COMSATS University, Islamabad Pakistan

LawyerUP

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Bachelor of Science in Software Engineering (2022-2026)

The candidate confirms that the work submitted is their own and appropriate credit has been given where reference has been made to the work of other.

COMSATS University, Islamabad Pakistan

LawyerUP

A project presented to

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In partial fulfillment

of the requirement for the degree of

Bachelors of Science in Computer Software Engineering

(2022-2026)

By

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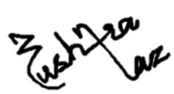
CERTIFICATE OF APPROVAL

It is to certify that the final year project of BS (SE) LawyerUP was developed by **MUHAMMAD FAIZAN KHURSHID (CIIT/FA22-BSE-030)** and **RAYYAN IMTIAZ (CIIT/FA22-BSE-037)** under the supervision of MS. BUSHRA NAZ and co supervisor MS. LAILMA JAVED and that in (their/his/her) opinion; it is fully adequate, in scope and quality for the degree of Bachelors of Science in Software Engineering.



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EXECUTIVE SUMMARY

In Pakistan's legal sector, practitioners and clients face significant challenges due to a heavy reliance on manual processes. Lawyers spend excessive time on manual document drafting and legal research, while clients struggle to find and connect with suitable legal experts in a timely and transparent manner. The existing digital tools are either static libraries with no interactive features or generic international platforms that are not tailored to Pakistan's specific legal procedures and jurisprudence.

To address these inefficiencies, the LawyerUP platform is developed. It is an AI-driven, web-based legal support system designed to digitize and streamline workflows for lawyers, clients, and law firms. The system provides an AI Legal Assistant trained on local Pakistani case law to automate the drafting of legal documents, suggest relevant statutes, and forecast case arguments. For clients, it offers a user-friendly portal to search for verified lawyers, book consultations, and communicate securely.

LawyerUP is a full-stack web application built with Next.js for the frontend and Python with FastAPI for the AI-powered backend, all connected to a MongoDB database. Users from all categories (clients, lawyers, and firm administrators) interact with the system through dedicated dashboards to manage cases, appointments, and communication, transforming the traditional legal process into an efficient, accessible, and intelligent ecosystem.

Abstract

This project is created to address the critical inefficiencies and technological gaps within Pakistan's legal system. The existing digital landscape consists of static legal databases that lack interactive tools and international management software that is not localized for Pakistani law, while general AI models cannot produce court-ready, jurisdiction-specific documents. Lawyers are challenged by time-consuming manual drafting and inadequate research tools, and clients face a lack of accessible platforms for finding and engaging legal experts. This creates a significant gap for an integrated, AI-powered legal platform specifically trained on Pakistani jurisprudence. The project aims to automate legal document drafting and enhance case readiness through AI-driven insights. It will also streamline lawyer-client interaction via integrated communication and appointment scheduling. Finally, it will provide law firms with centralized tools to manage cases and track lawyer performance. As a final product, LawyerUP will significantly enhance legal efficiency, improve access to justice for the public, and increase the overall preparedness of legal professionals in Pakistan.

Acknowledgement

All praise is to Almighty Allah who bestowed upon us a minute portion of His boundless knowledge by virtue of which we were able to accomplish this challenging task.

We are greatly indebted to our project supervisor "Ms. Bushra Naz" and our Co-Supervisor "Ms. Lailma Javed". Without their personal supervision, advice and valuable guidance, completion of this project would have been doubtful. We are grateful to them for their encouragement and continual help during this work.

And we are also thankful to our parents and family who have been a constant source of encouragement for us and brought us with the values of honesty & hard work.

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Chapter 1: Introduction and Problem Definition

This chapter provides a comprehensive overview of the LawyerUP project, establishing its context, purpose, and strategic importance. It begins by defining the core problem within Pakistan's legal system that the project aims to address, followed by a detailed vision statement, a proposed solution, and a clear set of objectives. The chapter further outlines the project's scope, its limitations, and breaks down the system into its core functional modules. It concludes with an analysis of related systems, a summary of the technologies used, and an explanation of the project's relevance to our academic coursework.

1.1 Overview of the Project

The LawyerUP platform is an AI-driven, web-based legal support system designed to revolutionize the legal practice in Pakistan. It is an intelligent platform intended to digitize and streamline the work of lawyers, law firms, and clients. The system bridges the gap between legal experts and clients by providing AI-powered tools for legal drafting, law suggestions, and client-attorney connectivity. By enabling features like AI-generated Written Statements, argument forecasting, appointment scheduling, and case management, it aims to reduce manual workload, improve legal access, and enhance overall legal preparedness. The proposed solution offers a localized AI platform specifically trained on Pakistani legal data, ensuring efficiency and accuracy in daily legal operations.

1.2 Vision Statement

For lawyers, law firms, and clients in Pakistan **Who** seeks a faster, smarter and more readily available method to manage legal workflows, prepare for court hearings and connect with legal professionals **The** LawyerUP platform **Is** an AI-driven legal support system **That** provides intelligent legal drafting, law recommendations, client-lawyer interaction and centralized case management suited to the Pakistani legal system **Unlike** static legal research websites, generic case management tools and manual legal drafting processes **Our system** combines artificial intelligence, localized legal knowledge and workflow automation into one unified platform that enhances legal efficiency, access to justice, and the overall preparedness of legal professionals and their clients.

1.3 Problem Statement

In the legal setup of Pakistan, lawyers seem to face a challenge in managing case preparation effectively, primarily due to manual legal drafting procedures and insufficient contextual legal research tools. There is also an absence of smart support in predicting case outcomes or applicable laws. As a result, time gets wasted with documentation inconsistencies and less readiness for court appearances. Similarly, clients do not have the right legal experts to reach on time for consultations and help under the legal process because guided platforms lack visibility. Firms do not have case-oriented tools through which they can distribute and track assignments among their lawyers. What is available now includes static databases and simple directories that do not support anything regarding dynamic case processing or even a dialogue between the lawyer and the client. These gaps create inefficiencies, delays, and compromised quality in the delivery of legal services. There is a need for an integrated AI powered system that can automate document drafting, suggest legal strategies, enable client lawyer interaction and assist law firms in managing their internal affairs efficiently.

1.4 Problem Solution

In order to deal with the inefficiencies of Pakistan's legal system, LawyerUP suggests a wide-ranging AI enabled platform that serves lawyers, clients, and law firms by utilizing intelligent legal tools and automation. The platform aims to support lawyers in drafting Written Statements, foretell legal arguments, and receive AI suggested law recommendations on the basis of local legal information. It minimizes the load of manual research and repetitive documentation which enables legal professionals to concentrate more on case strategy and representation. Clients will have access to a user-friendly portal to search for lawyers, see their profiles, schedule consultations and monitor case related communication. Law firms will be able to create and manage multiple lawyer profiles, allocate cases internally and monitor progress via a centralized dashboard. Furthermore, LawyerUP features tools for storage of legal documents, summarization of hearings and auto-reminders to provide more effective case management and timely preparation. By rolling these features under one platform, LawyerUP targets increased legal efficiency, elimination of delays and an overall quality in the delivery of legal services across the Pakistani justice system.

1.5 Objectives of the Proposed System

BO-1: Automate legal document drafting (e.g., Written Statements) to cut down lawyer preparation time.
BO-2: Enhance case readiness and legal precision through AI driven argument forecasting and law suggestions.
BO-3: Streamline lawyer client interaction via real time chat and appointment scheduling.
BO-4: Streamline law firm operations by allowing internal lawyer management and case assignment tracking.
BO-5: Allow clients to search, analyze and consult legal experts on the basis of case type and profile reviews.
BO-6: Minimize reliance on AI trained models based on Pakistani case law for manual legal research.
BO-7: Offer centralized storage of documents and case history to simplify legal workflow.
BO-8: Enhance timely response to court hearings through notification and reminder systems integrated into the system.

1.6 Scope

LawyerUP will be a web-based AI-powered legal support system designed to improve legal service delivery for lawyers, law firms, and clients in Pakistan. The platform will support three main actors: Admin, Lawyers/Law Firms, and Clients.

Admins will be responsible for verifying lawyers and firms by reviewing CNIC and license details. They will approve or reject registrations, manage user access, and monitor system activity to ensure professional use and platform integrity.
Lawyers and Law Firms will sign up and create professional profiles including their practice areas, years of experience, consultation fees, and availability. Law firms can register as organizations and add multiple lawyers under a single account, assigning cases internally and tracking team performance. Lawyers will use the integrated AI Legal Assistant to draft Written Statements, generate legal replies, predict counter-arguments, suggest relevant laws based on Pakistani legal data, and summarize hearings. They will also manage case files, FIRs, and evidence through the Document & Resource Management system, and access digital law books such as the Pakistan Penal Code and Civil Procedure Code. Notifications and reminders will alert them about hearings, client appointments, and deadlines.
Clients will register on the platform to search for lawyers based on legal category, specialization, location, and ratings. They will view lawyer profiles, book appointments, and communicate via real-time chat. Clients can submit legal briefs, upload case-related documents, and pay consultation fees through an integrated payment module. They will also receive automatic reminders about their upcoming consultations and responses from lawyers.

1.6.1 Limitations/Constraints

Following are the limitations of LawyerUP.

LI-1: LawyerUP will not support direct court filing or integration with official judicial portals in its initial version; all legal documents must be submitted manually by the lawyer.
LI-2: The AI assistant is intended to aid legal drafting and preparation but cannot provide certified legal advice or replace a licensed lawyer's judgment.
LI-3: Real-time legal updates or newly passed laws may not immediately reflect in the system until the AI engine is retrained or updated.

1.7 Modules

Below is the list of major modules of LawyerUP.

1.7.1 Module 1: Profile Management

This module handles registration, profile setup, and verification for lawyers, firms, and clients.

1.7.1.1 Lawyer/Firm Registration

Handles the onboarding and profile configuration of individual lawyers and legal firms.

FE-1: Allow individual lawyers and firms with role-based selection on registration.
FE-2: Allow lawyers to upload CNIC, license number, contact details, and other verification documents.

FE-3: Allow lawyers to select their areas of practice, consultancy fees, availability, and experience information.
FE-4: Provide law firms with the ability to create and manage multiple lawyer profiles in a single firm account.

1.7.1.2 Client Registration

Manages account creation, profile setup, and personalization for clients.

FE-5: Allow client account creation with phone/email verification and minimal personal details.
FE-6: Allow clients to modify profile, see appointment history, and control preferences.

1.7.1.3 Admin Management

Enables admin oversight for user verification and platform policy enforcement.

FE-7: Provide admin access to approve or deny lawyer and firm sign-up requests.
FE-8: Permit admin to suspend, reactivate, or track user accounts based on platform policy.

1.7.2 Module 2: Case Management

This module manages creation, tracking, assignment, and progress history of all legal cases.

FE-1: Make it possible for lawyers and firms to add, modify, or remove cases along with categories and court types.
FE-2: Enable uploading case-related documents such as FIRs, evidence, and summaries of previous hearings.
FE-3: Make it possible for users to update and view the status of cases as pending, in-process, or closed.
FE-4: Keep an elaborate timeline depicting the development of each case from beginning to end.
FE-5: Permit firms to assign cases to particular internal lawyers and track their status.

1.7.3 Module 3: AI Legal Assistant

This module assists lawyers in drafting legal documents, predicting case outcomes, and recommending laws using AI.

FE-1: Enable lawyers to input detailed case information, including case descriptions, types (e.g., civil, criminal), and supporting documents (e.g., FIRs, evidence files).
FE-2: Implement an interactive feature where the AI poses targeted questions to collect additional or clarify missing case details from the lawyer.
FE-3: Generate tailored initial drafts of legal documents (e.g., Written Statements, petitions) based on case-specific inputs provided by the lawyer.
FE-4: Deliver suggestions for relevant Pakistani laws, clauses, and judicial precedents applicable to the case context.

FE-5: Provide insights into potential counter-arguments and opposition strategies to strengthen case preparation.
FE-6: Display hypothetical case outcomes to assist lawyers in anticipating and preparing for possible judgments.
FE-7: Automatically produce concise summaries of hearing transcripts or notes for quick reference and archival purposes.
FE-8: Allow lawyers to save, retrieve, and organize AI-generated outputs (e.g., drafts, summaries) for efficient case management.

1.7.4 Module 4: Appointment & Consultation

This module manages lawyer-client appointment scheduling, consultation chat, and interaction history.

1.7.4.1 Client Side

Enables clients to search, book, and communicate with lawyers easily through the platform.

FE-1: Enable clients to search lawyers based on legal category, location, experience, and fee.
FE-2: Show comprehensive lawyer profiles with images, practice areas, client reviews, and availability.
FE-3: Allow clients to schedule online or offline appointments with their desired lawyer.
FE-4: Offer chat facility so that clients can talk directly with lawyers prior to or following scheduling.

1.7.4.2 Lawyer/Firm Side

Allows lawyers and law firms to manage appointments and track client consultations.

FE-5: Allow lawyers or firms to see, accept, or reject appointment requests.
FE-6: Show scheduled appointments along with dates, time, and client information on the dashboard.
FE-7: Store appointment history of lawyers to monitor client interactions and consultations.

1.7.5 Module 5: Document & Resource Management

This module enables users to upload, download, and organize legal documents and access digital law books.

FE-1: Give users the option to upload legal documents like FIRs, evidence, and court responses.
FE-2: Support download and print feature for all AI-created legal documents.
FE-3: Store uploaded documents in a searchable archive by case and document type.
FE-4: Offer access to digital legal resources such as the Pakistan Penal Code and CPC.
FE-5: Make law books searchable by keyword, section, or topic for immediate reference.

1.7.6 Module 6: Notifications, Feedback & Reminder

This module sends automated reminders, collects feedback from clients, and displays important alerts to users.

FE-1: Provide users with email and in-app reminder notifications for approaching hearings, appointments, and cases.
FE-2: Provide users with customizable reminder timelines for case milestones or consultations.
FE-3: Show reminders in lawyer and client dashboards as colored priority markers.
FE-4: Let clients review and rate lawyers post-consultations to establish trust.
FE-5: Enable lawyers to see reviews and ratings to enhance their services and public standing.

1.7.7 Module 7: AI Law Intelligence

This module includes development of AI system to suggest relevant laws, predict outcomes, and improve with continuous legal data training.

FE-1: Develop an AI system to correlate case details with relevant Pakistani statutes and past judicial decisions.
FE-2: Suggest optimal legal strategies and applicable clauses by analyzing historical case data and legal databases.
FE-3: Utilize machine learning to predict likely case outcomes based on patterns and trends in prior cases.
FE-4: Enable the AI to refine its accuracy by incorporating new case law and user feedback over time.

1.7.8 Module 8: Client Legal Support

This module provides clients with simplified legal help, knowledge resources, and issue submission tools.

FE-1: Permit clients to enter a concise description of their problem for lawyer review.
FE-2: Allow clients to monitor the status of their filed legal questions or consultation requests.
FE-3: Offer access to simplified guides to the law and FAQs to the law.
FE-4: Facilitate a searchable glossary or term-based lookup for foundational legal knowledge.

1.7.9 Module 9: Payment & Billing

This module manages secure fee transactions, invoicing, and billing history for lawyers, firms, and clients.

FE-1: Let clients pay consultation fees securely via integrated payment gateways.
FE-2: Produce printable and downloadable receipts for every transaction.
FE-3: Monitor payment history for the client and lawyer on finished appointments.

FE-4: Allow law firms to handle centralized billing and revenues for all firm lawyers.

1.8 Related System Analysis/Literature Review

1.8.1 Literature Review

The LawyerUP project incorporates advanced techniques such as **Artificial Intelligence (AI) and Machine Learning (ML)** for legal drafting, argument forecasting, and law recommendations. Therefore, an analysis of prior systems in the legal technology domain is essential to highlight how LawyerUP addresses existing gaps in the Pakistani context.

Previous systems and platforms for legal research and management in Pakistan primarily offer **static access** to legal texts, case laws, and statutes. For instance, **Pakistan Law Site** provides only static access to legal texts and lacks interactive features, AI support, or document generation tools. Similarly, **PLD Online** focuses on publishing judgments and digests but doesn't support case preparation, legal drafting, or client-lawyer collaboration tools. These systems, while providing a database of information, necessitate lawyers to manually draft documents and conduct research, leading to inefficiencies and time consumption.

Other platforms attempt to provide legal news or basic workflow management:

- **Courting The Law** offers legal news and limited case law search, but lacks workflow tools for lawyers and interactive platforms for client engagement.
- **Clio** is an international platform mainly used for billing and scheduling, but it **does not support Pakistani legal formats, procedures, or AI-powered drafting**. This highlights a critical need for a locally tailored solution.

Furthermore, general-purpose drafting tools like **ChatGPT/LegalTemplates** are not trained on Pakistani laws, meaning their output may be vague, irrelevant, or incorrectly formatted for use in Pakistani courts.

1.8.2 Related System Analysis

Table 1: Related System Analysis

Application Name	Weakness	Proposed Project Solution
• Pakistan Law Site • https://www.pakistanlawsite.com	Provides only static access to legal texts, case laws, and statutes. It lacks interactive features, AI support, or document generation tools.	LawyerUP offers AI-powered legal assistance, automates legal document drafting, and suggests relevant laws based on real-time case input from lawyers.
• PLD Online • https://pldpublishers.com	Focuses primarily on publishing judgments and digests. It doesn't support case preparation, legal drafting, or client-lawyer collaboration tools.	LawyerUP allows lawyers to prepare for hearings by drafting Written Statements, predicting arguments, and managing case data interactively—all within a localized ecosystem.

• Courting The Law • https://courtingthelaw.com	Offers legal news, blogs, and limited case law search but lacks workflow tools for lawyers and interactive platforms for client engagement.	LawyerUP bridges this gap by providing appointment booking, live chat, and lawyer profile discovery along with end-to-end legal workflow automation for both parties.
• Clio • https://www.clio.com	International platform mainly used for billing and scheduling. They do not support Pakistani legal formats, procedures, or AI-powered drafting.	LawyerUP is specifically built for the Pakistani legal system and includes document drafting, hearing prep, and firm-wide case management tailored to local court practices.
• ChatGPT / LegalTemplates • https://chatgpt.com	General-purpose drafting tools not trained on local laws. Output may be vague, irrelevant, or not formatted for court use in Pakistan.	LawyerUP uses AI trained on Pakistani case law to generate accurate, localized documents like Written Statements and legal replies with proper formatting and references.

1.9 Tools and Technologies

Table 2: Tools and Technologies

	Tools	Version	Rationale
Tools And Technologies	Visual Studio Code	1.84.2	IDE
	MongoDB Compass	1.46.2	GUI for MongoDB management
	Postman	11.45.6	API Testing
	Figma	2025	Mockups
	Canva	2025	Presentations
	Git/Github	2.49.0	Version Control and collaboration
	Technology	**Version**	**Rationale**
	Next.js	15.3.2	Full Stack Framework
	Typescript	5.8.2	Type safety for Next.js
	Python	3.13.3	AI Scripting
	MongoDB	8.0.9	No SQL database
	Tailwind CSS	4.1.7	Utility first CSS framework
	FastAPI	0.115.12	Python framework for AI/ML
	Flask	3.1.1	AI Backend
	Stripe API	2025-04-30.basil	Online Payment

	Mistral 7B (Fine Tuned)	Mistral-7B-v0.1	For legal intelligence
	OpenAI API	GPT-5	For dataset modification and creation
	Vercel	45.0.9	Deployment

1.10 Project Contribution

The **LawyerUP system** introduces several conceptual and technical contributions that make it a first-of-its-kind legal automation and support platform in Pakistan's context. It bridges AI-based automation with local law practices, enabling efficiency, accessibility, and legal intelligence in a domain that still relies heavily on manual processes.

Key Contributions

- ***AI-Powered Legal Drafting and Analysis*** *LawyerUP's AI Legal Assistant automates the generation of Written Statements and petitions by prompting case-specific questions to lawyers and drafting context-aware legal documents based on localized Pakistani laws. This significantly reduces manual drafting time and human error.*
- ***Localized Law Intelligence Engine*** *Unlike global legal AI tools trained on foreign datasets, LawyerUP uses* ***Pakistan-specific legal data sources*** *(Lahore High Court, Supreme Court, and Hugging Face datasets) to provide law recommendations, precedent citations, and argument predictions tailored to local legal standards.*
- ***Integrated Case Prediction and Argument Forecasting*** *The system's AI Law Intelligence module forecasts potential outcomes and opposing arguments using trained machine learning models. This offers lawyers a strategic advantage in case preparation, something rarely implemented in Pakistan's digital legal tools.*
- ***End-to-End Legal Workflow Automation*** *From profile registration to case creation, consultation scheduling, and payment, LawyerUP integrates all essential legal services into a unified digital ecosystem, eliminating the fragmentation found in current platforms.*
- ***AI-Based Hearing Summarization and Legal Document Insights*** *The system automatically summarizes hearing notes and extracts critical arguments, helping lawyers prepare concise briefs and reference points for future hearings — a feature not available in traditional tools.*
- ***Validated Legal AI Model through Expert Collaboration*** *All AI-generated outputs are verified and refined in collaboration with* **The Case Lawyer** *firm, ensuring that the system maintains professional accuracy and domain reliability.*
- ***Smart Client-Lawyer Interaction and Transparency*** *Real-time chat, client reviews, and lawyer ratings foster transparency and trust, helping clients make informed legal decisions while improving service quality among lawyers.*

- ***Centralized Digital Legal Library*** *The system incorporates searchable digital resources (e.g., Pakistan Penal Code, CPC) and links them dynamically with AI recommendations for faster reference and better usability.*

Contribution Impact

By combining **AI-driven automation**, **localized legal intelligence**, and **interactive client-lawyer collaboration**, LawyerUP transforms traditional legal workflows into a **smart, efficient, and transparent ecosystem**. It not only enhances productivity for lawyers and firms but also democratizes access to legal services for the public — marking a significant technological advancement in Pakistan's justice system.

1.11 Relevance to Course Modules

The LawyerUP project's development directly applies concepts from our academic coursework to build a functional, real-world application.

- ***Software Engineering Concepts****: Applied SDLC phases, project management with WBS and Gantt charts.*
- ***Software Requirement Engineering:*** *Conducted requirement gathering through interviews and questionnaires to define system features.*
- ***Software Design and Architecture:*** *Designed a modular architecture for scalability and created detailed UI mockups.*
- ***Programming Fundamentals & OOP****: Utilized OOP principles in TypeScript and Python for a structured codebase.*
- ***Data Structures:*** *Implemented arrays and lists to manage dynamic data like case histories and search results.*
- ***Databases:*** *Used MongoDB for flexible, NoSQL data storage and designed the application's data schema.*
- ***Artificial Intelligence:*** *Developed AI features by fine-tuning the Mistral 7B model on Pakistani legal data.*
- ***Software Construction and Development:*** *Built the full-stack application using Next.js, Python with FastAPI, and integrated the Stripe API.*
- ***Software Testing & Quality Engineering:*** *Ensured application reliability through systematic API testing and quality assurance workflows.*

Chapter 2: Requirement Analysis

This chapter details the complete functional and non-functional requirements for the LawyerUP system. It begins by identifying the different user classes and their characteristics, supplemented by use case diagrams to illustrate their interactions with the system. The chapter explains the requirement identification techniques used, combining Mockup-Based Analysis for the user interface and Event-Response Tables for backend processes. Subsequently, it presents an exhaustive list of functional requirements derived from each mockup, followed by a breakdown of the system's non-functional requirements and external interface specifications.

2.1 User Classes and Characteristics

Table 3: User Classes and Characteristics

User Class	Description
Lawyer	A Lawyer is an individual practitioner who uses the system to manage cases, draft Written Statements, schedule consultations, and interact with clients. They rely on the AI Legal Assistant for document generation, law recommendations, and case preparation.
Law Firm Administrator	A Law Firm Administrator manages multiple lawyers within a firm account. They assign cases, oversee progress, handle billing, and ensure firm-level coordination and compliance through a centralized dashboard.
Client/User	A Client is an individual seeking legal help who can register, search for lawyers, book consultations, and submit case briefs. They can also chat with lawyers and track appointment or case updates easily through a user-friendly interface.
Administrator (System Admin)	The Administrator manages overall system operations, verifies lawyers and firms, monitors user activity, updates resources, and ensures security and compliance across all modules.

2.1.1 Use case Diagram

Use Case Diagram for Client

Figure 1: Use Case Diagram for User/ Client

Use Case Diagram for Lawyer

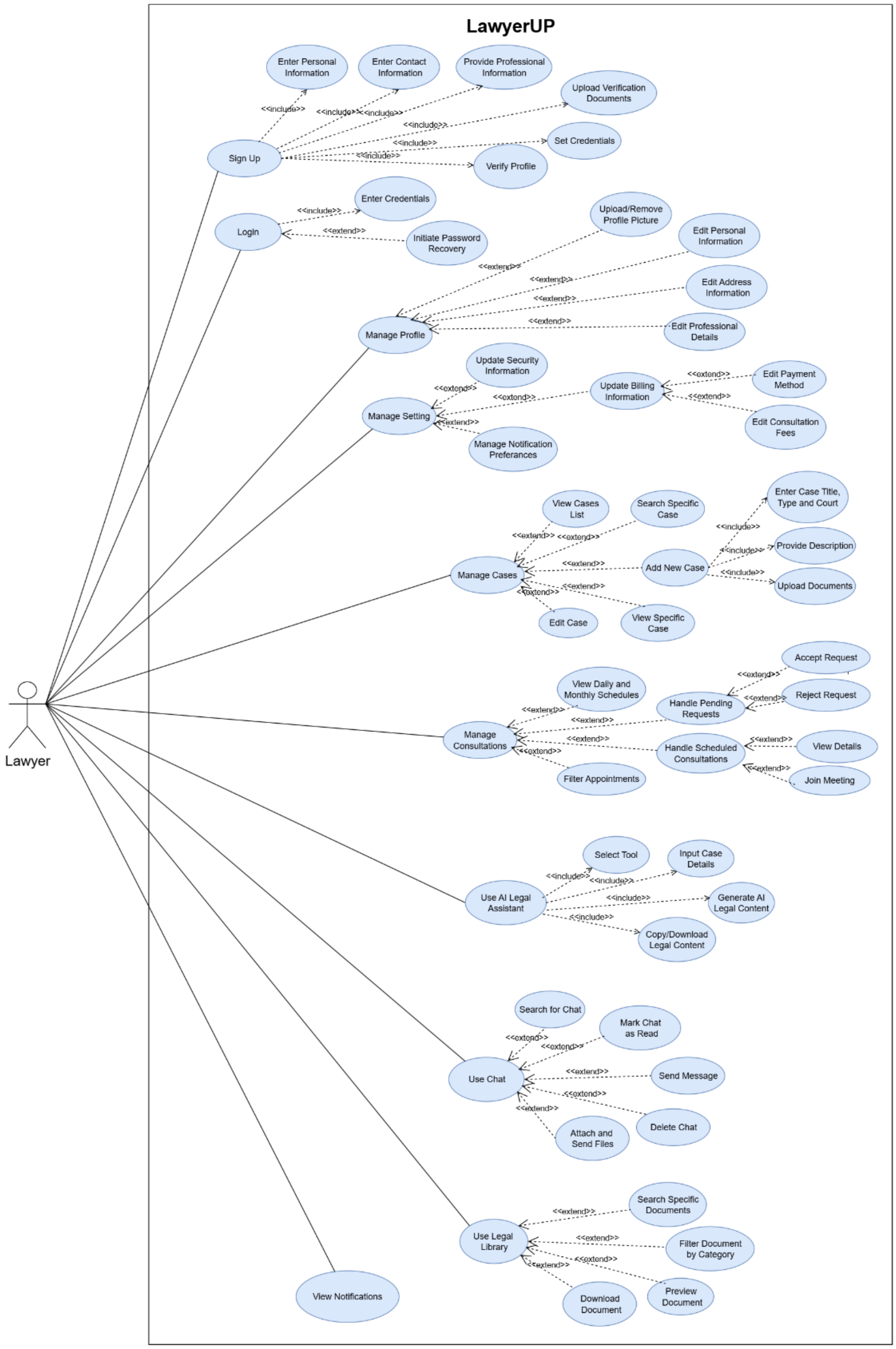

Figure 2: Use Case Diagram for Lawyer

Use Case Diagram for Firm Admin

Figure 3: Use Case Diagram for Firm Admin

2.1.2 Requirement Identifying Technique

This section describes the techniques used to identify and document the functional requirements of the LawyerUP system. For this project, a hybrid approach was adopted, combining **Mockup-Based Requirement Analysis** for user-facing interactions and **Event-Response Tables** for backend processes.

Mockup-Based Requirement Analysis

To define the user-centric features, we used a mockup-based approach. Detailed user interface mockups were created in Figma, visually representing how clients, lawyers, and admins would interact with the LawyerUP platform. Functional requirements were then systematically derived from each screen's elements and their expected behaviors.

Backend Process Requirements & Event-Response Tables

While mockups capture frontend interactions, critical system functionalities for LawyerUP occur at the backend. Examples include AI-driven document analysis, payment processing callbacks from Stripe, sending automated notifications for consultations, and handling user verification logic.

To capture these processes, the **Event–Response Table** technique was used. This method is highly effective for modeling backend behaviors where direct user interface interactions are not involved. It allowed us to clearly define the system's response to specific internal or external events, ensuring that all backend workflows were thoroughly documented during the requirements phase.

2.2 Functional Requirements

2.2.1 Mockup M1 – Role Selection Page

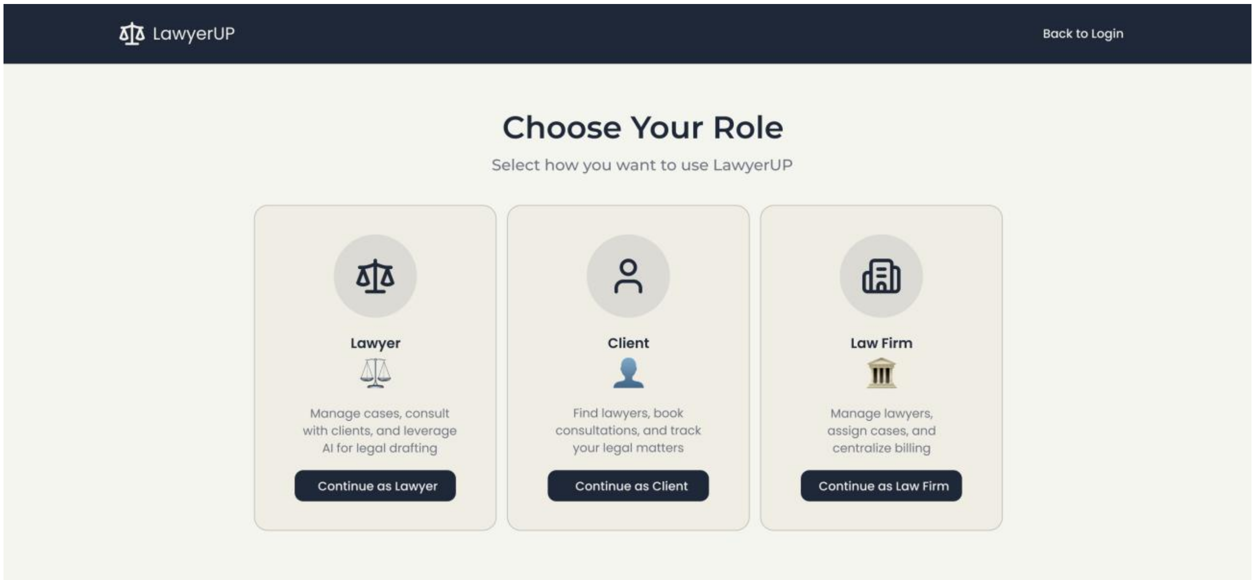

Figure 4: Mockup M1 – Role Selection Page

Functional Requirements Derived from Mockup M1 – Role Selection Page

Table 4: Functional Requirements Derived from Mockup M1

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Role Selection Cards	FR1.1: The system shall display three distinct, selectable cards for the "Lawyer," "Client," and "Law Firm" roles.	Each card must contain a title, an icon, a brief description of the role's purpose, and a corresponding "Continue" button.
Role Continuation Action	FR1.2: The system shall provide a "Continue as [Role]" button for each of the three roles.	Clicking a specific role's button must direct the user to the registration or login flow tailored for that role.
Back Navigation	FR1.3: The system shall provide a "Back to Login" link in the header.	Clicking this link must navigate the user to the main login page.

Event Response Table Derived from Mockup M1 – Role Selection Page

Table 5: Event Response Table Derived from Mockup M1

Event	System State	Response
User clicks the **"Continue as Lawyer"** button.	The user is on the Role Selection screen.	1. The system shall navigate the user to the start of the Lawyer registration/login workflow.
User clicks the **"Continue as Client"** button.	The user is on the Role Selection screen.	1. The system shall navigate the user to the start of the Client registration/login workflow.
User clicks the **"Continue as Law Firm"** button.	The user is on the Role Selection screen.	1. The system shall navigate the user to the start of the Law Firm registration/login workflow.
User clicks the **"Back to Login"** link.	The user is on the Role Selection screen.	1. The system shall navigate the user back to the primary login page.

2.2.2 Mockup M2 – User Login Page

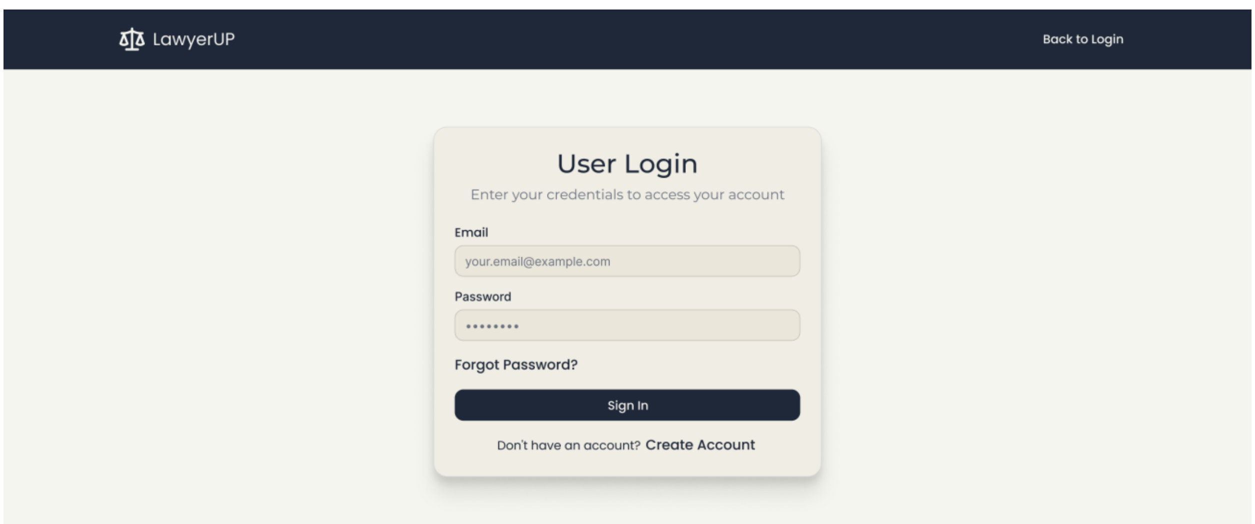

Figure 5: Mockup M2 – User Login Page

Functional Requirements Derived from Mockup M2 – User Login Page

Table 6: Functional Requirements Derived from Mockup M2

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
User Authentication	FR2.1: The system shall provide input fields for the user to enter their email and password.	The email field must validate for a standard email format. The password field must mask the input characters.
Sign-In Action	FR2.2: The system shall provide a "Sign In" button to submit the credentials for authentication.	The system shall lock an account after 5 consecutive failed login attempts to prevent unauthorized access.
Password Recovery	FR2.3: The system shall provide a "Forgot Password?" link to assist users who have forgotten their credentials.	Clicking this link must navigate the user to the password recovery workflow.
Account Creation Link	FR2.4: The system shall provide a "Create Account" link for users who do not have an existing account.	Clicking this link must navigate the user to the beginning of the registration process (e.g., the Role Selection screen).
Back Navigation	FR2.5: The system shall provide a "Back to Login" link in the header.	This link should navigate the user to the application's landing page or the previous screen in a workflow.

Event Response Table Derived from Mockup M2 – User Login Page

Table 7: Event Response Table Derived from Mockup M2

Event	System State	Response
User clicks the **"Sign In"** button with valid credentials.	The user has entered a correct email and password.	1. The system shall authenticate the user. 2. The system shall create a user session. 3. The system shall redirect the user to their appropriate dashboard (Client, Lawyer, or Firm).

User clicks the **"Sign In"** button with invalid credentials.	The user has entered an incorrect email or password.	1. The system shall prevent login. 2. The system shall display an error message (e.g., "Invalid email or password"). 3. The system shall increment the failed login attempt counter for that account.
User clicks the **"Forgot Password?"** link.	The user is on the login screen.	1. The system shall navigate the user to the password recovery page, where they can enter their email address to receive reset instructions.
User clicks the **"Create Account"** link.	The user is on the login screen.	1. The system shall navigate the user to the first step of the registration process, which is the "Choose Your Role" screen.

2.2.3 Mockup M3 – User Registration Page

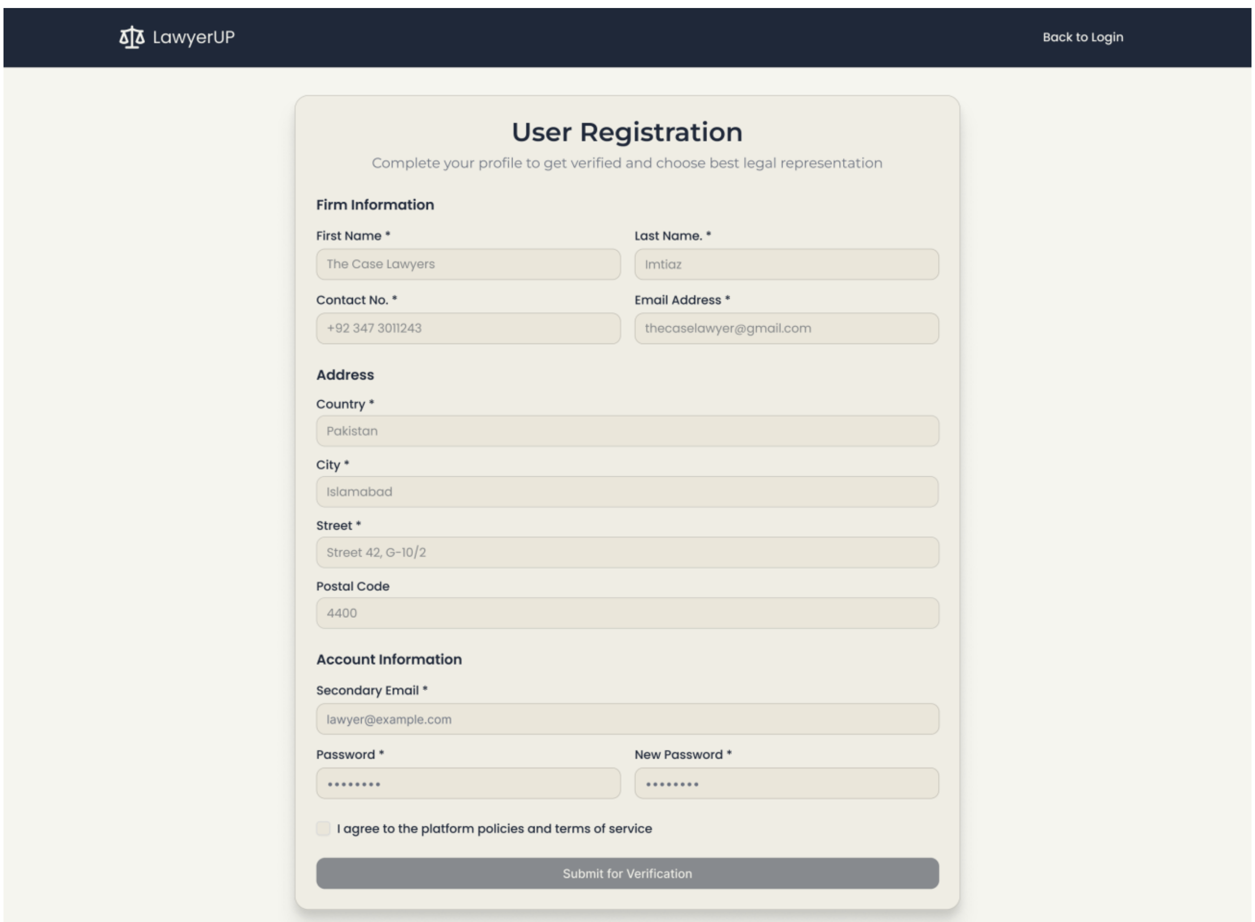

Figure 6: Mockup M3 – User Registration Page

Functional Requirements Derived from Mockup M3 – User Registration Page

Table 8: Functional Requirements Derived from Mockup M3

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
User Information Form	FR3.1: The system shall provide input fields for the user to enter their First Name, Last Name, Contact No., and Email Address.	All fields marked with an asterisk (*) are mandatory. The Email Address must be a valid format. The Contact No. must follow a valid phone number format.
Address Form	FR3.2: The system shall provide input fields for the user's Country, City, Street, and Postal Code.	Country, City, and Street are mandatory fields.
Account Information Form	FR3.3: The system shall provide input fields for a Secondary Email, Password, and New Password confirmation.	All fields are mandatory. The "Password" and "New Password" fields must match. The password must meet complexity requirements (e.g., minimum 8 characters, mix of letters and numbers).
Terms Agreement	FR3.4: The system shall provide a checkbox for the user to agree to the platform's policies and terms of service.	The user must check this box to enable the submission button. The text should contain a hyperlink to the full terms of service document.
Submission Action	FR3.5: The system shall provide a "Submit for Verification" button to finalize the registration process.	The button shall be disabled until all mandatory fields are filled and the terms of service checkbox is checked.

Event Response Table Derived from Mockup M3 – User Registration Page

Table 9: Event Response Table Derived from Mockup M3

Event	System State	Response
User clicks the **"Submit for Verification"** button with valid data.	All mandatory fields are correctly filled, and the terms checkbox is checked.	1. The system shall validate all inputs.

		2. The system shall create a new user account with a "Pending Verification" status. 3. The system shall redirect the user to a confirmation page or the login screen, displaying a message like "Your account has been submitted for verification."
User clicks the **"Submit for Verification"** button with invalid or missing data.	At least one mandatory field is empty, or the passwords do not match.	1. The system shall prevent the form submission. 2. The system shall display inline validation error messages next to the corresponding invalid fields.
User checks the **"I agree..."** checkbox.	The "Submit for Verification" button is disabled. All other mandatory fields are filled.	1. The system shall enable the "Submit for Verification" button.

2.2.4 Mockup M4 – Client Dashboard Page

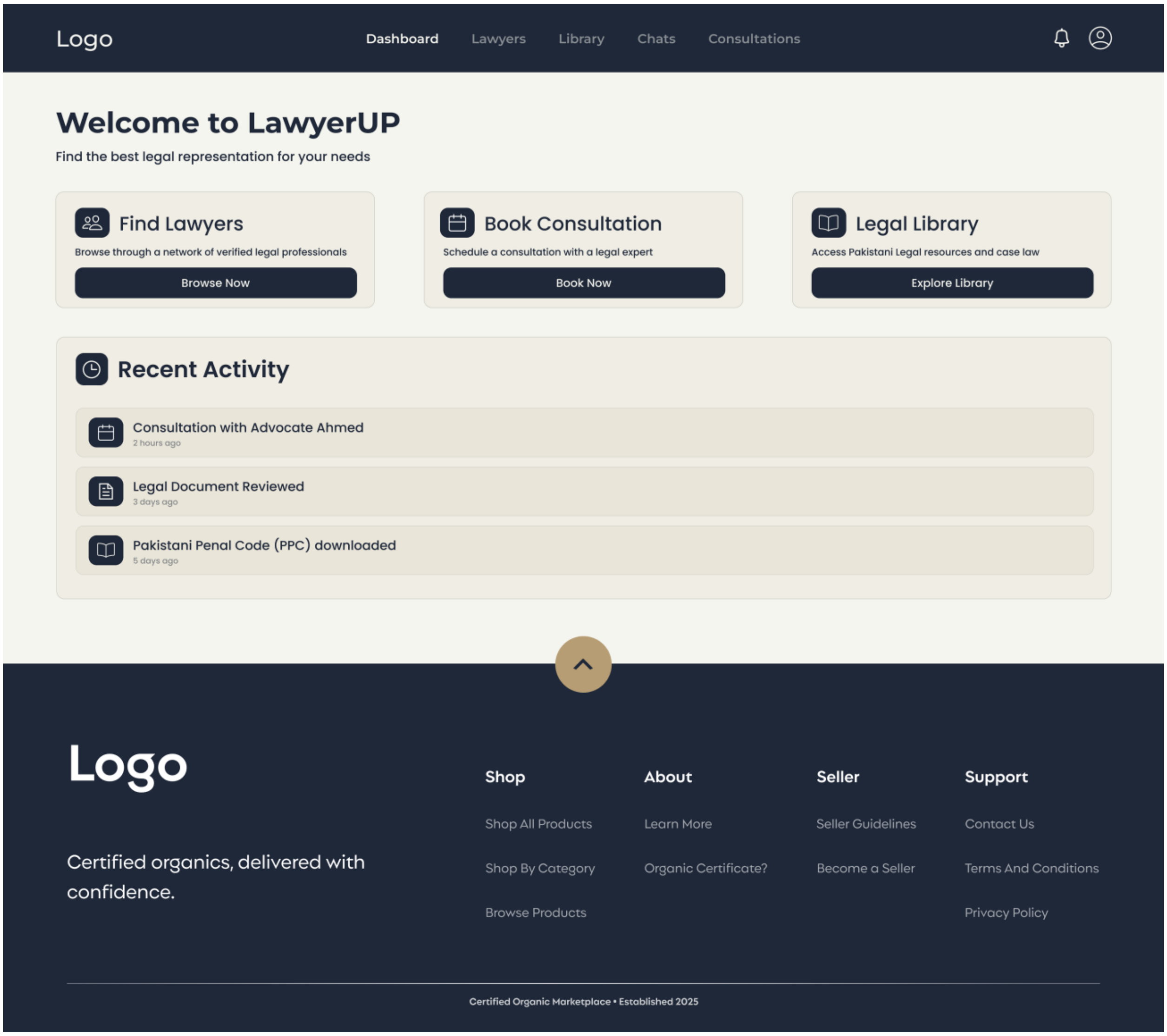

Figure 7: Mockup M4 – Client Dashboard Page

Functional Requirements Derived from Mockup M4 – Login Page

Table 10: Functional Requirements Derived from Mockup M4

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Header Navigation Bar	FR4.1: The system shall display a persistent header with navigation links for Dashboard, Lawyers, Library, Chats, and Consultations.	The header must be visible on all main pages of the client portal. The currently active page link should be visually highlighted.

Notification Access	FR4.2: The system shall provide a notification icon that, when clicked, displays a list of recent user notifications.	The icon should display a badge or indicator if there are unread notifications.
Profile Access	FR4.3: The system shall provide a profile icon that, when clicked, navigates the user to their account/profile management page.	N/A
Find Lawyers Card	FR4.4: The system shall present a "Find Lawyers" card with a "Browse Now" button to navigate the user to the lawyer discovery page.	This card should be a primary call-to-action on the dashboard.
Book Consultation Card	FR4.5: The system shall present a "Book Consultation" card with a "Book Now" button to navigate the user to the appointment scheduling interface.	N/A
Legal Library Card	FR4.6: The system shall present a "Legal Library" card with an "Explore Library" button to navigate the user to the legal resources section.	This provides access to resources like Pakistani case law.
Recent Activity Log	FR4.7: The system shall display a "Recent Activity" section listing the user's latest interactions in reverse chronological order.	The system shall display a maximum of 5 recent activities on the dashboard.
Activity Item Display	FR4.8: The system shall display each activity item with a relevant icon, a descriptive title (e.g., "Consultation with..."), and a relative timestamp (e.g., "2 hours ago").	The description should be concise and clearly state the action performed.

Event Response Table Derived from Mockup M4 – Login Page

Table 11: Event Response Table Derived from Mockup M4

Event	System State	Response

User clicks the **"Browse Now"** button on the "Find Lawyers" card.	The user is viewing the Client Dashboard.	1. The system shall navigate the user to the "Lawyers" search and discovery page.
User clicks the **"Book Now"** button on the "Book Consultation" card.	The user is viewing the Client Dashboard.	1. The system shall navigate the user to the first step of the consultation scheduling workflow.
User clicks the **"Explore Library"** button on the "Legal Library" card.	The user is viewing the Client Dashboard.	1. The system shall navigate the user to the main page of the Legal Library.
User clicks the **"Chats"** link in the header navigation.	The user is on any page within the client portal.	1. The system shall navigate the user to the primary chat interface, displaying their conversation history.
User clicks the **Notification icon** in the header.	The user is on any page. No notification list is visible.	1. The system shall display a dropdown or pop-over list of the user's most recent notifications.

2.2.5 Mockup M5 – Find Lawyers Page

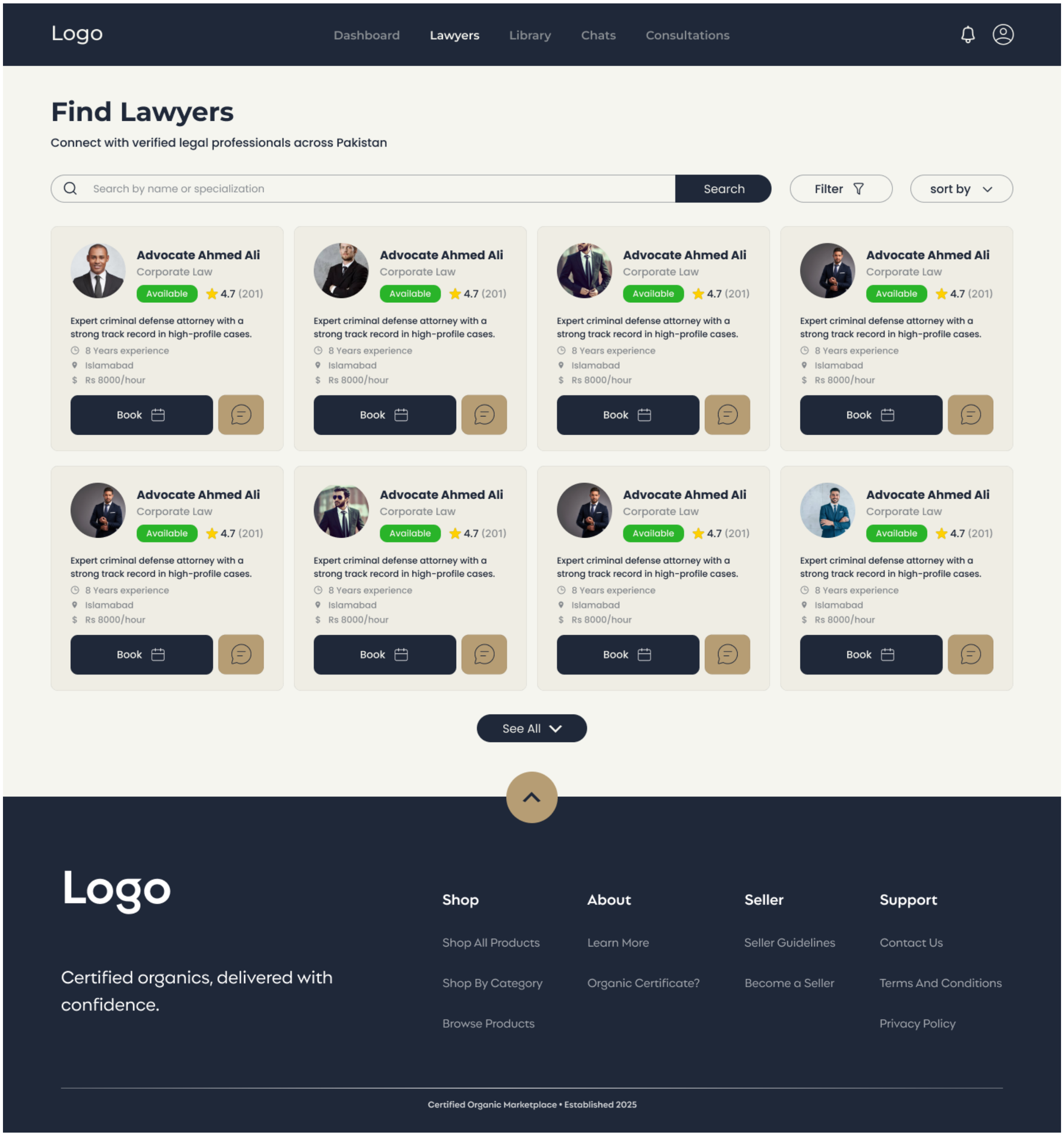

Figure 8: Mockup M5 – Find Lawyers Page

Functional Requirements Derived from Mockup M5 – Find Lawyers Page

Table 12: Functional Requirements Derived from Mockup M5

Feature	Functional Requirement (FR-ID: Statement)	Business Rule

Lawyer Search Bar	FR5.1: The system shall provide a text input field allowing users to enter search queries.	The placeholder text shall prompt the user to "Search by name or specialization".
Search Execution	FR5.2: The system shall provide a "Search" button to execute the query entered in the search bar.	The search should query against lawyer names and their listed specializations.
Result Filtering	FR5.3: The system shall provide a "Filter" button that reveals options for refining the search results.	N/A (Filter options are not visible).
Result Sorting	FR5.4: The system shall provide a "sort by" dropdown menu to reorder the displayed results.	Default sorting order should be based on relevance or top ratings.
Lawyer Profile Card	FR5.5: The system shall display each lawyer in the results list as a self-contained card.	Each card must display the lawyer's photo, name, specialization, availability, average rating, total number of reviews, location, and hourly rate.
Availability Status	FR5.6: The system shall display a visual tag on each card indicating the lawyer's current availability (e.g., "Available").	The tag's color should clearly communicate the status (e.g., green for available).
Booking Action	FR5.7: The system shall provide a "Book" button on each lawyer card.	Clicking this button must navigate the user to the scheduling interface for that specific lawyer.
Chat Action	FR5.8: The system shall provide a chat icon button on each lawyer card.	Clicking this button must initiate a direct chat session with that specific lawyer.
Pagination / Load More	FR5.9: The system shall display a "See All" button at the bottom of the initial results list.	Clicking this button should load and append the next set of results to the page without a full page refresh (infinite scroll behavior).

Event Response Table Derived from Mockup M5 – Find Lawyers Page

Table 13: Event Response Table Derived from Mockup M5

Event	System State	Response
User enters "Corporate Law" in the search bar and clicks **"Search"**.	The results grid displays a default or previous set of lawyers.	1. The system shall query the database for lawyers matching the specialization "Corporate Law". 2. The results grid shall be updated to display only the matching lawyer profiles.
User selects an option (e.g., "Price: Low to High") from the **"sort by"** dropdown.	The results are displayed in the default or a previous sort order.	1. The system shall reorder the currently displayed lawyer cards based on their hourly rate in ascending order.
User clicks the **"Book"** button on Advocate Ahmed Ali's card.	The user is viewing the lawyer search results page.	1. The system shall navigate the user to the appointment booking page. 2. The system should pass Advocate Ahmed Ali's profile information to the booking page.
User clicks the **chat icon button** on a lawyer's card.	The user is viewing the lawyer search results page.	1. The system shall open a chat modal or navigate to a chat page. 2. The chat session shall be initiated with the selected lawyer.
User clicks the **"See All"** button.	The initial set of search results is displayed, and more results are available but not visible.	1. The system shall fetch the next page of results from the server. 2. The system shall append the new lawyer cards to the bottom of the existing results grid.

2.2.6 Mockup M6 – Lawyer Profile Page

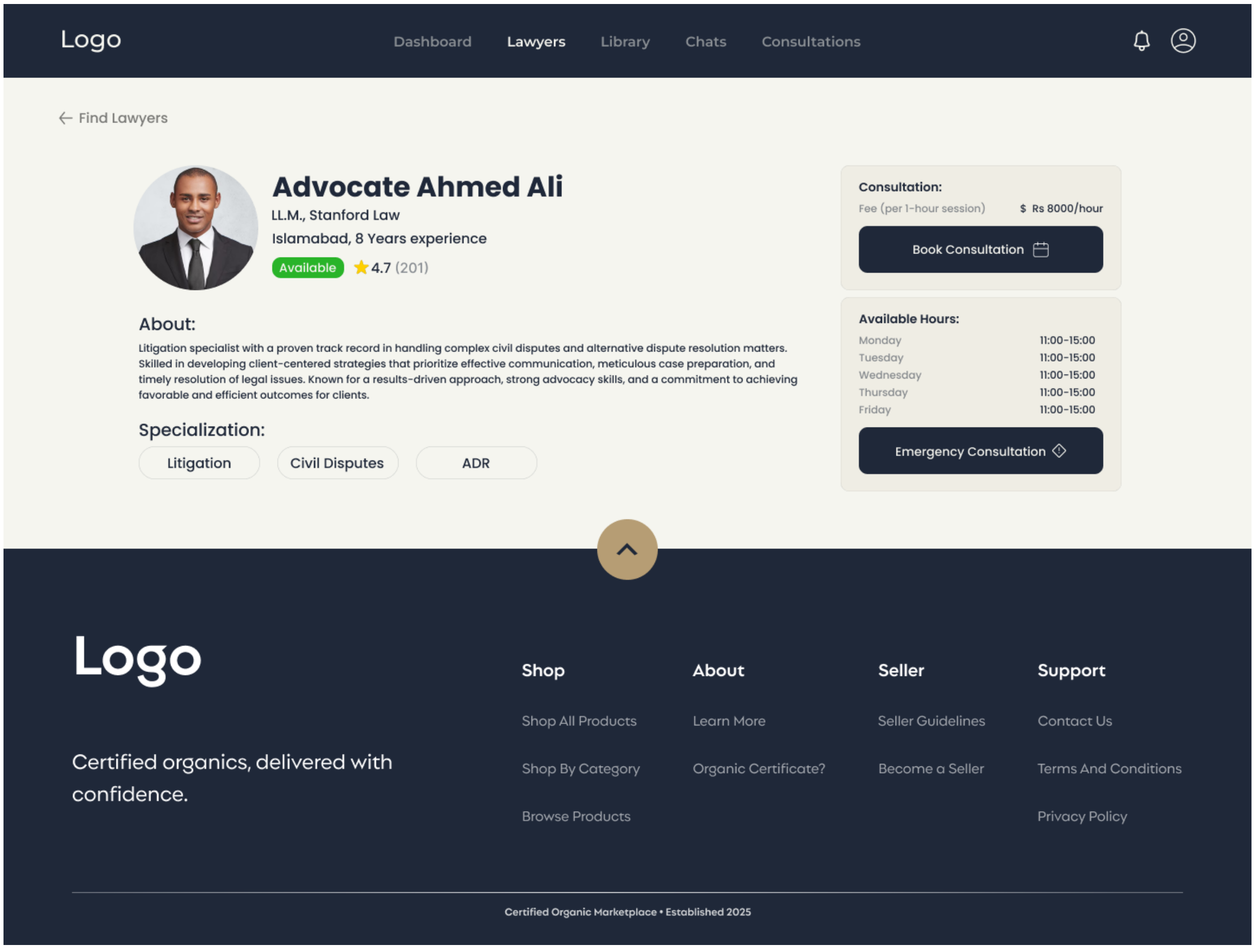

Figure 9: Mockup M6 – Lawyer Profile Page

Functional Requirements Derived from Mockup M6 – Lawyer Profile Page

Table 14: Functional Requirements Derived from Mockup M6

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Back Navigation	FR6.1: The system shall provide a "Find Lawyers" link to navigate the user back to the previous search results page.	The system must retain the user's previous search and filter parameters on the search page.
Lawyer Profile Header	FR6.2: The system shall display the lawyer's profile picture, full name, qualifications, location, and years of experience.	All displayed information must be retrieved from the lawyer's profile data in the database.

Availability Status	FR6.3: The system shall display a visual tag indicating the lawyer's current availability status.	The tag color must be green for "Available" and should change for other statuses (e.g., red for "Unavailable").
Rating Display	FR6.4: The system shall display the lawyer's average star rating and the total count of reviews received.	The rating must be calculated as an average of all submitted client ratings. The review count must be a live total.
About Section	FR6.5: The system shall display the lawyer's biographical information in a dedicated "About" section.	N/A
Specialization Tags	FR6.6: The system shall display tags for each of the lawyer's areas of specialization.	These tags should correspond to the predefined categories of legal practice within the system.
Consultation Fee	FR6.7: The system shall display the lawyer's fee for a one-hour consultation session.	The currency symbol (Rs) must be displayed.
Book Consultation CTA	FR6.8: The system shall provide a "Book Consultation" button to initiate the scheduling process.	This button should be disabled if the lawyer's status is "Unavailable".
Available Hours	FR6.9: The system shall display a list of the lawyer's standard available time slots for each day of the week.	The times must be displayed in the user's local time zone.
Emergency Consultation CTA	FR6.10: The system shall provide an "Emergency Consultation" button.	This button should navigate the user to a separate booking flow, potentially with different pricing and availability.

Event Response Table Derived from Mockup M6 – Lawyer Profile Page

Table 15: Event Response Table Derived from Mockup M6

Event	System State	Response

User clicks the **"← Find Lawyers"** link.	The user is viewing the lawyer's profile page.	1. The system shall navigate the user back to the previously viewed lawyer search results page.
User clicks the **"Book Consultation"** button.	The user is viewing the lawyer's profile and the lawyer is available.	1. The system shall navigate the user to the appointment scheduling interface. 2. The system shall pre-select "Advocate Ahmed Ali" and the standard consultation type in the scheduling form.
User clicks the **"Emergency Consultation"** button.	The user is viewing the lawyer's profile.	1. The system shall navigate the user to a dedicated emergency booking interface. 2. The system may display a warning about higher fees or different procedures for emergency sessions.

2.2.7 Mockup M7 – Book Consultation Page

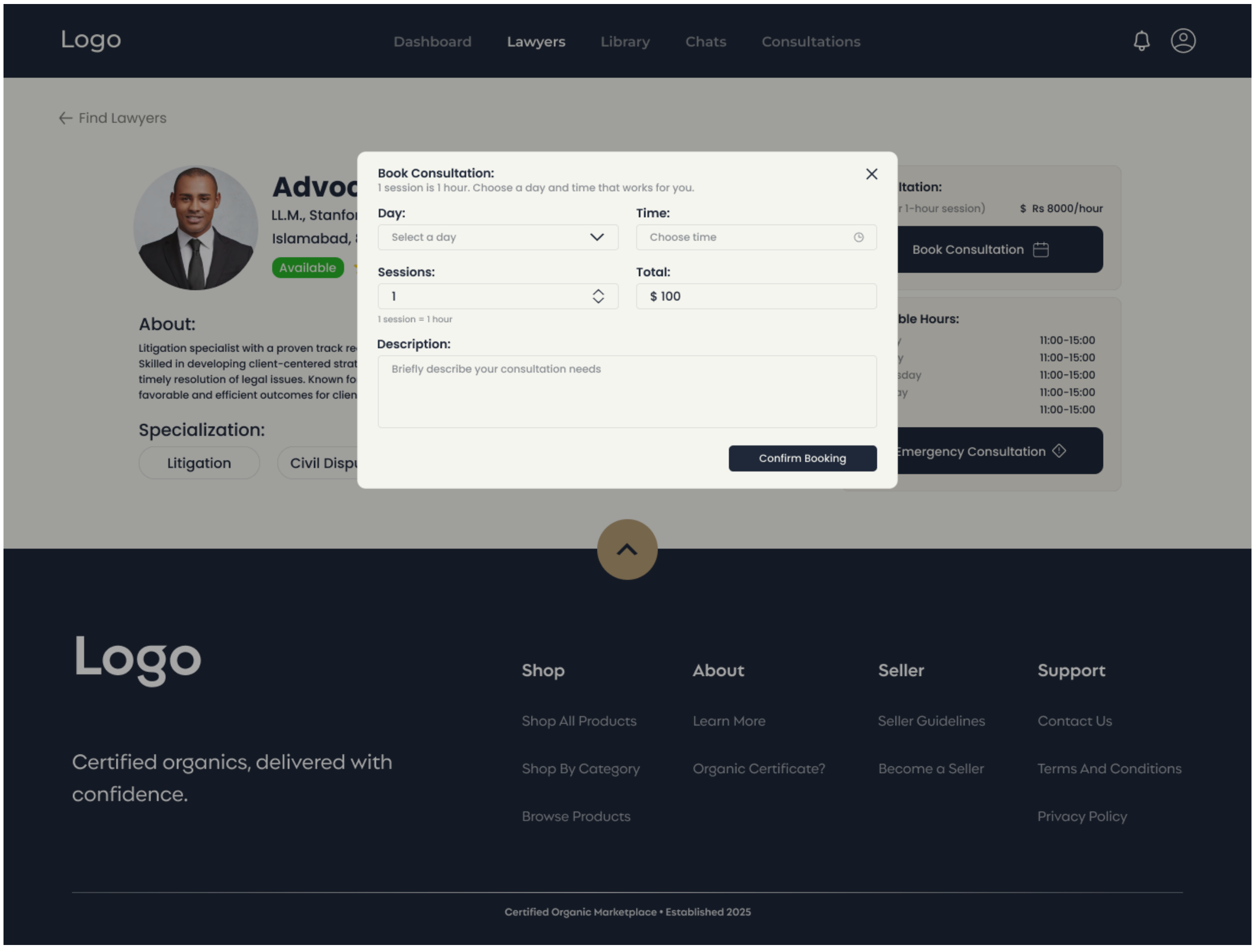

Figure 10: Mockup M7 – Book Consultation Page

Functional Requirements Derived from Mockup M7 – Book Consultation Page

Table 16: Functional Requirements Derived from Mockup M7

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Booking Modal Display	FR7.1: The system shall display a modal overlay for booking a consultation when initiated by the user.	The underlying page content should be visible but inactive while the modal is open.
Date Selection	FR7.2: The system shall provide a dropdown menu for the user to select a date for the consultation.	The dropdown should only show dates on which the lawyer has availability.

Time Selection	FR7.3: The system shall provide a dropdown menu for the user to select a time for the consultation.	The available times in the dropdown must be dependent on the selected date and the lawyer's schedule.
Session Quantity	FR7.4: The system shall provide a number input/stepper for the user to select the number of 1-hour sessions.	The minimum number of sessions must be 1.
Total Cost Calculation	FR7.5: The system shall automatically calculate and display the total cost of the consultation.	The total cost must be calculated as (Lawyer's Hourly Rate) x (Number of Sessions).
Consultation Description	FR7.6: The system shall provide a text area for the user to enter a brief description of their consultation needs.	The input should have a character limit (e.g., 500 characters) to ensure brevity.
Booking Confirmation	FR7.7: The system shall provide a "Confirm Booking" button to submit the consultation request.	The button shall be disabled until all required fields (Day, Time, Sessions) are filled.
Close Modal	FR7.8: The system shall provide a close icon ('X') to dismiss the modal.	Clicking the icon should close the modal without submitting the booking request, and any entered data should be discarded.

Event Response Table Derived from Mockup M7 – Book Consultation Page

Table 17: Event Response Table Derived from Mockup M7

Event	System State	Response
User selects a date from the **"Day"** dropdown.	The "Time" dropdown may be empty, disabled, or showing times for a different day.	1. The system shall populate the "Time" dropdown with the lawyer's available time slots for the newly selected date.
User changes the value in the **"Sessions"** number	The "Total" is displayed as $100.	1. The system shall recalculate the total cost based on the new number of sessions.

input (e.g., from 1 to 2).		2. The system shall update the "Total" display to reflect the new amount (e.g., $200).
User clicks the **"Confirm Booking"** button.	All required fields in the modal are valid and complete.	1. The system shall validate all inputs. 2. The system shall submit the booking request to the server. 3. The system shall close the modal and display a confirmation message or navigate the user to a payment/confirmation page.
User clicks the **close ('X') icon** at the top right of the modal.	The modal is open, and the user may have entered some information.	1. The system shall discard any data entered into the modal fields. 2. The system shall close the modal and return the user to the active lawyer profile page.

2.2.8 Mockup M8 – Legal Library Page

Figure 11: Mockup M8 – Legal Library Page

Functional Requirements Derived from Mockup M8 – Legal Library Page

Table 18: Functional Requirements Derived from Mockup M8

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Document Search	FR8.1: The system shall provide a text input field to allow users to search for legal documents.	The search functionality must query document titles, and potentially their content, for matching keywords.
Category Filters	FR8.2: The system shall display a set of buttons for filtering documents by legal category.	When a category is selected, only documents belonging to that category shall be displayed. The "All Categories" button should be the default selection. The active filter must be visually highlighted.
Statistics Display	FR8.3: The system shall display summary cards with key library metrics (Total Documents, Categories, Latest Update, Total Downloads).	These metrics must be dynamically generated and reflect the current state of the library's database.
Document Card	FR8.4: The system shall display each document in a card format, showing its title, category tag, rating, and metadata (Sections, Updated, Downloads).	All information displayed on the card must be retrieved from the document's record in the database.
Document View Action	FR8.5: The system shall provide a "View" button on each document card.	Clicking this button must navigate the user to an in-app document reader or a detailed view of the document.
Document Download Action	FR8.6: The system shall provide a download icon button on each document card.	Clicking this button must initiate a file download of the selected document. The download count for that document must be incremented.
Pagination Control	FR8.7: The system shall provide a "See All" button at the bottom of the document list.	Clicking this button must load the next set of available documents and append them to the current list.

Event Response Table Derived from Mockup M8 – Legal Library Page

Table 19: Event Response Table Derived from Mockup M8

Event	System State	Response
User clicks a **category filter button** (e.g., "Civil Law").	The library is displaying documents from "All Categories" or another category.	1. The system shall query for all documents tagged with "Civil Law". 2. The system shall update the document grid to display only the results of the query. 3. The system shall visually highlight the "Civil Law" button to indicate it is the active filter.
User types "PPC" into the search bar and clicks **"Search"**.	The library is displaying a list of documents.	1. The system shall filter the currently displayed list to show only documents whose title or content includes "PPC". 2. If no documents match, the system shall display a "No results found" message.
User clicks the **"View"** button on a "Pakistan Penal Code" card.	The user is on the Legal Library page.	1. The system shall navigate the user to the document viewer page, loading the content of the "Pakistan Penal Code".
User clicks the **download icon** on a document card.	The user is on the Legal Library page.	1. The system shall initiate the file download for that specific document. 2. The system shall send a request to the server to increment the download counter for that document.
User clicks the **"See All"** button.	An initial set of documents is displayed, and more are available on the server.	1. The system shall fetch the next page of document records from the server. 2. The system shall render the new documents as cards and append them to the bottom of the existing list.

2.2.9 Mockup M9 – Chat Page

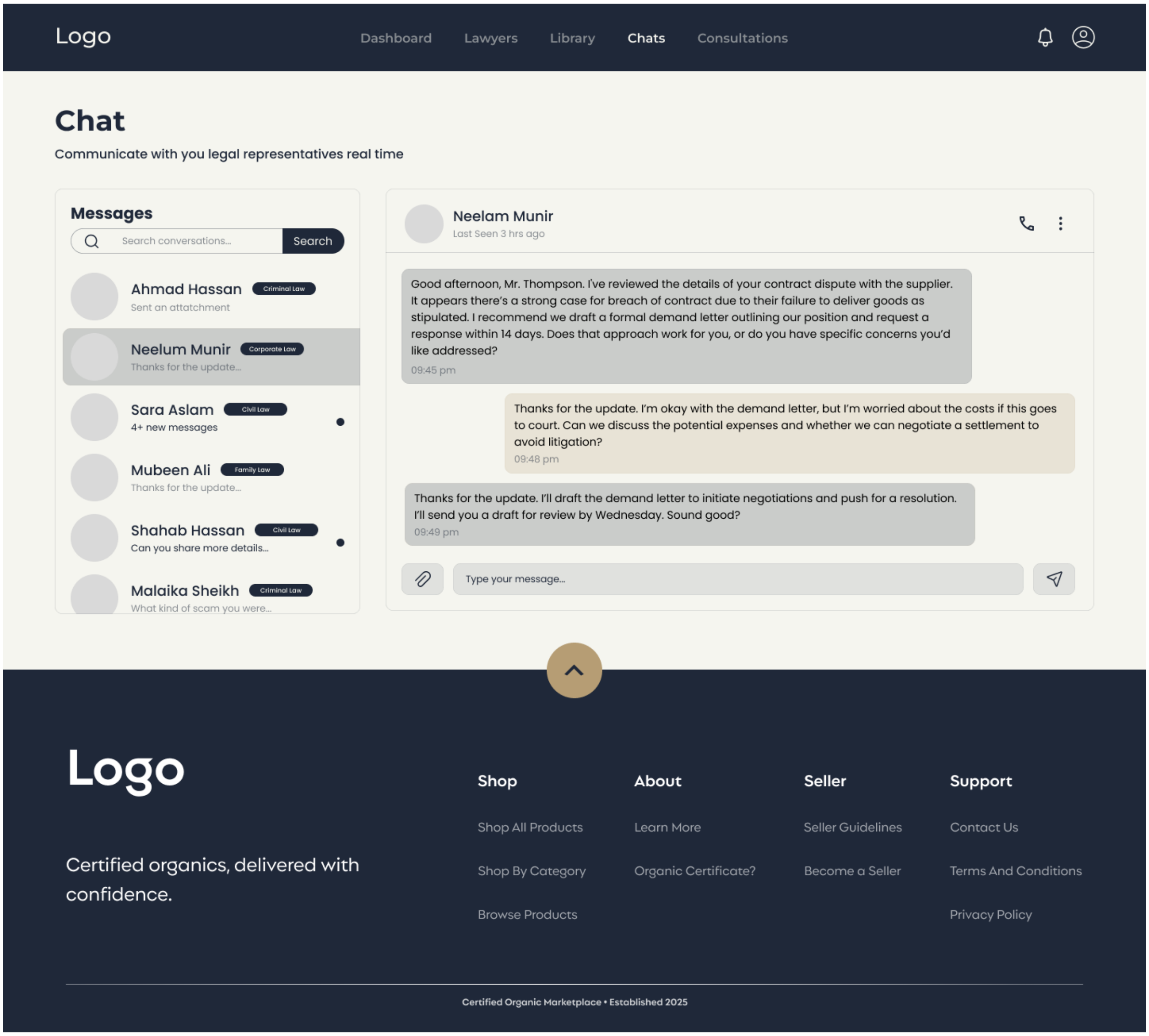

Figure 12: Mockup M9 – Chat Page

Functional Requirements Derived from Mockup M9 – Chat Page

Table 20: Functional Requirements Derived from Mockup M9

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Conversation Search	FR9.1: The system shall provide a search bar to filter the conversation list based on the user's input.	The search must filter by the other participant's name in real-time as the user types.

Conversation List	FR9.2: The system shall display a list of all conversations on the left-hand panel, sorted by the most recent message.	The currently active/selected conversation must be visually highlighted.
Unread Message Indicator	FR9.3: The system shall display a visual indicator next to conversations with unread messages.	The indicator should show the count of new messages if greater than zero.
Active Chat Window	FR9.4: The system shall display the full message history for the selected conversation in the main panel.	The user's messages must be right-aligned, and the other participant's messages must be left-aligned. Each message must have a timestamp.
Message Input	FR9.5: The system shall provide a text input field for the user to compose a message.	The input field should expand dynamically to accommodate multi-line messages.
File Attachment	FR9.6: The system shall provide a paperclip icon that allows the user to select one or more files to attach to a message.	The system should support common file types (e.g., PDF, DOCX, JPG).
Message Sending	FR9.7: The system shall provide a send icon to transmit the composed text and/or attached files.	The send icon shall be disabled if the message input field is empty and no files are attached.
Call Feature	FR9.8: The system shall provide a phone icon to initiate a call with the other participant in the chat.	N/A

Event Response Table Derived from Mockup M9 – Chat Page

Table 21: Event Response Table Derived from Mockup M9

Event	System State	Response
User clicks on a conversation (e.g.,	A different conversation (e.g., "Neelam Munir") is	1. The system shall visually highlight the "Sara Aslam" conversation in the list.

"Sara Aslam") in the left panel.	currently displayed in the main chat window.	2. The system shall load and display the message history for "Sara Aslam" in the main chat window. 3. The unread message indicator for "Sara Aslam" shall be cleared.
User types a message in the input field and clicks the **send icon**.	The user is viewing an active chat.	1. The system shall display the new message, right-aligned, at the bottom of the message history. 2. The system shall transmit the message to the recipient. 3. The text input field shall be cleared.
User clicks the **attachment icon**.	The user is viewing an active chat.	1. The system shall open the device's native file explorer/picker for the user to select a file.
A new message is received for a conversation that is **not** currently active.	The user is viewing a different chat or another part of the application.	1. The system shall display an unread message indicator next to the corresponding conversation in the list. 2. The conversation shall move to the top of the conversation list.
User clicks the **phone icon**.	The user is viewing an active chat.	1. The system shall initiate a voice/video call interface with the other participant.

2.2.10 Mockup M10 – Client Consultation Page

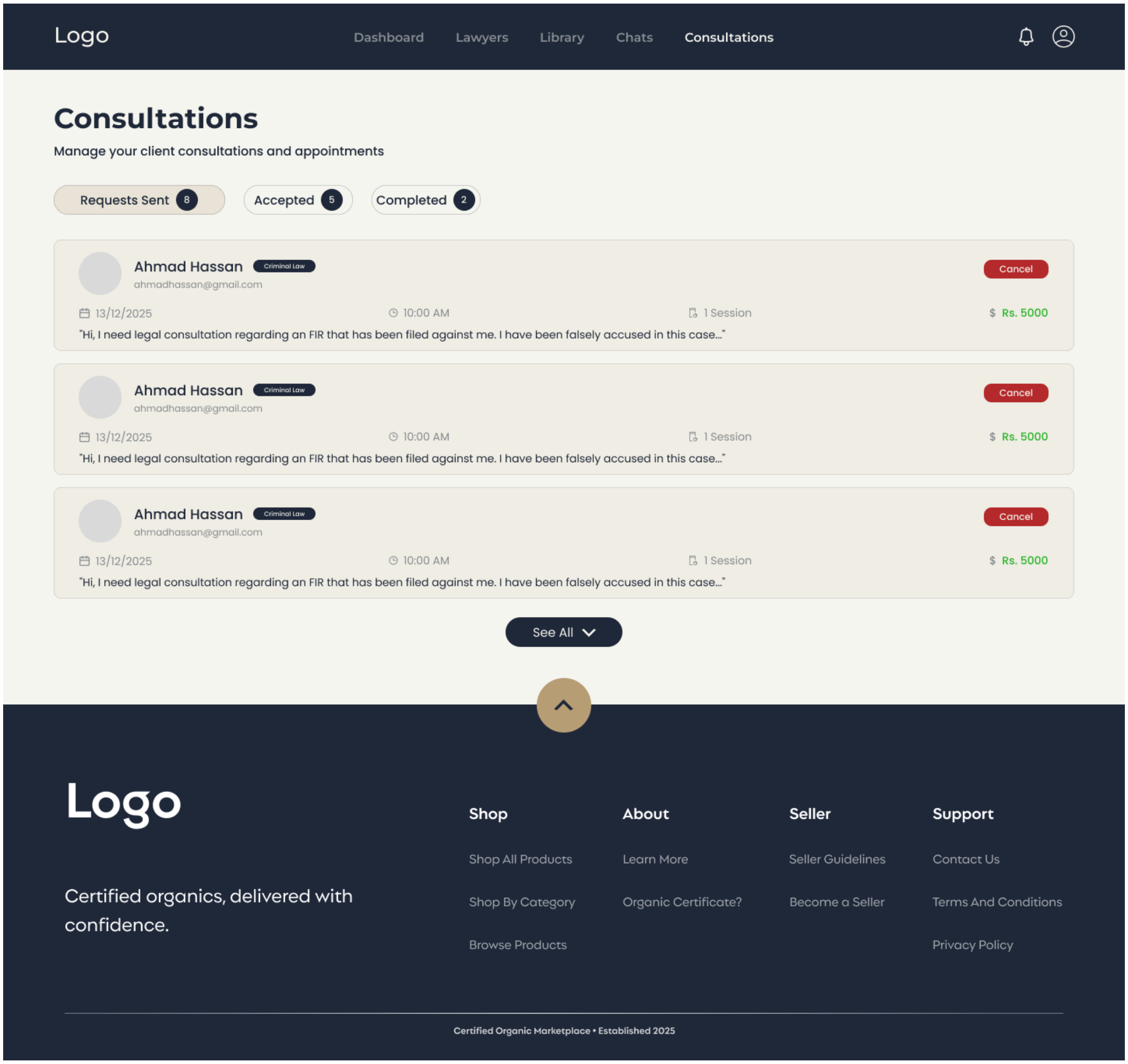

Figure 13: Mockup M10 – Client Consultation Page

Functional Requirements Derived from Mockup M10 – Client Consultation Page

Table 22: Functional Requirements Derived from Mockup M10

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Status Filter Tabs	FR10.1: The system shall display filter tabs for "Requests Sent," "Accepted,"	The "Requests Sent" tab shall be the default view upon

	and "Completed," each with a corresponding count.	loading the page. The active tab must be visually highlighted.
Consultation List	FR10.2: The system shall display a list of consultation records corresponding to the selected status tab.	The list should be sorted with the most recent requests appearing first.
Consultation Card	FR10.3: The system shall display each consultation request as a card containing the lawyer's name, email, date, time, session count, fee, and a description preview.	The description preview must be truncated to a maximum of 150 characters.
Cancel Request Action	FR10.4: The system shall provide a "Cancel" button for each item in the "Requests Sent" list.	The "Cancel" button must only be visible and active for consultations with a "pending" status.
Pagination Control	FR10.5: The system shall display a "See All" button if the number of consultations in a category exceeds the initial display limit.	The button should load the next set of records and append them to the existing list without a full page reload.

Event Response Table Derived from Mockup M10 – Client Consultation Page

Table 23: Event Response Table Derived from Mockup M10

Event	System State	Response
User clicks the **"Accepted"** tab.	The "Requests Sent" tab is currently active and displaying pending requests.	1. The system shall hide the list of sent requests. 2. The system shall fetch and display the list of accepted consultations. 3. The "Accepted" tab shall become visually active.
User clicks the **"Cancel"** button for a consultation request.	The request is in a "pending" state within the "Requests Sent" list.	1. The system shall display a confirmation prompt (e.g., "Are you sure you want to cancel?"). 2. If the user confirms, the system shall remove the request from the user's view, update the "Requests Sent" count, and notify the lawyer of the cancellation.

User clicks the **"See All"** button.	The initial list of requests is displayed, and more are available but not visible.	1. The system shall fetch the next page of results for the active category. 2. The system shall append the new consultation cards to the bottom of the current list.

2.2.11 Mockup M11 – User Settings Page

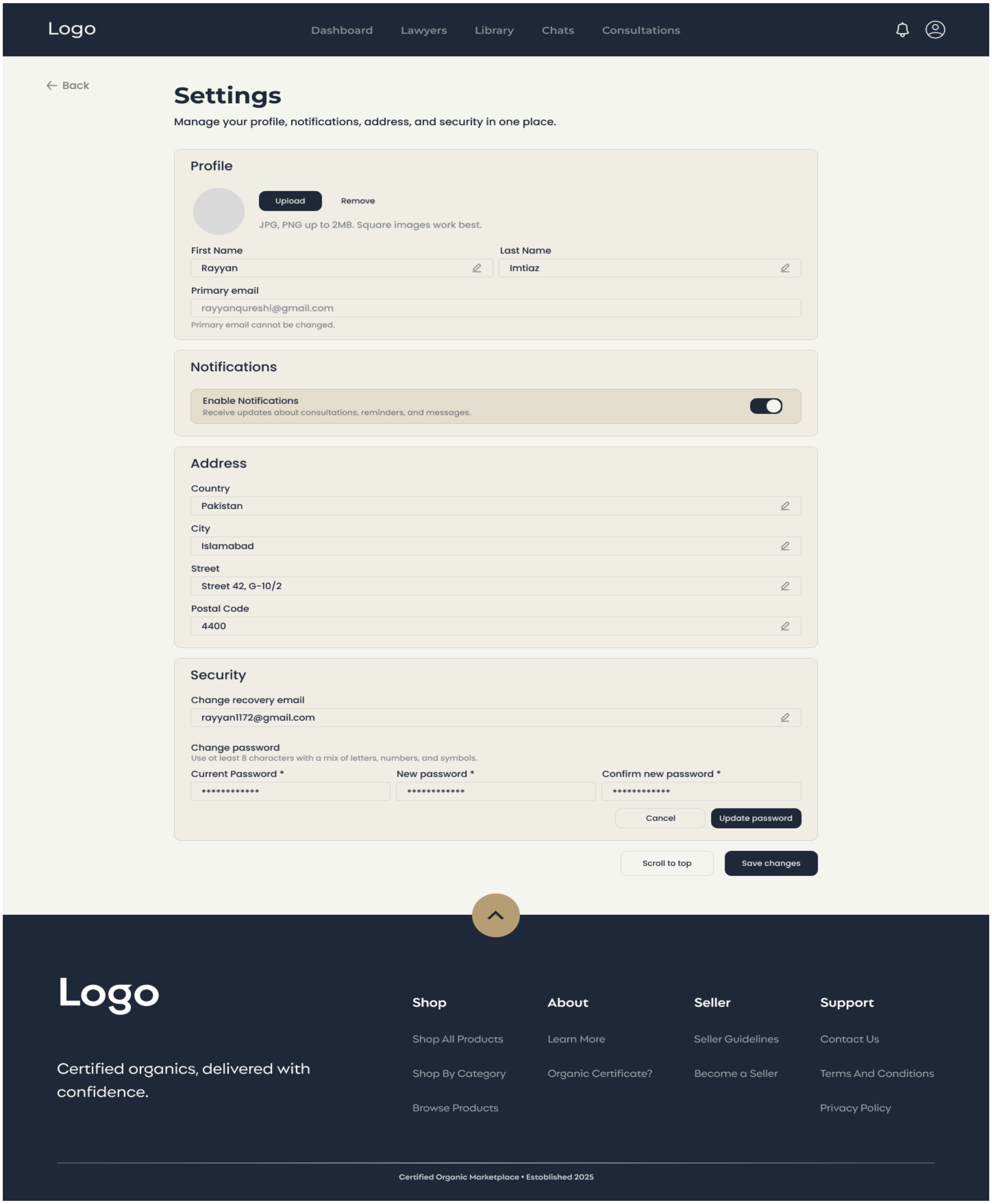

Figure 14: Mockup M11 – User Settings Page

Functional Requirements Derived from Mockup M11 – User Settings Page

Table 24: Functional Requirements Derived from Mockup M11

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Profile Picture Management	FR11.1: The system shall allow the user to upload a profile picture.	The file must be in JPG or PNG format with a maximum size of 2MB. Square images are recommended.
Name Editing	FR11.2: The system shall provide editable text fields for the user's "First Name" and "Last Name".	These fields cannot be submitted if left empty.
Primary Email Display	FR11.3: The system shall display the user's primary email in a read-only format.	A helper text "Primary email cannot be changed" must be displayed.
Notification Toggle	FR11.4: The system shall provide a master toggle switch to enable or disable all platform notifications.	The state of this toggle is saved when the user clicks the "Save changes" button.
Address Editing	FR11.5: The system shall provide editable text fields for all parts of the user's address (Country, City, Street, Postal Code).	All fields are optional.
Password Change	FR11.6: The system shall provide input fields for "Current Password," "New password," and "Confirm new password."	The "New password" and "Confirm new password" fields must match. The new password must be at least 8 characters and include letters, numbers, and symbols.
Update Password Action	FR11.7: The system shall provide an "Update password" button to finalize a password change.	This button is independent of the main "Save changes" button and should only submit the password fields for validation and update.
Save All Changes	FR11.8: The system shall provide a "Save changes" button to persist all modifications made	This action saves all editable fields on the page except for the password change section.

	to the profile, notifications, and address sections.	

Event Response Table Derived from Mockup M11 – User Settings Page

Table 25: Event Response Table Derived from Mockup M11

Event	System State	Response
User clicks the **"Upload"** button.	User is viewing the settings page.	1. The system shall open the device's native file explorer for image selection.
User toggles the **"Enable Notifications"** switch from ON to OFF.	Notifications are enabled.	1. The visual state of the switch changes to OFF. The change is staged and awaits the user clicking "Save changes".
User clicks the **"Update password"** button after filling fields correctly.	All three password fields are filled, and the new passwords match and meet complexity rules.	1. The system shall validate that the "Current Password" is correct. 2. If correct, the system shall update the user's password in the database and display a success message. 3. The password fields will be cleared.
User clicks the **"Update password"** button when "New password" and "Confirm new password" do not match.	The two new password fields have different values.	1. The system shall prevent the update. 2. The system shall display an inline error message, such as "Passwords do not match."
User clicks the **"Save changes"** button.	User has modified their name, address, or notification settings.	1. The system shall validate all modified fields. 2. The system shall persist the new data to the database. 3. The system shall display a success confirmation message (e.g., "Your changes have been saved.").

User clicks the **"← Back"** link with unsaved changes.	User has modified a field but has not clicked "Save changes".	1. The system should display a confirmation prompt (e.g., "You have unsaved changes. Are you sure you want to leave?").

2.2.12 Mockup M12 – Lawyer Login Page

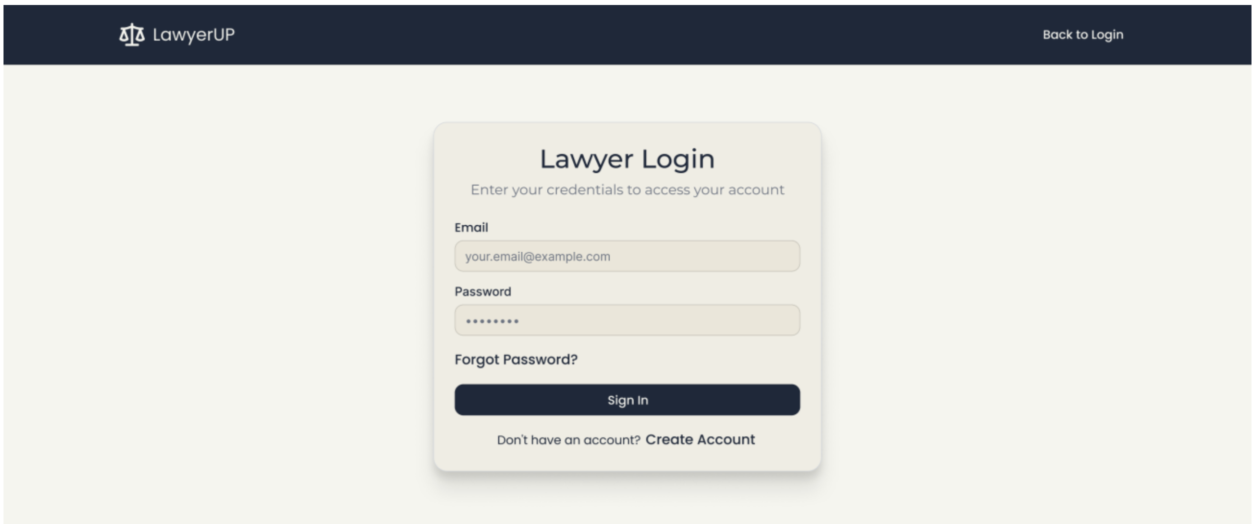

Figure 15: Mockup M12 – Lawyer Login Page

Functional Requirements Derived from Mockup M12 – Lawyer Login Page

Table 26:Functional Requirements Derived from Mockup M12

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
User Authentication	FR12.1: The system shall provide input fields for the user to enter their email and password.	The email field must validate for a standard email format. The password field must mask the input characters.
Sign-In Action	FR12.2: The system shall provide a "Sign In" button to submit the credentials for authentication.	The system shall lock a lawyer's account after 5 consecutive failed login attempts to prevent unauthorized access.

Password Recovery	FR12.3: The system shall provide a "Forgot Password?" link to assist users who have forgotten their credentials.	Clicking this link must navigate the user to the password recovery workflow.
Account Creation Link	FR12.4: The system shall provide a "Create Account" link for users who do not have an existing lawyer account.	Clicking this link must navigate the user to the lawyer registration page.

Event Response Table Derived from Mockup M12 – Lawyer Login Page

Table 27: Event Response Table Derived from Mockup M12

Event	System State	Response
User clicks the **"Sign In"** button with valid credentials.	The lawyer has entered a correct email and password combination.	1. The system shall authenticate the user. 2. The system shall create a user session. 3. The system shall redirect the user to the Lawyer Dashboard.
User clicks the **"Sign In"** button with invalid credentials.	The lawyer has entered an incorrect email or password.	1. The system shall prevent login. 2. The system shall display an error message (e.g., "Invalid email or password"). 3. The system shall increment the failed login attempt counter for that lawyer's account.
User clicks the **"Forgot Password?"** link.	The lawyer is on the login screen.	1. The system shall navigate the user to the password recovery page, where they can enter their email address to receive reset instructions.
User clicks the **"Create Account"** link.	The lawyer is on the login screen.	1. The system shall navigate the user to the Lawyer Registration page.

2.2.13 Mockup M13 – Lawyer Registration Page

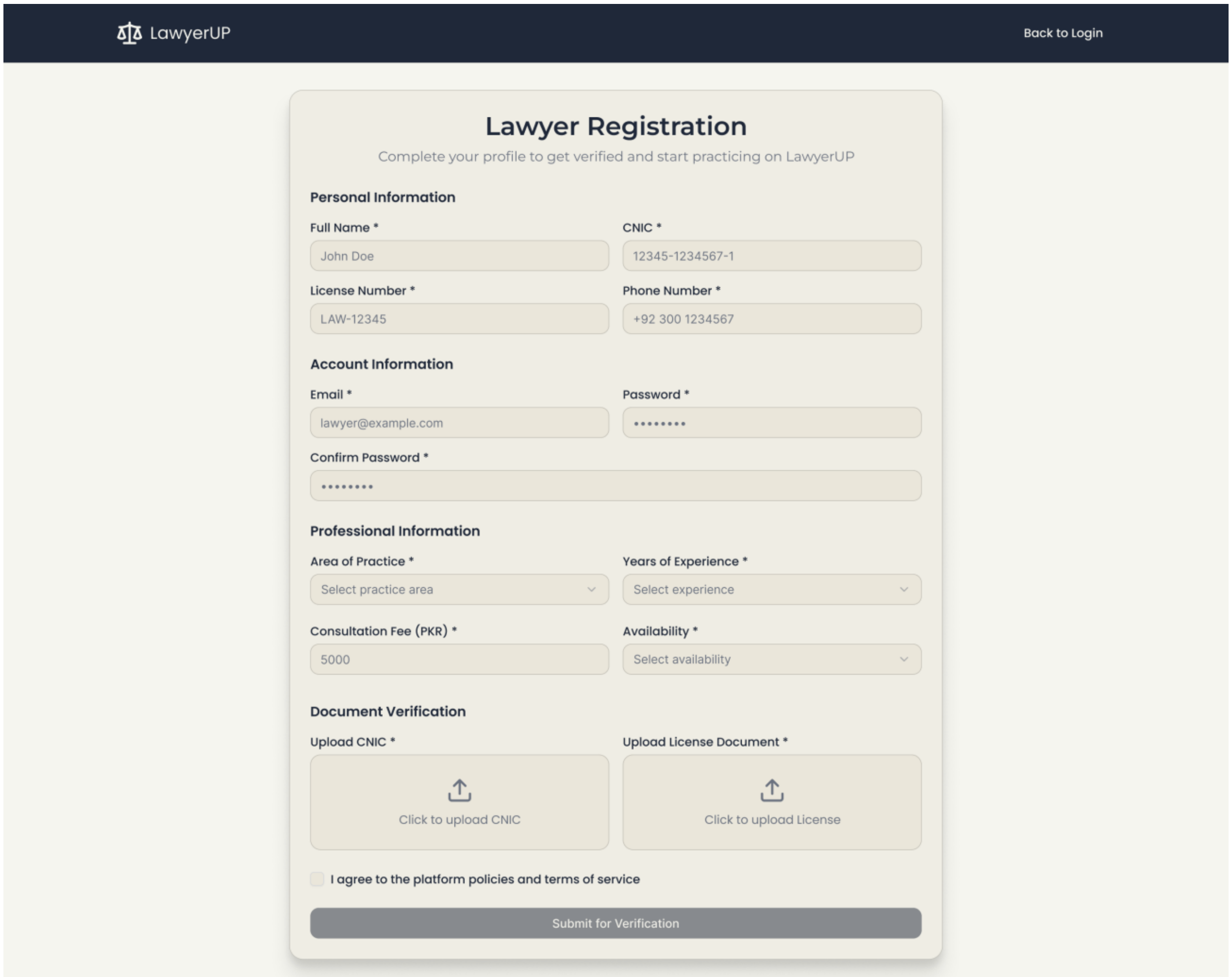

Figure 16: Mockup M13 – Lawyer Registration Page

Functional Requirements Derived from Mockup M13 – Lawyer Registration Page

Table 28: Functional Requirements Derived from Mockup M13

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
User Information Form	FR13.1: The system shall provide input fields for the user to enter their Full Name, CNIC, License Number, and Phone Number.	All fields marked with an asterisk (*) are mandatory. The CNIC must follow the XXXXX-XXXXXXX-X format. The Phone Number must be a valid Pakistani mobile number.

Account Creation Form	FR13.2: The system shall provide input fields for Email, Password, and Confirm Password.	All fields are mandatory. The Email must be a valid format. The "Password" and "Confirm Password" fields must match and meet complexity requirements (e.g., minimum 8 characters).
Professional Details Form	FR13.3: The system shall provide dropdown menus for "Area of Practice," "Years of Experience," and "Availability," and a numeric input for "Consultation Fee (PKR)."	All fields are mandatory. The dropdowns must be populated with predefined options. The Consultation Fee must be a positive number.
Document Upload	FR13.4: The system shall provide dedicated areas for the user to upload their CNIC and License Document.	Both document uploads are mandatory. The system should accept common image or document file formats (e.g., JPG, PNG, PDF).
Terms Agreement	FR13.5: The system shall provide a checkbox for the user to agree to the platform's policies and terms of service.	The "Submit for Verification" button shall remain disabled until this box is checked.
Submission Action	FR13.6: The system shall provide a "Submit for Verification" button to finalize the registration.	This button is the final action and submits all entered data and uploaded documents to the system administrators for review.

Event Response Table Derived from Mockup M13 – Lawyer Registration Page

Table 29: Event Response Table Derived from Mockup M13

Event	System State	Response
User clicks the **"Submit for Verification"** button with valid data.	All mandatory fields are correctly filled, documents are uploaded, and the terms checkbox is checked.	1. The system shall validate all inputs. 2. The system shall create a new lawyer account with a "Pending Verification" status. 3. The system shall securely store the uploaded documents. 4. The system shall redirect the user to a page confirming their

		submission and explaining the review process.
User clicks the **"Submit for Verification"** button with invalid or missing data.	At least one mandatory field is empty, or the passwords do not match.	1. The system shall prevent the form submission. 2. The system shall display inline validation error messages next to the corresponding invalid fields.
User clicks the **"Click to upload CNIC"** area.	The user is filling out the registration form.	1. The system shall open the operating system's native file selection dialog, allowing the user to choose a document to upload.
User checks the **"I agree..."** checkbox.	The "Submit for Verification" button is disabled. All other mandatory fields are filled.	1. The system shall enable the "Submit for Verification" button, allowing the user to complete the registration.

2.2.14 Mockup M14 – Lawyer Dashboard Page

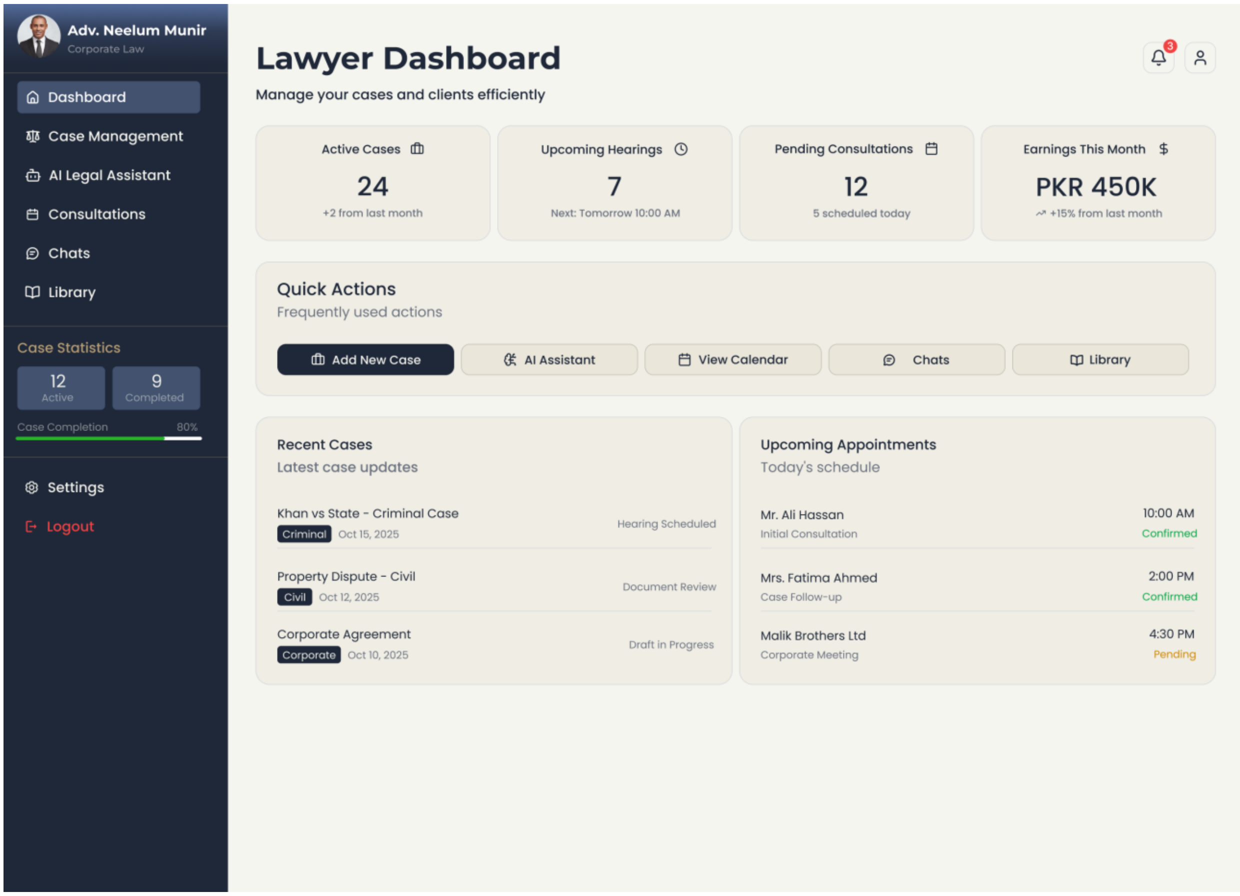

Figure 17: Mockup M14 – Lawyer Dashboard Page

Functional Requirements Derived from Mockup M14 – Lawyer Dashboard Page

Table 30: Functional Requirements Derived from Mockup M14

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
KPI Summary Cards	FR14.1: The system shall display four summary cards at the top of the dashboard for Active Cases, Upcoming Hearings, Pending Consultations, and Earnings This Month.	Data on these cards must be calculated in real-time. Metrics like "+2 from last month" must compare the current count to the previous month's total.
Sidebar Navigation	FR14.2: The system shall provide a persistent sidebar menu with direct	The icon and text for the currently active page (e.g.,

	links to all major sections of the application.	"Dashboard") must be visually highlighted.
Case Statistics	FR14.3: The system shall display a "Case Statistics" widget in the sidebar showing the total count of "Active" and "Completed" cases and a progress bar for "Case Completion".	The progress bar percentage must be calculated as (Completed Cases / (Active + Completed Cases)) * 100.
Quick Actions	FR14.4: The system shall provide a set of "Quick Actions" buttons for frequently used features.	Each button must navigate the user directly to its corresponding page or function (e.g., "Add New Case" opens a new case form).
Recent Cases List	FR14.5: The system shall display a "Recent Cases" section listing the lawyer's most recently updated cases.	The list must be sorted by the most recent activity date in descending order and should display a maximum of three cases on the dashboard.
Upcoming Appointments List	FR14.6: The system shall display an "Upcoming Appointments" section listing all appointments scheduled for the current day.	The list must be sorted chronologically. The status for each appointment ("Confirmed," "Pending") must be clearly visible and color-coded.
Logout	FR14.7: The system shall provide a "Logout" button in the sidebar.	Clicking the logout button must terminate the user's session and redirect them to the login page.

Event Response Table Derived from Mockup M14 – Lawyer Dashboard Page

Table 31: Event Response Table Derived from Mockup M14

Event	System State	Response
User clicks the **"Add New Case"** button.	The lawyer is viewing the dashboard.	1. The system shall navigate the user to the "Create New Case" page or display a modal form for case creation.

User clicks on a case in the **"Recent Cases"** list.	The lawyer is viewing the dashboard.	1. The system shall navigate the user to the detailed view page for that specific case within the "Case Management" section.
User clicks on an appointment in the **"Upcoming Appointments"** list.	The lawyer is viewing the dashboard.	1. The system shall navigate the user to the detailed view for that specific appointment, likely within the "Consultations" section.
User clicks the **"Logout"** button.	The user is logged into their account.	1. The system shall terminate the current session. 2. The system shall redirect the user to the application's login screen.
User clicks the **"View Calendar"** button.	The lawyer is viewing the dashboard.	1. The system shall navigate the user to a full-page calendar interface that displays all hearings, appointments, and deadlines.

2.2.15 Mockup M15 – Case Management Page

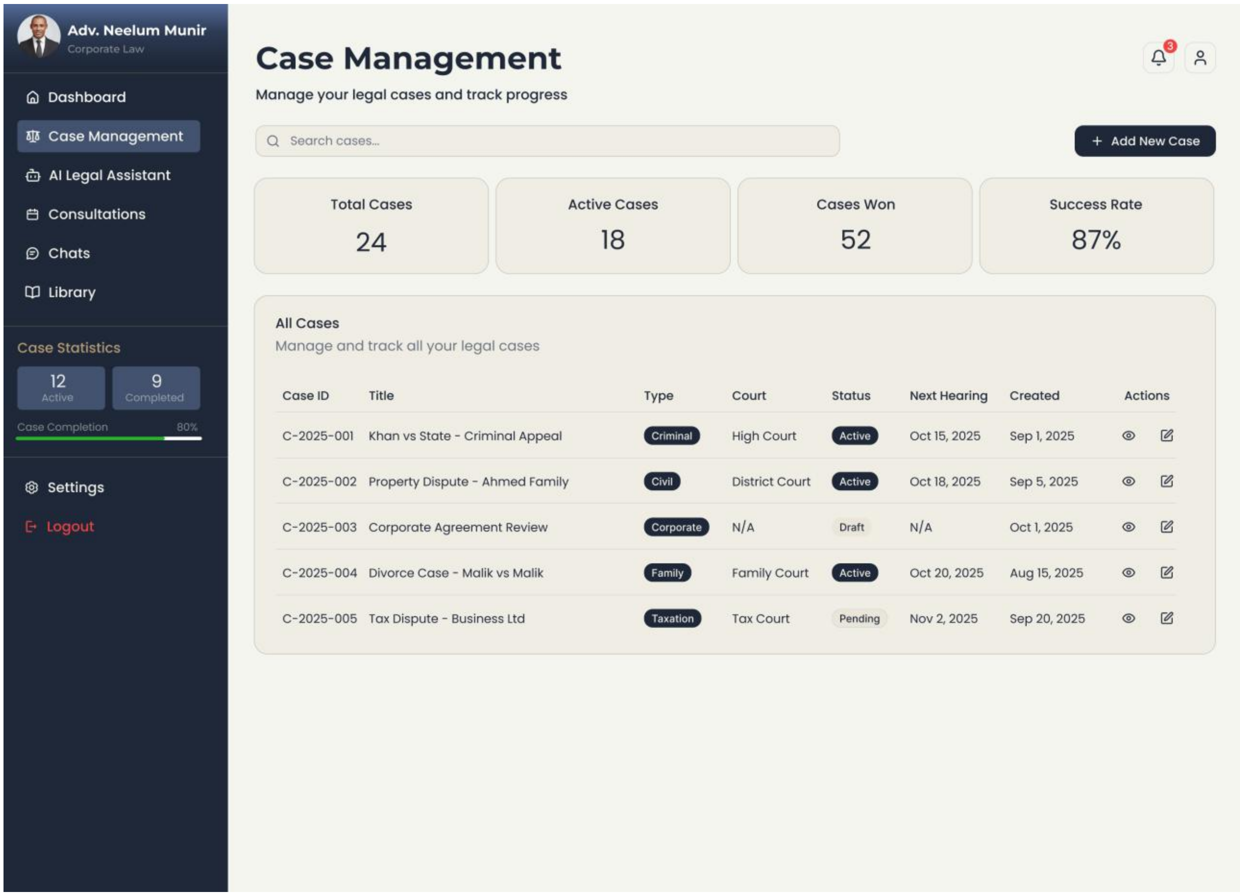

Figure 18: Mockup M15 – Case Management Page

Functional Requirements Derived from Mockup M15 – Case Management Page

Table 32: Functional Requirements Derived from Mockup M15

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Statistics Summary Cards	FR15.1: The system shall display four summary cards showing the count of Total Cases, Active Cases, Cases Won, and the calculated Success Rate.	The Success Rate must be calculated as (Cases Won / Total Cases) * 100 and displayed as a percentage.

Case Search	FR15.2: The system shall provide a search input field to filter the list of cases.	The search should filter the list in real-time based on matches in the Case ID and Title fields.
Add New Case Button	FR15.3: The system shall provide an "Add New Case" button.	Clicking this button must navigate the user to a new page or open a modal form for creating a case record.
Case List Table	FR15.4: The system shall display all cases in a table with columns for Case ID, Title, Type, Court, Status, Next Hearing, Created, and Actions.	The table should be paginated if the number of cases exceeds a predefined limit (e.g., 10 per page). The default sorting order should be by the "Created" date in descending order.
Status Tags	FR15.5: The system shall display the "Status" of each case using a color-coded tag.	The color of the tag must correspond to the status (e.g., green for "Active," yellow for "Pending," gray for "Draft").
Case Action Icons	FR15.6: The system shall provide "View" and "Edit" icon buttons in the "Actions" column for each case row.	The "View" icon must navigate to a read-only detail page for the selected case. The "Edit" icon must navigate to a form to modify the selected case's details.

Event Response Table Derived from Mockup M15 – Case Management Page

Table 33: Event Response Table Derived from Mockup M15

Event	System State	Response
User types "C-2025-003" into the **search bar**.	The table displays all cases.	1. The system shall filter the case list in real-time to display only the row(s) matching the search query.
User clicks the **"+ Add New Case"** button.	The lawyer is viewing the case management list.	1. The system shall navigate the user to the "Create New Case" form/page.
User clicks the **"View" icon** for the "Property Dispute" case.	The lawyer is viewing the case management list.	1. The system shall navigate to the detailed case view page for case "C-2025-002".

User clicks the **"Edit" icon** for the "Divorce Case".	The lawyer is viewing the case management list.	1. The system shall navigate to the case editing form, pre-populated with the data for case "C-2025-004".
User clicks the **"Dashboard"** link in the sidebar.	The "Case Management" page is active.	1. The system shall navigate the user to the Lawyer Dashboard page. 2. The "Dashboard" link in the sidebar shall become visually highlighted.

2.2.16 Mockup M16 – Add New Case Page

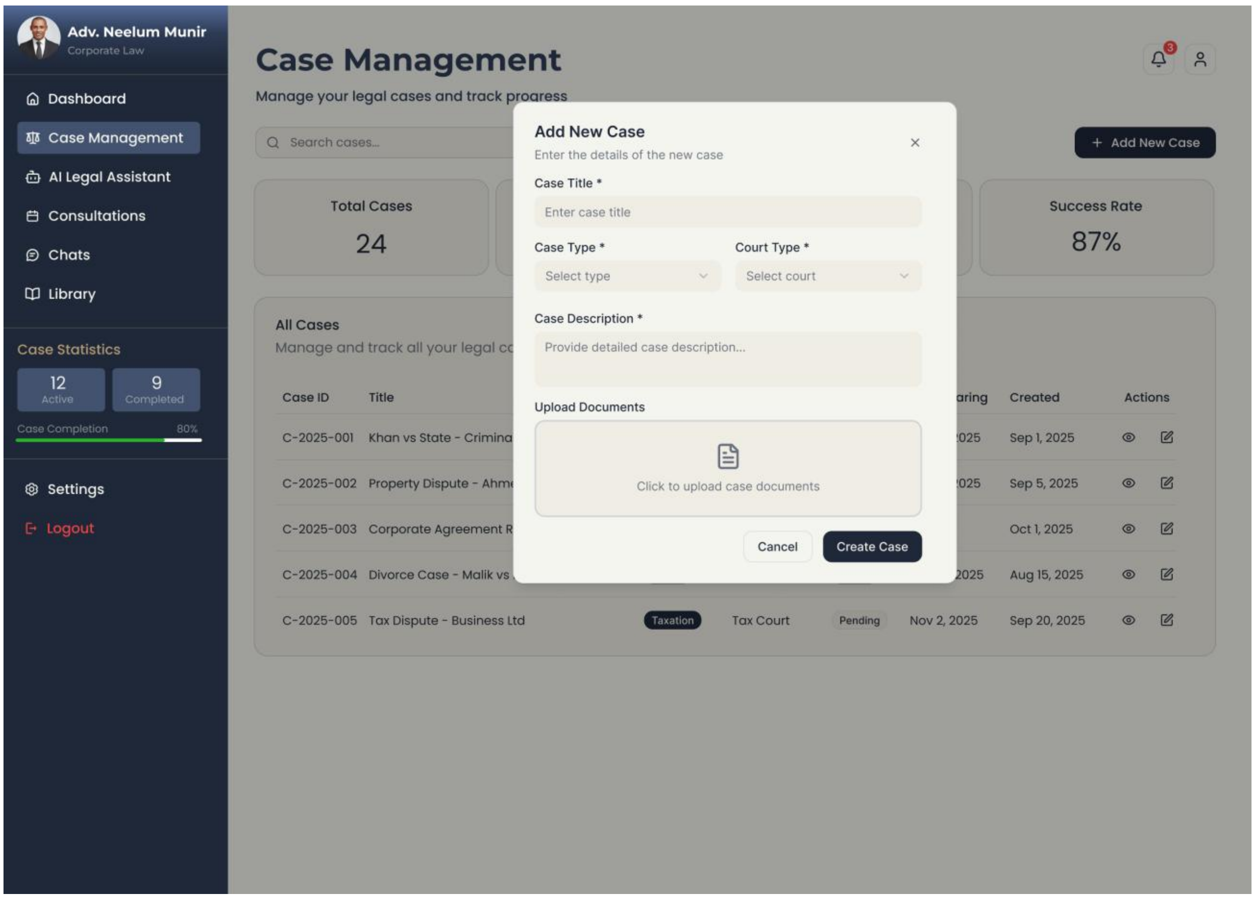

Figure 19: Mockup M16 – Add New Case Page

Functional Requirements Derived from Mockup M16 – Add New Case Page

Table 34: Functional Requirements Derived from Mockup M16

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Case Title Input	FR16.1: The system shall provide a text input field for the user to enter the case title.	This field is mandatory and cannot be empty.
Case Type Dropdown	FR16.2: The system shall provide a dropdown menu for the user to select the case type.	This field is mandatory. The options in the dropdown must be from a predefined list managed by the system administrator.
Court Type Dropdown	FR16.3: The system shall provide a dropdown menu for the user to select the court type.	The options in the dropdown must be from a predefined list. This field may be optional.
Case Description	FR16.4: The system shall provide a text area for the user to enter a detailed description of the case.	This field is mandatory and must support multi-line text entry.
Document Upload	FR16.5: The system shall provide a clickable area that allows the user to select and upload case-related documents.	The system should support multiple file uploads and restrict file types to common document formats (e.g., PDF, DOCX, JPG, PNG).
Create Case Button	FR16.6: The system shall provide a "Create Case" button to submit the form and create the new case record.	The button shall be disabled until all mandatory fields (Case Title, Case Type, Case Description) are filled.
Cancel Action	FR16.7: The system shall provide a "Cancel" button and a close ('X') icon to dismiss the modal.	Clicking either control must close the modal and discard any data entered into the form without saving.

Event Response Table Derived from Mockup M16 – Add New Case Page

Table 35: Event Response Table Derived from Mockup M16

Event	System State	Response

User clicks the **"Create Case"** button.	All mandatory fields are filled correctly.	1. The system shall validate all inputs. 2. The system shall save the new case record to the database. 3. The system shall close the "Add New Case" modal. 4. The case list in the background shall be refreshed to show the newly added case. 5. A success notification shall be displayed.
User clicks the **"Create Case"** button.	One or more mandatory fields are empty.	1. The system shall prevent the form submission. 2. The system shall display validation error messages next to the empty mandatory fields.
User clicks the **"Cancel"** button.	The modal is open, and data may have been entered.	1. The system shall discard any information entered in the form. 2. The system shall close the modal, returning the user to the Case Management page.
User clicks the **"Click to upload case documents"** area.	The "Add New Case" modal is open.	1. The system shall open the operating system's native file selection dialog, allowing the user to choose one or more files to upload.

2.2.17 Mockup M17 – Lawyer Consultation Management Page

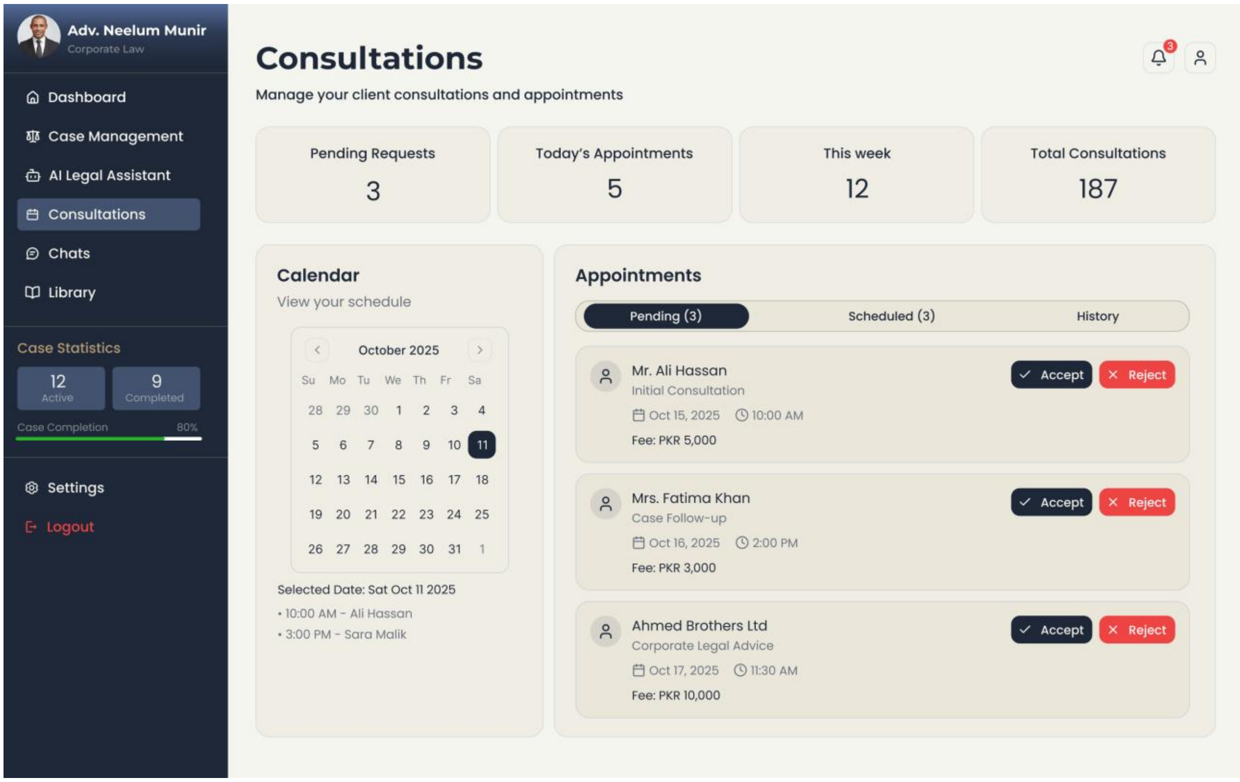

Figure 20: Mockup M17 – Lawyer Consultation Management Page

Functional Requirements Derived from Mockup M17 – Lawyer Consultation Management Page

Table 36: Functional Requirements Derived from Mockup M17

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
KPI Summary Cards	FR17.1: The system shall display four summary cards showing the total count for Pending Requests, Today's Appointments, This week's appointments, and Total Consultations.	The data on these cards must be calculated and displayed in real-time.
Interactive Calendar	FR17.2: The system shall provide a calendar widget that allows the user to navigate between months and select a specific date.	The current date must be highlighted. The selected date must have a distinct visual highlight.

Selected Date Schedule	FR17.3: The system shall display a list of all appointments scheduled for the date selected in the calendar.	If no appointments are scheduled for the selected date, the system must display a message like "No appointments scheduled for this day."
Appointment Filter Tabs	FR17.4: The system shall provide filter tabs for "Pending," "Scheduled," and "History," with each tab displaying the count of items in its category.	The "Pending" tab shall be the default active view. The active tab must be visually highlighted.
Pending Request Card	FR17.5: The system shall display each pending consultation as a card showing the client's name, consultation type, requested date, time, and fee.	N/A
Accept/Reject Actions	FR17.6: The system shall provide an "Accept" and a "Reject" button for each item in the "Pending" requests list.	These buttons must only be visible for requests with a "Pending" status. Once an action is taken, the buttons for that request must be removed or disabled.

Event Response Table Derived from Mockup M17 – Lawyer Consultation Management Page

Table 37: Event Response Table Derived from Mockup M17

Event	System State	Response
User clicks a date (e.g., Oct 15) on the **calendar**.	A different date (Oct 11) is currently selected and its schedule is displayed.	1. The visual highlight shall move from Oct 11 to Oct 15 on the calendar. 2. The schedule list below the calendar shall update to show appointments for Oct 15.
User clicks the **"Accept"** button for Mr. Ali Hassan's request.	The request is in the "Pending" list. The "Pending" count is 3, and the "Scheduled" count is 3.	1. The request's status shall be updated to "Scheduled."

		2. The card for Mr. Ali Hassan shall be removed from the "Pending" list. 3. The "Pending Requests" KPI card and tab count shall decrease to 2. 4. The "Scheduled" tab count shall increase to 4. 5. A confirmation notification shall be sent to the client.
User clicks the **"Reject"** button for a pending request.	The request is in the "Pending" list. The "Pending" count is 3.	1. The request's status shall be updated to "Rejected." 2. The card for that request shall be removed from the "Pending" list. 3. The "Pending Requests" KPI card and tab count shall decrease to 2. 4. A cancellation notification shall be sent to the client.
User clicks the **"Scheduled"** tab.	The "Pending" tab is currently active, showing a list of pending requests.	1. The list of pending requests shall be hidden. 2. The system shall display the list of all "Scheduled" appointments. 3. The "Scheduled" tab shall become visually highlighted.

2.2.18 Mockup M18 – Lawyer Chat Page

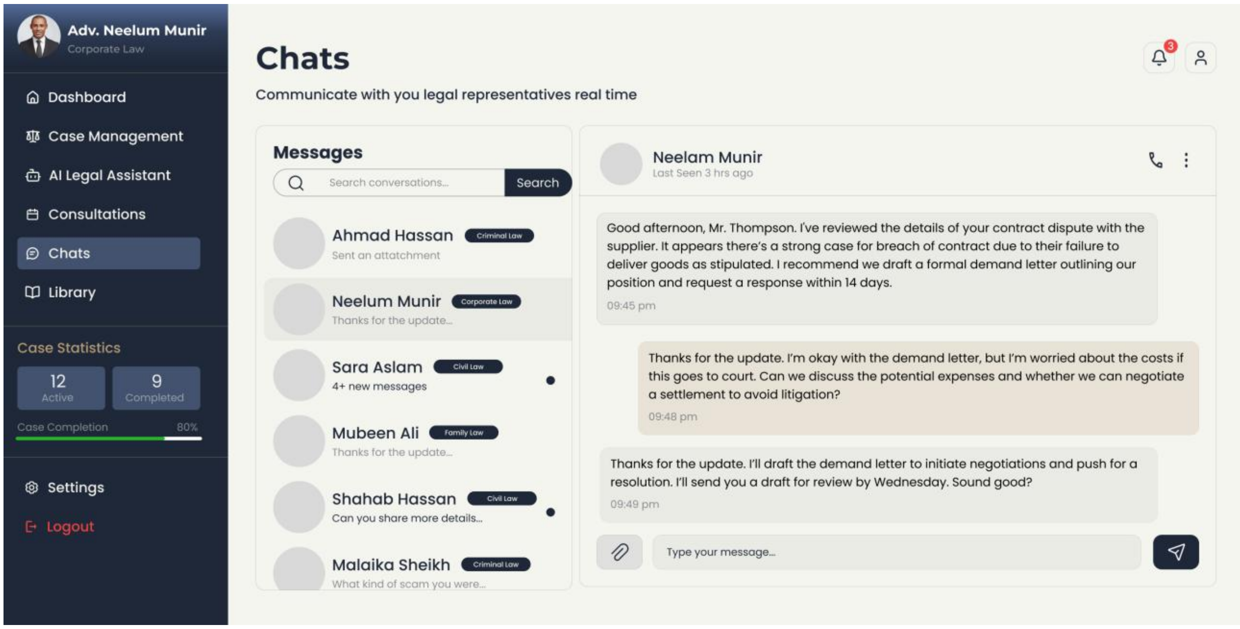

Figure 21: Mockup M18 – Lawyer Chat Page

Functional Requirements Derived from Mockup M18 – Lawyer Chat Page

Table 38: Functional Requirements Derived from Mockup M18

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Conversation Search	FR18.1: The system shall provide a search bar to filter the conversation list based on text input.	The search must filter the list by matching the client's name in real-time.
Conversation List	FR18.2: The system shall display a list of all conversations in the left panel, sorted by the most recent message activity.	The currently selected conversation must be visually highlighted.
Unread Message Indicator	FR18.3: The system shall display a visual indicator and a count for conversations containing unread messages.	The indicator and count must be cleared once the user clicks on and opens the conversation.
Active Chat Window	FR18.4: The system shall display the full message history for the selected	The lawyer's messages must be right-aligned, and the

	conversation, with timestamps for each message.	client's messages must be left-aligned.
Message Composition	FR18.5: The system shall provide a text input field to compose messages and a send button to transmit them.	The send button shall be disabled if the text input field is empty and no files are attached.
File Attachment	FR18.6: The system shall provide an attachment icon that opens the device's file explorer to select files.	The system must support common file formats such as PDF, DOCX, and image files.
Call Functionality	FR18.7: The system shall provide a call icon in the chat header to initiate a voice/video call with the client.	N/A

Event Response Table Derived from Mockup M18 – Lawyer Chat Page

Table 39: Event Response Table Derived from Mockup M18

Event	System State	Response
User clicks on the **"Sara Aslam"** conversation in the left panel.	A different conversation is currently displayed in the main chat window.	1. The system shall visually highlight the "Sara Aslam" conversation. 2. The system shall load and display the message history for "Sara Aslam" in the main window. 3. The system shall clear the unread message indicator for that conversation.
User types a message and clicks the **send icon**.	The user is viewing an active chat.	1. The system shall display the new message, right-aligned, at the bottom of the chat history. 2. The system shall transmit the message to the recipient. 3. The system shall clear the text input field.
A new message is received for an **inactive**	The user is currently viewing the chat with Neelam Munir.	1. The system shall display an unread message indicator on the

conversation (e.g., from Ahmad Hassan).		"Ahmad Hassan" conversation in the left panel. 2. The "Ahmad Hassan" conversation shall move to the top of the conversation list.
User clicks the **call icon**.	The user is viewing an active chat.	1. The system shall launch the integrated voice/video call interface to connect with the client in the current chat.

2.2.19 Mockup M19 – Lawyer Legal Library Page

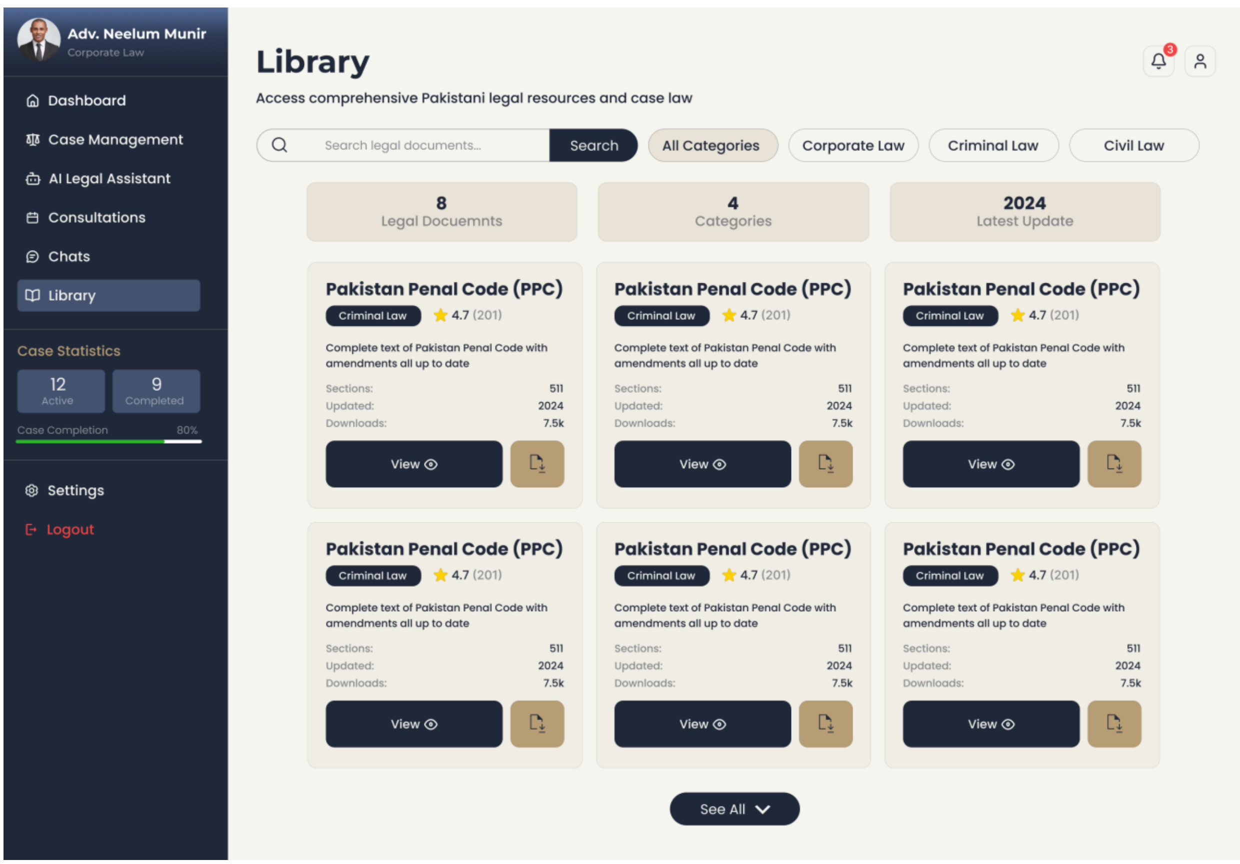

Figure 22: Mockup M19 – Lawyer Legal Library Page

Functional Requirements Derived from Mockup M19 – Lawyer Legal Library Page

Table 40: Functional Requirements Derived from Mockup M19

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Document Search	FR19.1: The system shall provide a text input field and a "Search" button to allow lawyers to search for legal documents.	The search must query document titles and potentially their content for matching keywords.
Category Filters	FR19.2: The system shall display a set of buttons for filtering documents by legal category.	The "All Categories" button should be the default active filter. When a different category is selected, only documents from that category shall be displayed.
Statistics Display	FR19.3: The system shall display summary cards with key library metrics (Total Documents, Categories, Latest Update).	These numbers must be dynamically generated from the library's database to reflect the most current state.
Document Card	FR19.4: The system shall display each document in a card format, showing its title, category, rating, and metadata (Sections, Updated, Downloads).	All information on the card must be retrieved from the corresponding document's record.
Document View Action	FR19.5: The system shall provide a "View" button on each document card.	Clicking this button must open the document in an in-application reader or a new browser tab for viewing.
Document Download Action	FR19.6: The system shall provide a download icon button on each document card.	Clicking this button must initiate a file download of the document. The download count for that document must be incremented by one upon successful download.
Pagination Control	FR19.7: The system shall provide a "See All" button at the bottom of the list to load more documents.	This action should append the next set of documents to the current view without requiring a full page refresh.

Event Response Table Derived from Mockup M19 – Lawyer Legal Library Page

Table 41: Event Response Table Derived from Mockup M19

Event	System State	Response
User clicks a **category filter button** (e.g., "Civil Law").	The library is displaying documents from "All Categories."	1. The system shall query for all documents tagged with "Civil Law." 2. The document grid shall be updated to display only the results of the query. 3. The "Civil Law" button shall be visually highlighted as the active filter.
User clicks the **"View"** button on a document card.	The user is on the Library page.	1. The system shall navigate the user to a document viewer page, loading the content of the selected document.
User clicks the **download icon** on a document card.	The user is on the Library page.	1. The system shall initiate a file download for the selected document. 2. The system shall send a request to the server to increment the download counter for that specific document.
User clicks the **"See All"** button.	An initial set of documents is displayed, and more are available but not visible.	1. The system shall fetch the next page of document records from the server. 2. The system shall render the new documents as cards and append them to the bottom of the existing list.

2.2.20 Mockup M20 – Lawyer Profile Settings Page

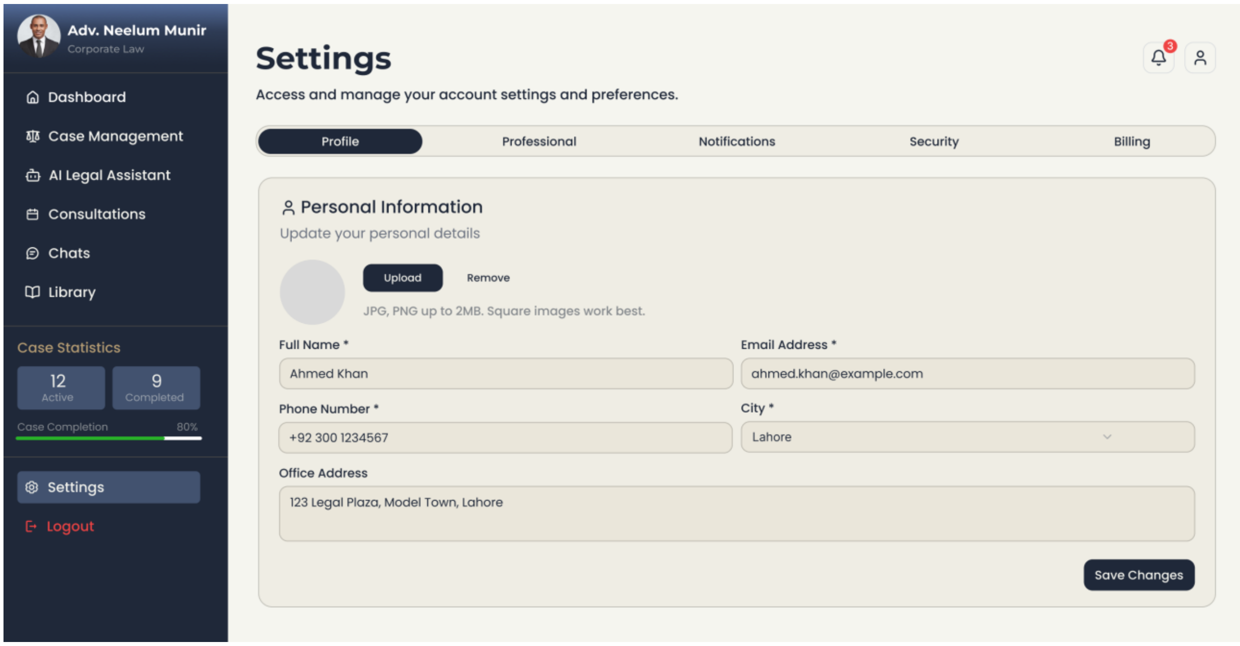

Figure 23: Mockup M20 – Lawyer Profile Settings Page

Functional Requirements Derived from Mockup M20 – Lawyer Profile Settings Page

Table 42: Functional Requirements Derived from Mockup M20

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Settings Navigation Tabs	FR20.1: The system shall display navigable tabs to switch between Profile, Professional, Notifications, Security, and Billing settings.	The currently active tab must be visually highlighted. The "Profile" tab is the default view.
Profile Picture Management	FR20.2: The system shall provide "Upload" and "Remove" buttons to manage the user's profile picture.	The system must only accept JPG and PNG file formats with a maximum size of 2MB.
Personal Information Form	FR20.3: The system shall provide editable input fields for Full Name, Email Address, Phone Number, and Office Address.	Full Name and Email Address are mandatory fields, indicated by an asterisk (*). The email must be a valid format.

City Selection	FR20.4: The system shall provide a dropdown menu for the user to select their city.	The list of cities must be predefined and managed by the system administrator. This is a mandatory field.
Save Action	FR20.5: The system shall provide a "Save Changes" button to persist all modifications made to the personal information form.	The button should only become active after a user has made at least one change to the form. On click, the system must validate all mandatory fields.

Event Response Table Derived from Mockup M20 – Lawyer Profile Settings Page

Table 43: Event Response Table Derived from Mockup M20

Event	System State	Response
User clicks the **"Professional"** tab.	The "Profile" tab is currently active.	1. The system shall hide the "Personal Information" section. 2. The system shall display the content for the "Professional" settings. 3. The "Professional" tab shall become visually highlighted.
User clicks the **"Upload"** button.	The lawyer is viewing the profile settings page.	1. The system shall open the device's native file explorer to allow the user to select an image file.
User clicks the **"Save Changes"** button with valid data.	At least one field in the form has been modified.	1. The system shall validate all inputs. 2. The system shall save the updated information to the database. 3. The system shall display a success confirmation message (e.g., "Settings saved successfully").
User attempts to save with an empty **mandatory field** (e.g., Full Name).	The "Full Name" input field is blank.	1. The system shall prevent the form from being saved.

		2. The system shall display an inline error message next to the "Full Name" field indicating that it is required.
User tries to navigate away with **unsaved changes**.	A field has been edited, but the "Save Changes" button has not been clicked.	1. The system shall display a confirmation prompt (e.g., "You have unsaved changes. Are you sure you want to leave?").

2.2.21 Mockup M21 – Lawyer Professional Settings Page

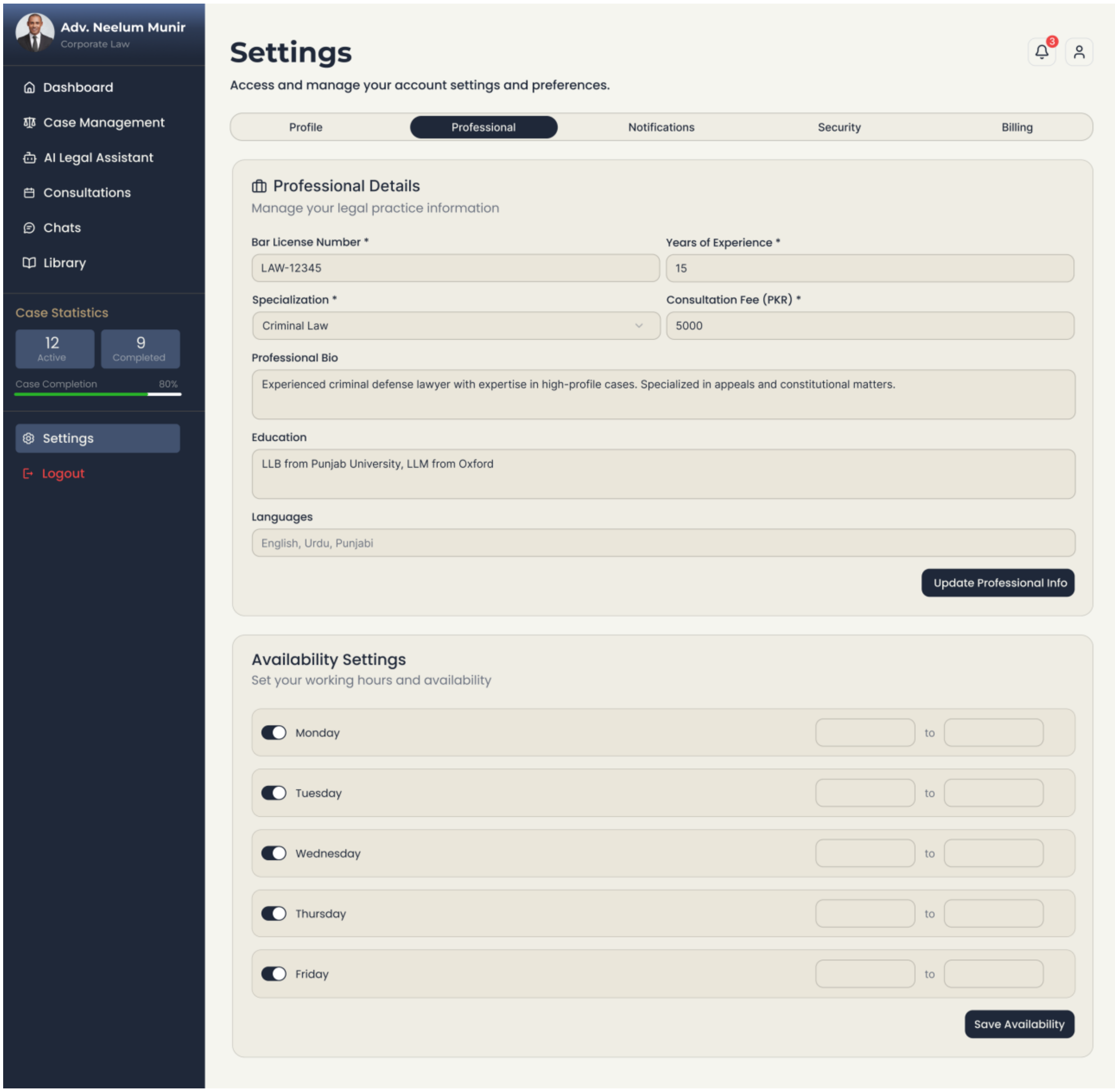

Figure 24: Mockup M21 – Lawyer Professional Settings Page

Functional Requirements Derived from Mockup M21 – Lawyer Professional Settings Page

Table 44: Functional Requirements Derived from Mockup M21

Feature	Functional Requirement (FR-ID: Statement)	Business Rule

Settings Navigation Tabs	FR21.1: The system shall display navigable tabs to switch between different settings categories.	The "Professional" tab is shown as the active view. The active tab must be visually distinct.
Professional Details Form	FR21.2: The system shall provide input fields for Bar License Number, Years of Experience, Consultation Fee, Professional Bio, Education, and Languages.	Fields marked with an asterisk (*) are mandatory. The "Years of Experience" and "Consultation Fee" fields must only accept numeric input.
Specialization Selection	FR21.3: The system shall provide a dropdown menu for the lawyer to select their specialization.	This is a mandatory field. The options in the dropdown must be from a predefined list managed by the system administrator.
Update Professional Info Action	FR2.3: The system shall provide an "Update Professional Info" button to save changes made to the professional details section.	This button validates all mandatory fields in its section before saving.
Availability Day Toggles	FR21.4: The system shall provide an individual toggle switch for each working day (Monday-Friday) to set availability.	When a day's toggle is switched OFF, the corresponding time input fields must be disabled. When switched ON, they must be enabled.
Time Input Fields	FR21.5: The system shall provide "from" and "to" time input fields for each enabled day in the availability settings.	The "to" (end) time must be later than the "from" (start) time for any given day.
Save Availability Action	FR21.6: The system shall provide a "Save Availability" button to persist the working hours and day selections.	This button saves the state of all toggles and time inputs in the "Availability Settings" section and is independent of the "Update Professional Info" button.

Event Response Table Derived from Mockup M21 – Lawyer Professional Settings Page

Table 45: Event Response Table Derived from Mockup

Event	System State	Response

User clicks the **"Security"** tab.	The "Professional" tab is currently active.	1. The system shall hide the content for the Professional settings. 2. The system shall fetch and display the content for the "Security" settings. 3. The "Security" tab shall become visually highlighted.
User clicks the **"Update Professional Info"** button with an empty mandatory field.	The lawyer has left the "Years of Experience" field blank.	1. The system shall prevent the form from saving. 2. The system shall display an inline validation error next to the "Years of Experience" field, indicating it is required.
User toggles the **"Tuesday"** switch from OFF to ON.	The time input fields for Tuesday are disabled.	1. The system shall enable the "from" and "to" time input fields for Tuesday, allowing the user to set working hours.
User clicks the **"Save Availability"** button.	The lawyer has updated their working hours for the week.	1. The system shall validate that for every enabled day, the end time is after the start time. 2. If valid, the system shall save the new availability schedule to the database. 3. The system shall display a success message (e.g., "Availability updated").

2.2.22 Mockup M22 – Lawyer Notification Settings Page

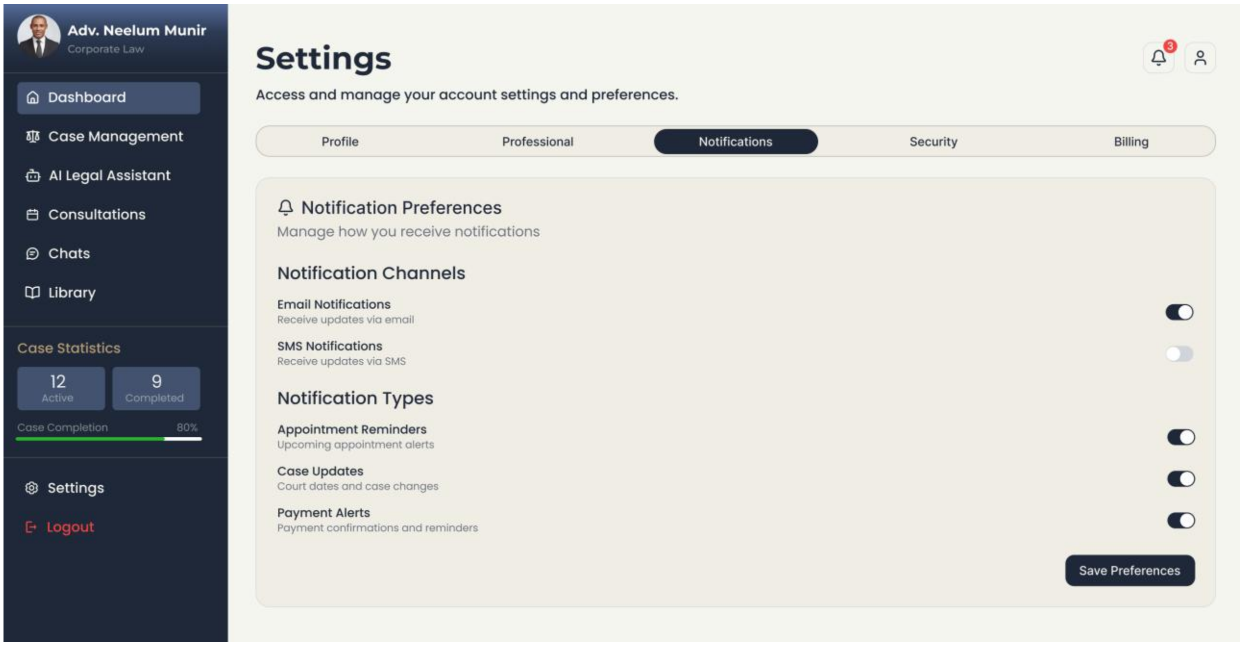

Figure 25: Mockup M22 – Lawyer Notification Settings Page

Functional Requirements Derived from Mockup M22 – Lawyer Notification Settings Page

Table 46: Functional Requirements Derived from Mockup M22

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Settings Navigation Tabs	FR22.1: The system shall display navigable tabs to switch between different settings categories.	The "Notifications" tab is shown as the active view and must be visually highlighted.
Notification Channel Toggles	FR22.2: The system shall provide individual toggle switches to enable or disable "Email Notifications" and "SMS Notifications."	To enable SMS notifications, the user must have a verified phone number on their profile.
Notification Type Toggles	FR22.3: The system shall provide individual toggle switches to enable or disable "Appointment Reminders," "Case Updates," and "Payment Alerts."	These toggles determine the content of the notifications sent, independent of the selected channel.

Save Preferences Action	FR22.4: The system shall provide a "Save Preferences" button to persist the current state of all toggles on the page.	The button should only become active after a user has changed the state of at least one toggle.

Event Response Table Derived from Mockup M22 – Lawyer Notification Settings Page

Table 47: Event Response Table Derived from Mockup M22

Event	System State	Response
User clicks the **"Security"** tab.	The "Notifications" tab is currently active.	1. The system shall hide the notification preferences content. 2. The system shall display the content for the "Security" settings. 3. The "Security" tab shall become visually highlighted.
User toggles the **"Case Updates"** switch from ON to OFF.	The "Save Preferences" button is inactive.	1. The visual state of the switch shall change to OFF. 2. The "Save Preferences" button shall become active to indicate there are unsaved changes.
User clicks the **"Save Preferences"** button.	One or more toggles have been changed, and the "Save Preferences" button is active.	1. The system shall save the current state of all notification toggles to the database. 2. The system shall display a success confirmation message (e.g., "Preferences saved"). 3. The "Save Preferences" button shall become inactive.
User attempts to navigate away with **unsaved changes**.	A toggle's state has been changed, but the changes have not been saved.	1. The system shall display a confirmation prompt (e.g., "You have unsaved changes. Are you sure you want to leave without saving?").

2.2.23 Mockup M23 – Lawyer Security Settings Page

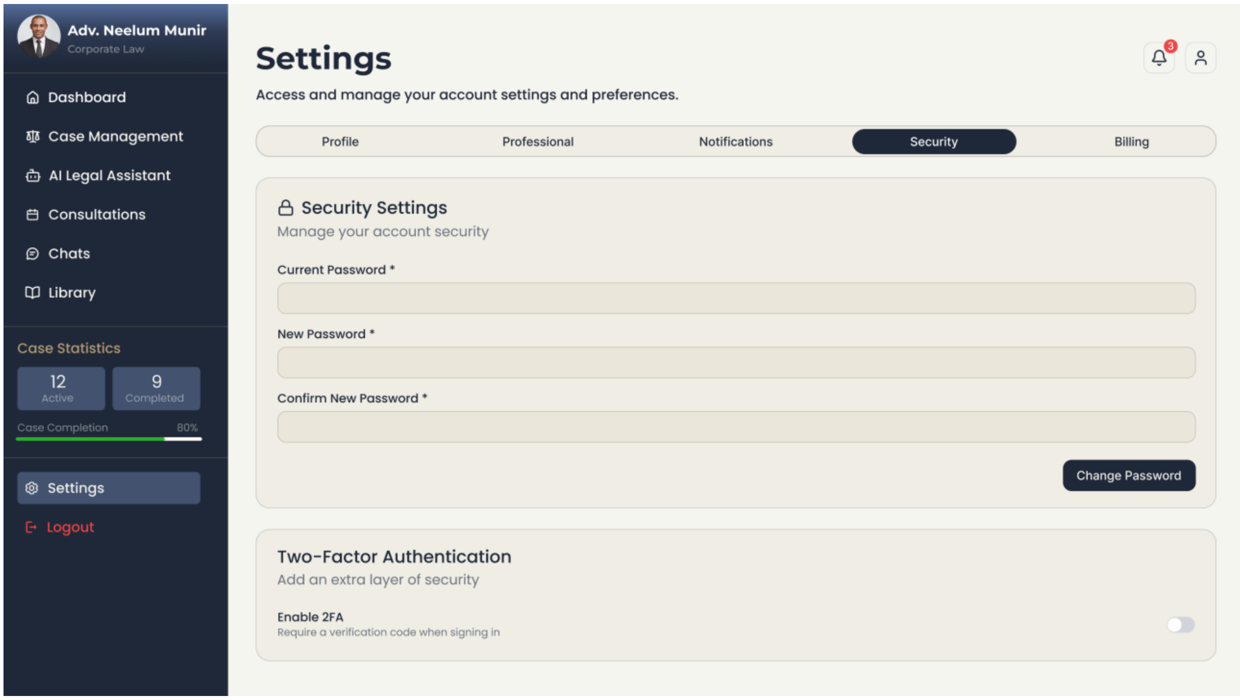

Figure 26: Mockup M23 – Lawyer Security Settings Page

Functional Requirements Derived from Mockup M23 – Lawyer Security Settings Page

Table 48: Functional Requirements Derived from Mockup M23

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Settings Navigation Tabs	FR23.1: The system shall display navigable tabs to switch between different settings categories.	The "Security" tab is shown as the active view and must be visually highlighted.
Change Password Form	FR23.2: The system shall provide three mandatory, password-masked input fields for "Current Password," "New Password," and "Confirm New Password."	The "New Password" and "Confirm New Password" fields must match. The new password must meet complexity requirements (e.g., minimum length, character types).
Change Password Action	FR23.3: The system shall provide a "Change Password"	The button should only become active when all three fields are filled. The system must validate the

	button to submit the password update request.	"Current Password" before processing the change.
Two-Factor Authentication (2FA)	FR23.4: The system shall provide a toggle switch to enable or disable Two-Factor Authentication for the account.	When enabling 2FA for the first time, the system must guide the user through a setup process (e.g., scanning a QR code with an authenticator app). Disabling 2FA might require password re-authentication.

Event Response Table Derived from Mockup M23 – Lawyer Security Settings Page

Table 49: Event Response Table Derived from Mockup M23

Event	System State	Response
User clicks the **"Billing"** tab.	The "Security" tab is currently active.	1. The system shall hide the security settings content. 2. The system shall display the content for the "Billing" settings. 3. The "Billing" tab shall become visually highlighted.
User clicks the **"Change Password"** button with valid inputs.	All three password fields are correctly filled.	1. The system shall verify that the "Current Password" is correct. 2. If correct, the system shall update the user's password in the database. 3. The system shall clear all password fields and display a success message. 4. The system may send a notification email confirming the password change.
User clicks **"Change Password"** with mismatched new passwords.	The "New Password" and "Confirm New Password" fields contain different values.	1. The system shall prevent the password update. 2. The system shall display an inline validation error message, such as "The new passwords do not match."

User toggles the **"Enable 2FA"** switch from OFF to ON.	Two-Factor Authentication is currently disabled.	1. The system shall initiate the 2FA setup workflow, likely by displaying a modal with a QR code and setup instructions for an authenticator app.

2.2.24 Mockup M24 – Lawyer Billing Settings Page

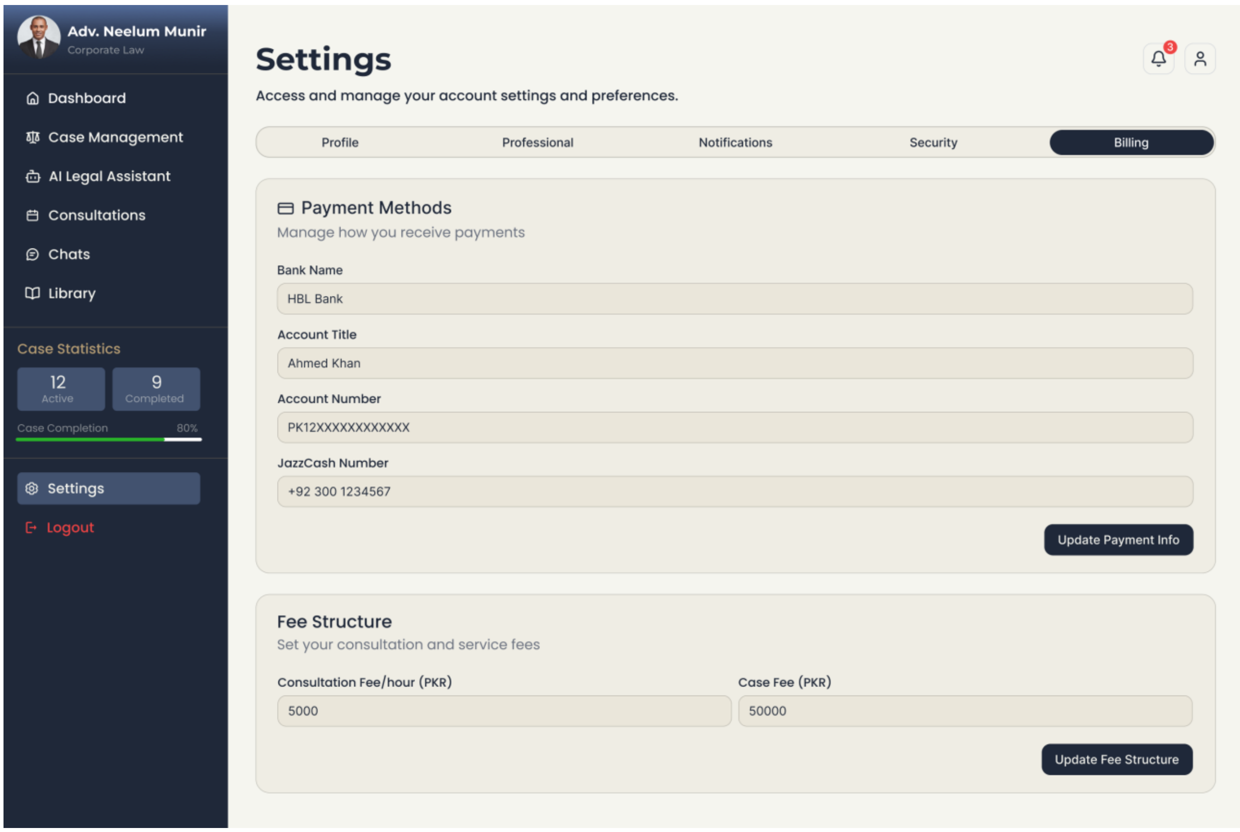

Figure 27: Mockup M24 – Lawyer Billing Settings Page

Functional Requirements Derived from Mockup M24 – Lawyer Billing Settings Page

Table 50: Functional Requirements Derived from Mockup M24

Feature	Functional Requirement (FR-ID: Statement)	Business Rule

Settings Navigation Tabs	FR24.1: The system shall display navigable tabs to switch between different settings categories.	The "Billing" tab is shown as the active view and must be visually highlighted.
Payment Methods Form	FR24.2: The system shall provide editable text input fields for Bank Name, Account Title, Account Number, and JazzCash Number.	The Account Number field must accept a valid IBAN format. The JazzCash Number must be a valid Pakistani mobile number format (e.g., +92 3XX XXXXXXX).
Update Payment Info Action	FR24.3: The system shall provide an "Update Payment Info" button to save all changes within the Payment Methods section.	This action validates and persists all four fields in the "Payment Methods" section.
Fee Structure Form	FR24.4: The system shall provide editable input fields for "Consultation Fee/hour (PKR)" and "Case Fee (PKR)".	Both fields must only accept numeric input.
Update Fee Structure Action	FR24.5: The system shall provide an "Update Fee Structure" button to save all changes within the Fee Structure section.	This action is independent of the "Update Payment Info" button and only persists the two fee-related fields.

Event Response Table Derived from Mockup M24 – Lawyer Billing Settings Page

Table 51: Event Response Table Derived from Mockup M24

Event	System State	Response
User clicks the **"Security"** tab.	The "Billing" tab is currently active.	1. The system shall hide the billing settings content. 2. The system shall display the content for the "Security" settings. 3. The "Security" tab shall become visually highlighted.

User clicks the **"Update Payment Info"** button.	The lawyer has modified their bank details.	1. The system shall validate the format of the inputs (e.g., IBAN, phone number). 2. If valid, the system shall save the new payment information to the database. 3. The system shall display a success confirmation message.
User clicks the **"Update Fee Structure"** button after entering non-numeric characters.	The "Case Fee" field contains "50000 PKR".	1. The system shall prevent the form from saving. 2. The system shall display an inline validation error message indicating that the field must be a number.
User tries to navigate away with **unsaved changes** in the "Fee Structure" section.	The lawyer has changed the "Consultation Fee" but has not clicked "Update Fee Structure".	1. The system shall display a confirmation prompt (e.g., "You have unsaved changes. Are you sure you want to leave without saving?").

2.2.25 Mockup M25 – AI Legal Assistant Page

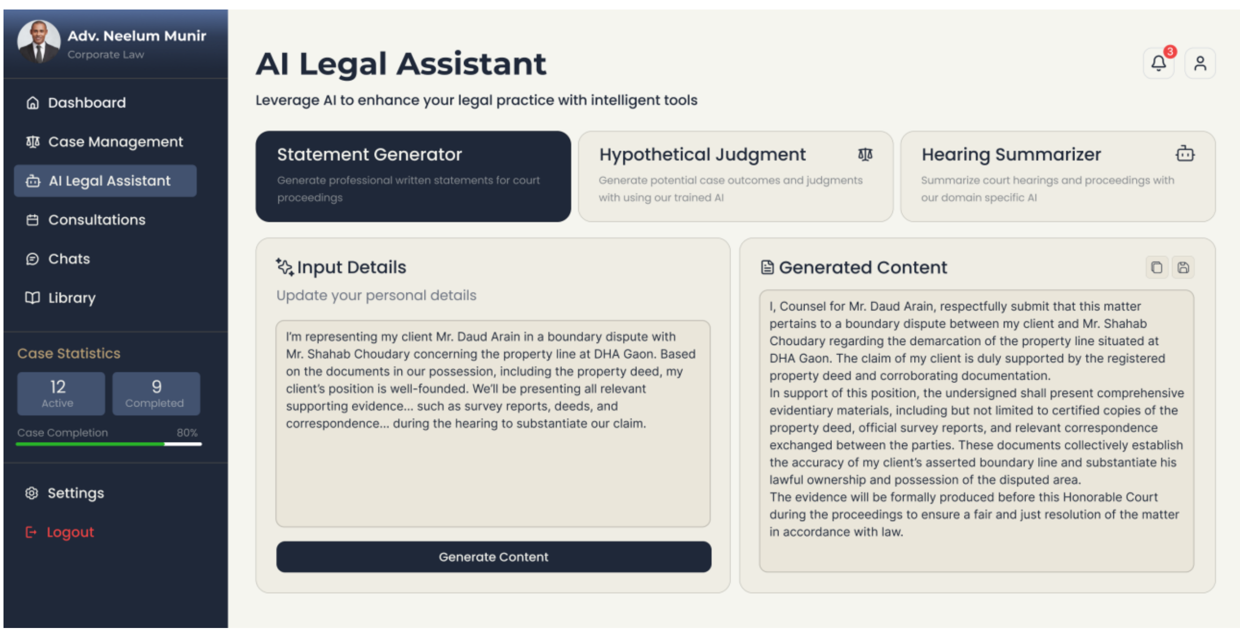

Figure 28: Mockup M25 – AI Legal Assistant Page

Functional Requirements Derived from Mockup M25 – AI Legal Assistant Page

Table 52: Functional Requirements Derived from Mockup M25

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
AI Tool Selection	FR25.1: The system shall display a set of selectable cards for each available AI tool (Statement Generator, Hypothetical Judgment, Hearing Summarizer).	The currently selected tool must be visually highlighted. The "Statement Generator" is the default selection for this view.
Input Details Text Area	FR25.2: The system shall provide a multi-line text area for the lawyer to input the details of a case.	N/A
Content Generation	FR25.3: The system shall provide a "Generate Content" button to initiate the AI processing of the input text.	The button shall be disabled if the "Input Details" text area is empty. Upon clicking, the system may show a loading indicator while processing.
Generated Content Display	FR25.4: The system shall display the output from the AI model in a read-only, scrollable text area.	The content in this area cannot be directly edited.
Copy Content Action	FR25.5: The system shall provide a "copy" icon that, when clicked, copies the entire text from the "Generated Content" area to the user's clipboard.	After a successful copy action, the system should provide a brief visual confirmation (e.g., a "Copied!" tooltip).
Download Content Action	FR25.6: The system shall provide a "download" icon that, when clicked, initiates a file download of the text from the "Generated Content" area.	The downloaded file should be in a standard document format, such as .txt or .docx.

Event Response Table Derived from Mockup M25 – AI Legal Assistant Page

Table 53: Event Response Table Derived from Mockup M25

Event	System State	Response

User clicks the **"Generate Content"** button.	The "Input Details" text area contains case information.	1. The system shall send the input text to the backend AI model for processing. 2. The system shall display a loading state to the user. 3. Once the response is received, the system shall populate the "Generated Content" area with the AI's output.
User clicks the **"Hypothetical Judgment"** tool card.	The "Statement Generator" tool is currently active.	1. The system shall visually highlight the "Hypothetical Judgment" card and deselect the "Statement Generator" card. 2. The system shall update the "Input Details" and "Generated Content" sections to reflect the requirements and outputs of the new tool.
User clicks the **"copy" icon** next to the "Generated Content" title.	The "Generated Content" area is populated with text.	1. The system shall copy the entire text content to the user's clipboard. 2. The system shall display a temporary confirmation message (e.g., a tooltip saying "Copied to clipboard").
User clicks the **"download" icon**.	The "Generated Content" area is populated with text.	1. The system shall create a file (.txt or .docx) containing the generated text. 2. The system shall initiate a browser download of that file.

2.2.26 Mockup M26 – Firm Login Page

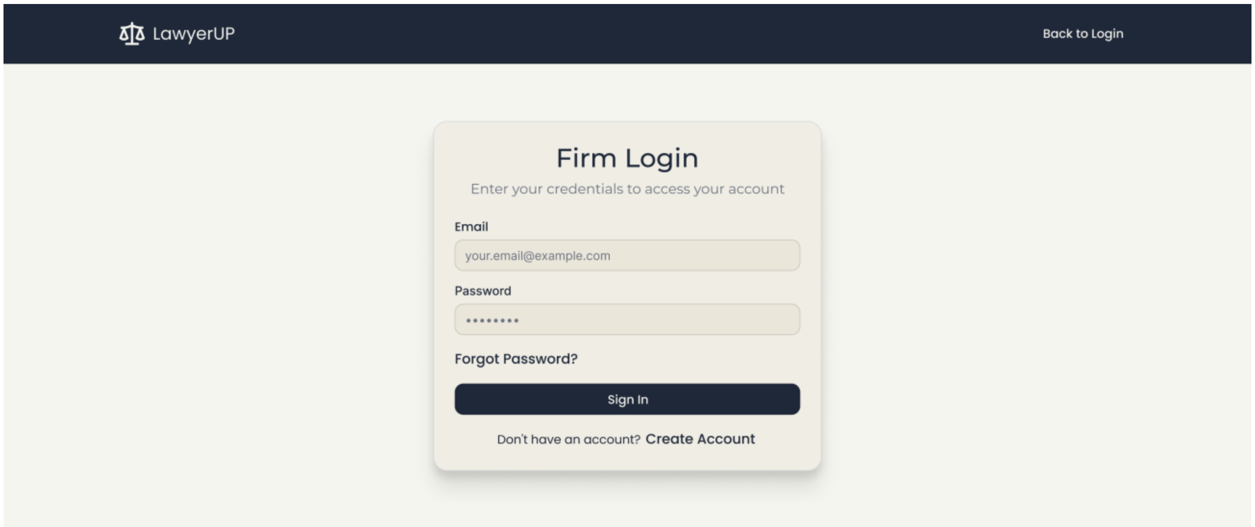

Figure 29: Mockup M26 – Firm Login Page

Functional Requirements Derived from Mockup M26 – Firm Login Page

Table 54: Functional Requirements Derived from Mockup M26

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
User Authentication	FR26.1: The system shall provide input fields for the user to enter their email and password.	The email field must validate for a standard email format. The password field must mask the input characters.
Sign-In Action	FR26.2: The system shall provide a "Sign In" button to submit the credentials for authentication.	The system shall lock a firm's account after 5 consecutive failed login attempts to prevent unauthorized access.
Password Recovery	FR26.3: The system shall provide a "Forgot Password?" link to assist users who have forgotten their credentials.	Clicking this link must navigate the user to the password recovery workflow.
Account Creation Link	FR26.4: The system shall provide a "Create Account" link for users who do not have an existing firm account.	Clicking this link must navigate the user to the firm registration page.

Event Response Table Derived from Mockup M26 – Firm Login Page

Table 55: Event Response Table Derived from Mockup M26

Event	System State	Response
User clicks the **"Sign In"** button with valid credentials.	The firm administrator has entered a correct email and password combination.	1. The system shall authenticate the user. 2. The system shall create a user session. 3. The system shall redirect the user to the Firm Dashboard.
User clicks the **"Sign In"** button with invalid credentials.	The firm administrator has entered an incorrect email or password.	1. The system shall prevent login. 2. The system shall display an error message (e.g., "Invalid email or password"). 3. The system shall increment the failed login attempt counter for that firm's account.
User clicks the **"Forgot Password?"** link.	The user is on the login screen.	1. The system shall navigate the user to the password recovery page, where they can enter their email address to receive reset instructions.
User clicks the **"Create Account"** link.	The user is on the login screen.	1. The system shall navigate the user to the Firm Registration page.

2.2.27 Mockup M27 – Firm Registration Page

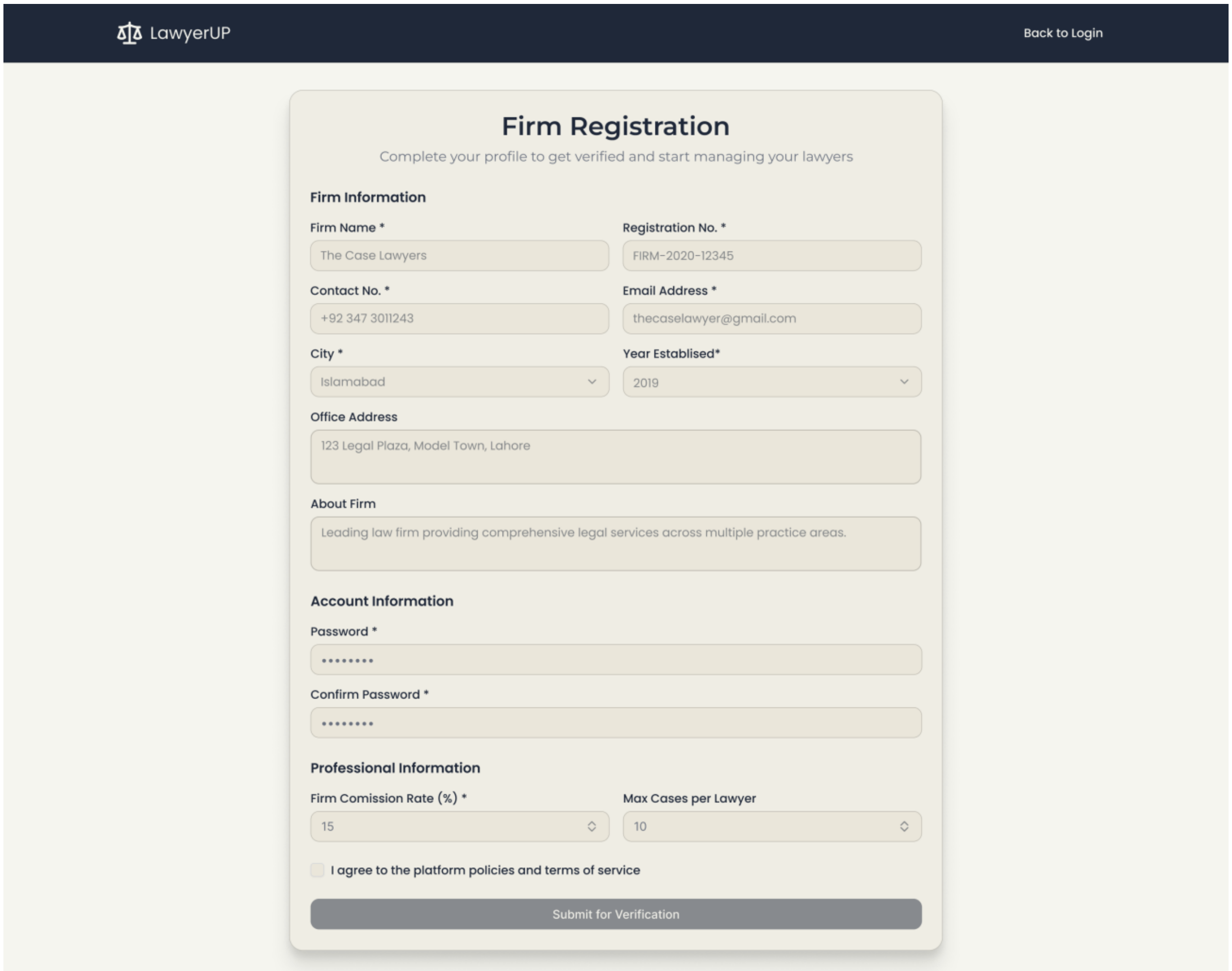

Figure 30: Mockup M27 – Firm Registration Page

Functional Requirements Derived from Mockup M27 – Firm Registration Page

Table 56: Functional Requirements Derived from Mockup M27

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Firm Information Form	FR27.1: The system shall provide input fields for the user to enter the Firm Name, Registration No., Contact No., Email Address, City,	All fields marked with an asterisk (*) are mandatory. The Email must be a valid format. City and Year Established must be selected from predefined dropdown lists.

	Year Established, Office Address, and About Firm.	
Account Creation Form	FR27.2: The system shall provide input fields for Password and Confirm Password.	Both fields are mandatory. The fields must match and meet password complexity requirements (e.g., minimum 8 characters).
Professional Details Form	FR27.3: The system shall provide number inputs for "Firm Commission Rate (%)" and "Max Cases per Lawyer."	Both fields are mandatory. Commission Rate must be a number between 0 and 100. Max Cases must be a positive integer.
Terms Agreement	FR27.4: The system shall provide a checkbox for the user to agree to the platform's policies and terms of service.	The "Submit for Verification" button shall remain disabled until this box is checked.
Submission Action	FR27.5: The system shall provide a "Submit for Verification" button to finalize the registration.	This button submits all entered data to the system administrators for review.

Event Response Table Derived from Mockup M27 – Firm Registration Page

Table 57: Event Response Table Derived from Mockup M27

Event	System State	Response
User clicks the **"Submit for Verification"** button with valid data.	All mandatory fields are correctly filled, and the terms checkbox is checked.	1. The system shall validate all inputs. 2. The system shall create a new firm account with a "Pending Verification" status. 3. The system shall redirect the user to a page confirming their submission and explaining the review process.
User clicks the **"Submit for Verification"** button with invalid or missing data.	At least one mandatory field is empty, or the passwords do not match.	1. The system shall prevent the form submission. 2. The system shall display inline validation error messages

		next to the corresponding invalid fields.
User checks the **"I agree..."** checkbox.	The "Submit for Verification" button is disabled. All other mandatory fields are filled.	1. The system shall enable the "Submit for Verification" button, allowing the user to complete the registration.

2.2.28 Mockup M28 – Firm Dashboard Page

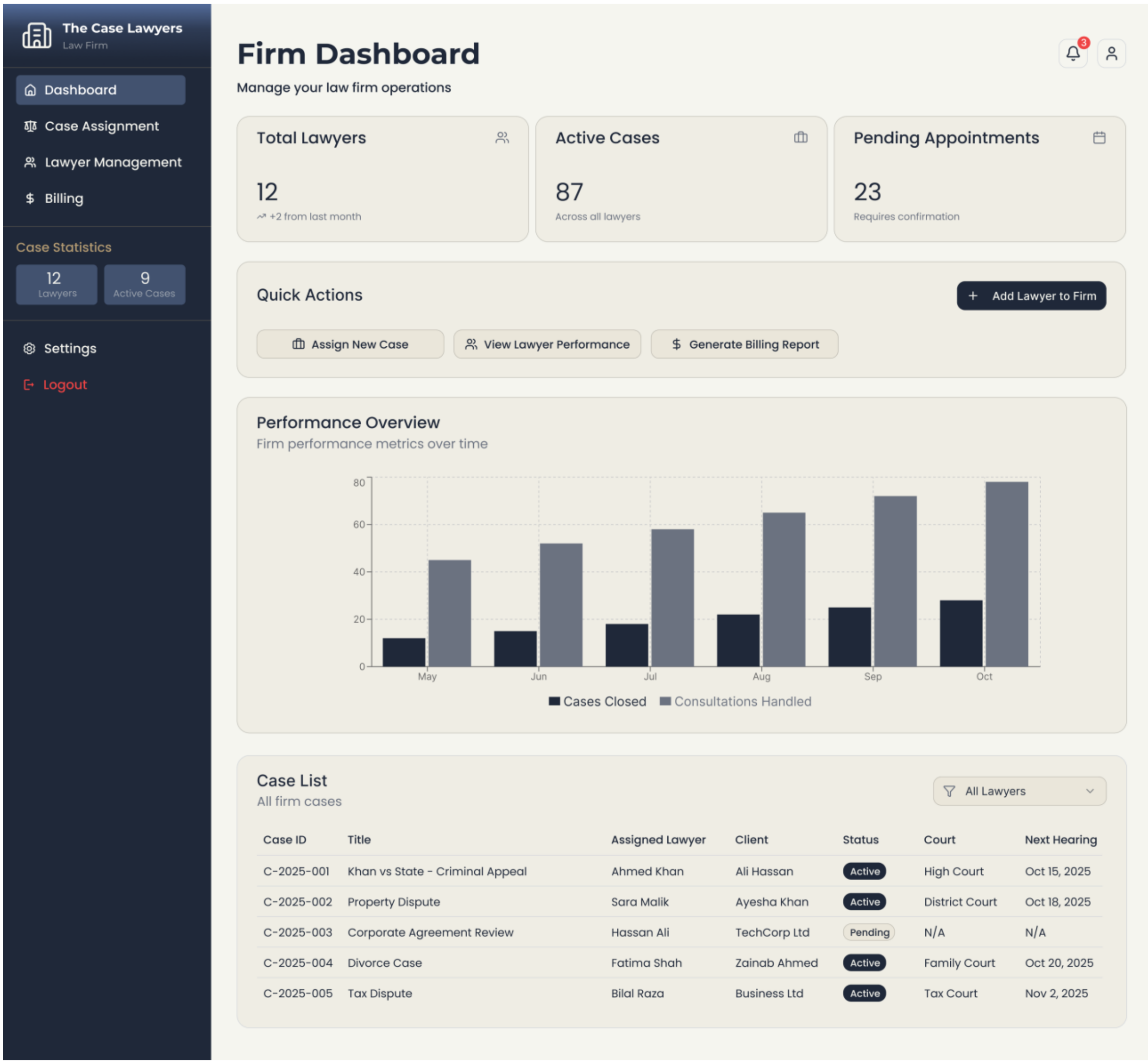

Figure 31: Mockup M28 – Firm Dashboard Page

Functional Requirements Derived from Mockup M28 – Firm Dashboard Page

Table 58: Functional Requirements Derived from Mockup M28

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
KPI Summary Cards	FR28.1: The system shall display three summary cards at the top of the dashboard for Total Lawyers, Active Cases, and Pending Appointments.	The "Total Lawyers" card must display the change in count from the previous month. The data on all cards must be

		aggregated from across the entire firm.
Sidebar Navigation	FR28.2: The system shall provide a persistent sidebar menu with direct links to all major sections of the firm management portal.	The link for the currently active page ("Dashboard") must be visually highlighted.
Quick Actions Panel	FR28.3: The system shall provide a set of "Quick Actions" buttons for frequently used features, including "Assign New Case," "View Lawyer Performance," and "Generate Billing Report."	Each button must navigate the user directly to its corresponding page or function.
Performance Overview Chart	FR28.4: The system shall display a bar chart visualizing the firm's performance over the last six months, comparing "Cases Closed" and "Consultations Handled."	The chart must include a clear legend to differentiate between the two metrics. Tooltips should appear on hover to show exact numbers for each bar.
Case List Table	FR28.5: The system shall display a list of all firm cases in a table with columns for Case ID, Title, Assigned Lawyer, Client, Status, Court, and Next Hearing.	The "Status" column must use color-coded tags (e.g., green for "Active," yellow for "Pending") for quick identification.
Case List Filter	FR28.6: The system shall provide a dropdown menu to filter the "Case List" table by a specific lawyer.	The default selection for the filter must be "All Lawyers," showing every case in the firm.

Event Response Table Derived from Mockup M28 – Firm Dashboard Page

Table 59: Event Response Table Derived from Mockup M28

Event	System State	Response
User clicks the **"+ Add Lawyer to Firm"** button.	The user is viewing the Firm Dashboard.	1. The system shall navigate the user to the "Add New Lawyer" page or display a modal form for entering the new lawyer's details.

User selects a specific lawyer from the **"All Lawyers"** dropdown filter.	The Case List table is displaying cases for all lawyers.	1. The system shall query for all cases assigned to the selected lawyer. 2. The Case List table shall refresh to display only the filtered results.
User clicks the **"Generate Billing Report"** button.	The user is viewing the Firm Dashboard.	1. The system shall navigate the user to the billing report generation page, possibly with pre-filled date ranges for the current month.
User clicks the **"Lawyer Management"** link in the sidebar.	The "Dashboard" page is currently active.	1. The system shall navigate the user to the Lawyer Management page. 2. The "Lawyer Management" link in the sidebar shall become visually highlighted, and the "Dashboard" link will be deselected.

2.2.29 Mockup M29 – Firm Case Assignment Page

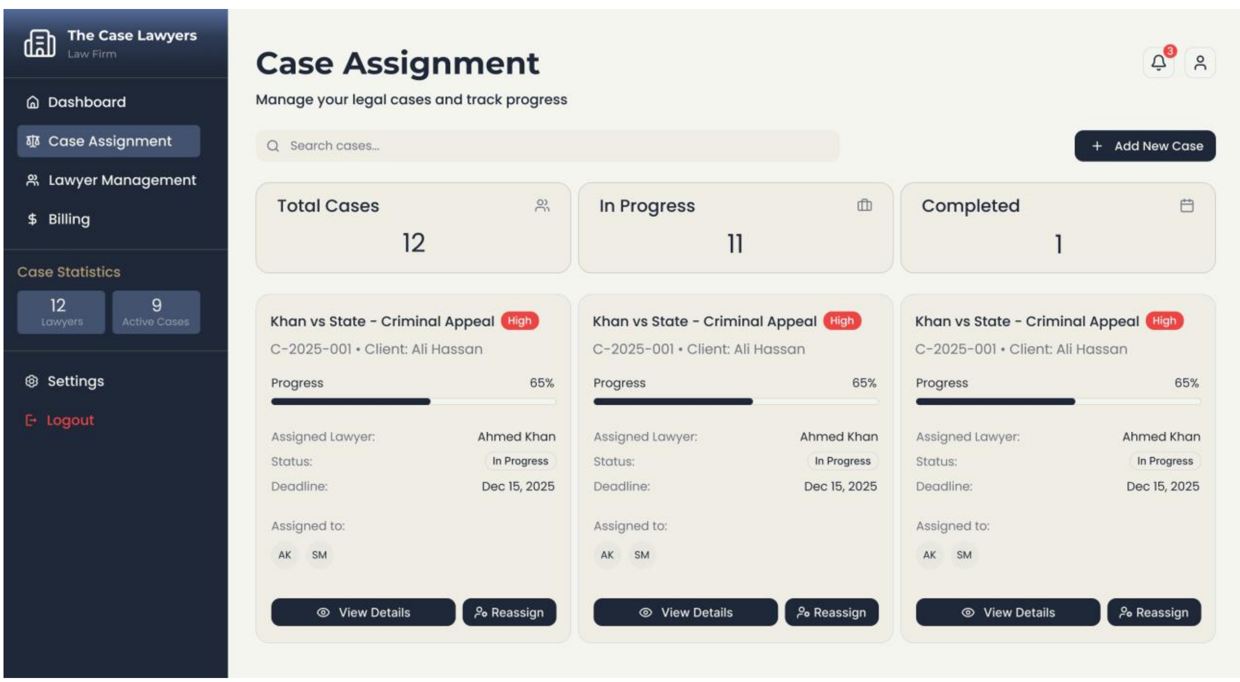

Figure 32: Mockup M29 – Firm Case Assignment Page

Functional Requirements Derived from Mockup M29 – Firm Case Assignment Page

Table 60: Functional Requirements Derived from Mockup M29

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Summary Cards	FR29.1: The system shall display three summary cards showing the total firm-wide count of "Total Cases," "In Progress" cases, and "Completed" cases.	These counts must be calculated in real-time based on the status of all cases in the firm's database.
Case Search	FR29.2: The system shall provide a search input field to filter the list of displayed case cards.	The search should filter results based on matches in the Case Title, Case ID, or Client Name.
Add New Case Action	FR29.3: The system shall provide an "+ Add New Case" button.	Clicking this button must open a modal or navigate the user to a form for creating and assigning a new case.
Case Card Display	FR29.4: The system shall display each case as a card containing its title, priority, ID, client, progress bar, assigned lawyer, status, deadline, and assigned team initials.	The priority tag (e.g., "High") must be color-coded for quick identification (e.g., red for high).
Progress Bar	FR29.5: The system shall display a progress bar on each case card indicating the percentage of completion.	The percentage value must be clearly displayed. The bar's fill level must correspond directly to this percentage.
View Details Action	FR29.6: The system shall provide a "View Details" button on each case card.	Clicking this button must navigate the user to a detailed, comprehensive view of the selected case.
Reassign Action	FR29.7: The system shall provide a "Reassign" button on each case card.	Clicking this button must open a modal or interface that allows the manager to select a different lawyer or team to assign the case to.

Event Response Table Derived from Mockup M29 – Firm Case Assignment Page

Table 61: Event Response Table Derived from Mockup M29

Event	System State	Response
User clicks the **"+ Add New Case"** button.	The user is viewing the Case Assignment page.	1. The system shall display a modal or navigate to a new page with a form to enter the details for a new case.
User types "Khan vs State" into the **search bar**.	The page displays all cases.	1. The system shall filter the case cards in real-time to show only those matching the search query.
User clicks the **"View Details"** button on a case card.	The user is viewing the Case Assignment page.	1. The system shall navigate the user to the detailed view page for that specific case.
User clicks the **"Reassign"** button on a case card.	The case is assigned to "Ahmed Khan".	1. The system shall display a modal or interface listing available lawyers. 2. The user can select a new lawyer and confirm the reassignment. 3. Upon confirmation, the "Assigned Lawyer" on the card will be updated, and notifications will be sent to the previous and new lawyers.

2.2.30 Mockup M30 – Firm Add New Case Page

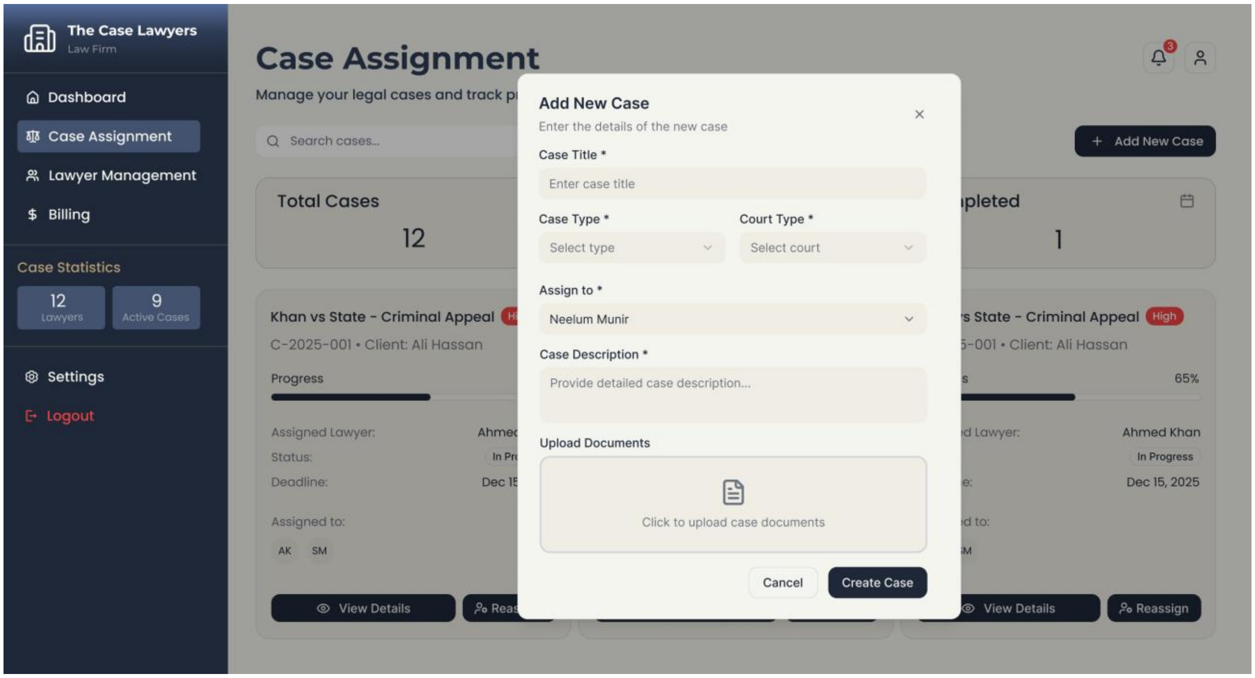

Figure 33: Mockup M30 – Firm Add New Case Page

Functional Requirements Derived from Mockup M30 – Firm Add New Case Page

Table 62: Functional Requirements Derived from Mockup M30

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Case Information Form	FR30.1: The system shall provide input fields for Case Title, Case Type, Court Type, Assign to, and Case Description.	Fields marked with an asterisk (*) are mandatory and must be filled before submission.
Lawyer Assignment	FR30.2: The system shall provide a dropdown menu labeled "Assign to".	The dropdown must be populated with a list of all active lawyers registered with the firm. This is a mandatory field.
Document Upload	FR30.3: The system shall provide a clickable area to allow the user to select and upload case-related documents.	The system should support multiple file uploads and restrict file types to common formats (e.g., PDF, DOCX, JPG).

Create Case Action	FR30.4: The system shall provide a "Create Case" button to submit the form.	The button shall be disabled until all mandatory fields are completed.
Cancel Action	FR30.5: The system shall provide a "Cancel" button and a close ('X') icon to dismiss the modal.	Clicking either control must close the modal and discard any entered data without creating a case.

Event Response Table Derived from Mockup M30 – Firm Add New Case Page

Table 63: Event Response Table Derived from Mockup M30

Event	System State	Response
User clicks the **"Create Case"** button with all mandatory fields filled.	The form is valid.	1. The system shall validate all inputs. 2. The system shall create a new case record in the database, linking it to the selected lawyer. 3. The system shall close the modal. 4. The case list in the background shall refresh to include the new case. 5. A success notification shall be displayed.
User clicks the **"Create Case"** button with an empty mandatory field (e.g., Case Title).	The form is invalid.	1. The system shall prevent the form from being submitted. 2. The system shall display a validation error message next to the empty mandatory field.
User clicks the **"Cancel"** button.	The modal is open, and data may have been entered into the form.	1. The system shall discard all information entered in the form. 2. The system shall close the "Add New Case" modal.
User clicks the **document upload** area.	The modal is open.	1. The system shall open the operating system's native file selection dialog, allowing the user to choose one or more documents to attach to the case.

2.2.31 Mockup M31 – Firm Profile Settings Page

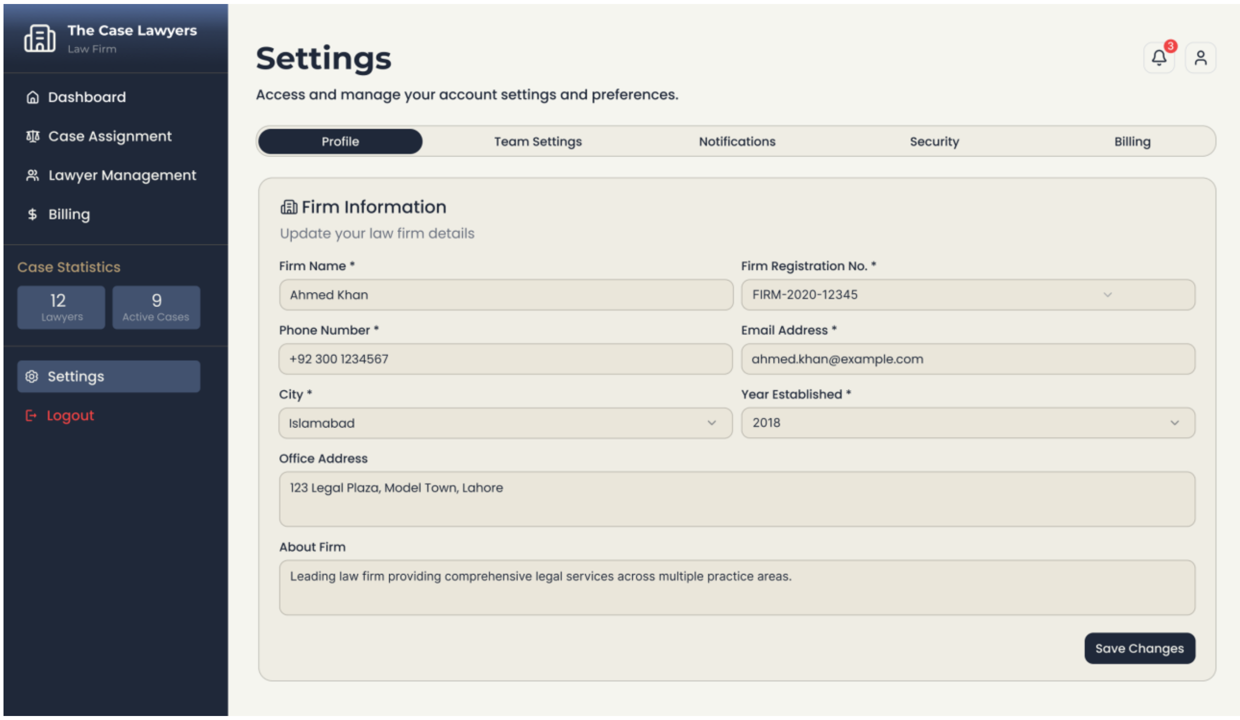

Figure 34: Mockup M31 – Firm Profile Settings Page

Functional Requirements Derived from Mockup M31 – Firm Profile Settings Page

Table 64: Functional Requirements Derived from Mockup M31

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Settings Navigation Tabs	FR31.1: The system shall display navigable tabs to switch between Profile, Team Settings, Notifications, Security, and Billing.	The "Profile" tab is the default view. The currently active tab must be visually highlighted.
Firm Information Form	FR31.2: The system shall provide editable input fields for Firm Name, Registration No., Phone Number, Email, Office Address, and About Firm.	Fields marked with an asterisk (*) are mandatory and cannot be left empty upon saving.
City & Year Selection	FR31.3: The system shall provide dropdown menus for selecting the firm's "City" and "Year Established."	Both are mandatory fields. The lists of cities and years must be predefined and managed by the system administrator.

Save Changes Action	FR31.4: The system shall provide a "Save Changes" button to persist all modifications made on the form.	The button should only become active if at least one field has been modified. The system must validate all mandatory fields before saving.

Event Response Table Derived from Mockup M31 – Firm Profile Settings Page

Table 65: Event Response Table Derived from Mockup M31

Event	System State	Response
User clicks the **"Team Settings"** tab.	The "Profile" tab is currently active.	1. The system shall hide the "Firm Information" form. 2. The system shall display the content for the "Team Settings" section. 3. The "Team Settings" tab shall become visually highlighted.
User clicks the **"Save Changes"** button with valid data.	At least one field in the form has been modified.	1. The system shall validate all inputs, especially mandatory fields. 2. The system shall save the updated information to the firm's profile in the database. 3. The system shall display a success confirmation message (e.g., "Firm information updated successfully").
User clicks **"Save Changes"** with an empty mandatory field.	The "Firm Name" input field is blank.	1. The system shall prevent the form from being saved. 2. The system shall display an inline error message next to the "Firm Name" field, indicating that it is a required field.
User attempts to navigate away with **unsaved changes**.	A field has been edited, but the "Save Changes" button has not been clicked.	1. The system shall display a confirmation prompt (e.g., "You have unsaved changes. Are you sure you want to leave without saving?").

2.2.32 Mockup M32 – Firm Team Settings Page

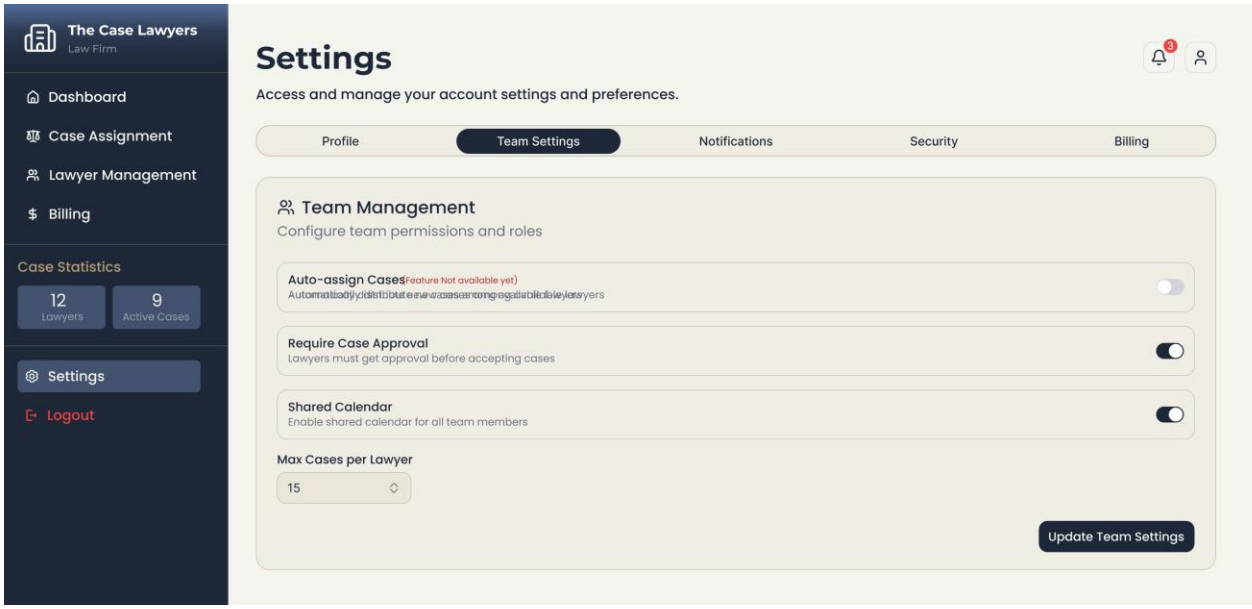

Figure 35: Mockup M32 – Firm Team Settings Page

Functional Requirements Derived from Mockup M32 – Firm Team Settings Page

Table 66: Functional Requirements Derived from Mockup M32

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Settings Navigation Tabs	FR32.1: The system shall display navigable tabs to switch between different settings categories.	The "Team Settings" tab is the active view and must be visually highlighted.
Auto-assign Cases Toggle	FR32.2: The system shall display a toggle for "Auto-assign Cases."	This toggle must be disabled and display a "Feature Not available yet" message.
Require Case Approval Toggle	FR32.3: The system shall provide a toggle switch to enable or disable the "Require Case Approval" setting.	If enabled, lawyers in the firm cannot accept new cases without an administrator's approval. If disabled, they can accept cases directly.
Shared Calendar Toggle	FR32.4: The system shall provide a toggle switch to enable or disable the "Shared	If enabled, all team members will have access to a firm-wide calendar. If disabled, calendars will be individual.

	Calendar" for all team members.	
Max Cases per Lawyer Input	FR32.5: The system shall provide a number input/stepper to set the "Max Cases per Lawyer."	The input must only accept positive integers. This number sets a system-wide limit on how many active cases can be assigned to a single lawyer.
Update Team Settings Action	FR32.6: The system shall provide an "Update Team Settings" button to persist all changes made on the page.	The button should only become active after a user has made at least one change. On click, the system must save the state of all active toggles and the max cases value.

Event Response Table Derived from Mockup M32 – Firm Team Settings Page

Table 67: Event Response Table Derived from Mockup M32

Event	System State	Response
User clicks the **"Billing"** tab.	The "Team Settings" tab is currently active.	1. The system shall hide the "Team Management" form. 2. The system shall display the content for the "Billing" settings. 3. The "Billing" tab shall become visually highlighted.
User toggles the **"Require Case Approval"** switch from ON to OFF.	The "Update Team Settings" button is inactive.	1. The visual state of the switch shall change to OFF. 2. The "Update Team Settings" button shall become active to indicate there are unsaved changes.
User changes the **"Max Cases per Lawyer"** value from 15 to 20.	The "Update Team Settings" button is inactive.	1. The value in the number input shall change to 20. 2. The "Update Team Settings" button shall become active.
User clicks the **"Update Team Settings"** button.	One or more settings have been changed, and the "Update Team Settings" button is active.	1. The system shall save the current state of all toggles and the max cases value to the database. 2. The system shall apply these rules across the platform (e.g., prevent

		lawyers from accepting cases if approval is now required). 3. The system shall display a success confirmation message.

2.2.33 Mockup M33 – Firm Notification Settings Page

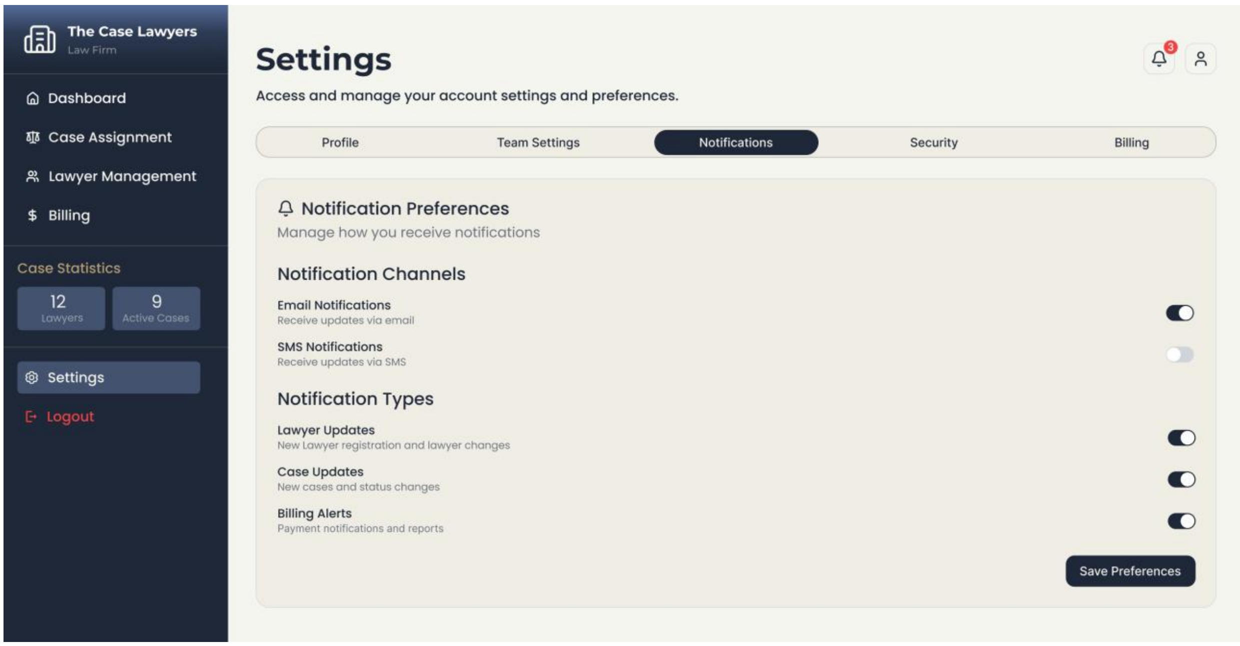

Figure 36: Mockup M33 – Firm Notification Settings Page

Functional Requirements Derived from Mockup M33 – Firm Notification Settings Page

Table 68: Functional Requirements Derived from Mockup M33

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Settings Navigation Tabs	FR33.1: The system shall display navigable tabs to switch between different settings categories.	The "Notifications" tab is the active view and must be visually highlighted.
Notification Channel Toggles	FR33.2: The system shall provide individual toggle switches to enable or disable "Email Notifications" and "SMS Notifications" for the firm's administrative account.	To enable SMS notifications, the firm must have a verified contact phone number in its profile settings.

Notification Type Toggles	FR33.3: The system shall provide individual toggle switches to enable or disable specific alert types: "Lawyer Updates," "Case Updates," and "Billing Alerts."	These toggles control the content of notifications sent to the administrator, regardless of the channel selected (Email/SMS).
Save Preferences Action	FR33.4: The system shall provide a "Save Preferences" button to persist the current state of all notification toggles on the page.	The button should only become active after a user has changed the state of at least one toggle. Clicking the button saves the state of all toggles in the section.

Event Response Table Derived from Mockup M33 – Firm Notification Settings Page

Table 69: Event Response Table Derived from Mockup M33

Event	System State	Response
User clicks the **"Security"** tab.	The "Notifications" tab is currently active.	1. The system shall hide the "Notification Preferences" content. 2. The system shall display the content for the "Security" settings. 3. The "Security" tab shall become visually highlighted.
User toggles the **"Case Updates"** switch from ON to OFF.	The "Save Preferences" button is inactive.	1. The visual state of the switch shall change to OFF. 2. The "Save Preferences" button shall become active to indicate there are unsaved changes.
User clicks the **"Save Preferences"** button.	One or more toggles have been changed, and the "Save Preferences" button is active.	1. The system shall save the current state of all notification toggles to the firm's settings in the database. 2. The system shall display a success confirmation message (e.g., "Preferences saved"). 3. The "Save Preferences" button shall become inactive.

User attempts to navigate away with **unsaved changes**.	A toggle's state has been changed, but the changes have not been saved.	1. The system shall display a confirmation prompt (e.g., "You have unsaved changes. Are you sure you want to leave without saving?").

2.2.34 Mockup M34 – Firm Security Settings Page

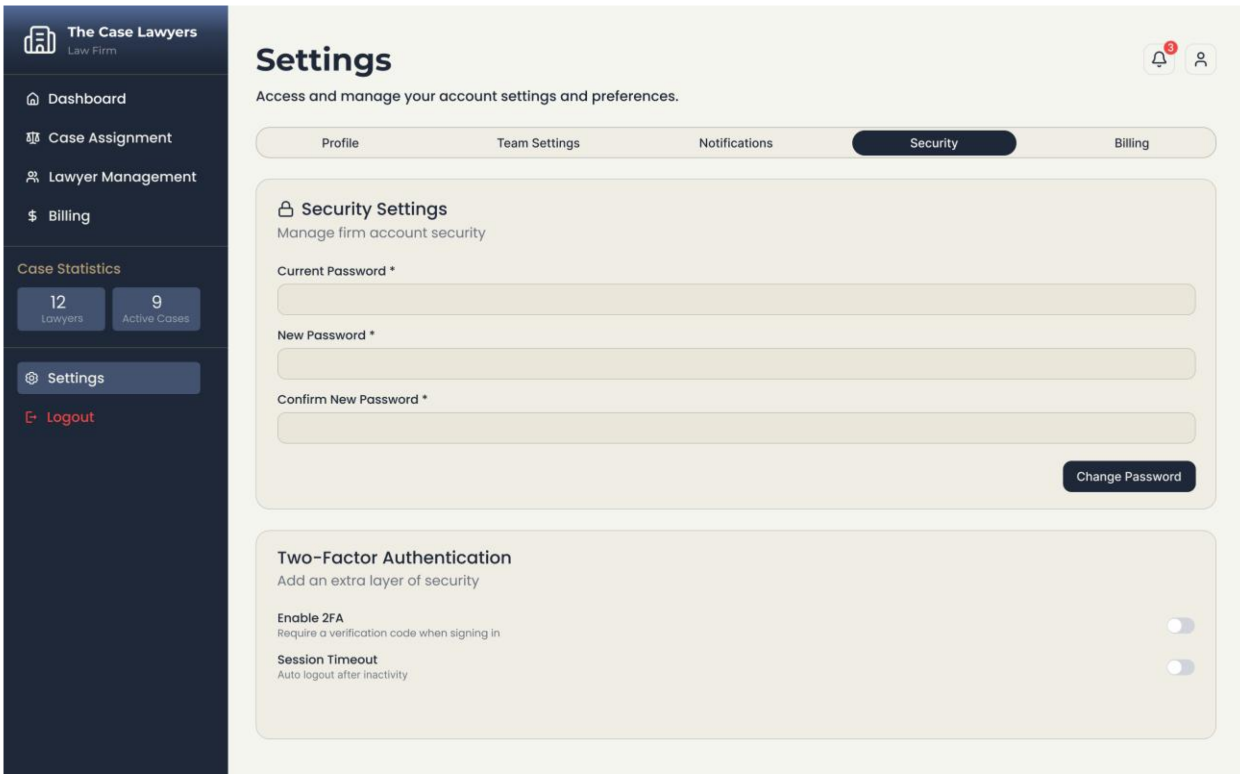

Figure 37: Mockup M34 – Firm Security Settings Page

Functional Requirements Derived from Mockup M34 – Firm Security Settings Page

Table 70: Functional Requirements Derived from Mockup M34

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Settings Navigation Tabs	FR34.1: The system shall display navigable tabs to switch between different settings categories.	The "Security" tab is the active view and must be visually highlighted.

Change Password Form	FR34.2: The system shall provide three mandatory, password-masked input fields for "Current Password," "New Password," and "Confirm New Password."	The "New Password" and "Confirm New Password" fields must match. The new password must meet complexity requirements (e.g., minimum length, character types).
Change Password Action	FR34.3: The system shall provide a "Change Password" button to submit the password update.	This button should only be enabled when all three fields are filled. The system must validate the "Current Password" is correct before applying the change.
Two-Factor Authentication	FR34.4: The system shall provide a toggle switch to enable or disable "Enable 2FA."	When enabling 2FA for the first time, the system must guide the user through a setup process (e.g., via an authenticator app).
Session Timeout	FR34.5: The system shall provide a toggle switch to enable or disable "Session Timeout."	When enabled, the system will automatically log the user out after a predefined period of inactivity (e.g., 30 minutes).

Event Response Table Derived from Mockup M34 – Firm Security Settings Page

Table 71: Event Response Table Derived from Mockup M34

Event	System State	Response
User clicks the **"Billing"** tab.	The "Security" tab is currently active.	1. The system shall hide the security settings content. 2. The system shall display the content for the "Billing" settings. 3. The "Billing" tab shall become visually highlighted.
User clicks the **"Change Password"** button with valid inputs.	All three password fields are filled correctly.	1. The system shall verify the "Current Password." 2. If correct, the system shall update the firm's password in the database. 3. The system shall clear all password fields and display a success message.

User toggles the **"Enable 2FA"** switch from OFF to ON.	Two-Factor Authentication is disabled.	1. The system shall initiate the 2FA setup process, likely by displaying a modal with instructions and a QR code.
User toggles the **"Session Timeout"** switch from OFF to ON.	Session timeout is disabled.	1. The visual state of the switch shall change to ON. 2. The system shall save this preference and display a confirmation message (e.g., "Session timeout enabled").

2.2.35 Mockup M35 – Firm Billing Settings Page

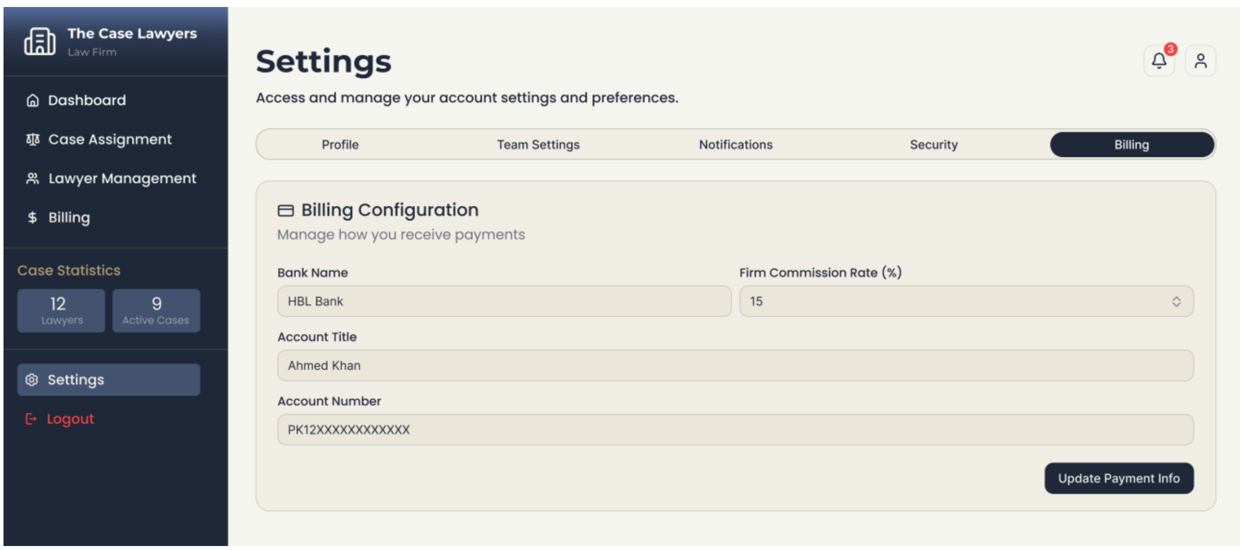

Figure 38: Mockup M35 – Firm Billing Settings Page

Functional Requirements Derived from Mockup M35 – Firm Billing Settings Page

Table 72: Functional Requirements Derived from Mockup M35

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Settings Navigation Tabs	FR35.1: The system shall display navigable tabs to switch between different settings categories.	The "Billing" tab is the active view and must be visually highlighted.

Billing Configuration Form	FR35.2: The system shall provide editable text input fields for Bank Name, Account Title, and Account Number.	The Account Number field must accept a valid IBAN format. All three fields are mandatory for payment processing.
Firm Commission Rate	FR35.3: The system shall provide a number input field for the "Firm Commission Rate (%)".	The input must only accept numeric values between 0 and 100. This value will be used to calculate the firm's share of revenue.
Update Payment Info Action	FR35.4: The system shall provide an "Update Payment Info" button to persist all changes made in the Billing Configuration section.	The button should only become active after a user has modified at least one field. The system must validate all inputs before saving.

Event Response Table Derived from Mockup M35 – Firm Billing Settings Page

Table 73: Event Response Table Derived from Mockup M35

Event	System State	Response
User clicks the **"Security"** tab.	The "Billing" tab is currently active.	1. The system shall hide the billing configuration content. 2. The system shall display the content for the "Security" settings. 3. The "Security" tab shall become visually highlighted.
User clicks the **"Update Payment Info"** button with valid inputs.	At least one field in the form has been modified.	1. The system shall validate the format of all inputs (e.g., IBAN format, numeric commission rate). 2. If valid, the system shall save the new billing information to the database. 3. The system shall display a success confirmation message.
User enters "Fifteen" into the **"Firm Commission Rate"** field and clicks "Update Payment Info".	The form is ready for submission.	1. The system shall prevent the form from being saved. 2. The system shall display an inline validation error message

		indicating that the commission rate must be a numeric value.
User attempts to navigate away with **unsaved changes**.	A field has been edited, but the "Update Payment Info" button has not been clicked.	1. The system shall display a confirmation prompt (e.g., "You have unsaved changes. Are you sure you want to leave without saving?").

2.2.36 Mockup M36 – Firm Billing Page

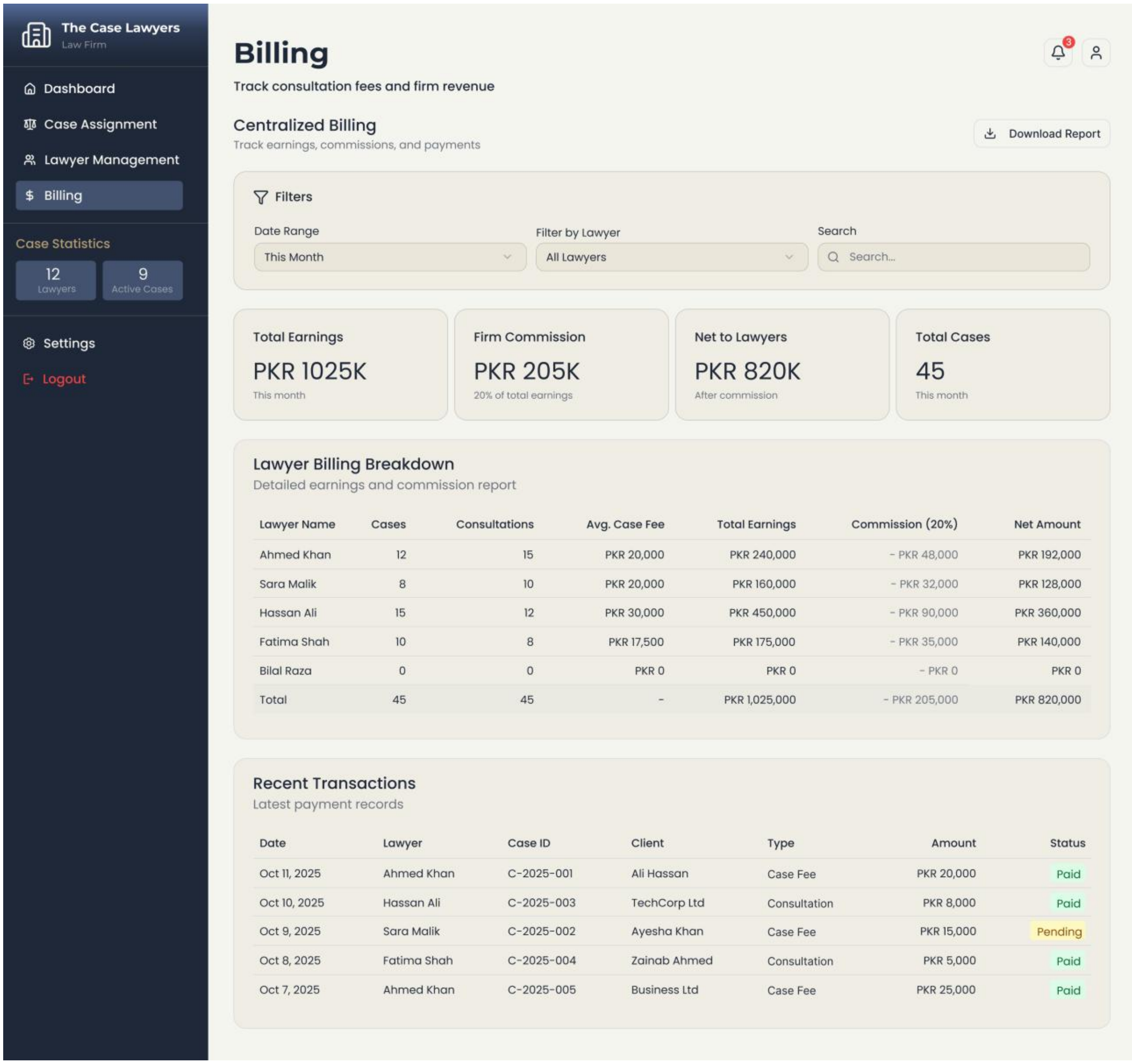

Figure 39: Mockup M36 – Firm Billing Page

Functional Requirements Derived from Mockup M36 – Firm Billing Page

Table 74: Functional Requirements Derived from Mockup M36

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
Data Filtering	FR36.1: The system shall provide filter controls for Date Range, Lawyer, and a text-based Search.	Changing any filter must dynamically update all data displayed on the page (summary cards and tables). The default

		filter should be "This Month" and "All Lawyers."
Report Download	FR36.2: The system shall provide a "Download Report" button.	Clicking this button must generate and initiate a download of a report file (e.g., CSV or PDF) containing the data from the tables, respecting the currently active filters.
Financial Summary Cards	FR36.3: The system shall display summary cards for Total Earnings, Firm Commission, Net to Lawyers, and Total Cases for the filtered period.	The "Firm Commission" must be calculated as (Total Earnings * Firm Commission Rate). The "Net to Lawyers" must be calculated as (Total Earnings - Firm Commission).
Lawyer Billing Breakdown Table	FR36.4: The system shall display a table detailing each lawyer's billing activity with columns for Lawyer Name, Cases, Consultations, Avg. Case Fee, Total Earnings, Commission, and Net Amount.	The table must include a "Total" row that provides the sum for all relevant columns. The "Net Amount" for each lawyer must equal their Total Earnings minus their Commission.
Recent Transactions Table	FR36.5: The system shall display a table of the latest transactions with columns for Date, Lawyer, Case ID, Client, Type, Amount, and Status.	The "Status" column must use color-coded tags for clarity (e.g., green for "Paid," yellow for "Pending"). The table should be sorted by date in descending order.

Event Response Table Derived from Mockup M36 – Firm Billing Page

Table 75: Event Response Table Derived from Mockup M36

Event	System State	Response
User selects a new **Date Range** (e.g., "Last Quarter").	The page is displaying data for "This Month."	1. The system shall query for all billing data within the "Last Quarter." 2. The system shall update the values in all four summary cards. 3. The system shall recalculate and update the data in both the "Lawyer

		Billing Breakdown" and "Recent Transactions" tables.
User selects a specific lawyer (e.g., "Sara Malik") from the **"Filter by Lawyer"** dropdown.	The page is displaying aggregated data for "All Lawyers."	1. The system shall filter all data to show only transactions and earnings associated with "Sara Malik." 2. The summary cards will update to reflect only her totals. 3. The "Lawyer Billing Breakdown" table will show only the row for "Sara Malik."
User clicks the **"Download Report"** button.	The user is viewing the billing page with active filters.	1. The system shall generate a report file (e.g., CSV) containing the data currently displayed in both tables. 2. The system shall initiate a browser download of the generated file.

2.2.37 Mockup M37 – Firm Lawyer Management Page

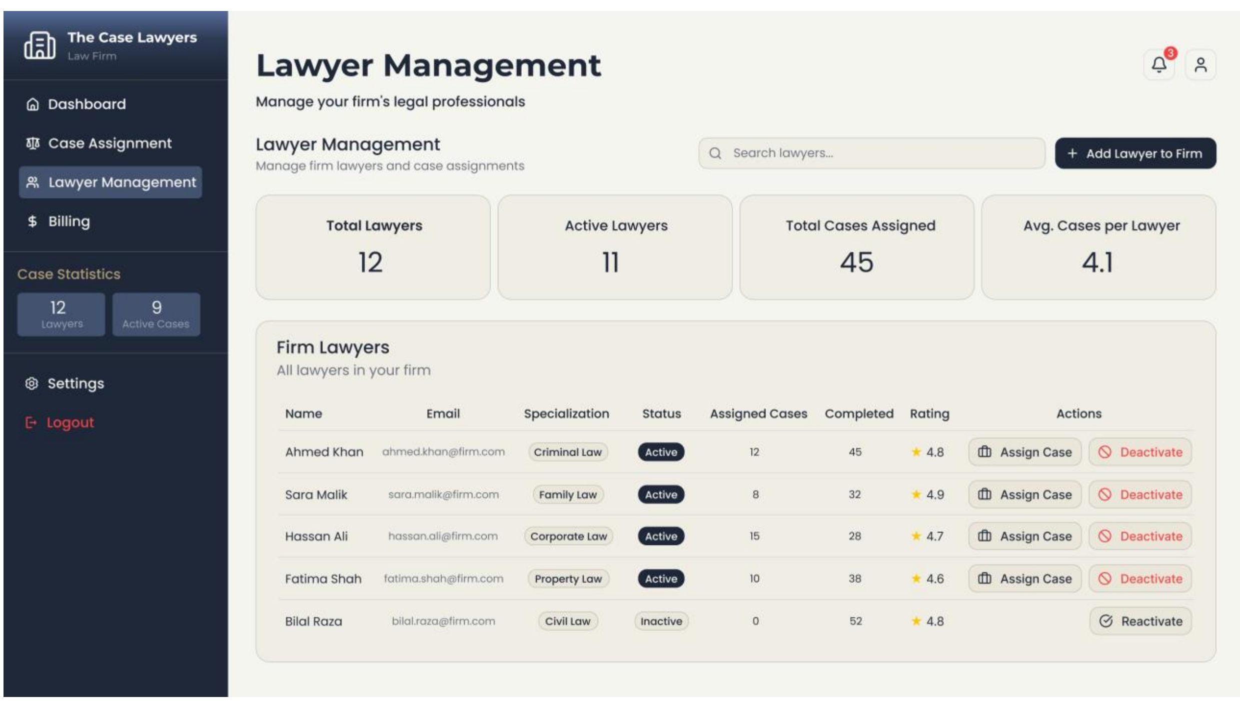

Figure 40: Mockup M37 – Firm Lawyer Management Page

Functional Requirements Derived from Mockup M37 – Firm Lawyer Management Page

Table 76: Functional Requirements Derived from Mockup M37

Feature	Functional Requirement (FR-ID: Statement)	Business Rule
KPI Summary Cards	FR37.1: The system shall display four summary cards showing the firm-wide count of Total Lawyers, Active Lawyers, Total Cases Assigned, and the Avg. Cases per Lawyer.	The "Avg. Cases per Lawyer" must be calculated as (Total Cases Assigned / Total Lawyers). All metrics must be calculated in real-time.
Lawyer Search	FR37.2: The system shall provide a search input field to filter the list of firm lawyers.	The search must filter the lawyer list in real-time based on matches in the "Name" and "Email" columns.
Add Lawyer to Firm Action	FR37.3: The system shall provide an "+ Add Lawyer to Firm" button.	Clicking this button must open a modal or navigate the user to a form for entering a new lawyer's details.
Firm Lawyers Table	FR37.4: The system shall display all lawyers in a table with columns for Name, Email, Specialization, Status, Assigned Cases, Completed, Rating, and Actions.	The "Status" column must use color-coded tags for quick identification (e.g., green for "Active," gray for "Inactive").
Assign Case Action	FR37.5: The system shall provide an "Assign Case" button in the "Actions" column for each lawyer.	Clicking this button must open a modal or navigate to a page where the administrator can select a case to assign to that specific lawyer.
Deactivate/Reactivate Action	FR37.6: The system shall provide a button to change a lawyer's status.	The button text must be "Deactivate" for "Active" lawyers and "Reactivate" for "Inactive" lawyers. The button's color should also change accordingly (e.g., red

		for Deactivate, green for Reactivate).

Event Response Table Derived from Mockup M37 – Firm Lawyer Management Page

Table 77: Event Response Table Derived from Mockup M37

Event	System State	Response
User clicks the **"+ Add Lawyer to Firm"** button.	The user is viewing the lawyer management page.	1. The system shall display a modal or navigate to a new page with a form to enter the details for a new lawyer.
User types "Sara" into the **search bar**.	The table displays all five lawyers.	1. The system shall filter the table in real-time to display only the row for "Sara Malik."
User clicks the **"Assign Case"** button for "Hassan Ali".	The user is viewing the lawyer management page.	1. The system shall display a modal or navigate to an interface where the user can select an unassigned case to assign to Hassan Ali.
User clicks the **"Deactivate"** button for "Ahmed Khan".	The lawyer "Ahmed Khan" has a status of "Active."	1. The system shall display a confirmation prompt (e.g., "Are you sure you want to deactivate this lawyer?"). 2. If confirmed, the system shall update the lawyer's status to "Inactive," and the button in that row will change to a "Reactivate" button.
User clicks the **"Reactivate"** button for "Bilal Raza".	The lawyer "Bilal Raza" has a status of "Inactive."	1. The system shall display a confirmation prompt. 2. If confirmed, the system shall update the lawyer's status to "Active," and the button in that row will change to a "Deactivate" button.

2.3Non-Functional Requirements

The following Non-Functional Requirements (NFRs) specify the quality attributes and performance criteria for the LawyerUP system to ensure reliability, scalability, and secure operation across all user types.

Performance Requirements

- **NFR-1:** The system shall load all primary dashboard interfaces within **3 seconds** under normal network conditions (average latency ≤ 100ms).
- **NFR-2:** The AI Legal Assistant shall generate the first draft of a Written Statement or legal document within **10 seconds** of receiving complete input data.
- **NFR-3:** The system shall support at least **500 concurrent active sessions** without performance degradation, ensuring server CPU usage remains below **75%**.
- **NFR-4:** The database response time for case retrieval queries shall not exceed **2 seconds**.

Reliability and Availability

- **NFR-5:** The system shall maintain **99.5% uptime** excluding scheduled maintenance.
- **NFR-6:** All user data and case records shall be automatically backed up every **24 hours** to ensure business continuity.
- **NFR-7:** In case of AI processing errors, the system shall log the incident and retry the operation within **30 seconds**.

Usability

- **NFR-8:** The system interface shall comply with **WCAG 2.1 accessibility standards**, ensuring compatibility for users with visual impairments.
- **NFR-9:** All user-facing modules shall maintain consistent layout, color palette, and typography as defined by the LawyerUP design system for ease of navigation.
- **NFR-10:** New users shall be able to complete registration and book a consultation within **3 minutes** without external help, ensuring simplicity and intuitiveness.

Security

- **NFR-11:** All sensitive data (e.g., CNIC, license number, payment details) shall be encrypted using **AES-256 encryption** during storage and **TLS 1.3** during transmission.
- **NFR-12:** The system shall enforce **two-factor authentication (2FA)** for all lawyer and administrator accounts.
- **NFR-13:** Access control shall follow **Role-Based Access Control (RBAC)**, ensuring that users only access functions permitted by their role.
- **NFR-14:** All login attempts, document uploads, and AI interactions shall be logged for auditing and compliance purposes.

Scalability and Maintainability

- **NFR-15:** The system architecture shall be modular to support horizontal scaling across multiple servers.
- **NFR-16:** Updates and patches shall be deployed with zero downtime using **continuous deployment pipelines**.
- **NFR-17:** The codebase shall follow **clean coding principles (SOLID, DRY)** to facilitate maintainability and ease of future enhancements.

2.4External Interface Requirements

The external interface requirements define how *LawyerUP* interacts with users, external systems, hardware devices, and communication channels to ensure seamless functionality and user experience.

User Interfaces Requirements

A consistent, accessible, and responsive interface is essential for ensuring ease of use across clients, lawyers, and administrators, while maintaining the LawyerUP design identity.

Requirements:

- **UI-1:** All UI screens shall follow the **LawyerUP Design System** built in **Figma**, with consistent use of **Tailwind CSS 4.1.7** components.
- **UI-2:** The interface shall support **light/dark modes** and maintain legibility on screen resolutions from **1280×720 to 2560×1440**.
- **UI-3:** Each page shall include a **navigation bar**, **help button**, and **user profile menu** for universal access.
- **UI-4:** Field tab sequences shall follow a logical top-to-bottom, left-to-right order.
- **UI-5:** Font standards: *Montserrat* or *Poppins*, with sizes ranging from **14px (body text)** to **24px (headings)**.
- **UI-6:** Shortcut keys shall be provided for core operations (e.g., Ctrl+S for save draft, Ctrl+L for lawyer list).
- **UI-7:** UI mockups shown in the scope document serve as **conceptual reference only**, not final committed layouts.

Software interfaces

LawyerUP integrates multiple third-party services, AI frameworks, and APIs to enable document generation, payment processing, and user authentication, requiring well-defined software interfaces.

Requirements:

- **SI-1:** The system shall connect with **Stripe API (v2025)** for payment processing and transaction verification.

- **SI-2:** The **FastAPI** and **Flask** services shall integrate with **Next.js 15.3.2** via RESTful APIs for AI and data operations.
- **SI-3: MongoDB 8.0.9** shall serve as the main database and connect via **Mongoose ORM**.
- **SI-4:** The **OpenAI GPT-5 API** and **Mistral 7B (fine-tuned)** model shall be used for AI-driven document drafting and legal prediction.
- **SI-5: Postman** shall be used for testing all software interfaces during the integration phase.
- **SI-6: Vercel** shall serve as the deployment and CI/CD hosting environment.

Hardware interfaces

LawyerUP is a fully web-based application deployed on cloud infrastructure and accessed through standard computing devices. It does not directly interact with or control any specialized hardware components. Therefore, no hardware interface requirements apply to this system.

Requirements:

- **HI-1:** LawyerUP shall operate entirely within standard browser environments on user devices (desktop, laptop, or mobile).
- **HI-2:** The system shall not require any external hardware integration such as biometric scanners, printers, or IoT devices.
- **HI-3:** All interactions shall occur through web protocols and network-based interfaces rather than physical hardware connections.
- **HI-4:** The hosting infrastructure shall be cloud-based (e.g., Vercel or AWS) and independent of any on-premise hardware dependencies.

Communications interfaces

Reliable and secure communication channels are essential for coordinating interactions among system components, external APIs, and users across web and email environments.

Requirements:

- **CI-1:** All client-server communications shall use **HTTPS** secured with **TLS 1.3**.
- **CI-2: Email notifications** (consultation confirmations, password resets) shall be sent through **SMTP integration (e.g., NodeMailer)**.
- **CI-3: In-app notifications** shall be managed via **Next.js API routes** for real-time updates.
- **CI-4:** The system shall send automated **reminders and feedback requests** through email or SMS (depending on user preferences).
- **CI-5: AI backend communication** (FastAPI ↔ Mistral/OpenAI) shall occur through secure API tokens managed by environment variables (.env.local).

Chapter 3: References

List any documents or other resources to which this SRS refers, if any. These might include user interface style guides, standards, system requirements specifications, interface specifications, or the SRS for a related product. The following are a few examples of different resources.

Example:

Book
Author(s). Book title. Location: Publishing company, year, pp.
Example:
W.K. Chen. Linear Networks and Systems. Belmont, CA: Wadsworth, 1993, pp. 123-35.

Article in a Journal
Author(s). “Article title”. Journal title, vol., pp, date.
Example:
G. Pevere. “Infrared Nation.” The International Journal of Infrared Design, vol. 33, pp. 56-99, Jan. 1979.

Articles from Conference Proceedings (published)
Author(s). “Article title.” Conference proceedings, year, pp.
Example:
D.B. Payne and H.G. Gunhold. “Digital sundials and broadband technology,” in Proc. IOOC-ECOC, 1986, pp. 557-998.

World Wide Web
Author(s)*. “Title.” Internet: complete URL, date updated* [date accessed].
M. Duncan. “Engineering Concepts on Ice. Internet: www.iceengg.edu/staff.html, Oct. 25, 2000 [Nov. 29, 2003].

Chapter 4: Plagiarism Report

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