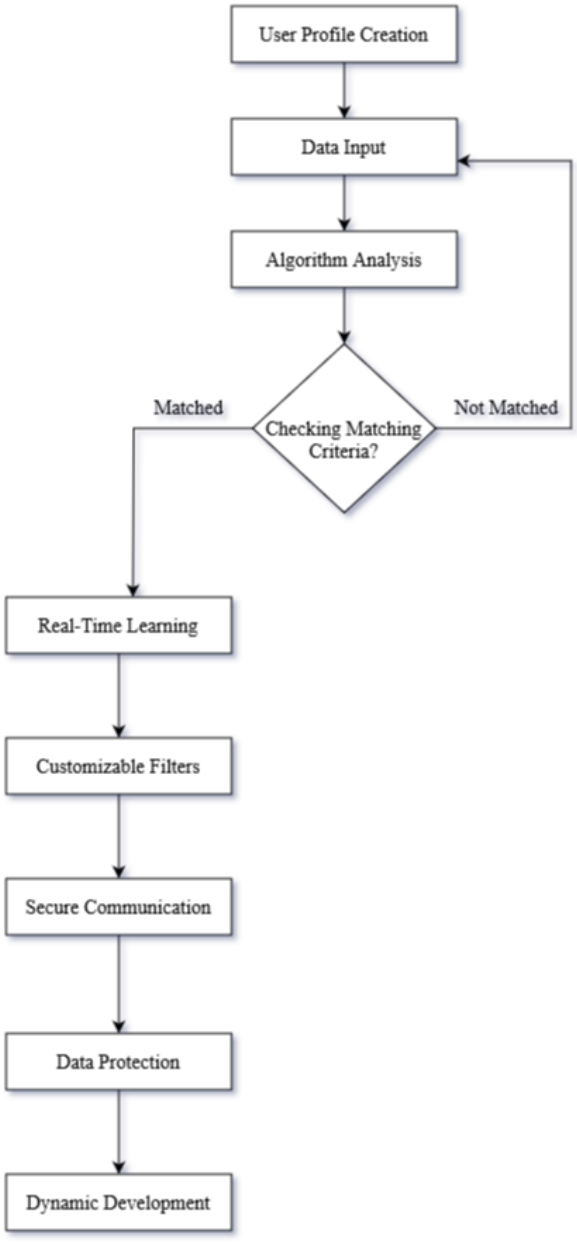


Figure 5.8: Flowchart of Working Principle

6 RESULTS AND ANALYSIS

6.1 Home Page

Options for user login are located in a header section at the top of the website. Users can log in and gain rapid access to different sections of the platform through this section.This section also offers the option to choose the necessary partner's gender, age range, and place of residence. This is the initial and previous method of providing data input to the web application system. Although this is an expected outcome, there may be a small variation in the input method.

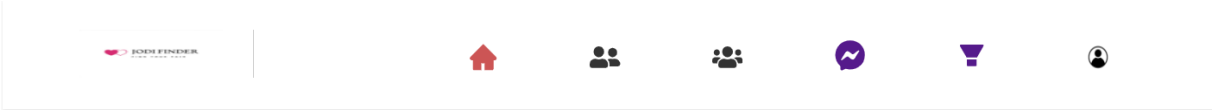


Figure 6.1: Navigation Bar

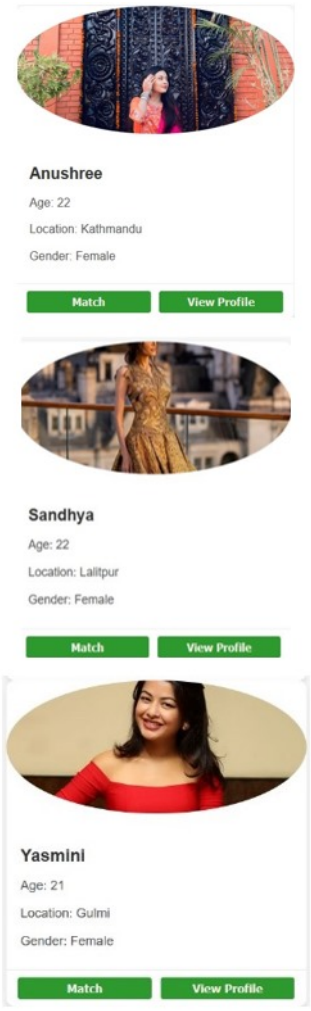


Figure 6.2: Homefeed

6.2 Login page

Login Page will, in essence, function in the same way as other webapps. Its primary features are as follows: users can log in with their username and password, and in the event that they forget their password, we can utilize the forget password feature to keep their ID. Additionally, this page offers the option to create an account on the web application, as illustrated in fig:.

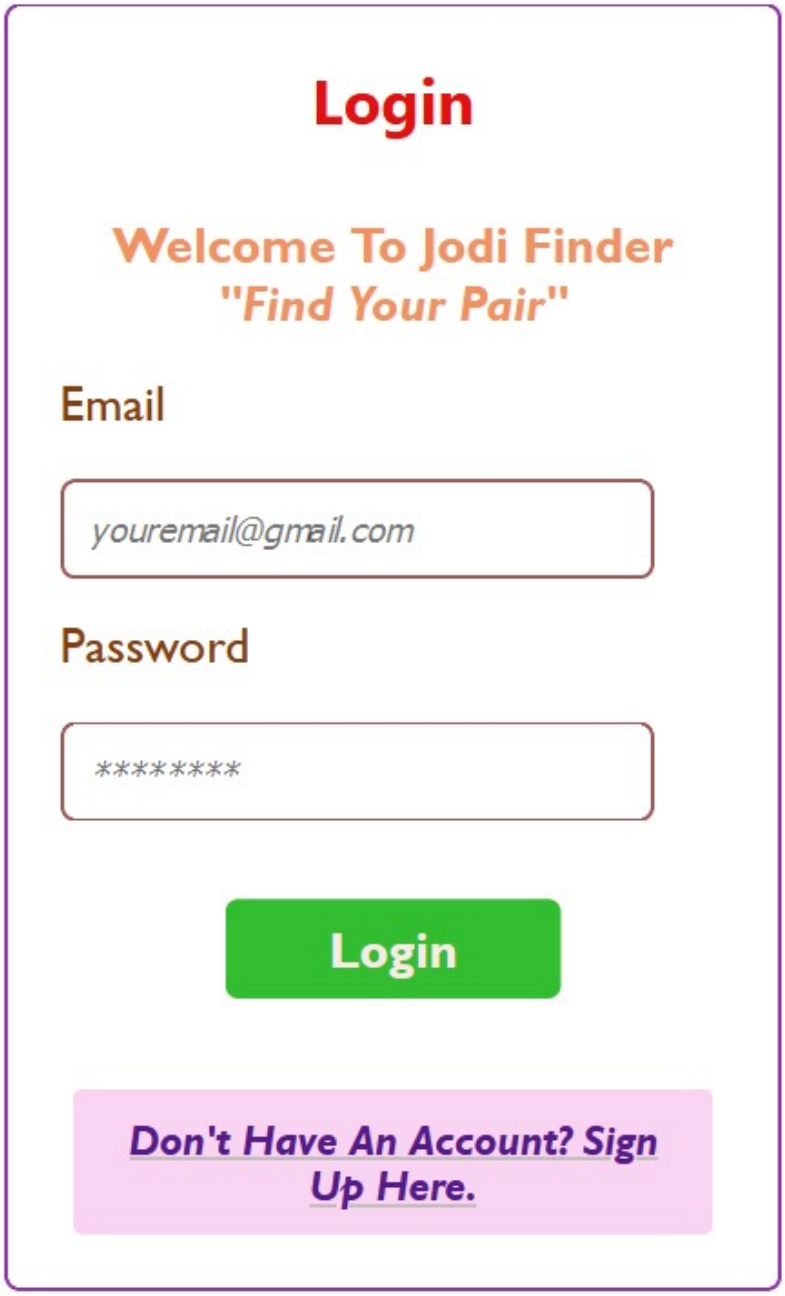


Figure 6.3: Login Page

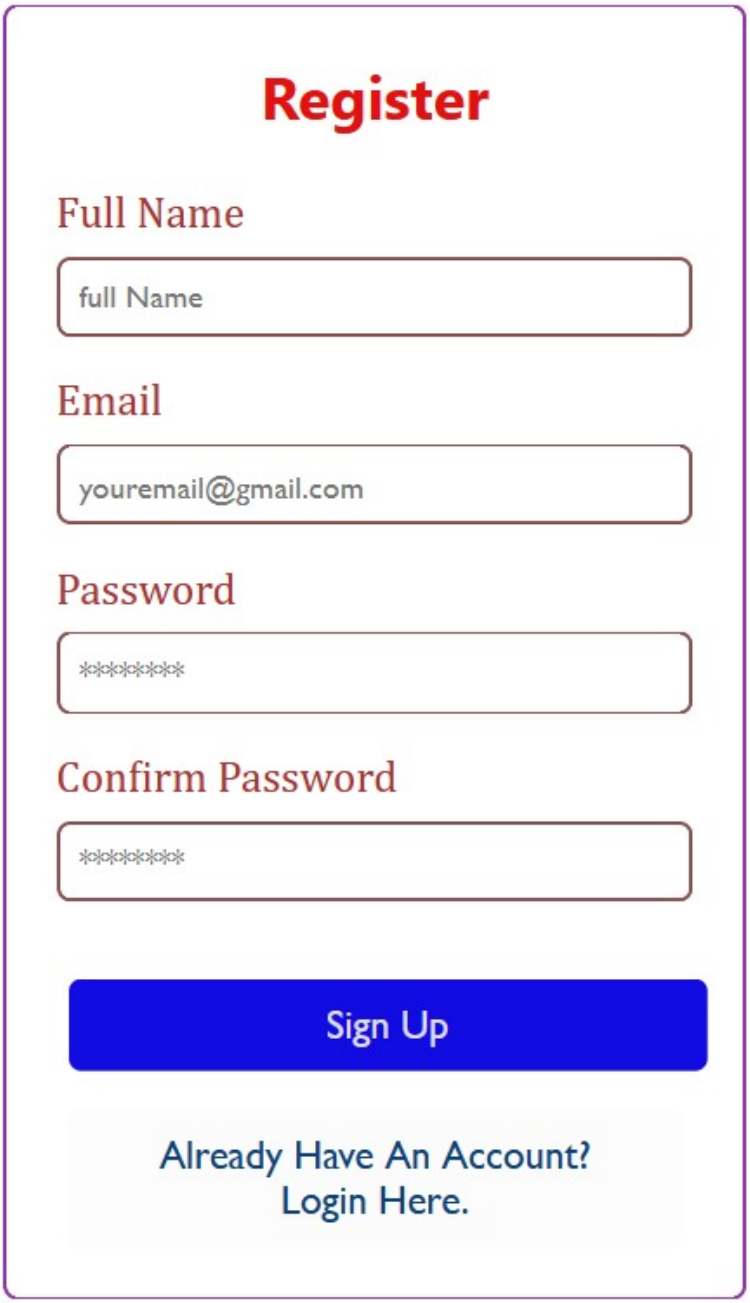


Figure 6.4: Register Page

6.3 Create User Profile

Profile creation page in a web app is designed to collect information from users to create a personalized account. This page typically includes various input fields and options to help users set up their profiles.

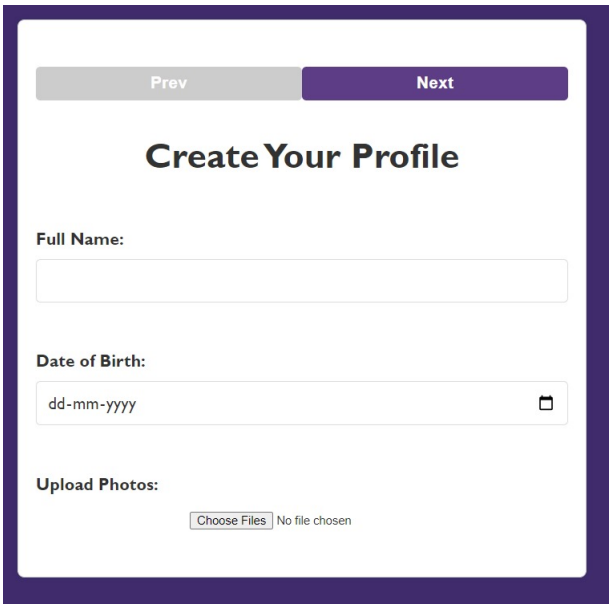


Figure 6.5: Create Profile page 1

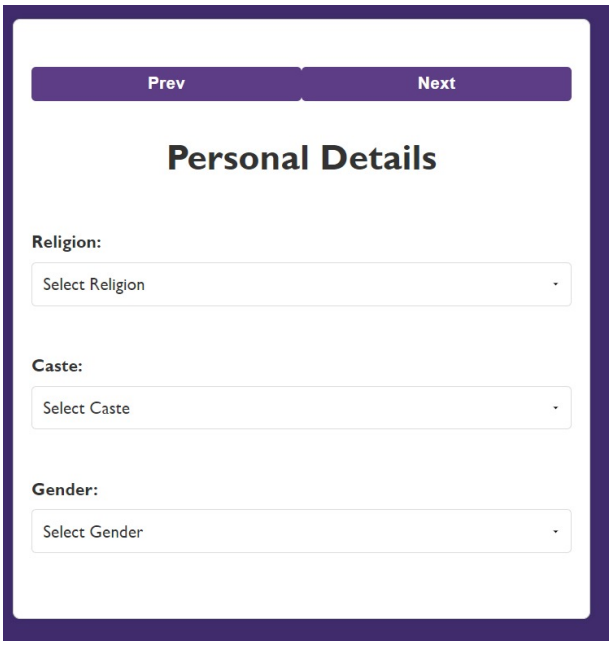


Figure 6.6: Create Profile page 2

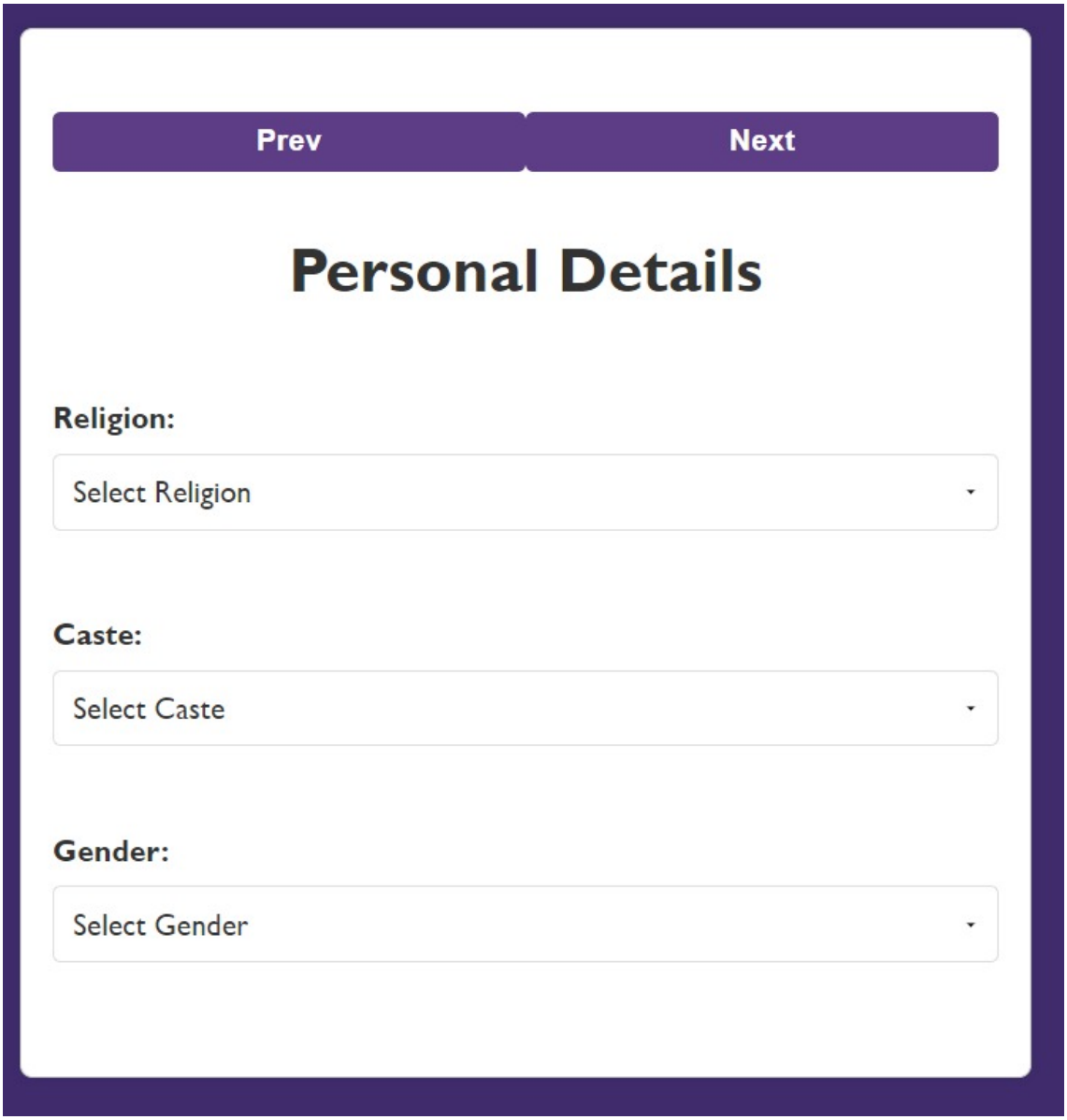


Figure 6.7: Create Profile page2

6.4 Search Filtering

Users begin by entering their preferences and criteria into the filtering system. These preferences can include age range, religion, caste, location, and more.Filtering algorithm processes the user's input and applies it to the database of user profiles. The algorithm uses various criteria specified by the user to filter out profiles that do not meet the specified requirements.The algorithm identifies profiles that match the user's specified criteria.It ranks or sorts the matching profiles based on their relevance to the user's preferences. Profiles that closely match the user's criteria are typically displayed at the top of the search results.

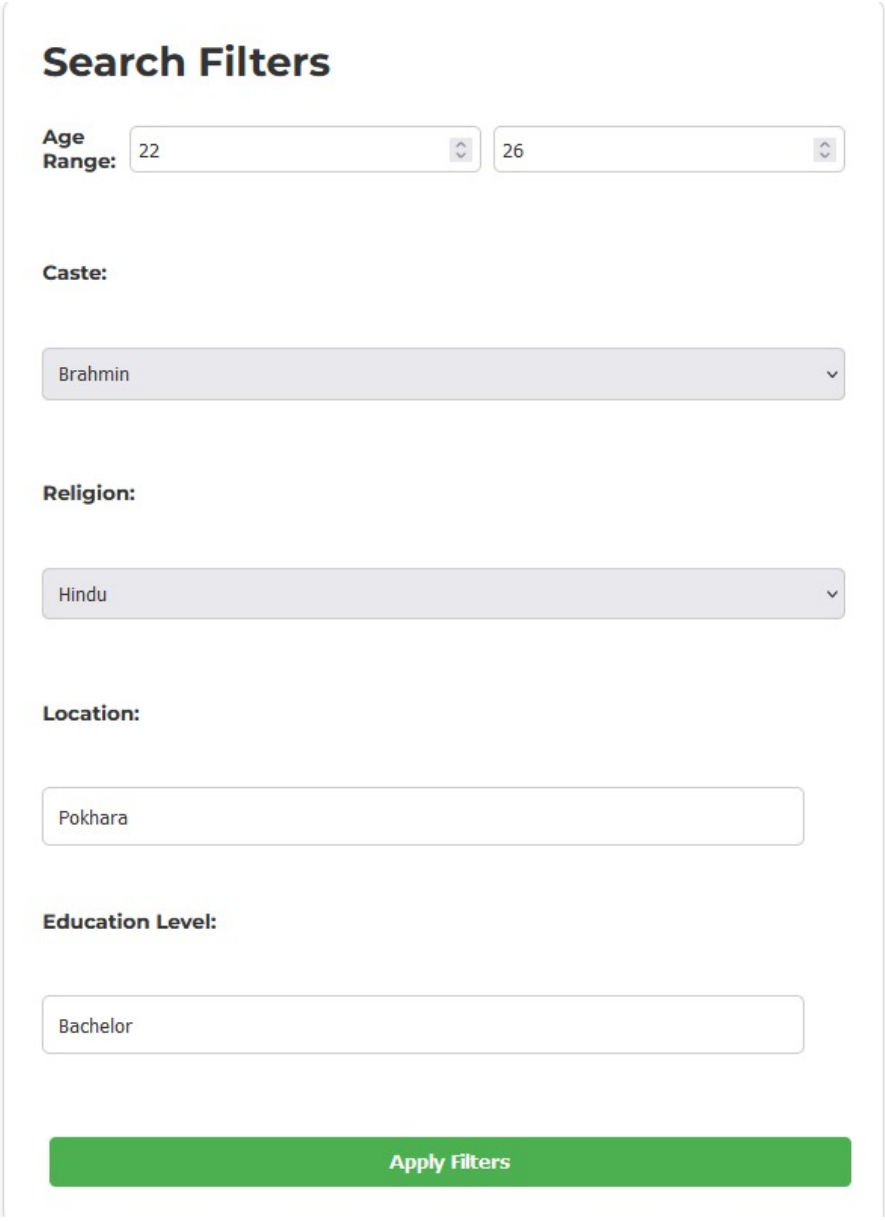


Figure 6.8: Filtering search

6.5 Verification and Validation

When a user register for a new account or logging in, the system prompts the user to provide their email address.Once the user provides their contact information, the system generates a unique OTP and sends it to their email address. The OTP is usually a randomly generated numeric or alphanumeric code with a limited validity period.When user receives the OTP on their email inbox and submit their OTP.The system compares the OTP entered by the user with the OTP generated and sent by the system. If the OTPs match, the user‘s identity is verified, and they are allowed to proceed with the requested action.This step confirms that the user is authorized to access the sensitive features or perform critical actions within the website.OTP verification adds an extra layer of security to the authentication process, helping to ensure that only authorized users can access sensitive features or perform critical actions within the matrimonial website.OTP verification process provides an additional layer of security to the authentication process, ensuring that only authorized users can access sensitive features or perform critical actions within the matrimonial website. It also helps to verify the ownership of the email address associated with the user’s account, adding an extra level of confidence in the user’s identity.

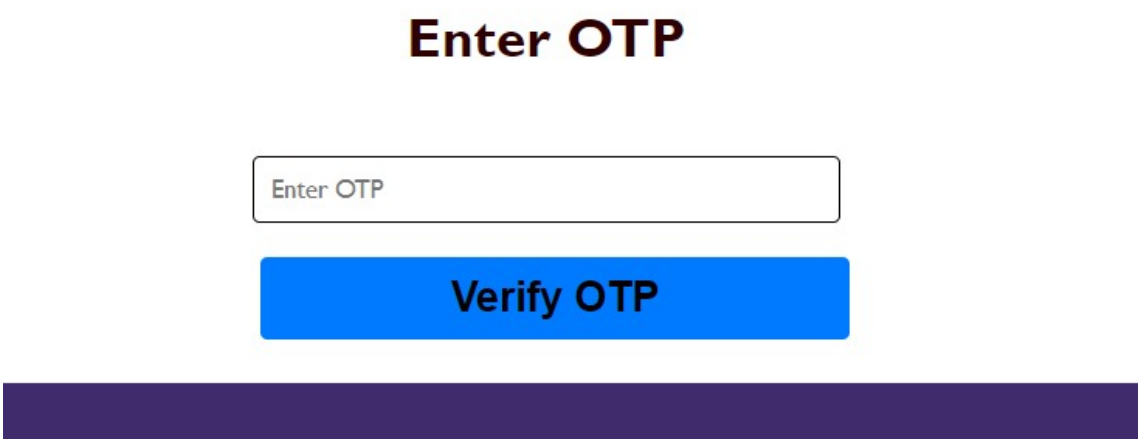


Figure 6.9: OTP Bar

7 FUTURE ENHANCEMENT

- **End to End Encrypted Chat:**Data is encrypted on the sender's device and only decrypted on the recipient's device, meaning that even the service provider facilitating the communication cannot access the plaintext content of the messages.
- **Community and Support Groups:**Build up online communities and back bunches inside the wedding site for clients to put, through share encounters, and look for counsel from peers exploring comparative relationship challenges.
- **Feedback and Improvement Mechanisms:**Implement feedback mechanisms and user surveys to collect valuable insights and suggestions for continuous improvement, ensuring that the platform evolves to meet the changing needs and preferences of its user base.
- **Relationship Counseling Services:**Accomplice with qualified relationship counselors and specialists to offer personalized counseling administrations to clients, making a difference them explore challenges, resolve clashes, and construct sound, satisfying connections.

8 CONCLUSION

Begins with user registration, where users provide their name, date of birth (DOB), gender, religion, and password. After successful registration, users can log in using their email credentials. Upon logging in, they are directed to the homepage, which features a navigation menu and a search bar. From the homepage, users can make requests or explore suggestions for potential matchups. Accepted matchups lead to chats via a messaging interface.Jodi Finder websites serve as profitable stages for people looking for life accomplices, advertising comfort, openness, and a tremendous pool of potential matches. In any case, these stages moreover come with confinements, counting confirmation challenges, security concerns, and social limitations. To address these impediments and meet the advancing needs of clients, future improvements may incorporate progressed coordinating calculations, character confirmation measures, and comprehensive highlights catering to different inclinations and communities. By persistently enhancing and prioritizing client protection and security, marital websites can endeavor to cultivate significant associations,

8.1 Limitation

- **Limited Scope for Specialized Preferences:** Individuals with certain preferences, such disabilities, LGBTQ+ status, or non-traditional lifestyles, could encounter restricted alternatives or a lack of inclusivity on popular Jodi Finder websites.
- **Social Stigma:**Even while online dating is becoming more and more common, utilizing Jodi Finder websites may still carry social stigma, particularly in conservative cultures or within particular age groups.
- **Dependency on Technology:**Websites are vulnerable to cyberattacks, server outages, and other issues that can impair platform dependability and negatively impact user experience.
- **Lack of Physical Interaction:**Online dating services don't offer in-person connection, which is essential for determining compatibility and chemistry. Mismatches between online personalities and real-life dynamics may result from this.

APPENDIX A

A.1 Project Schedule

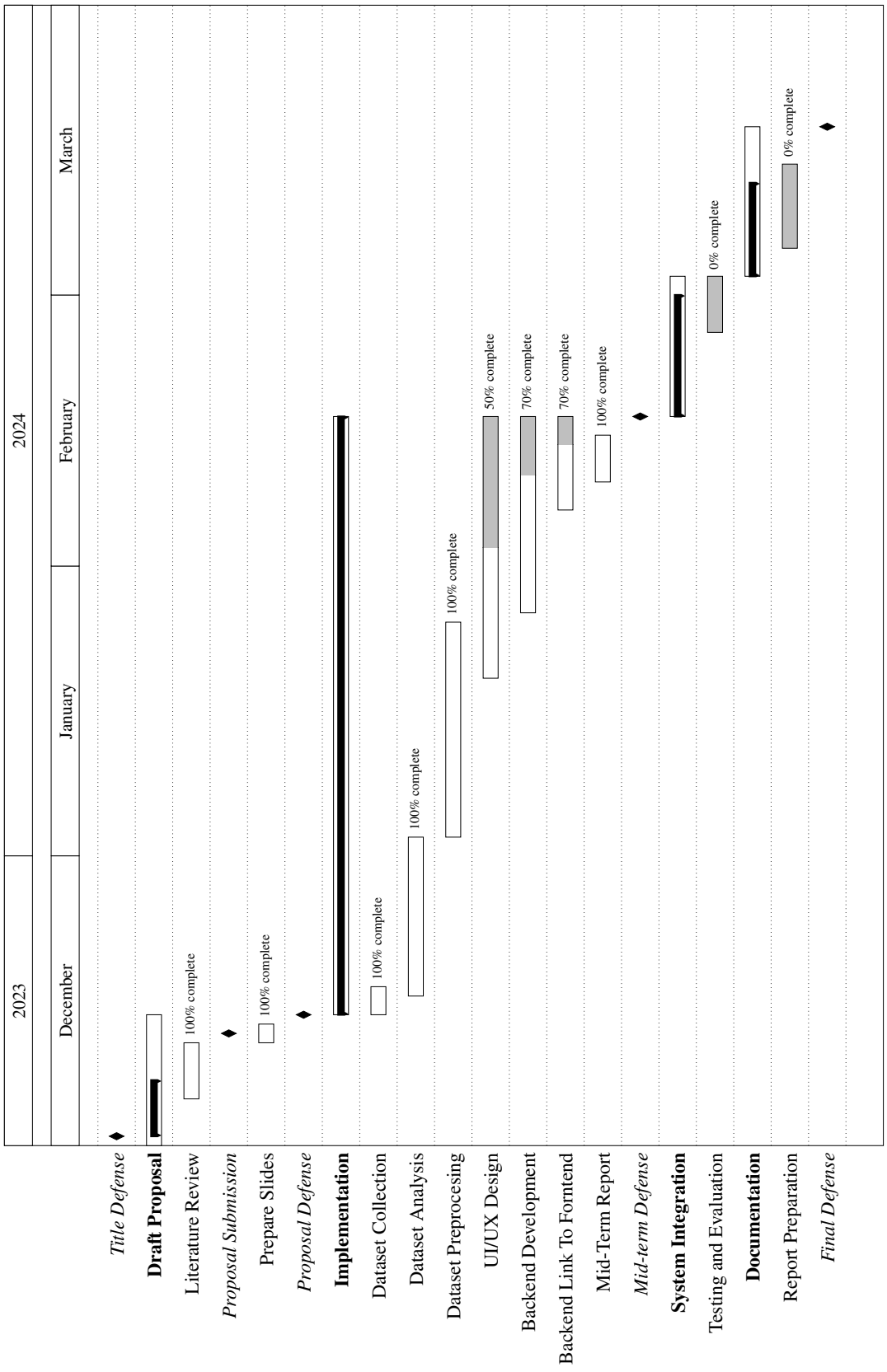
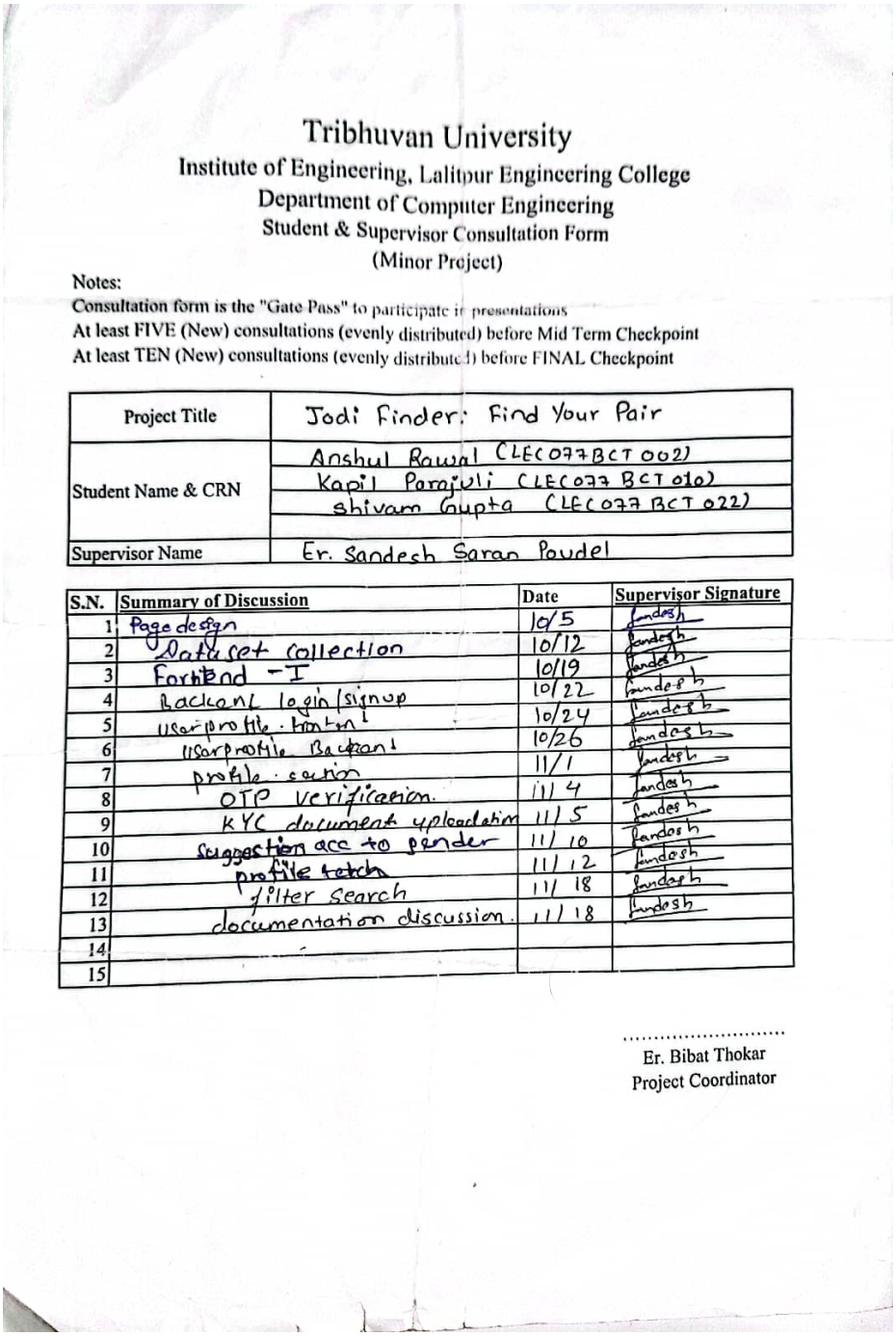


Figure A.1: Gantt Chart showing Expected Project Timeline.

A.2 Supervisor Consultation form



Tribhuvan University
Institute of Engineering, Lalitpur Engineering College
Department of Computer Engineering
Student & Supervisor Consultation Form
(Minor Project)

Notes:
Consultation form is the "Gate Pass" to participate in presentations
At least FIVE (New) consultations (evenly distributed) before Mid Term Checkpoint
At least TEN (New) consultations (evenly distributed) before FINAL Checkpoint

Project Title	Jodi Finder: Find Your Pair
Student Name & CRN	Anshul Rawal (LEC077BCT002) Kapil Parajuli (LEC077BCT010) Shivam Gupta (LEC077BCT022)
Supervisor Name	Er. Sandesh Saran Poudel

S.N.	Summary of Discussion	Date	Supervisor Signature
1	Page design	10/5	Sandesh
2	Dataset collection	10/12	Sandesh
3	Frontend - I	10/19	Sandesh
4	Backend login/signup	10/22	Sandesh
5	Userprofile - Frontend	10/24	Sandesh
6	Userprofile Backend	10/26	Sandesh
7	profile section	11/1	Sandesh
8	OTP verification.	11/4	Sandesh
9	KYC document uploadation	11/5	Sandesh
10	Suggestion acc to gender	11/10	Sandesh
11	profile fetch	11/12	Sandesh
12	filter search	11/18	Sandesh
13	documentation discussion.	11/18	Sandesh
14			
15			

.....
Er. Bibat Thokar
Project Coordinator

Figure A.2: Supervisor Consultation form

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