# **FIXLY**

"Convenience at Your Doorstep"

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**Group No.-13** 

# **Functional Requirements**

#### **User Management:**

- > Users can register as a Customer, Service Provider, or Admin.
- > JWT-based authentication for login/logout and secure access.
- > Users can manage their profiles (name, email, photo, contact info).
- > Password recovery and update feature.
- > Role-based access control (Admin, Provider, Customer).

#### **Service Provider Management:**

- > Providers can register and submit documents for verification.
- > Admin verifies or rejects provider applications.
- > Providers can add, edit, and delete service listings.
- > Providers can define service price, description, and availability.
- Providers can track bookings and earnings via dashboard.

## Service Management :

- ➤ Admin can create and manage Service Categories (ex, plumbing, cleaning, electrical).
- > Each service includes title, description, price, and image.
- > Customers can browse or search services by category and location.

## **Booking Management:**

- > Customers can book a service by selecting date/time and provider.
- > Providers receive notifications of new bookings and can accept/reject.
- Booking statuses include: Pending, Confirmed, Completed, Cancelled, Rejected.
- > Customers can reschedule or cancel before confirmation.
- > Real-time updates (email or notification) for booking status changes.

#### **Payment Management:**

- > Payments processed securely via Razorpay gateway.
- > Supports multiple payment methods (UPI, credit/debit card, etc.).
- > Automatically calculates commission (default 10%).
- Generates payment receipts and stores transaction history.

#### **Review & Rating:**

- > Customers can rate and review providers after completed service.
- > Average rating automatically updates provider profile.
- > Admin monitors reviews to prevent misuse.

#### **Complaint Management:**

- Customers can file complaints related to bookings.
- > Admin can review, resolve, or close complaints.
- > Complaint statuses: Open, Under Review, Resolved, Closed.

#### **Communication & Notifications:**

- > Real-time chat between customers and providers.
- > Notifications for booking confirmations, cancellations, and payments.
- > Email notifications using Nodemailer.

## Loyalty & Rewards System:

- > Customers earn points on bookings, referrals, and reviews.
- > Points redeemable for discounts on future services.
- Admin manages reward thresholds and offers.

## **Analytics & Reporting:**

Providers get an analytics dashboard showing revenue, ratings, and booking trends.

- Admin can view overall platform analytics earnings, commissions, total bookings, active users, etc.
- > Reports generated for daily, weekly, and monthly analysis.

# Non-Functional Requirements

#### Performance:

- > The system should handle up to 10,000 concurrent users efficiently.
- > API response time should be less than 3 seconds under normal load.
- > Database queries should be optimized using indexes in MongoDB.

### **Scalability:**

- The platform should support horizontal scaling using Node.js and MongoDB clusters.
- Cloud-based hosting (Vercel & Render) ensures easy scaling for future growth.

## Security:

- > JWT-based authentication for secure sessions.
- > Passwords hashed using bcrypt.
- > Input validation and sanitization to prevent XSS/SQL Injection.
- > Role-based access control for different users.

## Reliability & Availability:

- > System uptime of at least 99.5%.
- > implement error logging.
- > Fail-safe payment handling ensures no loss of transaction data.

#### **Usability:**

- > Clean and responsive UI built with React + Tailwind CSS.
- > Simple navigation and accessible design for all age groups.
- > Intuitive forms and validation messages for better user experience.

#### **Maintainability:**

- > Modular code structure using MVC architecture.
- > Version control using Git & GitHub.
- > Well-documented APIs for easy updates and future enhancements.

## Portability:

- > Platform accessible on any modern web browser.
- > Mobile-friendly responsive design.

## Compliance:

- > All transactions handled via Razorpay, compliant with PCI DSS standards.
- ➤ User data management complies with data privacy regulations.

# **User Stories**

## 1. User Management

- As a new user, I want to register as a Customer, Provider, or Admin, so that I can access features relevant to my role.
- As a registered user, I want to log in securely using JWT authentication, so that I can access my account safely.
- 3. As a user, I want to log out securely, so that my session cannot be misused.
- 4. As a user, I want to update my profile details (name, email, photo, contact info), so that my information stays current.
- 5. As a user, I want to recover my password via email, so that I can regain access if I forget it.
- 6. As an admin, I want to control user roles and permissions, so that only authorized users can access certain features.

## 2. Service Provider Management

- 1. As a provider, I want to register and submit documents, so that the admin can verify my identity.
- As an admin, I want to verify or reject provider applications, so that only legitimate providers are onboarded.
- 3. As a provider, I want to add, edit, and delete service listings, so that I can manage my offerings.
- 4. As a provider, I want to set service price, description, and availability, so that customers know what I offer.
- 5. As a provider, I want to view my bookings and earnings in a dashboard, so that I can monitor my business performance.

# 3. Service Management

- As an admin, I want to create and manage service categories (e.g., plumbing, cleaning), so that services are organized.
- 2. As a customer, I want to browse or search services by category or location, so that I can quickly find what I need.
- As a provider, I want to associate my service with a specific category, so that it's easily discoverable.

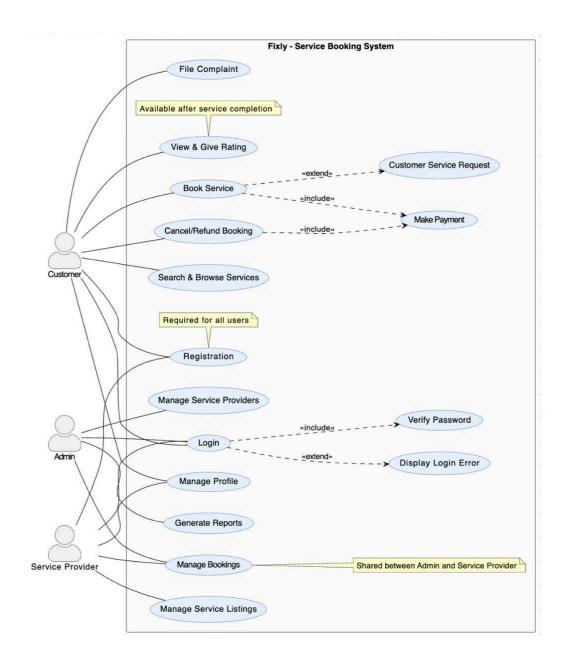
## 4. Booking Management

- 1. As a customer, I want to book a service by selecting a provider and time slot, so that I can schedule my service conveniently.
- As a provider, I want to receive booking notifications, so that I can respond promptly.
- 3. As a provider, I want to accept or reject bookings, so that I can manage my availability.
- 4. As a customer, I want to reschedule or cancel bookings before confirmation, so that I have flexibility.
- 5. As a user, I want to get real-time updates (email/notification) for booking status changes, so that I stay informed.

## 6. Review & Rating

- As a customer, I want to rate and review a provider after a completed service, so that I can share my experience.
- 2. As a system, I want to update provider's average rating automatically, so that users see accurate feedback.
- As an admin, I want to monitor and remove inappropriate reviews, so that the platform remains fair.

# Usecase Diagram



# Interface Requirements

#### 4.1 User Interface:

#### Homepage:

- → Overview of categories and trending services.
- → Book Now and Register as Provider buttons.

#### Login/Register Page:

→ Input validation with error/success messages.

#### **Service Listing Page:**

→ Grid of services with filters (price, rating, category).

#### **Booking Page:**

→ Calendar for choosing date/time and secure payment gateway.

#### **Payment Page:**

→ Integration with Razorpay, multiple payment options, transaction summary, and booking confirmation receipt.

#### **User Dashboards:**

→ View upcoming and past bookings, favorite providers, loyalty points, reviews, profile settings, and notifications.

#### **Provider Dashboard:**

→ Manage service listings, view bookings, update availability, track earnings, view analytics, and respond to messages.

#### **Admin Dashboard:**

→ Manage users, verify providers, handle complaints, generate reports, and monitor platform performance.

## **Chat / Messaging Page:**

→ Enables secure messaging between customers and providers

## 4.2 Backend Interface (API)

RESTful APIs using Node.js + Express.

Example endpoints:

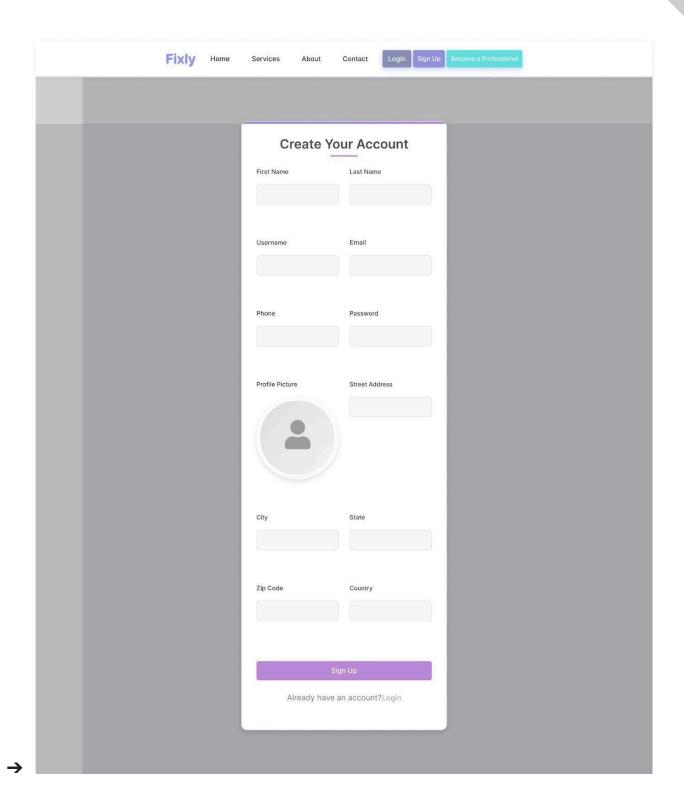
- → POST/api/auth/register Register new user.
- → POST/api/auth/login User login.
- → GET/api/services Fetch all services.
- → POST/api/bookings Create a new booking.
- → POST/api/payments Process payment via Razorpay.
- → GET/api/reports/admin Admin dashboard data.

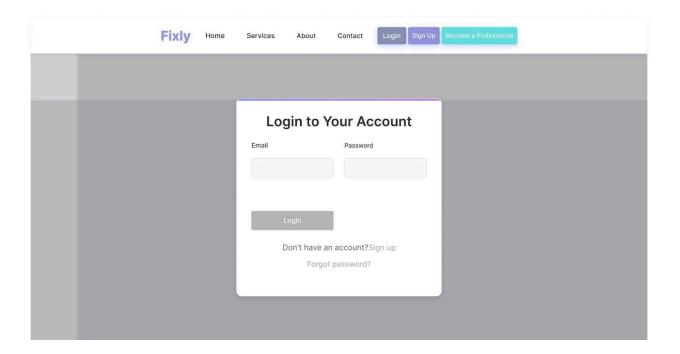
## **4.3 External Interfaces**

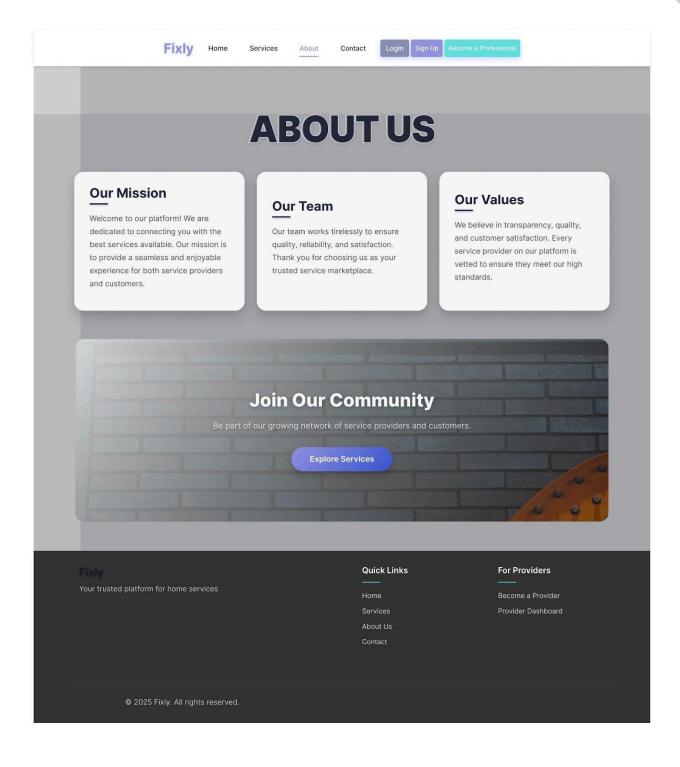
- → Payment Gateway: Razorpay API for secure payments.
- → Cloud Storage: Cloudinary for media uploads.
- → Email Service: Nodemailer for notifications.

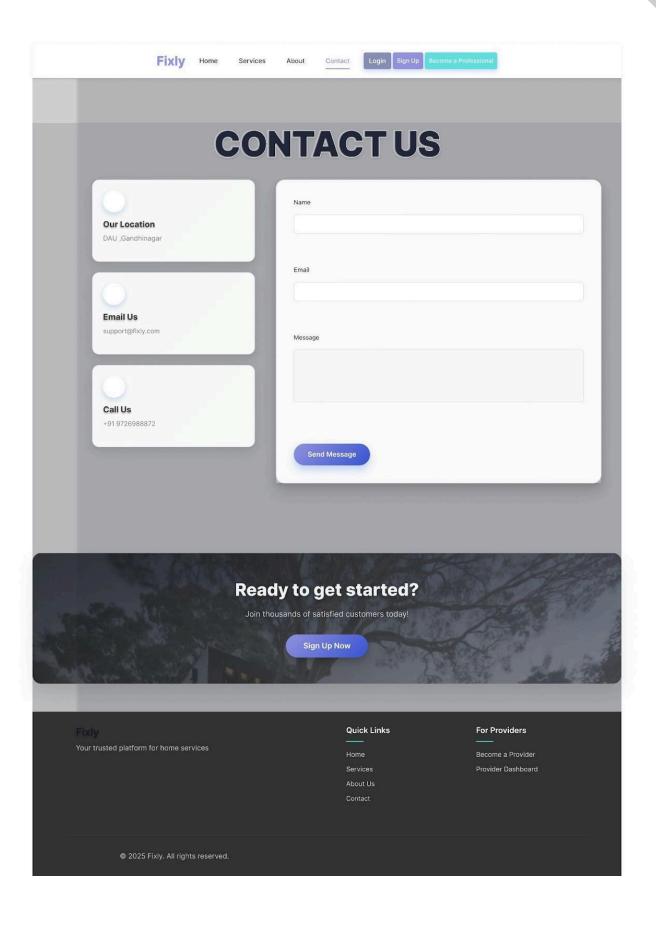
# Wireframes or UI/UX mockups

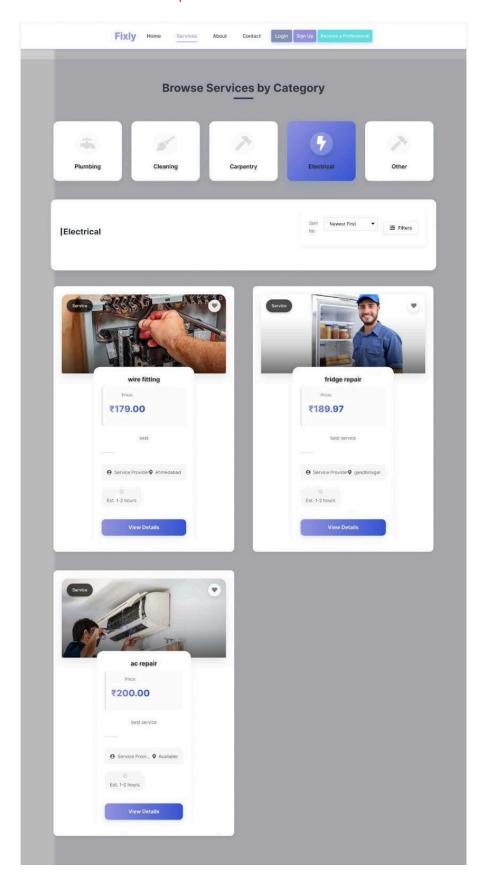


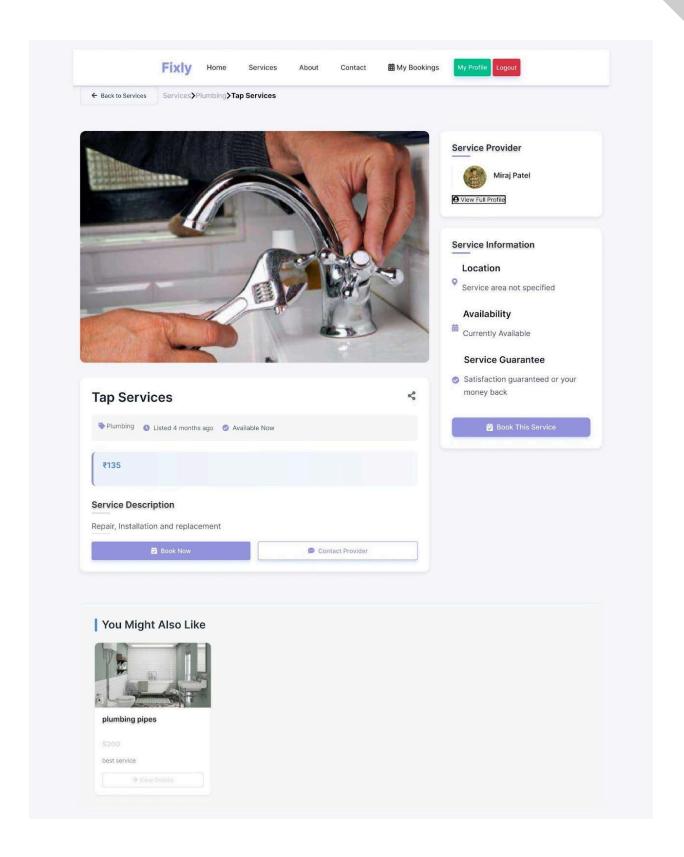


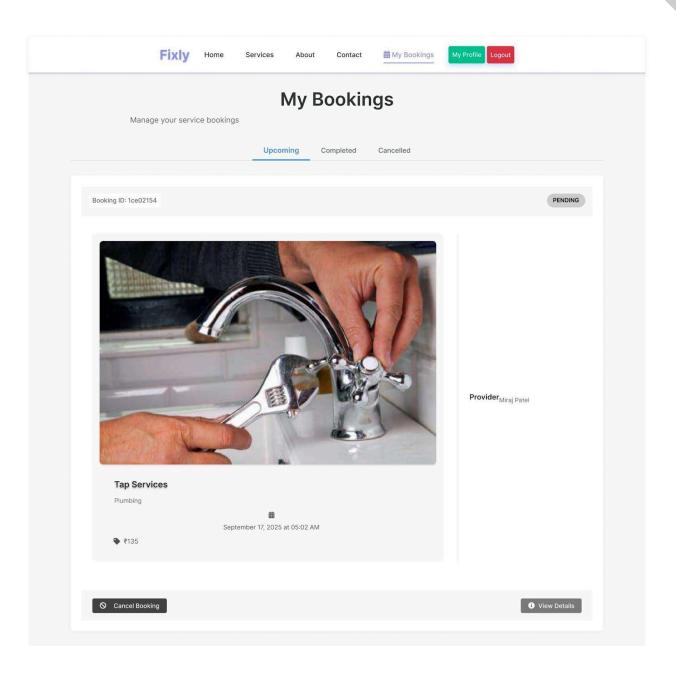


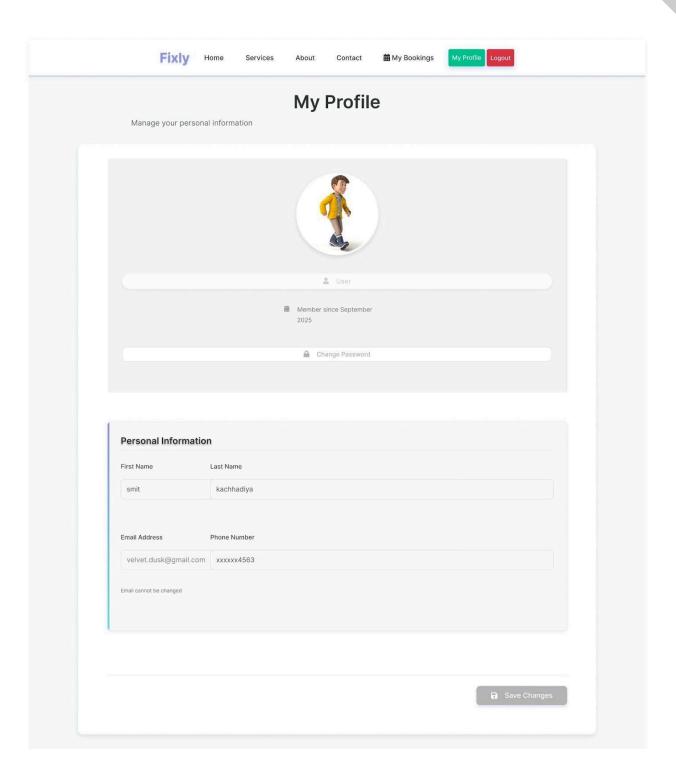


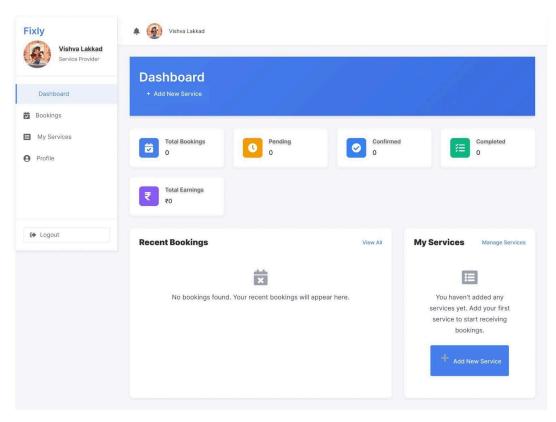


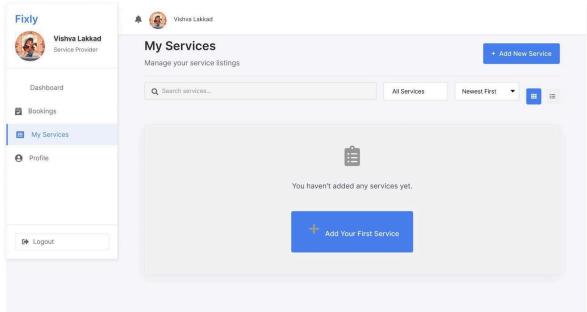


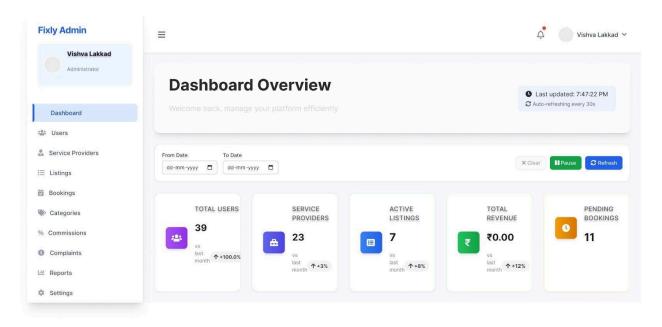


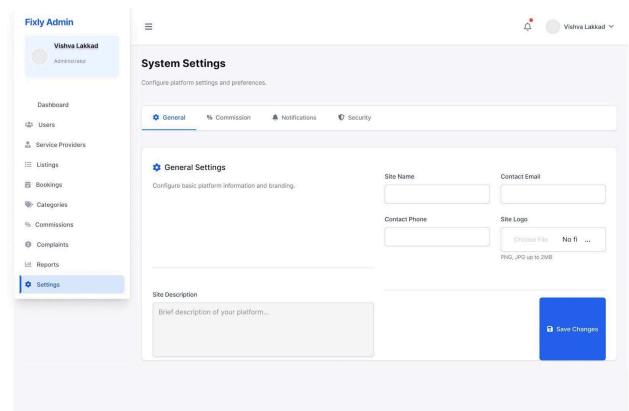


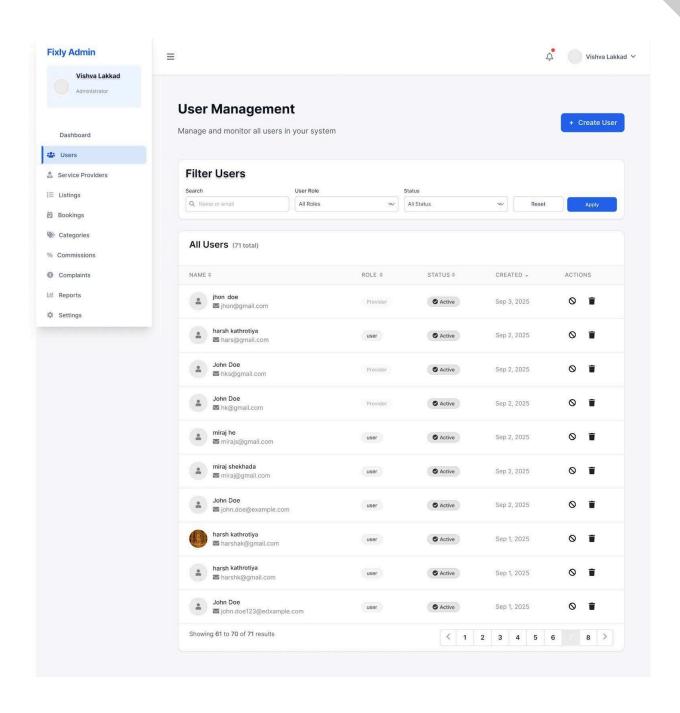


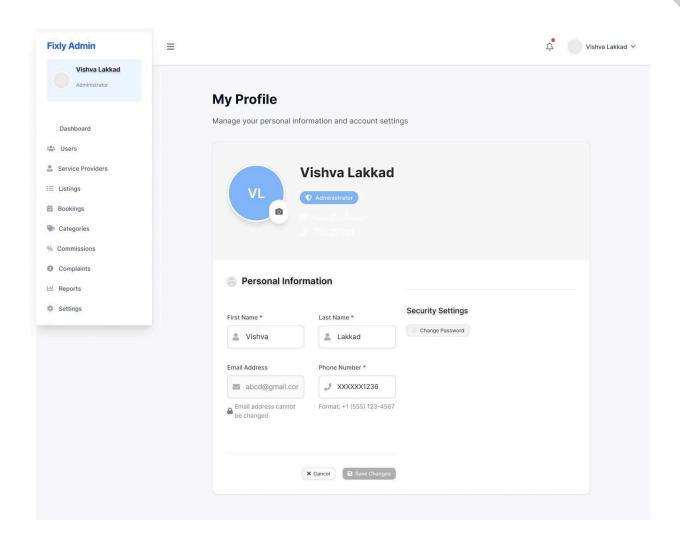












# Acceptance Criteria

## **User Registration:**

- → Users can sign up with a name, email, phone, and password.
- → Invalid details (wrong email format, empty fields) show an error message.
- → Email verification is sent, and the account activates only after confirmation.

### **Login System**

- → Users can log in with the correct email and password.
- → Wrong credentials show an error message.
- → Only logged-in users can access protected pages.

#### **Service Listing**

- → Providers can add, edit, or delete service listings.
- → Customers can view all listings with title, description, price, and image.
- → Only verified providers can publish services.

## **Booking System**

- → Customers can select a service, date, and time to create a booking.
- → Providers receive a notification and can accept or reject it.
- → Booking status updates correctly (Pending → Confirmed → Completed).

## **Payment System**

- → Payments can be made securely via Razorpay.
- → Booking is confirmed only after successful payment.
- → Commission and provider earnings are calculated automatically.

## **Review System**

- → Only customers with completed bookings can give reviews.
- → Ratings (1-5) and review text are saved correctly.
- → Provider's overall rating updates based on all reviews.

## **Complaint System**

- → Customers can submit complaints for any booking issue.
- → Admin can view complaints and change status (Open → Resolved).
- → Resolution notes are recorded and visible to the admin.

#### **Admin Dashboard**

- → Shows total users, bookings, revenue, and complaints.
- → Admin can manage users, providers, and services from the dashboard.

## **Analytics Dashboard**

- → Displays real-time charts for bookings, revenue, ratings, and service trends.
- → Data updates automatically without manual refresh.

## **Rewards System**

- → Points are added automatically after a booking, review, or referral.
- → Users can redeem points for discounts or offers.