A
PROJECT REPORT
ON
Find-My-Lawyer

Submitted in partial fulfilment for the award of

(PG-DAC) from

Institute of Emerging Technologies

Authorized Training Centre

Under the Guidance of Mrs.Sampada Tarare
BY Name of students and PRN

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<u>Certification</u>

This is to certify that the project report entitled: **Find My Lawyer** The web based platform for all pet related services is a bonfire work carried out by **1) Yede Abhishek 2) Ganesh Kale 3) Navinee Thorat 4) Vivekanand Bachche 5) Ankit Manwar** submitted in partial fullfilment of the requirement for the C-DAC ACTS, DAC course in the Institute of Emerging Technology in the batch of march 2024.

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ACKNOWLEDGEMENT

This project **Find My Lawyer** : The Web-based Platform for all Advocate-Client related services was a great learning experience for us and we are submitting this work to Advanced Computing Training School (CDAC).

We are very glad to mention **Mrs.Sampada Tarare** for her valuable guidance to work on this project. His guidance and support helped us to overcome various obstacles and intricacies during the course of project work.

Our most heart full thanks goes to **Mr. Sangram Patil (Director ,IET)**who gave all the required support and kind coordination to provide all the necessities like required hardware , internet facility and extra lab hours to complete the project and throughout the course up to the last day here in C-DAC ACTS, Pune

Name & Sign of Students

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ABSTRACT

The web-based FindMyLawyer project aims to create a comprehensive platform for individuals seeking legal assistance. The platform is designed to connect users with a wide range of legal professionals and services, offering a one-stop solution for legal needs. Users can search for lawyers based on their specific requirements, such as practice area, location, and availability. The platform allows users to browse profiles of legal professionals, read reviews, and book consultations at their convenience. Additionally, the system provides a feature for legal professionals to register, create detailed profiles, and advertise their services to potential clients. An administrative section is included to manage and verify the profiles of both lawyers and users, ensuring the integrity and reliability of the platform.

To develop the FindMyLawyer website, a variety of technologies are employed. These include multi-tiered architecture, server and client-side scripting techniques, and implementation technologies such as Spring MVC. Key programming languages used in development are Core Java and Advanced Java, while relational databases like MySQL support data management. This project's objective is to deliver a user-friendly platform where clients can efficiently find and connect with legal professionals, streamlining the process of obtaining legal services.

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1. INTRODUCTION

The **Find My Lawyer** platform is designed to bridge the gap between individuals seeking legal assistance and lawyers offering legal services. The platform provides an easy-to-use interface for users to find, evaluate, and connect with lawyers based on their legal needs. This system aims to streamline the process of finding legal representation and advice, ensuring users have access to qualified legal professionals.

1.1 Purpose

The purpose of this Software Requirement Specification (SRS) for **Find My Lawyer** is to outline the objectives and functionalities of the platform. This document provides a detailed description of the system's expected behavior, functionalities, and constraints. It serves as a foundational guide for the development team, ensuring a clear understanding of user requirements and project goals.

This SRS will also be useful for future developers and maintenance teams as a reference for understanding the initial design and for making modifications or enhancements to the system.

1.2 Need of Find My Lawyer

The **Find My Lawyer** platform enhances the accessibility and efficiency of legal services by providing an online hub where users can:

- Access detailed profiles of legal professionals.
- Book consultations and appointments.
- Read and provide feedback on legal services.
- Ensure transparency and ease in connecting with qualified legal assistance.

Integrating these services into a single platform improves user experience, expands the reach of legal professionals, and facilitates better client-lawyer relationships.

1.3 Overview

The subsequent sections of this document provide a comprehensive overview of the **Find My Lawyer** platform, including:

- **Section 2: Overall Description** - Describes the product perspective, functionalities, user characteristics, assumptions, and constraints.
- **Section 3: Specific Requirements** - Outlines detailed functional and non-functional requirements, including external interface requirements, software system attributes, performance, capacity, availability, and safety requirements, as well as a requirement traceability matrix.

2. Problem Definition and Scope

2.1 Problem Statement and Scope of the Project

The **Find My Lawyer** platform aims to address several challenges faced by individuals seeking legal assistance and lawyers providing legal services. The following are key technical and operational issues, along with their potential solutions:

Data Modelling and Database Design:

- **Challenge:** Creating an efficient and scalable database schema that accurately represents the relationships between users, lawyers, appointments and administrative functions.
- **Solution:**
    - **Database Schema Planning:** Invest time in designing a robust database schema that accommodates all entities and their relationships. Consider the use of normalized tables to reduce redundancy and improve data integrity.
    - **ORM Tools:** Utilize Object-Relational Mapping (ORM) tools such as Hibernate in Spring Boot to simplify database interactions and reduce complexity. ORM tools can help manage database operations more effectively and maintain consistency.
    - **Schema Evolution:** Regularly review and refine the schema as the project evolves to accommodate new features and ensure optimal performance.

User Authentication and Authorization:

- **Challenge:** Ensuring secure authentication and authorization mechanisms to protect user data and control access to different parts of the platform.
- **Solution:**
    - **Authentication Libraries:** Implement established authentication libraries, such as Spring Security, to manage user authentication and authorization.
    - **Best Practices:** Follow best practices for security, including using hashed passwords, implementing secure password reset workflows, and applying role-based access control (RBAC) to manage permissions for users, lawyers, and administrators.

Concurrency and Data Consistency:

- **Challenge:** Managing data consistency and handling concurrent updates to prevent conflicts and ensure data integrity.
- **Solution:**
    - **Database Transactions:** Use database transactions to handle multiple operations as a single unit, ensuring consistency and rollback capabilities in case of errors.
    - **Isolation Levels:** Understand and apply appropriate isolation levels (e.g., READ COMMITTED, REPEATABLE READ) to manage concurrent access and prevent issues like dirty reads or lost updates.

○ **Locking Strategies:** Implement optimistic or pessimistic locking strategies to handle concurrent updates and maintain data integrity.

Search and Filtering:

● **Challenge:** Providing efficient and fast search capabilities to help users find lawyers based on their criteria and preferences.
● **Solution:**
    ○ **Search Engines:** Integrate search engines like Elasticsearch to handle complex search queries and provide fast, relevant results.
    ○ **Pagination and Indexing:** Implement pagination to handle large result sets and indexing to improve search performance and reduce query times.
    ○ **Caching:** Cache frequently used search results to minimize database load and enhance user experience.

2.2 Goals and Objectives

The primary goal of the **Find My Lawyer** platform is to create a comprehensive and user-friendly system that connects individuals seeking legal assistance with qualified lawyers. The objectives include:

● **User Convenience:** Provide an easy-to-navigate platform where users can search for lawyers, view profiles, book appointments.
● **Lawyer Visibility:** Enhance the visibility of legal professionals and enable them to manage their profiles, appointments, and interactions with clients.
● **Transparency:** Foster transparency in legal services through detailed profiles, client reviews, and secure communication channels.
● **Efficiency:** Streamline the process of finding and connecting with legal professionals to save time and improve the overall experience for users and lawyers alike.
● **Community Building:** Promote a community of responsible and professional legal practitioners committed to providing high-quality legal services.

2.3 Product Functions

The **Find My Lawyer** platform will include the following general functions:

1. **User Registration and Authentication**
    ○ Users can create accounts, log in securely, and manage their profiles.
    ○ Authentication mechanisms will ensure that only authorized users can access specific features.
2. **Search and Filter Lawyers**
    ○ Users can search for lawyers based on various criteria such as specialty, location, and rating.
    ○ Filtering options will help narrow down search results to match user preferences.
3. **View Lawyer Profiles**

- ○ Detailed profiles for each lawyer will include qualifications, experience, and client reviews.
- ○ Users can view contact information and areas of expertise.
4. **Book Appointments**
   - ○ Users can schedule and manage appointments with lawyers through the platform.
   - ○ Lawyers can accept or decline appointment requests and manage their schedules.
5. **Admin Dashboard**
   - ○ Administrators can manage user accounts, monitor platform activity, and configure system settings.
   - ○ Tools for managing content and handling user issues will be provided.
6. **Secure Communication**
   - ○ Implement secure messaging features for communication between clients and lawyers.
   - ○ Ensure confidentiality and privacy of user interactions.

3. <u>Software Requirement Specification</u>

3.1 Proposed System and Scope

The **Find My Lawyer** platform aims to deliver a comprehensive and user-friendly application designed to connect individuals seeking legal assistance with qualified legal professionals. The platform will serve two main groups of users:

1. Lawyers (Service Providers)

- ● **Showcase Offerings:** admin can create and manage lawyer profiles, including detailed descriptions of their legal specialties, qualifications, experience, and areas of expertise.
- ● **Interact with Customers:** Lawyers can respond to client inquiries, manage appointment requests, and communicate securely with clients through the platform.
- ● **Ensure Service Quality:** Lawyers can receive and respond to client message, ensuring transparency and maintaining high standards of service.

2. Users (Clients/Customers)

- ● **Create Accounts:** Users can sign up and create personal accounts, allowing them to manage their information, preferences, and interaction history.
- ● **Interact with Service Providers:** Users can view detailed profiles of lawyers, request consultations, and communicate securely with legal professionals.
- ● **Post Reviews:** After receiving legal services, users can leave feedback and rate their experiences. This helps other users make informed decisions and provides valuable insights for lawyers.

Scope of the Platform

The **Find My Lawyer** platform will encompass the following key functionalities:

1. **User Registration and Authentication:**
   - **Registration:** Allow users and lawyers to create accounts with necessary details.
   - **Authentication:** Secure login mechanisms to ensure user privacy and data protection.
2. **Profile Management:**
   - **Lawyer Profiles:** Enable lawyers to set up and update their profiles, including qualifications, practice areas, and contact information.
   - **User Profiles:** Allow users to manage their personal information and preferences.
3. **Appointment Scheduling:**
   - **Booking:** Users can request and book consultations with lawyers through an integrated scheduling system.
   - **Management:** Lawyers can accept or decline appointment requests and manage their schedules.
4. **Secure Communication:**
   - **Messaging:** Provide a secure messaging system for communication between users and lawyers.
   - **Privacy:** Ensure that all communications are encrypted and private.
5. **Administrative Functions:**
   - **User Management:** Admins can manage user accounts, handle disputes, and oversee platform activities.
   - **Content Management:** Admins can manage platform content, such as lawyer listings.
6. **Performance and Scalability:**
   - **Scalability:** Design the platform to handle increasing numbers of users and data efficiently.
   - **Performance:** Ensure fast response times and a smooth user experience, even under high load conditions.
7. **Security and Compliance:**
   - **Data Protection:** Implement measures to protect user data and comply with relevant data protection regulations.
   - **Authentication and Authorization:** Utilize secure authentication methods and role-based access control.

Additional Considerations

- **Integration with Third-Party Services:** The platform may integrate with third-party services for payment processing, email notifications, or other functionalities.
- **User Experience:** Focus on creating an intuitive and easy-to-navigate interface to enhance user satisfaction.

- **Accessibility:** Ensure that the platform is accessible to users with disabilities, adhering to relevant accessibility standards.

4. <u>System Modules</u>

1. Booking Management

Description: The Booking Management module handles all aspects of scheduling and managing appointments between users and lawyers.

Features:

- **Appointment Booking:** Users can request and schedule consultations with lawyers.
- **Appointment Viewing:** Users can view their upcoming and past appointments, including details such as date, time, and lawyer information.
- **Appointment Management:** Lawyers can view and manage their appointment schedules, including accepting or declining requests and rescheduling as needed.

Responsibilities:

- Facilitate the booking process and ensure seamless scheduling.
- Allow users and lawyers to manage and track appointments efficiently.

2. User Management

Description: The User Management module handles user-related activities, including registration, authentication, and profile management.

Features:

- **User Registration:** Allows users and lawyers to create accounts with necessary details.
- **User Login/Logout:** Secure login and logout functionalities to access the platform.
- **Profile Management:** Users and lawyers can update their personal and professional information.
- **Role Management:** Differentiates access levels and functionalities based on user roles (e.g., client, lawyer, admin).

Responsibilities:

- Manage user accounts and authentication processes.
- Provide secure access and maintain user profile information.

3. Profile Management

Description: The Profile Management module enables both users and lawyers to create, edit, and manage their profiles.

Features:

- **Lawyer Profiles:** Lawyers can add and update their qualifications, areas of expertise, experience, and contact information.
- **User Profiles:** Users can manage their personal information, preferences, and interaction history.
- **Profile Visibility:** Manage visibility and accessibility of profiles based on user roles and privacy settings.

Responsibilities:

- Ensure accurate and up-to-date information for users and lawyers.
- Facilitate profile updates and maintain profile integrity.

4. Service Management

Description: The Service Management module allows providers (lawyers) and administrators to manage the services offered on the platform.

Features:

- **Service Listings:** Lawyers and admins can add, edit, or remove legal services provided by lawyers.
- **Service Categories:** Organize services into categories for easier navigation and search.
- **Service Details:** Include descriptions, pricing, and other relevant details for each service.

Responsibilities:

- Maintain an up-to-date list of services available on the platform.
- Ensure that service information is accurate and easily accessible.

5. Payment Management

Description: The Payment Management module oversees all financial transactions, including processing payments and handling refunds.

Features:

- **Payment Processing:** Handle payment transactions for consultations and services.
- **Invoicing:** Generate and manage invoices for transactions.

Responsibilities:

- Ensure secure and efficient handling of financial transactions.
- Manage and track payments, and invoicing accurately.

6. Security Module

Description: The Security Module ensures the protection of system and user data through various security measures.

Features:

- **Authentication:** Implement secure authentication methods to verify user identities.
- **Authorization:** Manage user permissions and access levels based on roles.
- **Encryption:** Encrypt sensitive data to protect it during transmission and storage.
- **Data Protection:** Implement measures to safeguard user data from unauthorized access and breaches.
- **Security Audits:** Conduct regular security audits to identify and address vulnerabilities.

Responsibilities:

- Protect user data and ensure the integrity and confidentiality of the platform.
- Implement and maintain security best practices to safeguard against threats.

5. <u>Performance Requirements</u>

Performance requirements for the **Find My Lawyer** platform ensure that the system delivers a seamless and efficient experience for all users, including clients and lawyers. Key performance aspects include:

5.1 Speed and Responsiveness

- **Loading Times:** The platform should ensure fast loading times for all pages and features. Critical operations such as search queries, profile updates, and appointment bookings should have a response time of under 2 seconds.
- **Search Efficiency:** Implement efficient indexing and search algorithms to ensure quick retrieval of lawyer profiles and search results.
- **Interface Navigation:** The user interface should be highly responsive, providing smooth transitions and interactions without noticeable lag.

5.2 Scalability

- **Concurrent Users:** The system should be designed to handle a high volume of simultaneous users. The platform should be able to scale horizontally to accommodate increasing numbers of users and transactions.

- **Load Handling:** Implement load balancing techniques to distribute traffic evenly across servers and avoid performance bottlenecks during peak usage times.

5.3 Reliability and Uptime

- **Availability:** The platform should be available 99.9% of the time, with minimal downtime for maintenance. Implement redundancy and failover mechanisms to ensure continuous operation.
- **Error Handling:** The system should handle errors gracefully and provide informative messages to users without crashing or becoming unresponsive.

5.4 Security and Data Protection

- **Data Encryption:** Ensure that all sensitive data, including personal information and transaction details, is encrypted during transmission and storage.
- **Secure Access:** Implement secure authentication and authorization mechanisms to protect user accounts and data from unauthorized access.

5.5 Usability

- **User-Friendly Interface:** The platform should offer an intuitive and easy-to-navigate interface, allowing users to quickly find and book legal services with minimal effort.
- **Mobile Compatibility:** The platform must be fully responsive and functional across various devices and screen sizes, including smartphones and tablets.

5.6 Reporting and Analytics

- **Performance Metrics:** Provide robust reporting and analytics tools to track key performance indicators (KPIs) such as user engagement, appointment bookings, revenue, and client feedback.
- **Data Insights:** Enable administrators to generate reports on platform usage, service popularity, and financial transactions to make informed decisions

6. <u>Hardware and Software Requirements</u>

6.1 Hardware Requirements

- **Server Specifications**: The platform should be hosted on servers with sufficient processing power, memory, and storage capacity to handle peak loads. Specific hardware requirements will depend on anticipated traffic and data volume.
- **Backup Systems:** Implement reliable backup solutions to ensure data recovery in case of hardware failures or other issues.

6.2 Software Requirements

- **Operating System**: The platform should be compatible with major operating systems such as Windows Server, Linux, or other server environments as required by the hosting provider.
- **Web Server:** Utilize robust web server software such as Apache, Nginx, or IIS to handle HTTP requests and serve the application.
- Database Management System: Use a reliable database management system (DBMS) like PostgreSQL, MySQL, or another suitable relational database to manage user data and application content.
- **Development Framework:** Implement the application using a modern development framework such as Spring Boot for Java, or other suitable frameworks depending on the chosen technology stack.
- **ORM Tool:** Utilize an Object-Relational Mapping (ORM) tool like Hibernate to facilitate database interactions and manage data persistence.
- **Security Tools:** Integrate security tools and libraries such as Spring Security for authentication and authorization, and ensure compliance with data protection regulations.
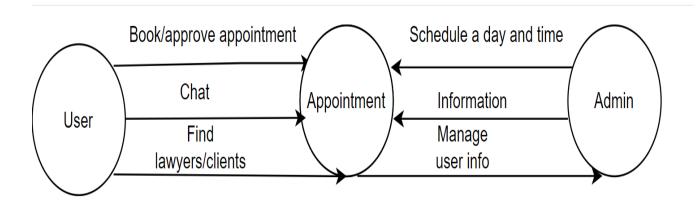
User Interfaces

- **Browser Compatibility:** The user interface must be compatible with major web browsers, including Mozilla Firefox, Google Chrome, Microsoft Edge, and Opera. Ensure that the platform performs consistently across these browsers and maintains usability.
- **Mobile Browsers:** The platform should be optimized for mobile browsers to provide a seamless experience on smartphones and tablets, ensuring functionality and readability on smaller screens.
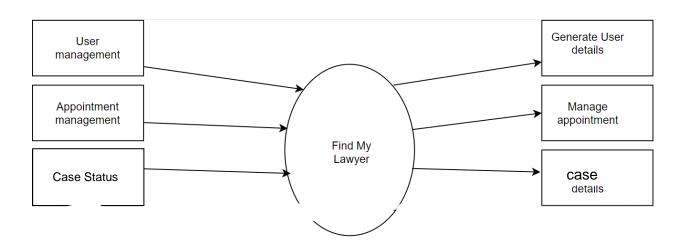
Software Interfaces

- **Third-Party Integrations:** The platform may require integration with third-party services such as payment gateways, email services, or other APIs. Ensure compatibility and secure integration with these services.
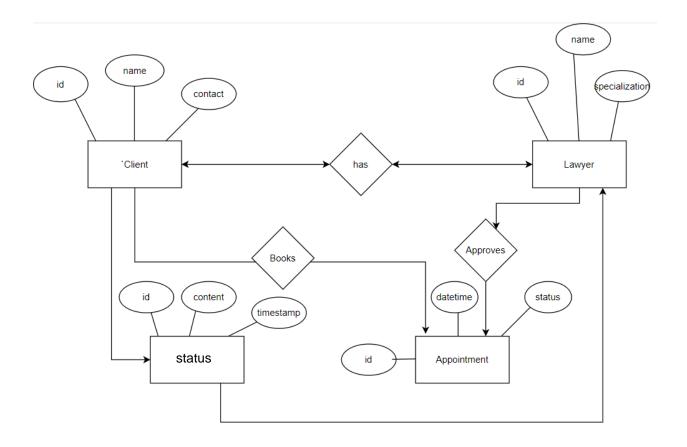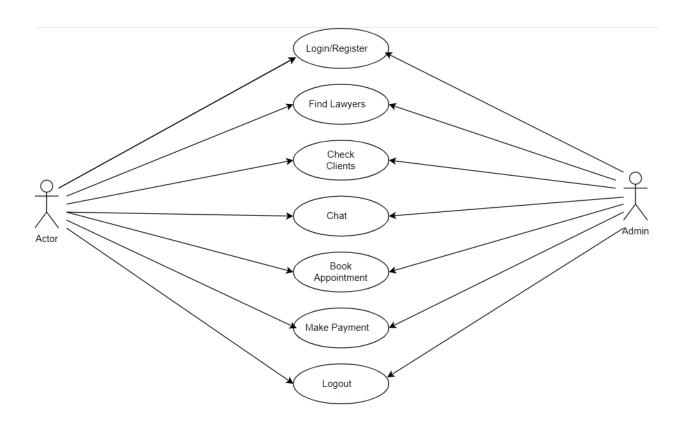
UML DIAGRAMS:

6.1.1 Zero Level Data Flow Diagram:

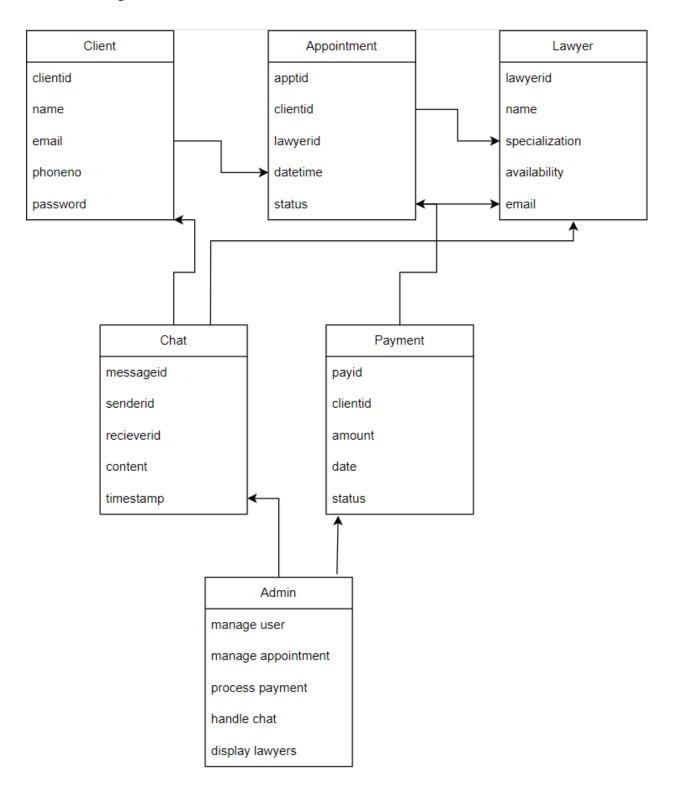
6.1.2 First Level Data Flow Diagram:
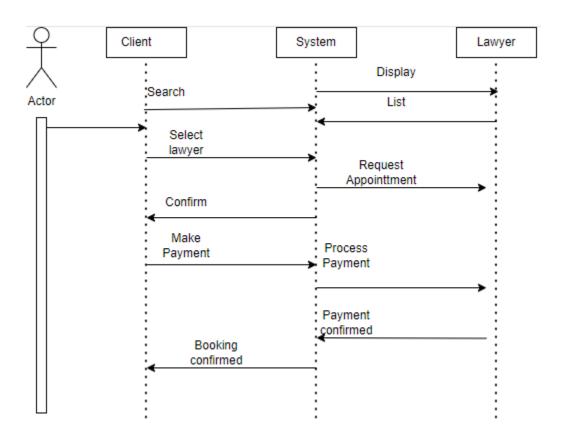
6.2 Entity Relationship Diagram:
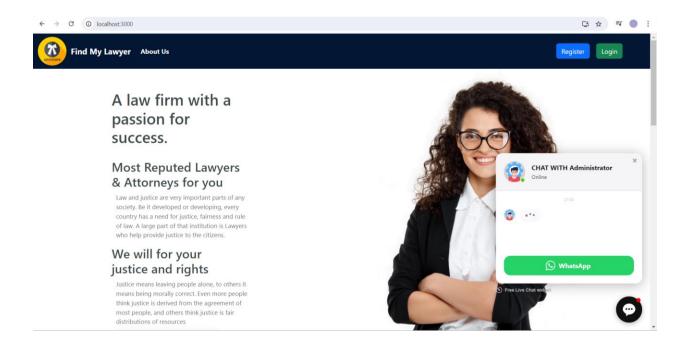
6.3 Use Case Diagram:

6.4 Class Diagram:

Client

- clientid
- name
- email
- phoneno
- password

Appointment

- apptid
- clientid
- lawyerid
- datetime
- status

Lawyer

- lawyerid
- name
- specialization
- availability
- email

Chat

- messageid
- senderid
- recieverid
- content
- timestamp

Payment

- payid
- clientid
- amount
- date
- status

Admin

- manage user
- manage appointment
- process payment
- handle chat
- display lawyers
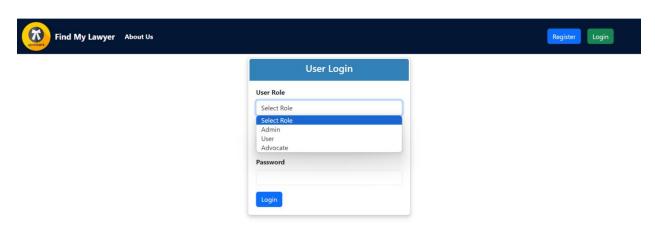
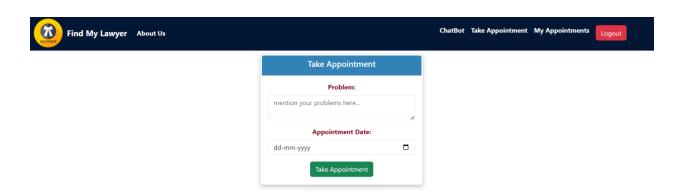**6.5 Sequence Diagram:**
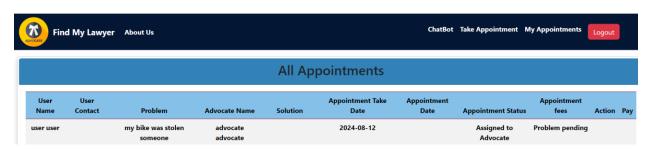
Screenshots:

8.1 Homepage

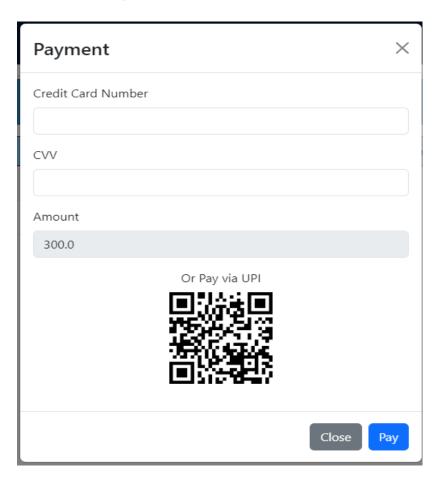

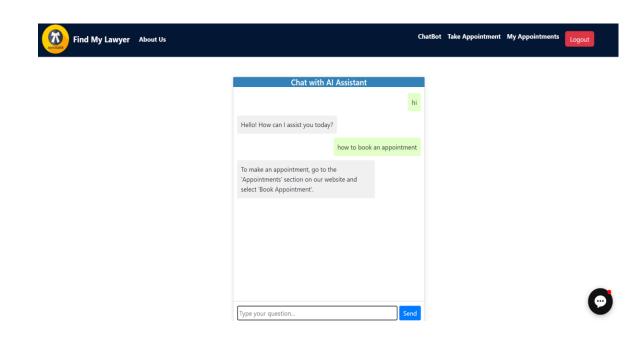Login Section

8.2 User

1) Login

2) Take Appoitment
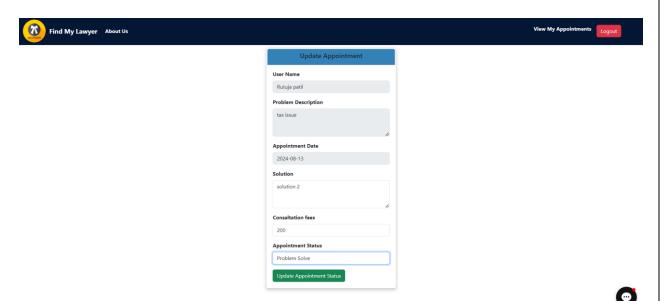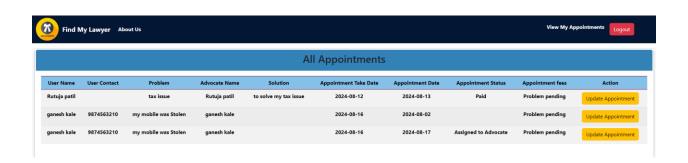

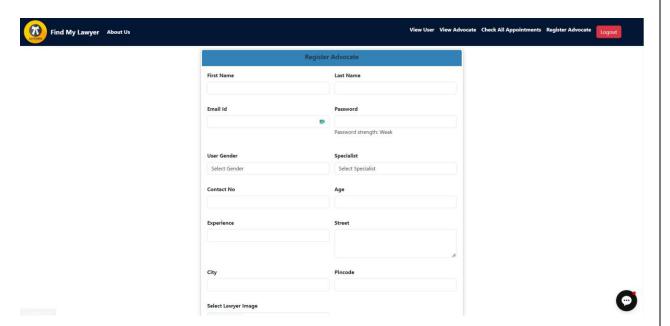3) See all recent Appointments

4) Make Payment

5) Use ChatBot

8.3 Lawyer

1) Login
2) Give Solution to User/Client
3) Add Consulting fees
4) Update Appointment
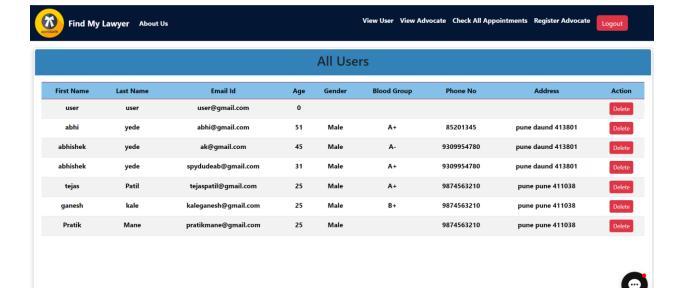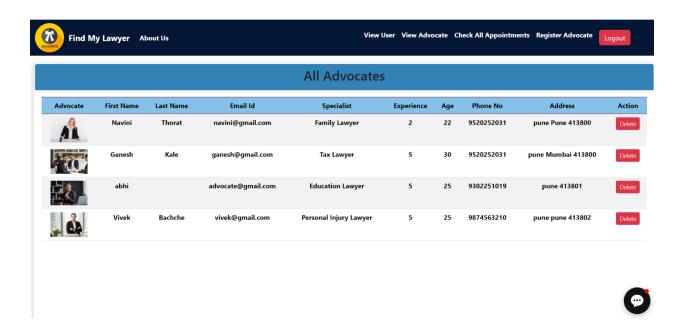
8.4 Admin

1) Login
2) Register Lawyers
3) Assign Advocate to user
4) Check all Advocates
5) Check All clients

All Advocates

Advocate	First Name	Last Name	Email Id	Specialist	Experience	Age	Phone No	Address	Action
	Navini	Thorat	navini@gmail.com	Family Lawyer	2	22	9520252031	pune Pune 413800	Delete
	Ganesh	Kale	ganesh@gmail.com	Tax Lawyer	5	30	9520252031	pune Mumbai 413800	Delete
	abhi		advocate@gmail.com	Education Lawyer	5	25	9302251019	pune 413801	Delete
	Vivek	Bachche	vivek@gmail.com	Personal Injury Lawyer	5	25	9874563210	pune pune 413802	Delete

8.5 Payment

All Appointments

User Name	User Contact	Problem	Advocate Name	Solution	Appointment Take Date	Appointment Date	Appointment Status	Appointment fees	Action	Pay
ganesh kale	9874563210	my mobile was Stolen	Navini Thorat	solution 2	2024-08-16	2024-08-02	Paid	300.0		
ganesh kale	9874563210	my mobile was Stolen	Navini Thorat	solution 2	2024-08-16	2024-08-17	Problem Solve	100.0		Pay

```
Appointment ID: 9
User Name: ganesh kale
Advocate Name: Navini Thorat
Amount Paid: 300.0
Status: Paid
```