

Waterfall-Functional Requirement Document

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Waterfall Methodology -Functional Requirement Documentation

Cosmetic Trial Booking System

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Role: Business Analyst

Project Type: Academic / Portfolio Demonstration

Methodology: Waterfall Methodology

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Confidentiality: Internal / Demonstration Purposes Only

Phase 3 – Requirements Analysis & Functional Specification

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1. Introduction

The purpose of this Functional Requirements Document (FRD) is to define, in detail, the system functionality required to support the **Shared Sync mobile application**.

Shared Sync is designed to enable customers to **book personalized cosmetic trial sessions** conducted by **certified beauty agents in partner stores**. The app provides a seamless experience — from **booking and trial management** to **personalized recommendations** and **product purchases** — driving engagement, conversions, and loyalty in cosmetic retail.

This document translates the **Business Requirements (BRD)** into precise **functional specifications** for development and testing teams.

2. Purpose of the FRD

The FRD serves to:

- Define all system functionalities to be implemented.
- Bridge business requirements and technical design.
- Provide clarity to developers, testers, and stakeholders on system behavior.
- Act as a reference for validation, verification, and traceability (BRD ↔ FRD).

3. Project Scope

In Scope

The project will focus on the **design, development, and deployment** of a customer-facing mobile application that enables users to discover, book, and manage personalized cosmetic trial sessions at certified partner stores. The scope includes:

- **Customer Mobile Application (CX App):**
Development of a user-friendly mobile platform (iOS/Android) that allows customers to browse available trial sessions, select preferred slots, and confirm bookings.
- **Session Discovery and Booking Management:**
Customers can explore available trial sessions by category, product type, or skin concern, and make instant bookings with real-time slot availability.
- **Payment and Subscription Integration:**
Enable secure payment processing for session bookings and subscriptions through integrated payment gateways, supporting multiple methods (card, UPI, wallets, etc.).
- **Notification and Communication System:**
Automated push notifications and reminders for upcoming sessions, offers, and personalized recommendations to improve engagement and retention.
- **Feedback and Review Feature:**
Customers can share post-session feedback and rate their experience, enabling stores to monitor satisfaction and improve service quality.
- **Integration with Store Backend (Limited):**
The app will connect with store systems only for retrieving available slots and session details — no staff-side scheduling or resource management.
- **Data Analytics and Reporting (CX-focused):**
Capture customer booking data, feedback, and engagement metrics to support business decision-making and marketing analysis.

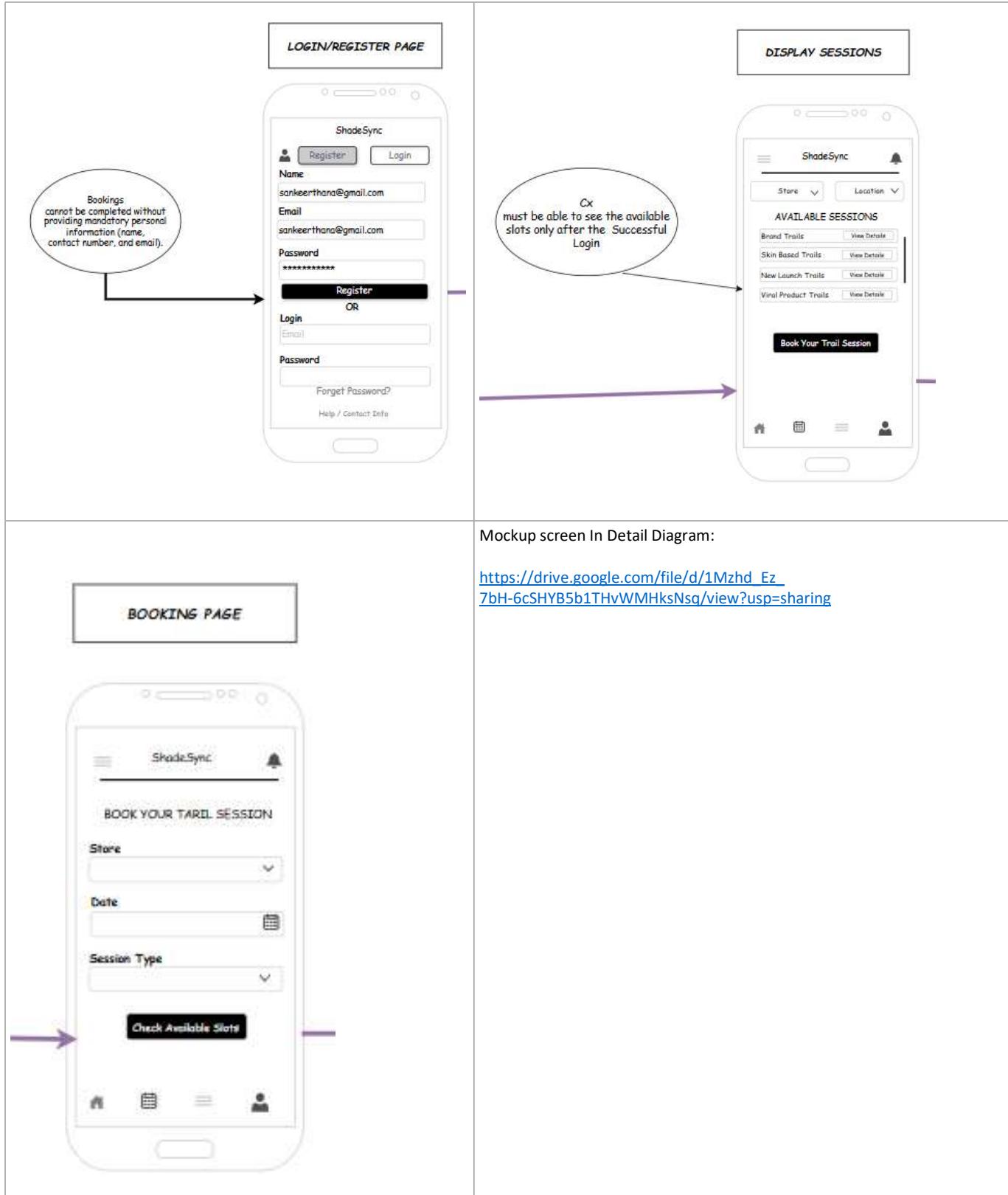
Out of Scope

The following components are **excluded** from the current phase of the project:

- **Staff or Agent Management Portal:**
The system will not include any separate interface or functionality for store staff or certified agents to view or manage bookings. These operations will continue to be handled manually at the store level.
- **Inventory or Product Stock Management:**
The application will not track product inventory, SKU details, or store stock levels.
- **External E-Commerce Integrations:**
No third-party e-commerce platform integration (e.g., Amazon, Nykaa) will be implemented in this phase.
- **Physical Store Operations:**
On-ground logistics, staff allocation, or store management processes remain outside the digital system's scope.
- **Customer Support Chatbot or AI Assistant:**
Advanced AI-based support systems or chatbots will not be part of this release.

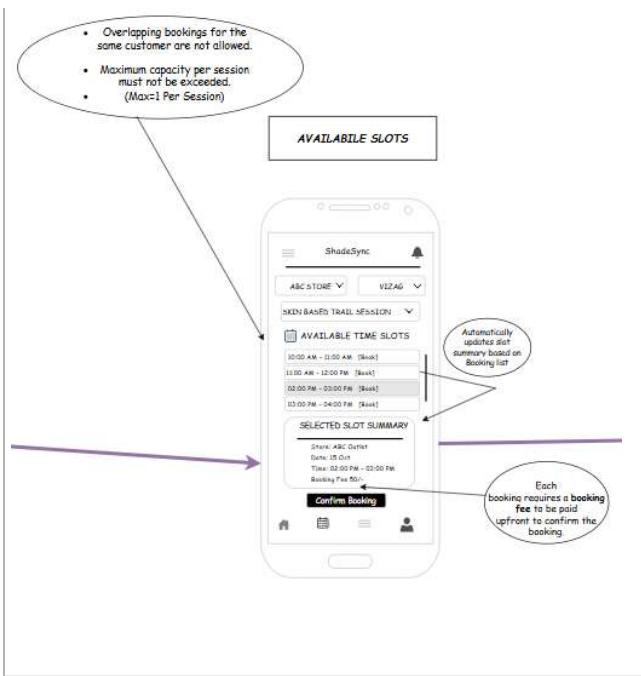
4. Functional Requirements Table

Requirement ID	Description	Priority	Related Business Requirement ID
FR-01.1	System shall allow customers (CX) to register by providing required details such as name, email, and password.	High	BR-01
FR-01.2	System shall authenticate customer login credentials securely before granting access.	High	BR-01
FR-01.3	System shall fetch and display available session types and categories from the database after successful login.	Medium	BR-01
FR-01.4	System shall enable filtering of sessions based on store or location preference.	Medium	BR-01



FR-02.1 System shall allow customers to select preferred store, session type, and date/time slot for booking. High BR-02

FR-02.2 System shall display only real-time available slots to avoid booking conflicts. High BR-02



Mockup screen In Detail Diagram:

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- FR-03.1** System shall allow customers to edit or modify booking details (session type, date, time, or agent) before final confirmation. Medium BR-03
- FR-03.2** System shall automatically update slot availability and booking summary based on user selection in real time. Medium BR-03

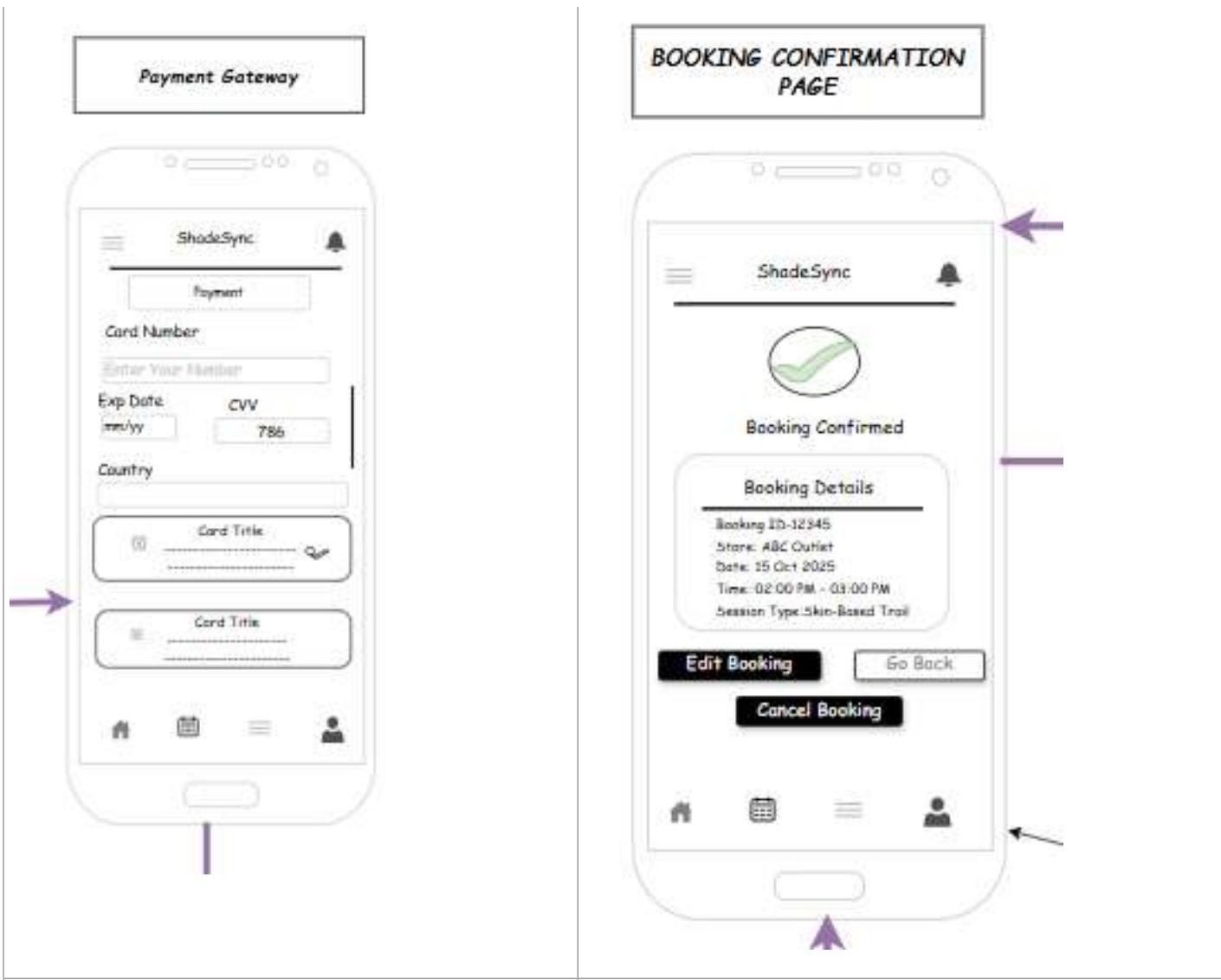
Refer to the Wireframe for BR-2

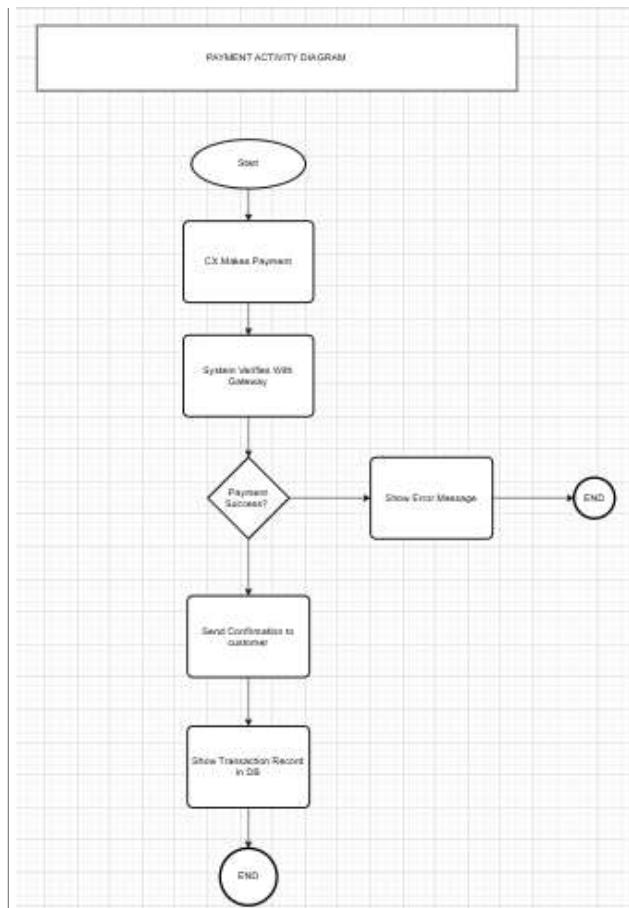
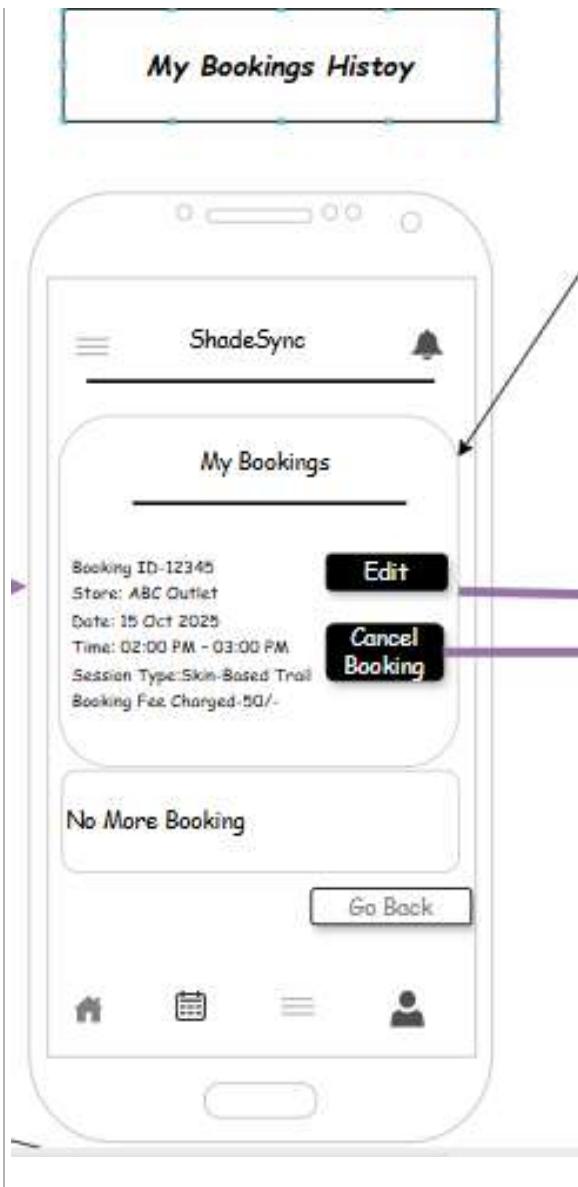


Mockup screen In Detail Diagram:

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- FR-04.1** System shall enable secure online payment for booking the cosmetic trial session. High BR-04
- FR-04.2** System shall send a digital confirmation (via email/SMS/in-app notification) upon successful payment. High BR-04
- FR-04.3** System shall store and maintain transaction records for audit, reporting, and reconciliation purposes. High BR-04





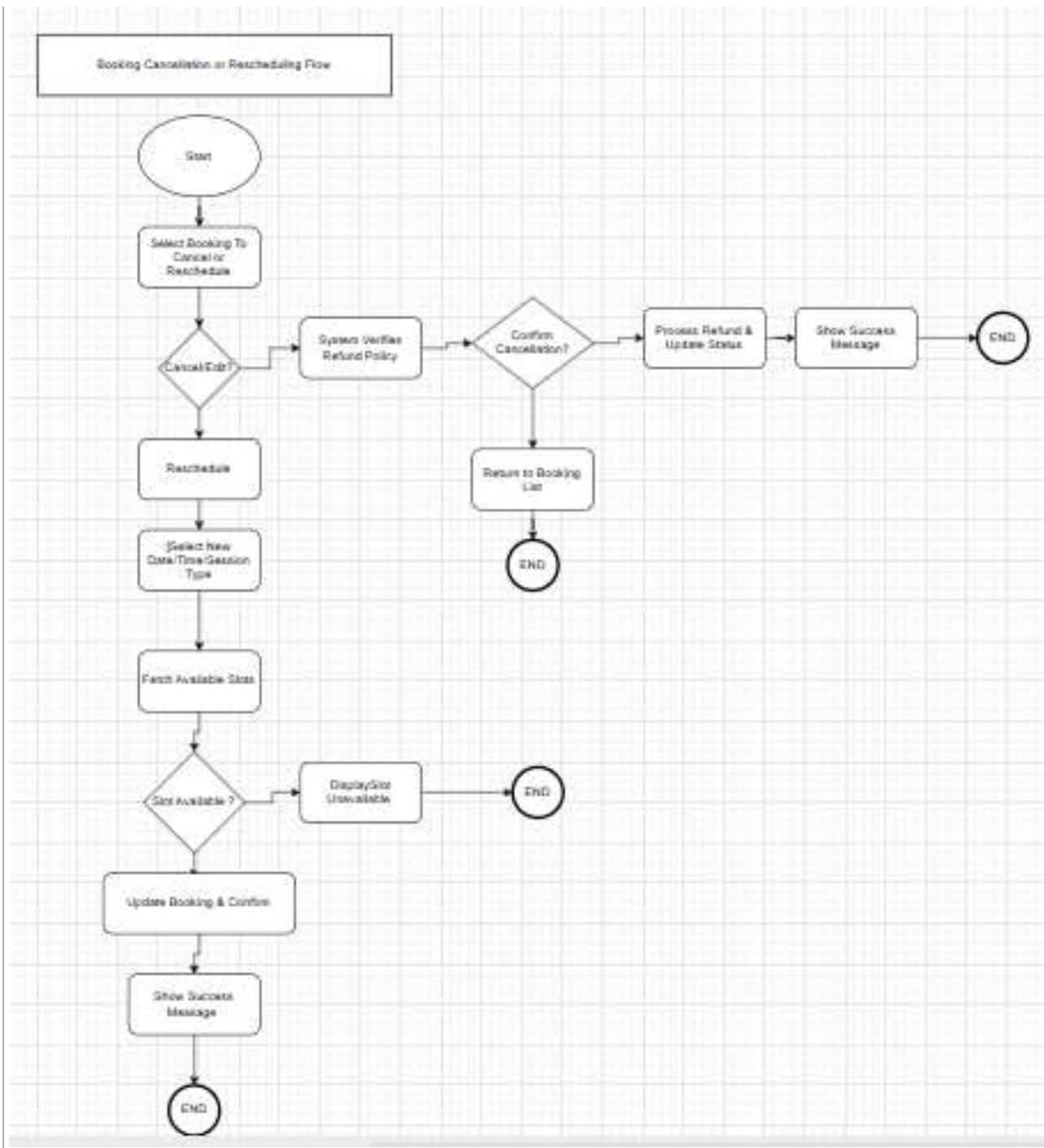
Mockup screen In Detail Diagram:

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FR-05.1 System shall allow customers to cancel or reschedule confirmed bookings through the mobile app. High BR-05

FR-05.2 System shall verify applicable refund and cancellation policies before confirming the action. High BR-05



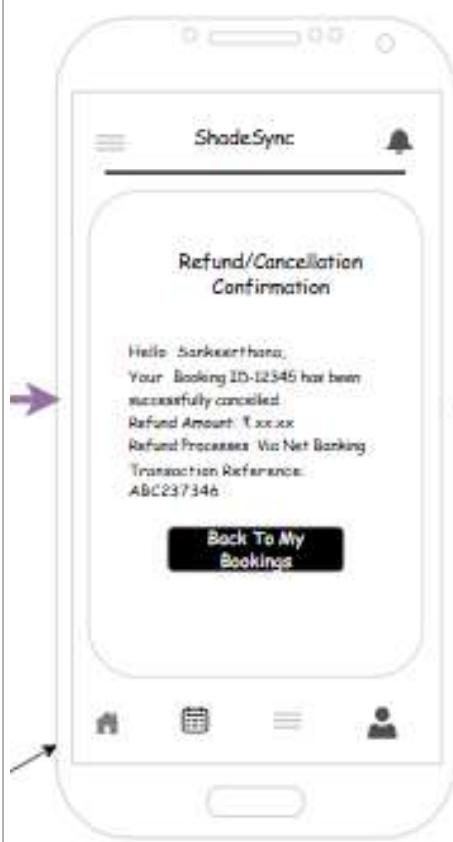


Mockup screen In Detail Diagram:

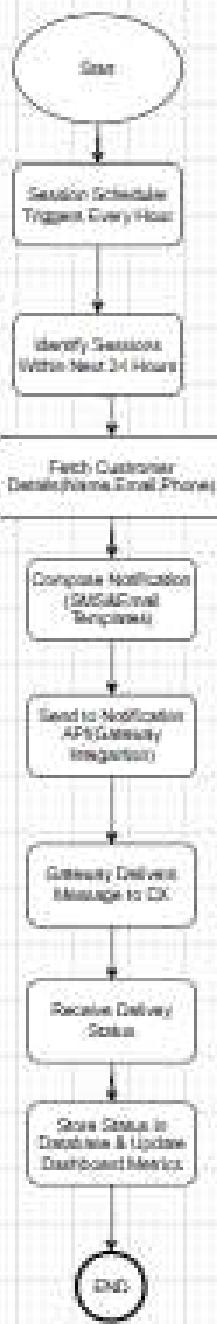
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- | | | |
|--|--------|-------|
| FR-06.1 System shall send a confirmation notification to the customer upon successful refund or cancellation. | Medium | BR-06 |
| FR-06.2 System shall fetch and display refund details securely from the payment gateway. | Medium | BR-06 |

REFUND INITIATION



Notification Flow



Mockup screen In Detail Diagram:

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FR-07.1 System shall store and retrieve each customer's session data in the database for future analysis and personalization.

High

BR-07

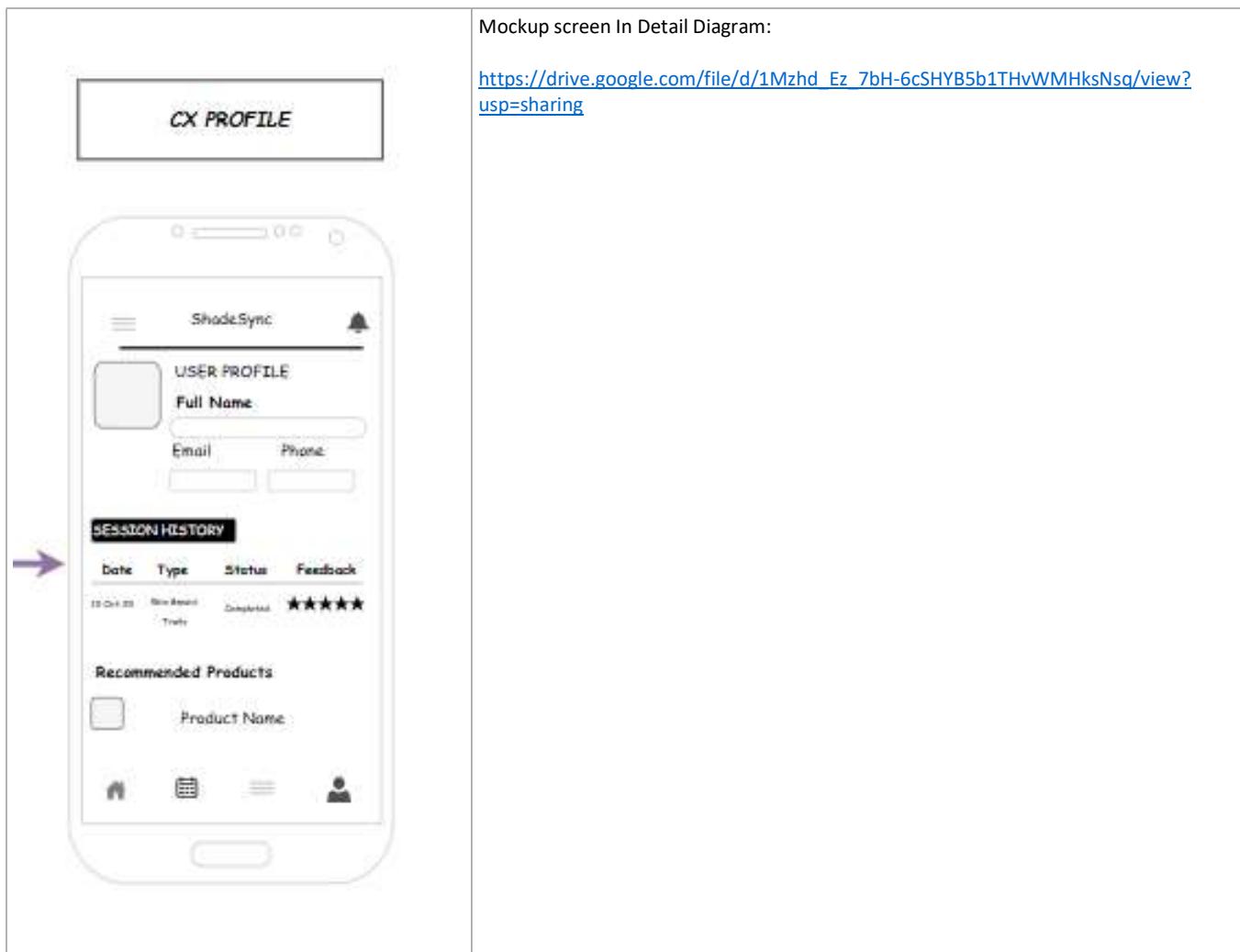
FR-07.2 System shall generate and display personalized cosmetic product

Mediu

BR-07

recommendations based on previous sessions and agent analysis.

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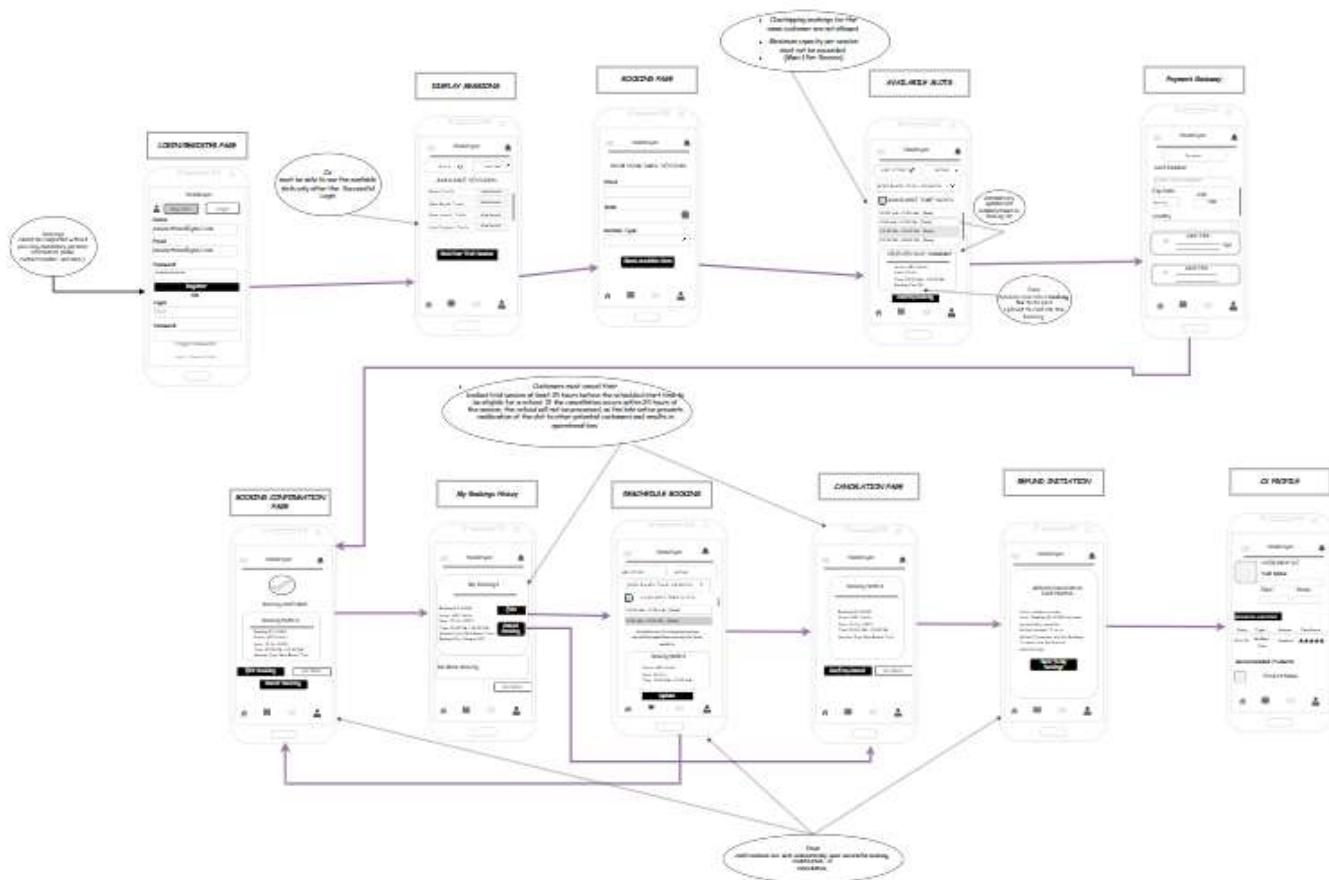


5. System Features and Use Cases

Mockup screen In Detail Diagram:

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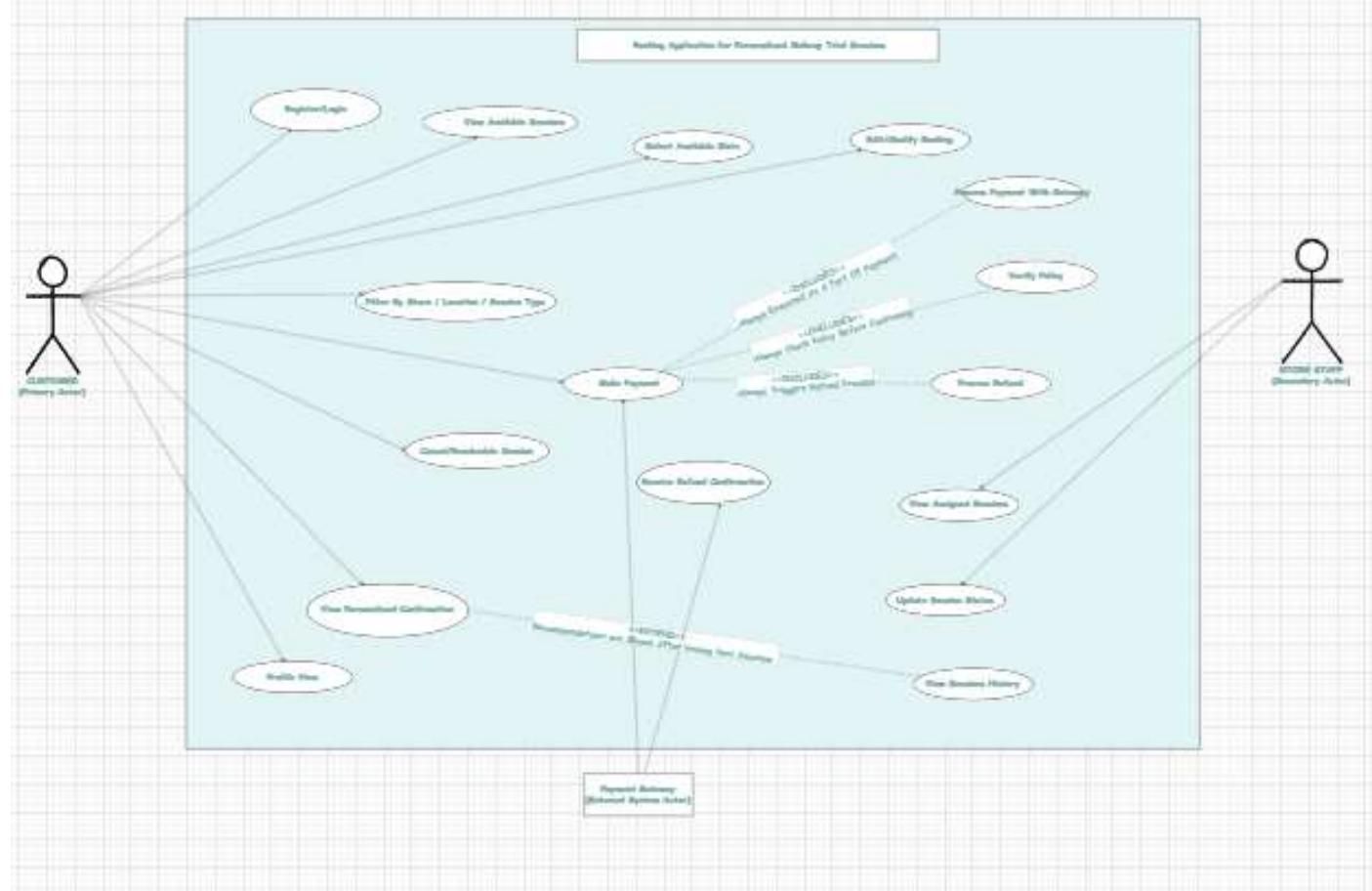
5.1 Overview of System Features



5.2 Use Case Diagram

Mockup screen In Detail Diagram:

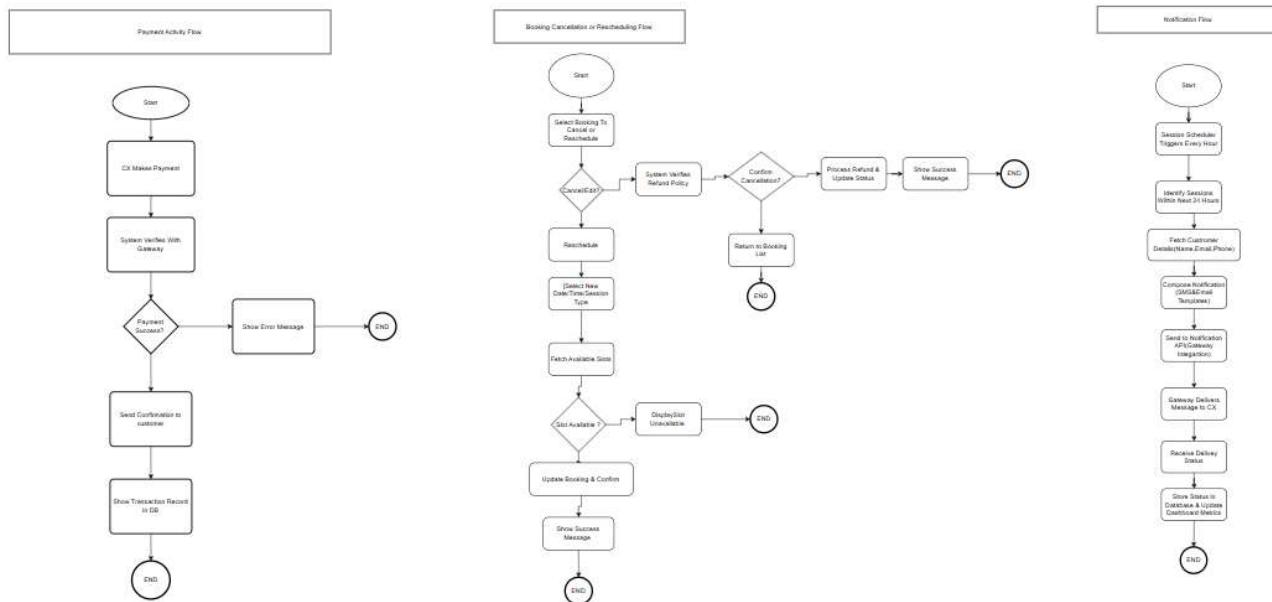
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5.3 Activity Diagram

Mockup screen In Detail Diagram:

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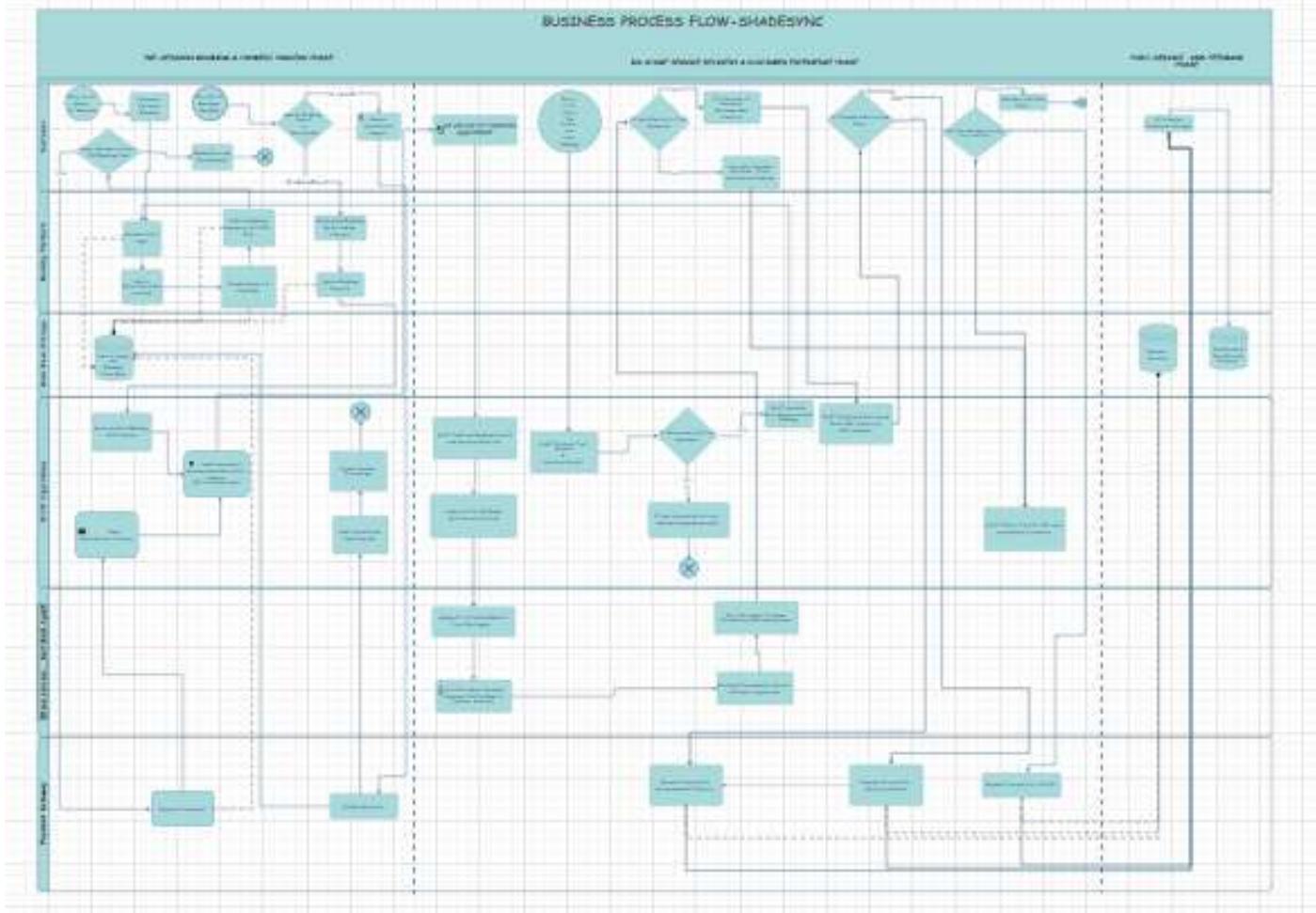
6. Process Flow Diagrams

Mockup screen In Detail Diagram:

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6.1 Operational Process Flow Of Entire Business (End-To-End Flow From Booking To Payment , Refund and Recommendations)

6.2 Data Flow Diagrams (DFD – Level 0 and Level 1)

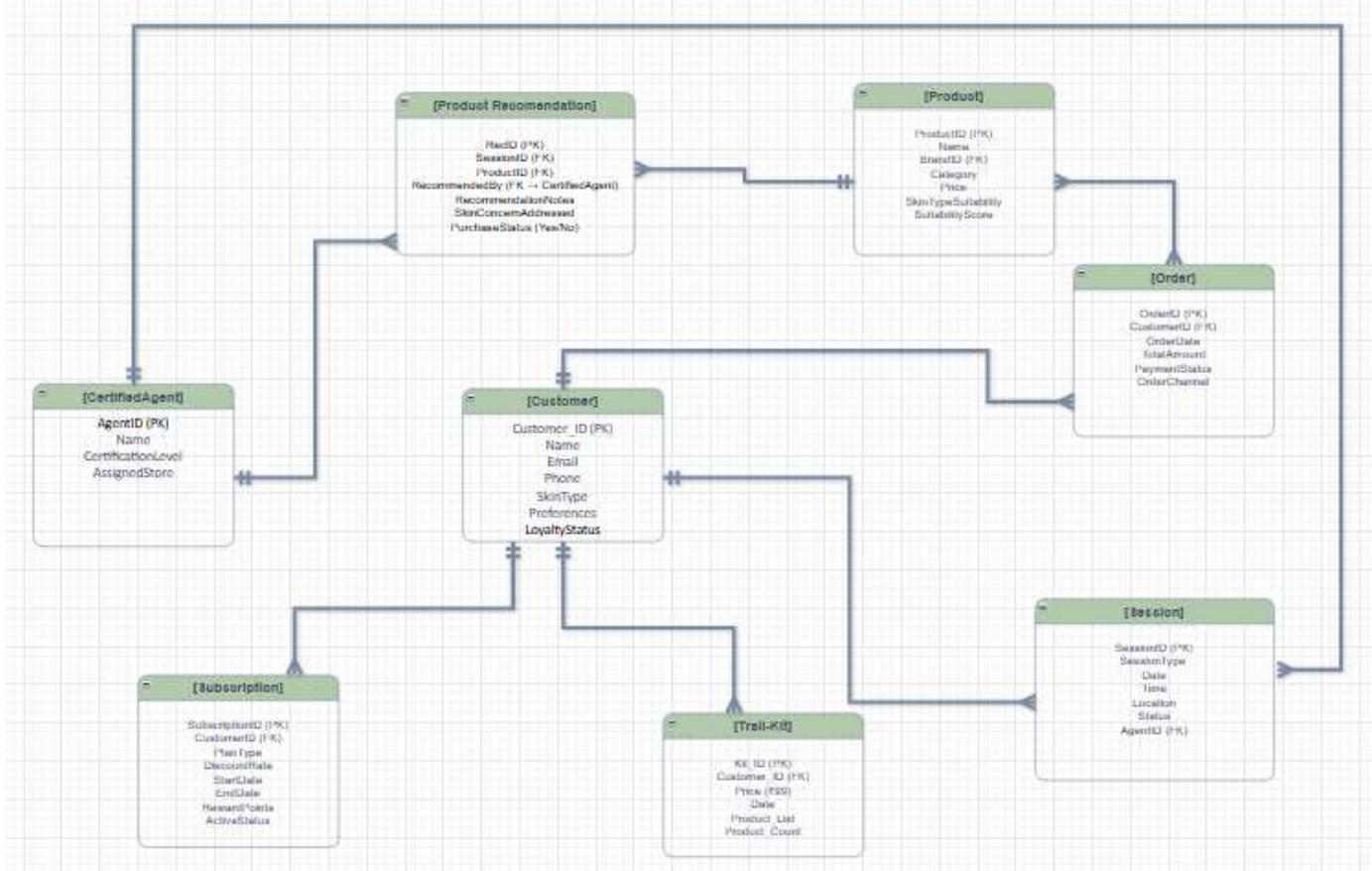


7. Data Design

Mockup screen In Detail Diagram:

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7.1 Entity Relationship Diagram (ERD)



8. Non-Functional Requirements (NFRs)

1. Introduction

Non-functional requirements define the **quality attributes**, **system constraints**, and **operational conditions** under which the functional requirements must perform.

They ensure the application is **usable, secure, reliable, scalable, and efficient** for both customers and certified agents.

2. Non-Functional Requirements Table

NFR ID	Category	Requirement Description	Related BR/FR IDs	Priority
NFR-01	Performance	The system should load the login and registration screens within 3 seconds under normal network conditions.	BR-01, FR-01.1, FR-01.2	High
NFR-02	Performance	The session list and slot availability must refresh in real-time with a delay of no more than 2 seconds .	BR-02, FR-02.1, FR-02.2	High
NFR-03	Usability	The mobile interface should follow a clean, intuitive UI design, ensuring that a new customer can complete a booking with no more than 3 navigations .	BR-02, BR-03, FR-03.1	Medium
NFR-04	Usability	All mandatory fields (e.g., name, email, contact number) must be clearly marked with an asterisk (*) and validated before submission.	BR-01, FR-01.1	High
NFR-05	Security	All customer credentials must be stored using AES-256 encryption , and all communications must occur over HTTPS (SSL) .	BR-01, FR-01.2, FR-04.1	Critical
NFR-06	Security	The system must comply with PCI-DSS standards for payment data handling.	BR-04, FR-04.1	Critical
NFR-07	Reliability	The system must maintain 99.5% uptime , ensuring consistent session availability for customers.	BR-02, BR-03	High
NFR-08	Scalability	The system should be capable of supporting up to 10,000 concurrent users without degradation in performance.	BR-02, BR-04, BR-08	Medium

NFR-09	Maintainability	The application should be developed using modular architecture , allowing independent updates to booking, payment, and user modules.	All FRs	Medium
NFR-10	Portability	The mobile application must be compatible with both Android (v10+) and iOS (v14+) platforms.	All BRs	High
NFR-11	Accessibility	The UI must adhere to WCAG 2.1 standards , supporting text-to-speech and high-contrast themes for accessibility.	BR-02, BR-03	Medium
NFR-12	Data Integrity	The system must ensure no loss of session or transaction data in the event of network disruption. All data should be synced upon reconnection.	BR-04, BR-07, FR-07.1	High
NFR-13	Auditability	Every booking, modification, cancellation, and refund transaction must be logged with a unique reference ID and timestamp.	BR-03, BR-04, BR-05, BR-07	High
NFR-14	Availability	The system should provide continuous access to booking and cancellation modules, with downtime limited to scheduled maintenance windows only.	BR-02, BR-03, BR-05	High
NFR-15	Backup and Recovery	Data backups must occur daily, with a disaster recovery plan ensuring system restoration within 4 hours of a major failure.	BR-04, BR-07, BR-08	Medium

9. Approval & Sign-Off

(Digital acknowledgment of completion or stakeholder sign-off)

⌚ [Add Placeholder: Signature or Approval Table]