

Capstone Project Document

Skinalyze - Pharmaceuticals and Cosmetics Shop Management with AI-Powered Skin Disease Detection

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Definition and Acronyms

Acronym	Definition
AI	Artificial Intelligence
API	Application Programming Interface
AWS	Amazon Web Services

BA	Business Analysis
BE	Back-end
BR	Business Rule
CLI	Command Line Interfaces
COD	Cash On Delivery
CSS	Cascading Style Sheets
DB	Database
ERD	Entity Relationship Diagram
FE	Front-end
GDPR	General Data Protection Regulation
GHN	GiaoHangNhanh (Shipping Service)
GUI	Graphical User Interface
ICD	Interface Control Document
JWT	JSON Web Token
MVP	Minimum Viable Product
OTP	One-Time Password
PM	Project Manager
PO	Product Owner
RAG	Retrieval-Augmented Generation
RBAC	Role-Based Access Control
REST	Representational State Transfer
RMS	Retail Management System
SDD	Software Design Description
SPMP	Software Project Management Plan
SQL	Structured Query Language
SRS	Software Requirement Specification

UAT	User Acceptance Test
UC	Use Case
WBS	Work Breakdown Structure

I. Project Introduction

1. Overview

1.1 Project Information

Project Name: Skinalyze – AI-Integrated Skin Analysis and Retail Management Platform

Type: Web and Mobile Application

Core Technologies:

- **AI:** Python (FastAPI), RAG Chain (Retrieval-Augmented Generation).
- **Web (Admin/Staff/Dermatologist):** Next.js (App Router), Tailwind CSS.
- **Mobile (User/Shipper):** React Native (Expo/CLI).
- **Backend:** NestJS (TypeScript), TypeORM.
- **Database/Infra:** MySQL, Redis, Docker, Digital Ocean, Huggingface Space.
- **Services:** Cloudinary (Images), Goong Map (Location), GiaoHangNhanh (Shipping), SePay (Payment), Firebase (Notifications), Socket.io (Real-time).

Target Users: Customers, Dermatologists, Store Staff, and Administrators in cosmetic and pharmaceutical retail.

1.2 Project Team

-Team Members:

- Front-end: Trinh Han Hoang Long, Le Nguyen Chi Bao
- Back-end: Pham Nguyen Vu, Chu Phan Nhat Long

-Stakeholders:

- Dermatologist
- Staff
- Admin
- User

2. Product Background

Vietnam's cosmetic and pharmaceutical markets are growing rapidly, yet most retailers face fragmented systems, manual operations, and lack of personalization. Customers often struggle to receive suitable product recommendations tailored to their specific skin conditions.

At the same time, skin diseases affect millions worldwide, particularly in rural or underserved areas with limited access to dermatologists. Smartphones and digital cameras allow patients to capture skin images, but analysis still requires expert intervention.

Skinalyze was proposed to bridge these gaps by combining **AI-powered skin disease detection** with a **comprehensive retail and consultation platform**, offering personalized care, smart inventory management, and integrated services.

3. Existing Systems

- **Retail Management Systems (RMS):** Existing RMS solutions support inventory and sales but lack AI-driven personalization and health integration.
- **Telemedicine Platforms (e.g., Halodoc, Doctor Anywhere):** Offer remote consultations but not tailored cosmetic/pharmaceutical product recommendations.
- **AI Research in Dermatology (e.g., ISIC dataset, Stanford's DeepDerm):** Demonstrates potential of CNNs in skin disease detection, but limited commercial integration with retail. These systems provide useful references, but none offer an **end-to-end solution** that merges AI diagnostics, product recommendation, retail management, and consultation in one platform.

4. Business Opportunity

The Vietnamese beauty and healthcare markets are projected to continue rapid growth, with increasing customer demand for digital and personalized services. Current gaps include:

- Lack of AI-driven skin disease detection in commercial retail.
- Absence of integrated solutions that unify consultation, diagnosis, and retail management.
- Limited accessibility for customers in rural areas.

Opportunity:

Skinalyze positions itself at the intersection of **AI healthcare innovation** and **cosmetic/pharmaceutical retail**, enabling businesses to improve sales accuracy, reduce returns, and build stronger customer trust. The platform leverages current trends in digital healthcare, e-commerce, and AI adoption, making it attractive for both retailers and consumers.

5. Software Product Vision

Skinalyze empowers individuals to understand their skin health anytime, anywhere, by combining advanced AI-driven disease detection with personalized product recommendations and seamless consultation services. It envisions a future where skincare and dermatology are accessible, accurate, and integrated into everyday retail experiences.

6. Project Scope & Limitations

Scope:

- Using results from skin disease detection AI model from uploaded images.
- Personalized pharmaceutical and cosmetic product recommendations.
- Real-time stock and sales management.
- Online dermatologist consultation booking with secure video integration.
- AI chatbot for FAQs and skincare guidance.
- Role-based dashboards for administrators and staff.
- Integration with secure payment (SePay), authentication (Auth0), Gmail notifications, and Google Meet video calls.

Limitations (Out of Scope):

- AI models will initially focus on **common skin conditions** only, not rare or highly complex diseases.
- The platform will not provide **medical prescriptions**; only recommendations and dermatologist consultations.
- International expansion features (multi-language, global logistics) are excluded from the initial release.

II. Project Management Plan

1. Overview

1.1 Scope & Estimation

#	WBS Item	Complexity	Est. Effort (man-days)
1	Sprint 1: Setup & Authentication (Foundation)		29
1.1	Project Setup: Init NestJS (TypeORM, MySQL, Redis), React Native (CLI), NextJS (App Router).	Simple	4
1.2	Authentication Core: Implement JWT Strategy, Guards, RBAC (Role-Based Access Control).	High	6
1.3	User Flows: Login, Register (Customer/Dermatologist), Verify OTP, Forgot/Change/Reset Password.	Medium	13
1.4	Services: Setup Email Service (Gmail Integration), Token Management, API Interceptors.	Medium	6

2	Sprint 2: User Profile & Skin Analysis Core		34.5
2.1	Profile Management: User/Customer CRUD, Address Management, Cloudinary Integration (Avatar/Images).	Medium	10
2.2	AI Skin Analysis: Integrate FastAPI (Disease Detection), Manual Entry logic, Analysis History & Detail.	High	14.5
2.3	Mobile Features: FacialSkinCamera, Analyze Screen, Result Display (Mask/Bounding Box).	High	6
2.4	Web Features: User Management List, Profile Settings.	Simple	4
3	Sprint 3: Dermatologist & Appointment		38
3.1	Dermatologist Module: List, Search, Detail, Availability Slots Management (Calendar Picker).	Medium	9
3.2	Appointment Booking: Create Reservation, Payment logic (Wallet/Sub), Cancel/Refund Logic (BR compliance).	High	13
3.3	Consultation Tools: Google Meet Link Generation, Medical Notes Editor, Check-in System.	High	9
3.4	Web Features: Dermatologist Directory, Appointment Management, Dispute Resolution.	Medium	7
4	Sprint 4: Products, Cart & Treatment Routines		40.5
4.1	E-commerce Core: Product/Category CRUD, Search & Filter, Stock Validation.	Medium	9
4.2	Cart System: Cart Logic (Add/Update/Remove), Context Providers (Product/CartCount).	Medium	7.5
4.3	Treatment Routines: Create Routine (Morning/Noon/Evening), Routine Versioning (24h grace), Tracking.	High	16
4.4	Web Features: Product Catalog, Inventory Adjustment Review.	Medium	8
5	Sprint 5: Orders, Payment & Subscriptions		46
5.1	Order Management: Checkout Flow, Order Creation, Status Tracking (Pending -> Delivered).	High	10
5.2	Payment & Wallet: Integrate SePay (QR Banking), Wallet (Top-up/Withdrawal), Transaction History.	High	13

5.3	Subscriptions: Plan Management, Subscribe Logic, Expiry Tracking.	Medium	8.5
5.4	Logistics: GHN Integration, Shipper App (Map, Delivery Proof, COD Summary).	High	11.5
5.5	Reviews: Product/Service Ratings & Comments.	Simple	3
6	Sprint 6: Chat, Notifications & Admin Dashboard		43
6.1	Chat System: Real-time Chat (Socket.io), AI Chatbot (RAG Chain Integration via FastAPI).	High	14.5
6.2	Notifications: WebSocket Gateway, Local/Push Notifications, Notification Badge.	High	9.5
6.3	Maps & Location: Goong Map Integration (Directions, Distance Matrix).	Medium	5
6.4	Admin Dashboard: Statistics (Revenue, Users), Reports, Inventory Mgmt, Swagger Docs.	Medium	14
Total Estimated Effort			231

1.2 Project Objectives

#	Testing Stage	Target Coverage	Max. No. of Defects (High/Critical)	Target % of Defect Removal	Notes
1	Reviewing (Requirements/Design)	100% Document Review	N/A	80% of Requirements Errors	Focus on Clarity and completeness
2	Unit Test	≥ 85% Code Coverage	4	95.8% of Logical/Syntax Errors	Performed by developers
3	Integration Test	100% API Endpoints Tested	3	98.4% of Interface Errors	Focus on data flow between components (FE/BE/DB)
4	System Test	100% Core Scenarios Tested	5	90% of Functional Errors	Simulating end-to-end
5	Acceptance Test	100% User	3	100% of Critical	Conducted by

		Scenarios Tested		Errors	stakeholders (Dermatologist, Staff, User)
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1.3 Project Risks

#	Risk Description	Impact (1-Low, 2-Medium , 3-High)	Possibility (1-Low, 2-Medium, 3-High)	Response Plans
1	AI Model Accuracy is insufficient for reliable diagnosis, leading to poor recommendations.	High	High	
2	Integration Issues between diverse technologies (NextJs, NestJs, React Native, external APIs like Auth0, SePay).	High	Medium	Create detailed Interface Control Documents (ICDs) early in the design phase. Implement contract testing between Front-end and Back-end APIs. Allocate extra time for integration testing in the schedule
3	Team Member Skill Gap in specific technologies (e.g., React Native, NestJs, specific cloud setup).	High	Medium	Implement the Training Plan immediately (see 2.3). Pair programming and mandatory code reviews to transfer knowledge and maintain quality.

2. Management Approach

We will use an Agile-Scrum approach to manage and implement the Skinalyze project. This iterative and incremental framework is suitable for a project with high integration complexity and the need for frequent feedback from stakeholders, especially concerning the AI component and user experience.[Describe the approach you would use the manage and implement your project]

2.1 Project Process

The team will utilize the Scrum Development Process model.

Description of the Process:

- Product Backlog:** All requirements and features are listed, prioritized by the Product Owner (Admin/Stakeholder).
- Sprint Planning (weekly):** The team selects a set of high-priority items from the Product Backlog to form the **Sprint Backlog** for a sprint.

3. **Development & Daily Scrum (15 mins):** The team implements the features. Every day, the team meets briefly to discuss "What did I do yesterday?", "What will I do today?", and "Are there any impediments?".
4. **Sprint Review (End of Sprint):** The team demonstrates the completed features (working software increment) to the stakeholders for feedback.
5. **Sprint Retrospective (End of Sprint):** The team reflects on the process and identifies ways to improve for the next sprint (e.g., communication, tools, coding practices).
6. **Release:** After several sprints, when a sufficient set of features is stable and approved, a major release (e.g., Beta, MVP) will occur.

2.2 Quality Management

We will adopt a multi-layered quality assurance approach focused on defect prevention and early detection.

- **Defect Prevention:** We'll enforce clear coding standards, use **TypeScript** for strong type checking, and conduct **design review meetings** to catch architectural flaws before coding begins.
- **Reviewing:**
 - **Peer Code Review:** Mandatory for all source code changes using a Git-based workflow (Pull Requests). A senior member must approve the code before merging.
 - **Document Review:** Stakeholders and team leads review the Software Requirements Specification (SRS) and technical design documents to ensure clarity and correctness.
- **Unit Testing:** Developers must write unit tests for all critical functions (e.g., business logic, API controllers, AI data handling) to achieve $\geq 85\%$ code coverage.
- **Integration Testing:** Automated tests will verify the communication and data integrity between the Front-end, Back-end (NestJs/NextJs), Database, and external APIs (Auth0, SePay, AI Service).
- **System Testing:** End-to-end test cases will be executed manually and automatically, simulating actual user journeys (e.g., "User uploads image, receives recommendation, and books a consultant").
- **Acceptance Testing:** The final product will be tested by the target stakeholders (Dermatologist, Staff, Admin, Users) to confirm the solution meets their specific needs and business requirements.

2.3 Training Plan

Training Area	Participants	When, Duration	Waiver Criteria
NestJS/NextJS Best Practice	Back-end & Front-end Developers	Week 1, 3 days	Mandatory
React Native/Mobile Development	Front-end Developers	Week 2, 2 days	Mandatory
Git, Github	All team members	Week 1, 0.5 day	Mandatory

3. Project Deliverables

#	Deliverable	Due Date	Notes
1	Project Introduction Document	End of Week 4	Finalized scope, team structure, and project plan. (Internal)
2	Software Requirements Specification (SRS)	End of Week 8	Detailed functional and non-functional requirements. (Internal/External)
3	Database & API Design Document	End of Week 8	Schema and detailed API contracts (ICDs). (Internal)
4	Minimum Viable Product (MVP)	End of Week 10	Core functions (Analysis, Recommendation, Basic Inventory) for pilot testing. (External)
5	System Test Report	End of Week 15	Summary of defects found and fixed during system testing. (Internal)
6	Final Source Code	End of Week 17	Clean, documented, and tested codebase on the repository. (Internal)
7	User Manual & Training Materials	End of Week 17	Guides for Staff, Admin, and Dermatologists. (External)
8	Final Production Release (Skinalyze v1.0)	End of Week 18	Fully deployed and operational system. (External)

4. Responsibility Assignments

Responsibility	Pham Nguyen Vu	Trinh Han Hoang Long	Chu Phan Nhat Long	Le Nguyen Chi Bao
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Project Planning & Tracking	S	S	S	R
Prepare SRS Document (User Requirements)	D	D	D	D
Front-end Architecture Design	D	D	D	R
Back-end API and DB Implementation	D	D	D	D
AI Model Integration Service	-	-	-	D
Customer/User Mobile App Development	S	S	S	D
Integration Testing & Deployment	S	S	D	D

5. Project Communications

Communication Item	Who/ Target	Purpose	When, Frequency	Type, Tool, Method(s)
Daily Standup	Development Team	Synchronization, issue reporting (Impediments).	9:00 AM, 15 mins	Google Meet
Sprint Planning	Development Team	Define sprint goals	Bi-weekly, 1-2 hours	Google Meet
Sprint Review/Demo	Development Team	Demonstrate completed features	Bi-weekly, 1 hour	Google Meet
Technical Design/Review	Development Team	Resolve technical issues, review architecture.	Ad-hoc, as needed	Google Meet, DrawIO

6. Configuration Management

6.1 Document Management

Project documents (SRS, Design, Plans, Reports) will be stored on **Google Drive** for collaborative, real-time editing and accessibility.

- **Naming Convention:** Documents will follow a strict naming convention: [DocType]_[ProjectName]_[VersionNumber]_[Date]. E.g., SRS_Skinalyze_v1.0_20251020.
- **Version Control:** Google Docs/Sheets' built-in version history will be used for tracking major and minor changes, with the version number in the file name only updated for major approved revisions. Only the Project Lead will have the final approval rights for version updates.
- **Access Control:** Access permissions will be managed via Google Drive's sharing settings (Read-only for stakeholders, Edit for the development team).

6.2 Source Code Management

All source code for the Front-end (NextJs/React Native) and Back-end (NestJs) will be managed using Git and hosted on a GitLab repository.

- **Branching Strategy:** We will adopt the Git Flow model (or a simplified version):
 - main: Contains the production-ready, stable code.
- **Change Control:** All code merges into the develop and main branches must be done via a Merge Request (MR)/Pull Request (PR).
 - MRs require mandatory peer code review by at least one other developer.
 - MRs must pass all automated Unit and Integration tests before they can be merged.

6.3 Tools & Infrastructures

Category	Tools / Infrastructure
Technology	NextJs (Web FE), React Native (Mobile App), NestJs (Backend API)
Database	MySQL, Redis
IDEs/Editors	Visual Studio Code
Diagramming	DrawIO (for system architecture and flowcharts)
Documentation	Google Docs
Version Control	Github
Project Management	GitLab Issues

Deployment Server/Cloud	Digital Ocean (BE & DB), Vercel (FE)
Communication	Google Meet, Google Meet

III. Software Requirement Specification

1. Product Overview

Product Name: Skinlyze

Description: Skinlyze is a comprehensive skincare management platform that leverages AI-driven skin analysis, dermatologist consultations, e-commerce for product sales, and inventory management to provide personalized treatment roadmaps and seamless user experiences. It supports users in uploading skin images for AI diagnostics, interacting with a chatbot for queries, booking virtual consultations, placing orders, and managing subscriptions. The system operates in a web and mobile environment, integrating with external services like payment gateways and AI chatbots.

Intended Environment:

- **Deployment:** Cloud-based with responsive web app (NextJS frontend) and mobile apps (iOS/Android via React Native).
- **Hardware/Software:** Standard web browsers (Chrome, Firefox, Safari), mobile devices (iOS 14+, Android 10+), backend (NestJS with MySQL database, FastAPI).

Anticipated Users:

- **End Users:** Customers (authenticated/unauthenticated) for analysis, browsing, and purchases.
- **Professionals:** Dermatologists for consultations and availability management.
- **Internal Users:** Staff for order processing and reports; Admins for system oversight and inventory.
- **External:** Guests for demos; 3rd-party AI Chatbot for interactions.

Known Constraints:

- Compliance with GDPR for user data (skin images, medical history).

Assumptions:

- Users have access to cameras for skin scans.
- Stable internet for real-time chatbot and consultations.
- External APIs (e.g., payment gateways) are reliable with 99% uptime.

Dependencies:

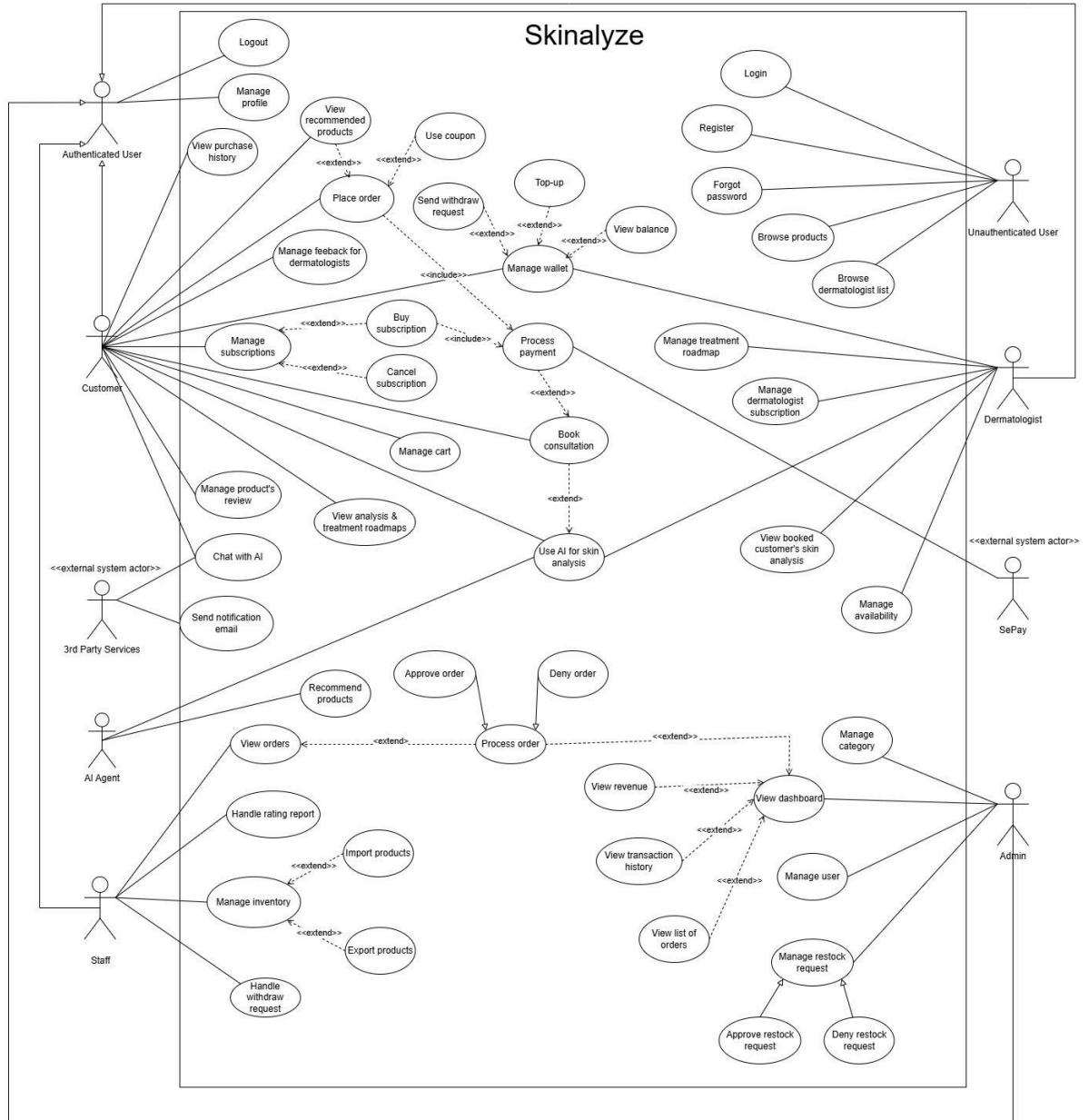
- Third-party:
- Internal: ERD entities (Users, Orders, Products, etc.) as foundational data models.

2. User Requirements

Actors:

- **Authenticated User/Customer:** Registers, analyzes skin, books consultations, manages orders/wallet.
- **Unauthenticated User/Guest:** Browses products, views AI demo, registers.
- **Dermatologist:** Manages availability, conducts sessions, updates roadmaps.
- **Staff:** Processes orders, handles reports, manages inventory.
- **Admin:** Oversees users, categories, stock requests, dashboards.
- **External Actors:** Payment Gateway (processes transactions), 3rd AI Chatbot (handles queries).

Use Case Diagram:



3. Functional Requirements

3.1 System Functional Overview

Screen Flow:

- **Login/Register Flow:** Guest → Login/Register Screen → Dashboard (Authenticated).
- **Analysis Flow:** Dashboard → Upload Image Screen → Analysis Report → Chatbot Screen → Consultation Booking Screen → Order Cart.
- **Admin Flow:** Admin Login → Dashboard → User Management/Inventory Screens.

Screen Descriptions:

- **Dashboard:** Overview of recommendations, history, quick links (e.g., "New Analysis").
- **Upload/Analysis Screen:** Image upload, progress bar, report with roadmap visuals.
- **Consultation Screen:** Dermatologist list, calendar picker, confirmation modal.
- **Cart/Order Screen:** Item list, payment form, invoice preview.
- **Admin Dashboard:** Metrics (orders, users), tables for management.

System User Roles & Authorization:

Role	Permissions	Screens Accessible
Customer	View analysis, book, order	Analysis, Consultation, Cart
Dermatologist	Manage availability, view bookings	Availability, Session Screen
Staff	Process orders, view reports	Order Processing, Reports
Admin	Full CRUD on users/inventory	All + Admin Dashboard

Non-Screen Functions:

- Background: AI processing (async), inventory updates (triggers on orders), email notifications (post-booking).
- ERD Overview: Entities include Users (email, isActive, isVerified), Orders (status, items), Products (description, stock), Inventory (quantity), Diseases (name), StockMovement (status: PENDING/APPROVED/REJECTED), Subscriptions (plan, status). Relationships: User 1:M Order, Product 1:M Inventory.

3.2 User Management Feature

3.2.1 Register User Function

- **Description:** Allows new users to create accounts.
- **Inputs:** Email, password, address, profile image.
- **Outputs:** Pending account with verification email/SMS.
- **Rules:** Password min 8 chars; email unique.
- **ER Integration:** Insert into Users (isVerified=false, isActive=false).

3.2.2 Verify Account Function

- **Description:** Confirms user via email/SMS code.
- **Inputs:** Verification code.
- **Outputs:** Activated account (isVerified=true, isActive=true).
- **Rules:** Code expires in 15 mins.

3.2.3 Login/Logout Function

- **Description:** Authenticates users.
- **Inputs:** Email/password.
- **Outputs:** JWT token for session.
- **Rules:** Failed attempts lock for 5 mins after 3 tries.

3.3 Skin Analysis & Consultation Feature

3.3.1 Perform AI Skin Analysis Function

- **Description:** Analyzes uploaded image for skin issues.
- **Inputs:** Skin image file.
- **Outputs:** Report with diseases, roadmap, product recs.
- **Rules:** Image <5MB, JPEG/PNG only.
- **ER Integration:** Link to User, store in Analysis History.

3.3.2 Interact with Chatbot Function

- **Description:** Queries 3rd-party AI for refinements.
- **Inputs:** User message.
- **Outputs:** Response with prompts/responses logged.
- **Rules:** Rate limit 10 queries/min.

3.3.3 Book Consultation Function

- **Description:** Schedules free session with dermatologist.
- **Inputs:** Dermatologist ID, date/time.
- **Outputs:** Booking confirmation, calendar sync.
- **Rules:** No overlaps; notify if cancelled.
- **ER Integration:** Insert into Bookings (linked to User, Derm).

3.4 E-Commerce & Orders Feature

3.4.1 Add to Cart & Checkout Function

- **Description:** Manages shopping cart.
- **Inputs:** Product IDs, quantities.
- **Outputs:** Cart summary.
- **Rules:** Check stock before add.

3.4.2 Process Order & Payment Function

- **Description:** Handles purchase completion.

- **Inputs:** Payment details.
- **Outputs:** Invoice, status update.
- **Rules:** Integrate with gateway; update inventory on success.
- **ER Integration:** Insert Order (status=Processing), link StockMovement (PENDING).

3.4.3 Manage Wallet Function

- **Description:** Top-up/withdraw from user wallet.
- **Inputs:** Amount, method.
- **Outputs:** Balance update.
- **Rules:** Min withdraw \$10; verify balance.

3.5 Inventory & Admin Feature

3.5.1 Manage Inventory Function

- **Description:** Tracks stock levels.
- **Inputs:** Product ID, quantity changes.
- **Outputs:** Updated stock.
- **Rules:** Alert on low stock (<10).
- **ER Integration:** Update Inventory quantity; create StockMovement.

3.5.2 Approve Stock Movement Function

- **Description:** Reviews import/export requests.
- **Inputs:** Movement ID.
- **Outputs:** Status: APPROVED/REJECTED.
- **Rules:** Only staff/admin can approve.

3.5.3 Generate Reports Function

- **Description:** Creates dashboards/reports.
- **Inputs:** Date range, type (orders, revenue).
- **Outputs:** PDF/CSV export.
- **Rules:** Role-based access.

4. Non-Functional Requirements

4.1 External Interfaces

User Interfaces: Responsive web/mobile UI with accessibility (WCAG 2.1 AA).

Hardware Interfaces: Camera access for image upload (via browser APIs).

Software Interfaces:

- **Payment Gateway:** REST API
- **Email/SMS:**
- **Chatbot:**
- **Database:** SQL queries via ORM

Communication Protocols: HTTPS for all external calls; JSON for data exchange.

4.2 Quality Attributes

Attribute	Specification
Performance	Response time <2s for analysis; handle 1,000 concurrent users.
Scalability	Horizontal scaling; auto-scale pods on traffic spikes.
Reliability	99.5% uptime; automated backups daily.
Usability	Intuitive UI; 95% task completion in first try (usability testing).
Security	OAuth2/JWT auth; encrypt sensitive data (AES-256); input validation against SQLi/XSS.
Maintainability	Modular code; 80% test coverage; API docs via Swagger.
Portability	Cross-platform (web/mobile)

5. Requirement Appendix

5.1 Business Rules

Rule ID	Description	Conditions	Actions
BR-001	User Verification	New registration	Send email/SMS; set isVerified=true on confirm.
BR-002	Stock Check	Order placement	If quantity > stock, reject; notify user.
BR-003	Movement Approval	StockMovement PENDING	Admin review; approve if valid supplier/quantity.
BR-004	Cancel appointment	User has booked an consultation with Dermatologists	<ol style="list-style-type: none"> Check if appointment status is SCHEDULED (cannot cancel if already started/completed/cancelled) Calculate time difference between now and appointment start time If > 24 hours before appointment (Early Cancellation): <ul style="list-style-type: none"> Set appointment status to CANCELLED Set terminatedReason to CUSTOMER_CANCELLED_EARLY

			<ul style="list-style-type: none"> • Refund 100% to customer wallet (if paid) OR refund 1 session to subscription • Release availability slot back to AVAILABLE • Notify customer and dermatologist <p>4. If \leq 24 hours before appointment (Late Cancellation):</p> <ul style="list-style-type: none"> • Set appointment status to CANCELLED • Set terminatedReason to CUSTOMER_CANCELLED_LATE • No refund issued (0% money back) • Transfer 75% of booking amount to dermatologist wallet (platform keeps 25% fee) • Release availability slot back to AVAILABLE • Notify customer and dermatologist
BR-005	Password validation	User must have a password with at least 1 uppercase, 1 number and 1 special character	<ol style="list-style-type: none"> 1. Generate a secure, time-limited token (e.g., valid for 15 mins). 2. Send token to user's registered email. 3. On confirmation, require the user to set a new password (must pass BR-005).
BR-006	Password Reset	The user requests password reset and provides the correct email.	
BR-007	Cart Reservation	The user adds an item to the cart.	<ol style="list-style-type: none"> 1. Temporarily reserve the stock 2. If user does not check out within 60 minutes, release the reserved stock.
BR-008	Appointment Reminder	2 hours before a scheduled consultation.	<ol style="list-style-type: none"> 1. Send automated reminder via SMS and email. 2. Include the Google Meet link in the reminder.
BR-009	Dermatologist Cancellation	Dermatologist cancels an existing, booked appointment.	<ol style="list-style-type: none"> 1. Notify user immediately (SMS/email). 2. Process a 100% refund to the user.

BR-010	Voucher Validation	The user applies a voucher code at checkout.	<ol style="list-style-type: none"> 1. Check if code exists, is not expired, and has remaining uses. 2. Check if cart value meets minimum order condition (if any). 3. If valid, apply discount. If invalid, show error message
BR-011	Order Creation Requires Payment	Customer attempts checkout	System validates that Transaction status is COMPLETED before creating Order. If payment is incomplete, order creation is blocked.
BR-012	Product Refund Policy	The user requests a refund for a delivered product.	<ol style="list-style-type: none"> 1. Check if request is within 7 days of delivery AND product is unopened/unused. 2. If valid, approve refund (minus shipping). 3. If invalid, reject the request with reason.
BR-013	Late Cancellation	The user cancels the appointment less than 24 hours before the scheduled time.	<ol style="list-style-type: none"> 1. Process cancellation. 2. No refund is issued (0% money back).
BR-014	Early Cancellation	The user cancels the appointment more than 24 hours before the scheduled appointment time.	<ol style="list-style-type: none"> 1. Cancel the appointment slot. 2. Process a 100% refund to the user. 3. Notify user and dermatologist.
BR-015	Subscription Package Creation	A verified Dermatologist (with DERMATOLOGIST) initiates the creation of a new subscription package.	<ol style="list-style-type: none"> 1. Create a new Subscription record. 2. Must provide: subscriptionDescription, dermatologistId, basePrice, totalSessions, durationInDays. 3. Set isActive = false (Draft mode). 4. createdAt and updatedAt are set to the current timestamp.
BR-016	Package Activation	Dermatologist updates an existing package with isActive = false.	<ol style="list-style-type: none"> 1. Set isActive = true. 2. The package is now visible for users to purchase. 3. Update updatedAt timestamp.
BR-017	Package Deactivation	Dermatologist updates an existing package with isActive = true.	<ol style="list-style-type: none"> 1. Set isActive = false. 2. New users can no longer see or purchase this package. 3. (Note: This does <i>not</i> affect users who have already purchased it).

BR-018	Package Update	Dermatologist edits basePrice, totalSessions, or durationInDays for a package.	<ol style="list-style-type: none"> Update the corresponding fields in the Subscription table. Update updatedAt timestamp. (Note: This should only be allowed if isActive = false, or it might affect new purchases unfairly).
BR-019	User Cancels Subscription	<ol style="list-style-type: none"> User has a UserSubscription record User clicks the "Cancel Subscription" button. 	<ol style="list-style-type: none"> The UserSubscription.status remains "ACTIVE". The expiryDate and remainingSessions are not changed. Notify user: "Your subscription is cancelled. You may continue to use your benefits until [expiryDate]."
BR-020	Payment Expiration	Payment created with PENDING status	Payment expires after 5 minutes if not completed. System sets status to EXPIRED.
BR-021	Payment Code Validation	SePay webhook receives transfer	Extract payment code from transfer content. If code doesn't exist or doesn't match any payment, reject webhook.
BR-022	Duplicate Payment Prevention	Webhook received for already-completed payment	Return success but don't process again. Log warning.
BR-023	Underpayment Handling	Transfer amount < expected payment amount	<ol style="list-style-type: none"> Set payment status to FAILED. Refund received amount to user's wallet. Notify user of shortfall.
BR-024	Overpayment Handling	Transfer amount > expected payment amount	Accept payment as completed. Excess amount becomes platform revenue (no refund).
BR-025	Minimum Topup Amount	User attempts wallet topup	Amount must be \geq 10,000 VND. Reject if below minimum.
BR-026	Maximum Topup Amount	User attempts wallet topup	Amount must be \leq 50,000,000 VND per transaction.
BR-027	Wallet Payment Balance Check	User selects wallet payment for order/booking	Verify balance \geq total amount BEFORE creating order. Throw "Insufficient balance" if not enough.
BR-028	Order Auto-Creation After Banking Payment	SePay webhook confirms ORDER payment completed	<ol style="list-style-type: none"> Parse cartData from payment. Create order with status=CONFIRMED. Create order items. Clear user's cart.

BR-029	Payment Type Validation	Create payment request	ORDER type: Require orderId OR (cartData + customerId). TOPUP type: Require userId, amount ≥ 10,000 VND. BOOKING: Require appointment data. SUBSCRIPTION: Require planId.
BR-030	Skin Analysis Prerequisite	Customer attempts to book appointment	User must have at least one skin analysis record. Reject booking without analysis.
BR-031	Slot Price Enforcement	Appointment creation	Payment amount must exactly match slot price. Cannot be negotiated.
BR-032	Booking Fee Deduction (Platform Revenue)	Appointment marked as SETTLED (24h after completion, no dispute)	Platform keeps 25% of booking amount. Transfer 75% to dermatologist wallet.
BR-033	Immediate Doctor Cancellation Refund	Dermatologist cancels appointment	1. Always refund 100% to customer. 2. Release slot to AVAILABLE. 3. Notify both parties.
BR-034	Dispute Resolution - Full Customer Refund	Admin resolves dispute with decision=REFUND_CUSTOMER	1. Refund 100% to customer wallet. 2. Doctor gets 0%. 3. Platform absorbs loss.
BR-035	Dispute Resolution - Full Doctor Payout	Admin resolves dispute with decision=PAYOUT_DOCTOR	1. Customer gets 0% refund. 2. Pay doctor 75% (after 25% platform fee). 3. Mark appointment SETTLED.
BR-036	Dispute Resolution - Partial Split	Admin resolves dispute with decision=PARTIAL_REFUND	1. Refund specified amount to customer. 2. Calculate remaining revenue. 3. Pay doctor 75% of remaining. 4. Platform keeps 25%
BR-037	Subscription Booking No Double Payment	Appointment created via subscription	Do NOT transfer money to doctor on settlement (doctor already paid via subscription plan purchase).
BR-038	Appointment Settlement After 24h	Cron job runs daily	For appointments COMPLETED > 24h ago with no dispute, auto-settle: transfer 75% to doctor, mark SETTLED.
BR-039	Doctor Completion Requires Medical Note	Dermatologist marks appointment complete	Must provide medicalNote (min 5 characters). Cannot complete without note.

BR-040	OTP Withdrawal Verification	User requests withdrawal	Generate 6-digit OTP, valid 10 minutes. Send to user email. User must provide OTP when creating withdrawal request. Verify OTP matches and not expired.
BR-041	Minimum Withdrawal Amount	User creates withdrawal request	Amount must be \geq 50,000 VND.
BR-042	Withdrawal Amount Must Match OTP Session	User submits withdrawal with OTP	Withdrawal amount must exactly match the amount requested during OTP generation. Reject if mismatch.
BR-043	Withdrawal Balance Check	Admin approves withdrawal	Re-verify user balance \geq withdrawal amount before deducting. Throw error if insufficient (prevents race condition).
BR-044	Withdrawal Status Progression	Admin updates withdrawal status	Can only approve from VERIFIED status. Cannot skip verification step.
BR-045	Withdrawal Cancellation by User	User cancels own withdrawal request	Can only cancel if status is PENDING or VERIFIED. Cannot cancel if APPROVED/COMPLETED.
BR-046	OTP Single Use	Withdrawal request created with OTP	Mark OTP session as used. Cannot reuse the same OTP for multiple withdrawals.
BR-047	Account Number Censoring	Non-admin views withdrawal request	Show only first 3 and last 2 digits (e.g., "123****89"). Admin sees full number.
BR-048	Phone Number Validation for GHN Shipping	Order created with shippingMethod=GHN	Customer phone must be valid (not "0000000000", length \geq 10 digits). Reject order if invalid phone.
BR-049	Product Review Verified Purchase	Customer attempts to create product review	<ol style="list-style-type: none"> Check if customer purchased the product in an order with status DELIVERED (query order_items + user's delivered orders). If not purchased \rightarrow reject. If already reviewed \rightarrow reject. Otherwise: allow review creation.
BR-050	Order Completion by Customer	Customer marks order as completed	<ol style="list-style-type: none"> Verify order belongs to the customer (customerId matches). Order status must be DELIVERED. If not \rightarrow reject.

			<p>3. Update order status to COMPLETED.</p> <p>4. (Optional) Save customer feedback.</p>
BR-051	Appointment Completion Requirements	Dermatologist marks appointment as complete	<p>1. Appointment status must be IN_PROGRESS.</p> <p>2. Customer must have checked in (customerJoinedAt ≠ null). If not → reject: "Cannot complete: <i>Customer has not joined the appointment. Mark as NO_SHOW instead.</i>"</p> <p>3. Require medicalNote (min 5 chars).</p> <p>4. Set appointment status to COMPLETED.</p> <p>5. Set actualEndTime = now.</p> <p>6. Save medical note to records.</p>

5.2 Common Requirements

Data Validation: All inputs sanitized; required fields marked (*).

Error Handling: Graceful failures with user-friendly messages (e.g., "Try again later").

Logging: Audit all user actions (e.g., login, order) for 90 days.

Internationalization: UTC timestamps; currency in USD initially.

Backup: Automated daily DB snapshots; retention 30 days.

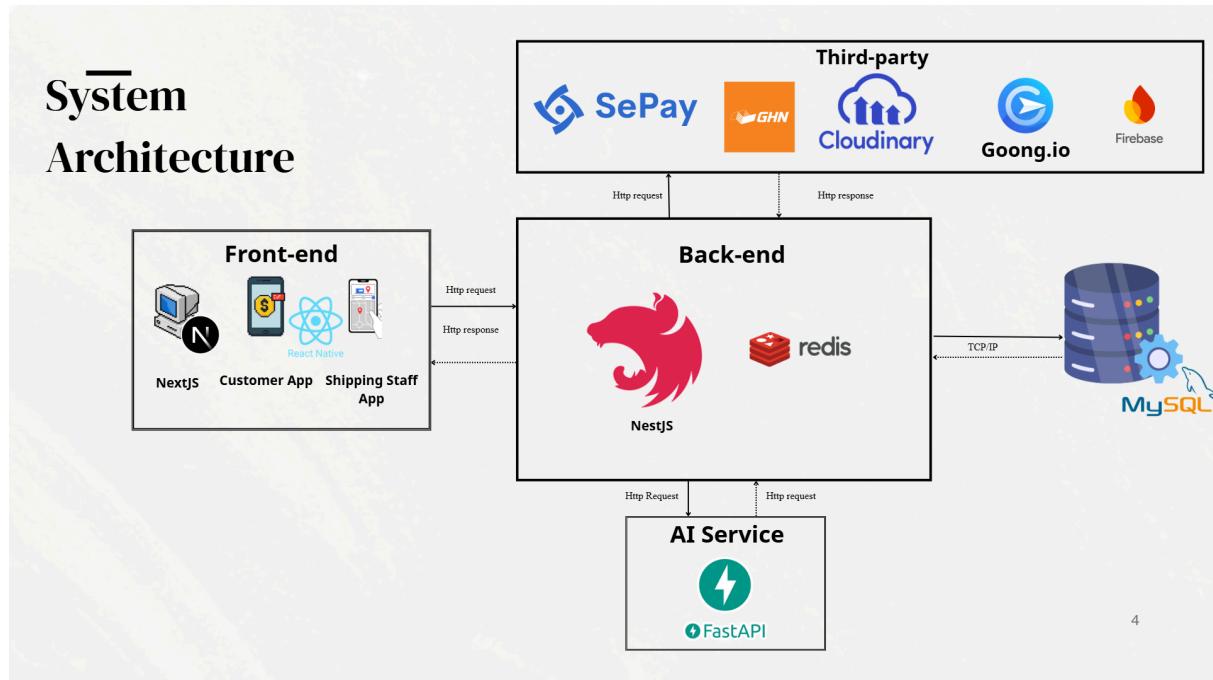
5.3 Application Messages List

 Application Messages List

IV. Software Design Description

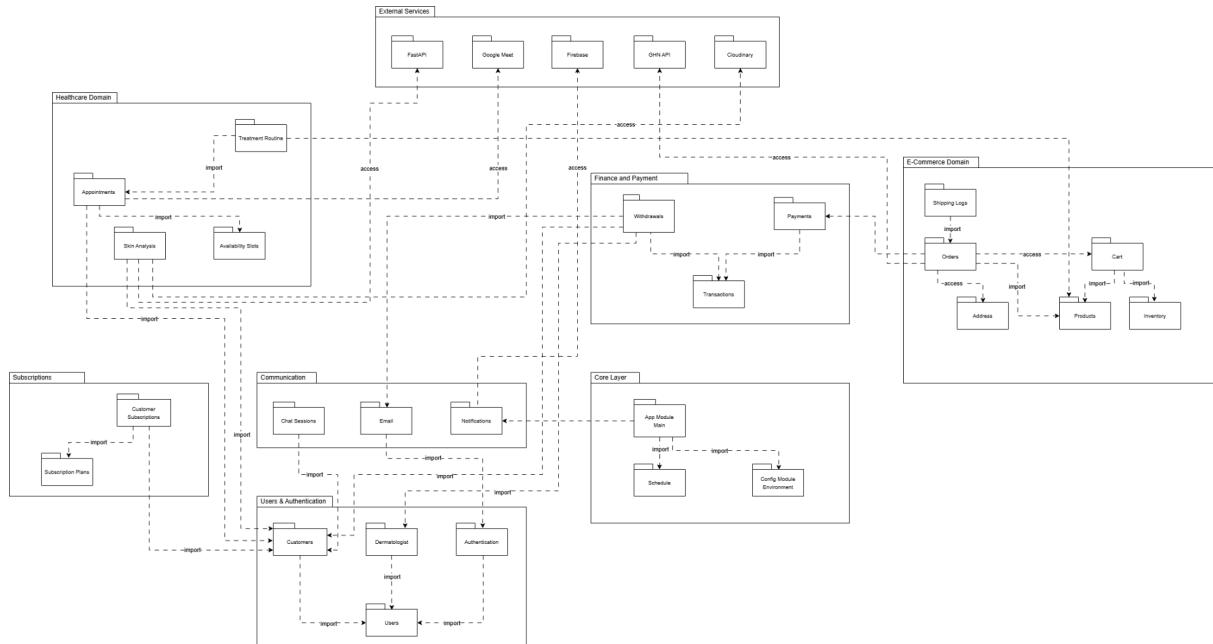
1. System Design

1.1 System Architecture

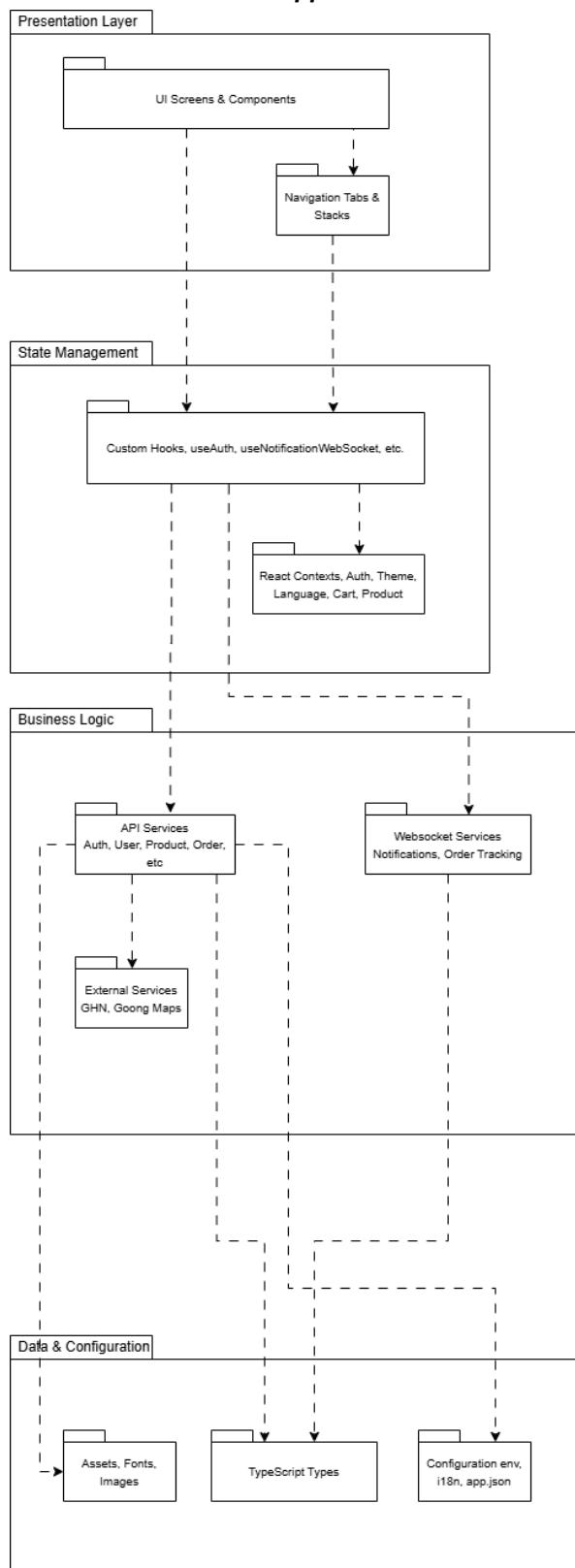


1.2 Package Diagram

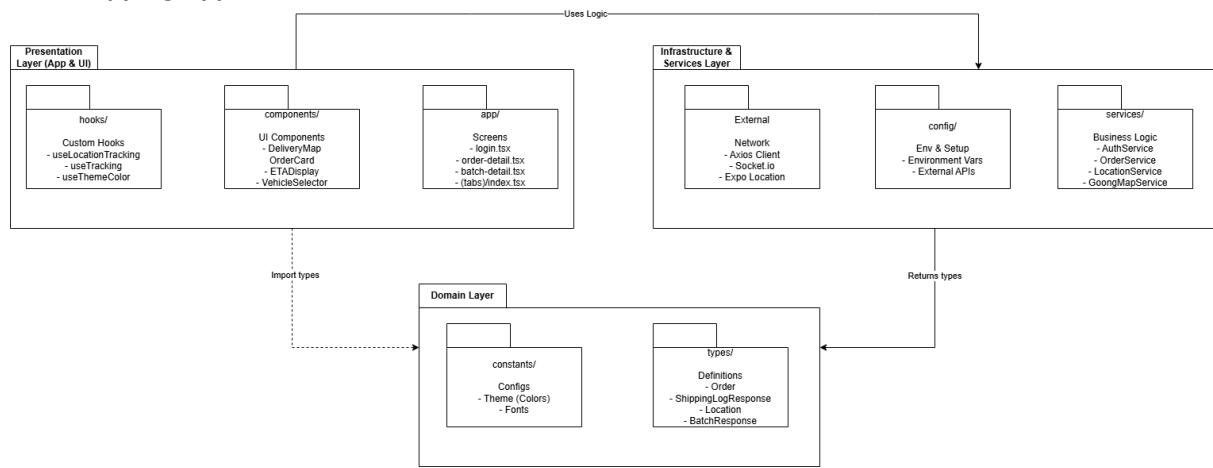
1.2.1 Backend



1.2.2 Customer Mobile Application

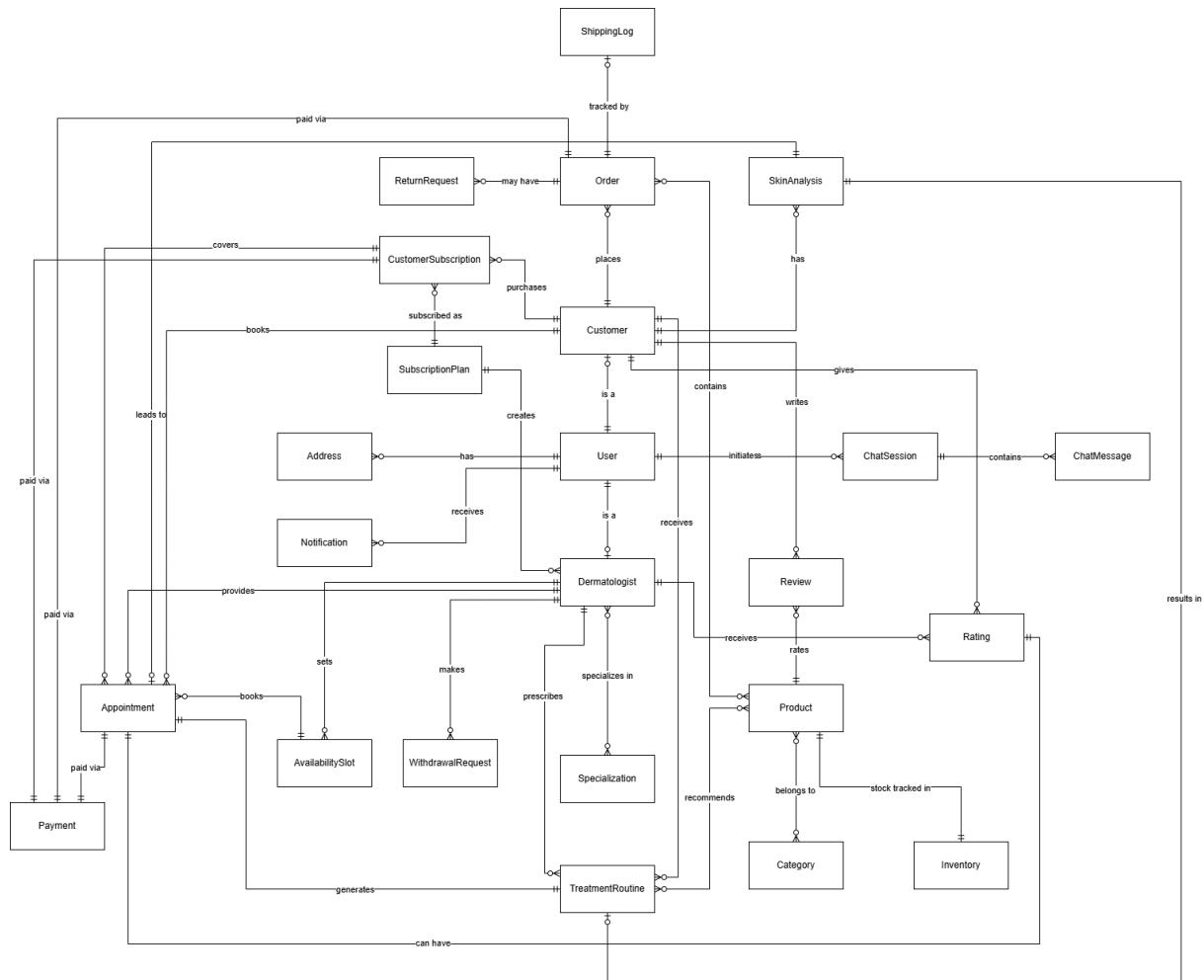


1.2.3 Shipping Application

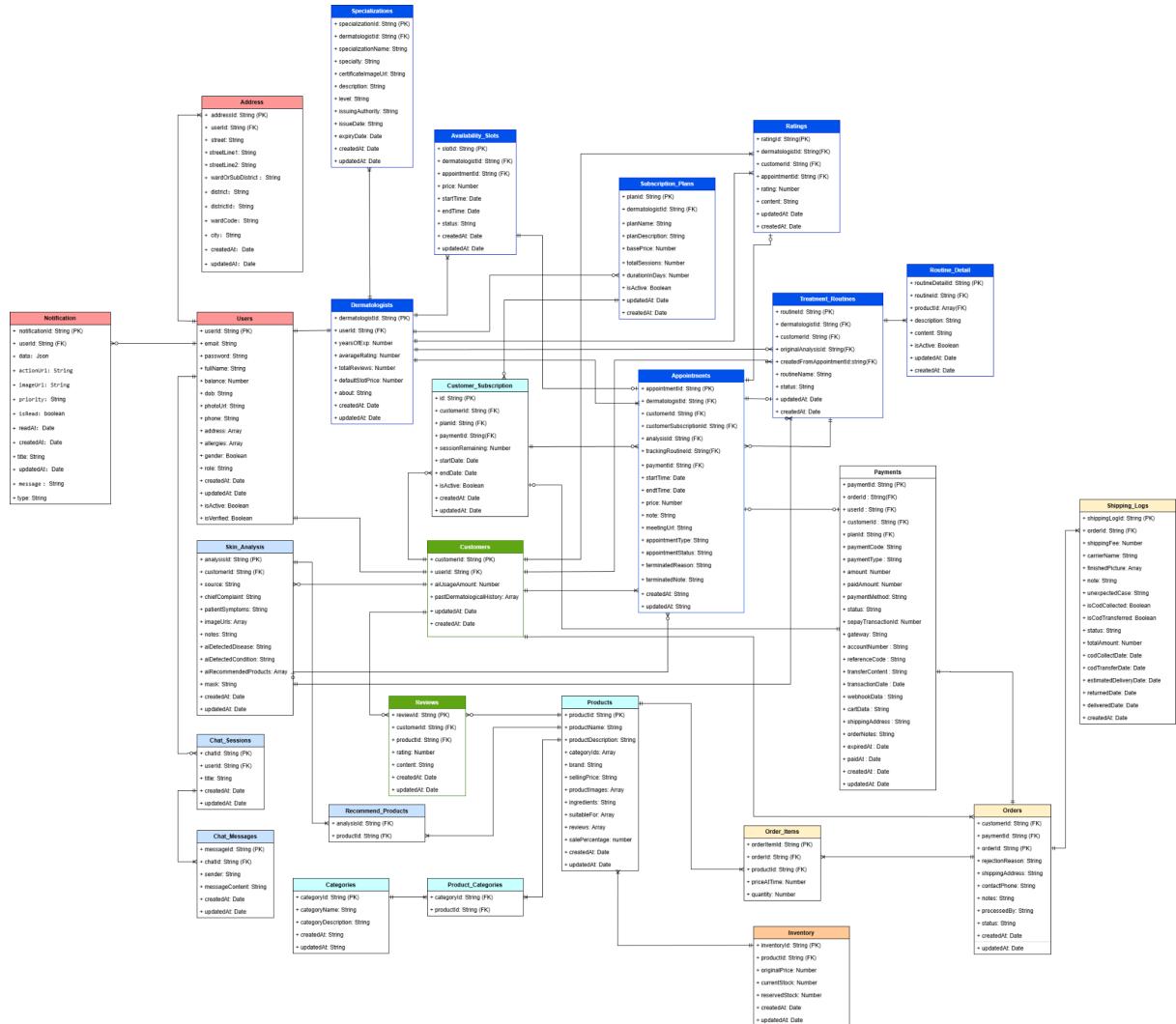


2. Database Design

2.1 Conceptual ERD



2.2 Physical ERD



No	Entity	Description (Attributes)	Primary key	Foreign key
1	Users	email, password, fullName, balance, dob, photoUrl, phone, address (Array), allergies (Array), gender, role, isActive, isVerified, createdAt, updatedAt	userId	-
2	Address	street, streetLine1, streetLine2, wardOrSubDistrict, district, districtId, wardCode, city, createdAt, updatedAt	addressId	userId

3	Customers	aiUsageAmount, pastDermatologicalHistory, updatedAt, createdAt	customerId	userId
4	Dermatologists	yearsOfExp, averageRating, totalReviews, defaultSlotPrice, about, createdAt, updatedAt	dermatologistId	userId
5	Specializations	specializationName, specialty, certificateImageUrl, description, level, issuingAuthority, issueDate, expiryDate, createdAt, updatedAt	specializationId	dermatologistId
6	Availability_Slots	price, startTime, endTime, status, createdAt, updatedAt	slotId	dermatologistId, appointmentId
7	Subscription_Plans	planName, planDescription, basePrice, totalSessions, durationInDays, isActive, updatedAt, createdAt	planId	dermatologistId
8	Customer_Subscription	sessionsRemaining, startDate, endDate, isActive, createdAt, updatedAt	id	customerId, planId, paymentId
9	Ratings	rating, content, createdAt	ratingId	dermatologistId, customerId, appointmentId

10	Appointments	startTime, endTime, price, note, meetingUrl, appointmentType, appointmentStatus, terminatedReason, terminatedNote, createdAt, updatedAt	appointmentId	dermatologistId, customerId, customerSubscriptionId, analysisId, trackingRoutineId, paymentId
11	Skin_Analysis	source, chiefComplaint, patientSymptoms, imageUrls, notes, aiDetectedDisease, aiDetectedCondition, aiRecommendedProducts, mask, createdAt, updatedAt	analysisId	customerId
12	Treatment_Routines	routineName, status, updatedAt, createdAt	routineId	dermatologistId, customerId, originalAnalysisId, createdFromAppointmentId
13	Routine_Detail	description, content, isActive, updatedAt, createdAt	routineDetailId	routineId, productId
14	Products	productName, productDescription, categoryIds, brand, salePrice, productImages, ingredients, suitableFor, reviews, salePercentage, createdAt, updatedAt	productId	-
15	Categories	categoryName, categoryDescription, createdAt, updatedAt	categoryId	-
16	Product_Categories	(Junction table for Products and Categories)	-	categoryId, productId

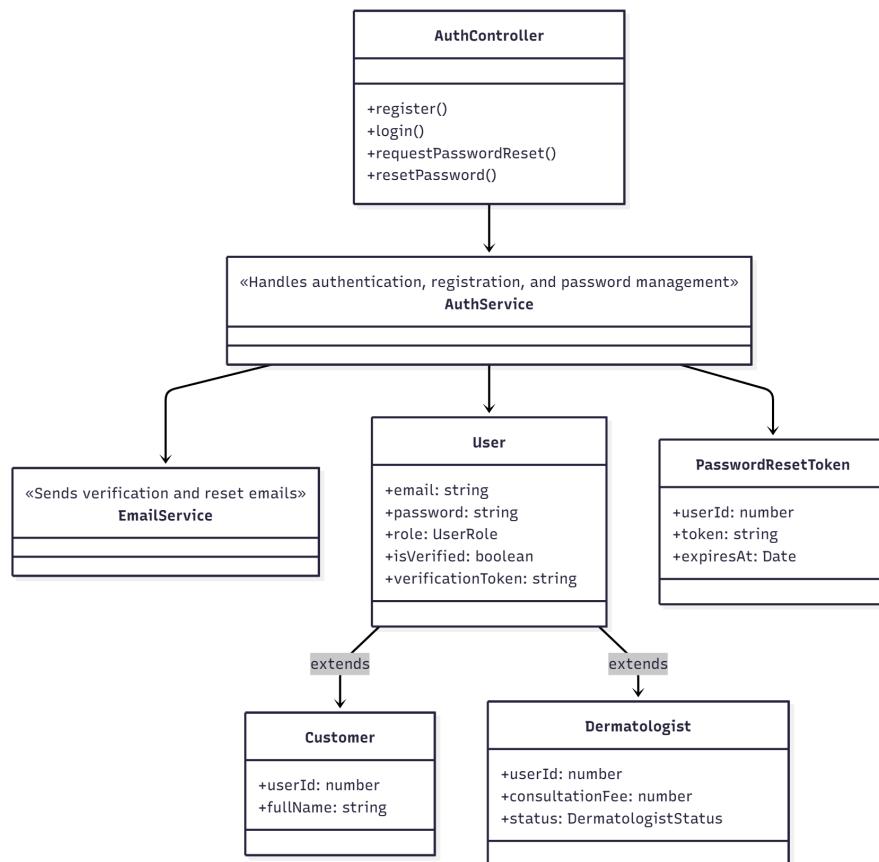
17	Recommend_Products	(Junction table for Analysis and Products)	-	analysisId, productId
18	Reviews	rating, content, createdAt, updatedAt	reviewId	customerId, productId
19	Inventory	originalPrice, currentStock, reservedStock, createdAt, updatedAt	inventoryId	productId
20	Orders	rejectionReason, shippingAddress, contactPhone, note, processedBy, status, createdAt, updatedAt	orderId	customerId, paymentId
21	Order_Items	priceAtTime, quantity	orderItemId	orderId, productId
22	Shipping_Logs	shippingFee, carrierName, finishedPicture, note, unexpectedCase, isCodCollected, isCodTransferred, status, totalAmount, codCollectDate, codTransferDate, estimatedDeliveryDate, returnedDate, deliveredDate, createdAt	shippingLogId	orderId

23	Payments	paymentCode, paymentType, amount, paidAmount, paymentMethod, status, seipayTransactionId, gateway, accountNumber, referenceCode, transferContent, transactionDate, webhookData, cartData, shippingAddress, orderNotes, expiredAt, paidAt, createdAt, updatedAt	paymentId	orderId, userId, customerId, planId
24	Chat_Sessions	title, createdAt, updatedAt	chatId	userId
25	Chat_Messages	sender, messageContent, createdAt, updatedAt	messageId	chatId
26	Notification	data, actionUrl, imageUrl, priority, isRead, readAt, createdAt, title, updatedAt, message, type	notificationId	userId

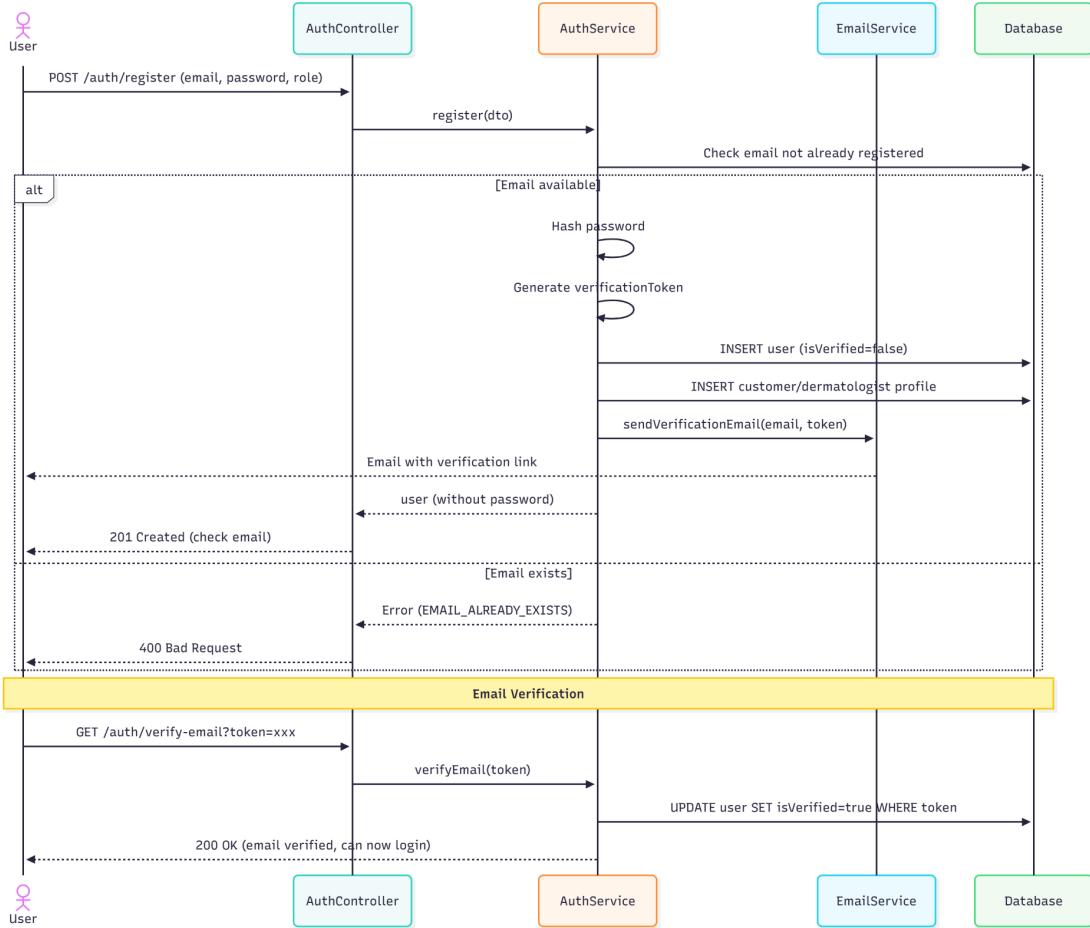
3. Detailed Design

3.1 User Registration and Authentication

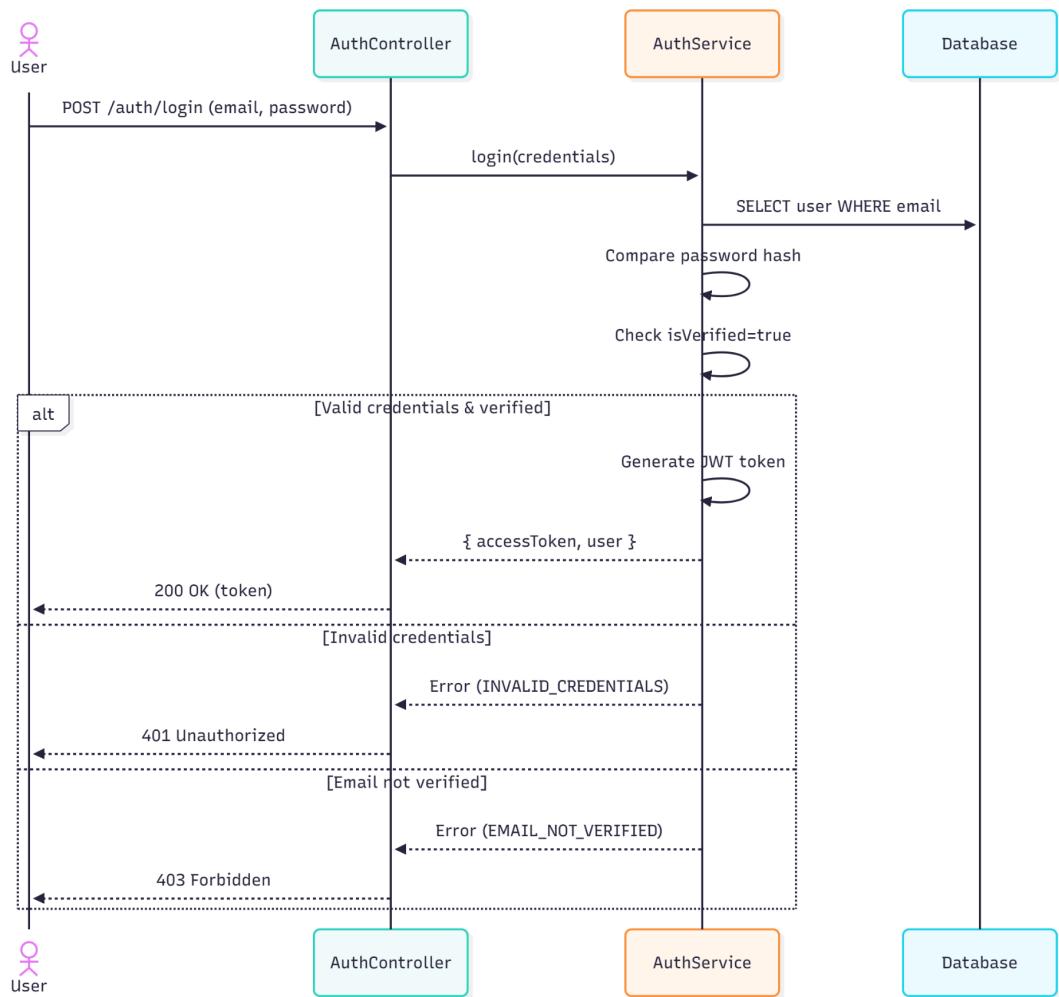
3.1.1 Class Diagram



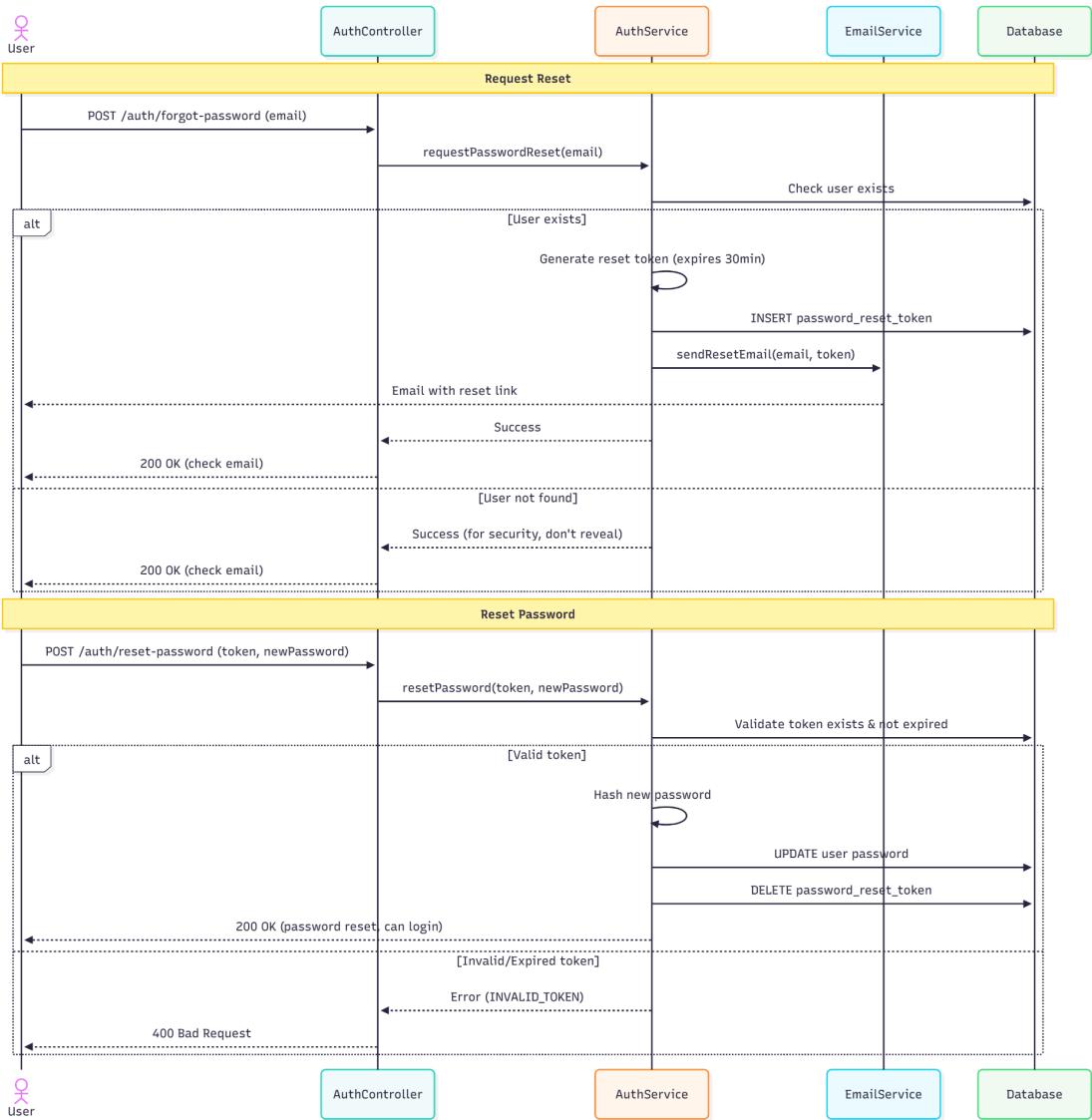
3.1.2 Registration Sequence Diagram



3.1.3 Login Sequence Diagram

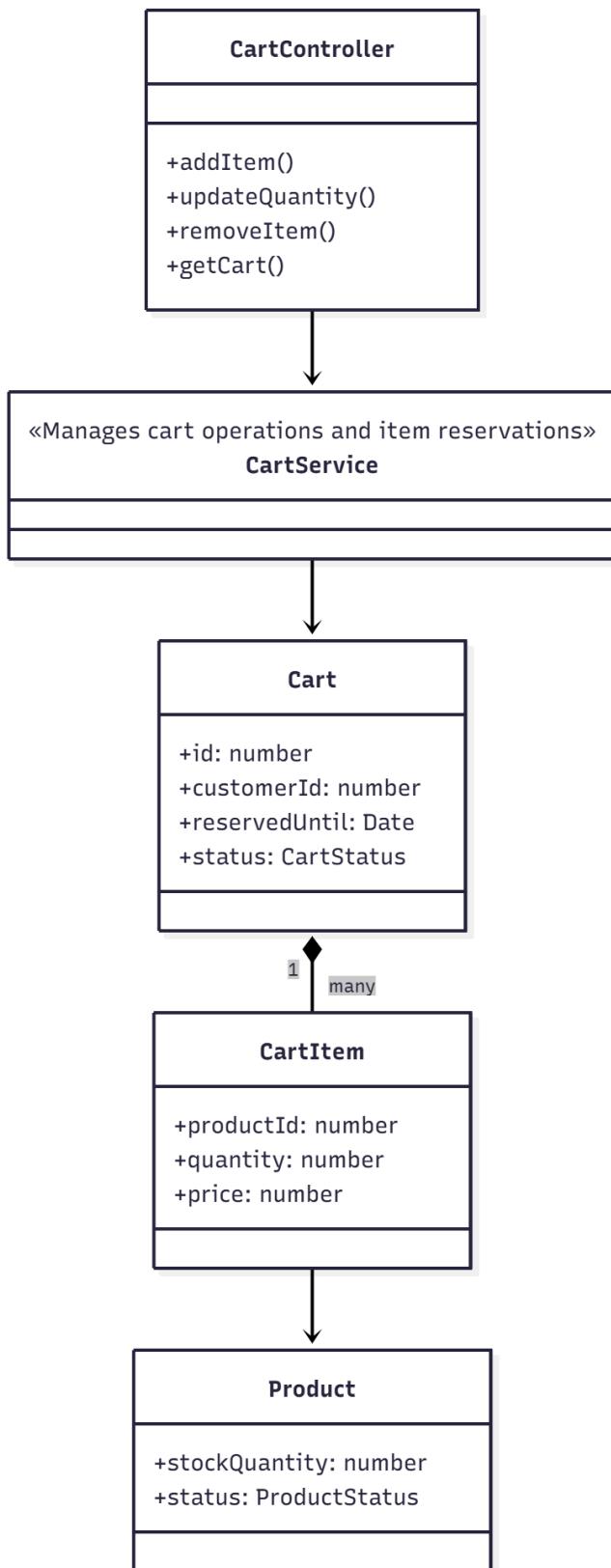


3.1.4 Password Reset Sequence Diagram

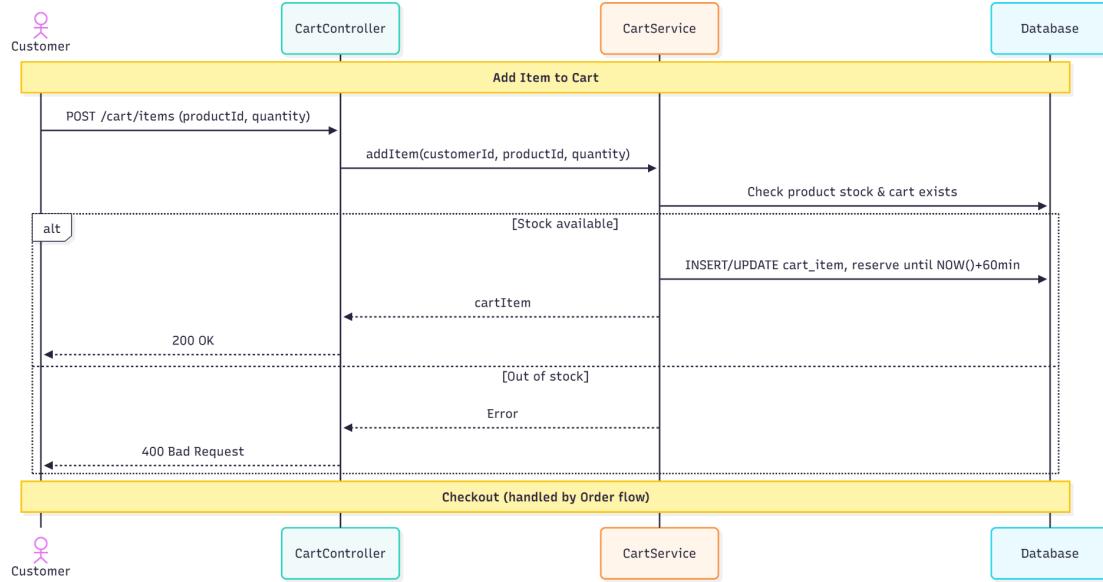


3.2 Cart Management

3.2.1 Cart Management Class Diagram

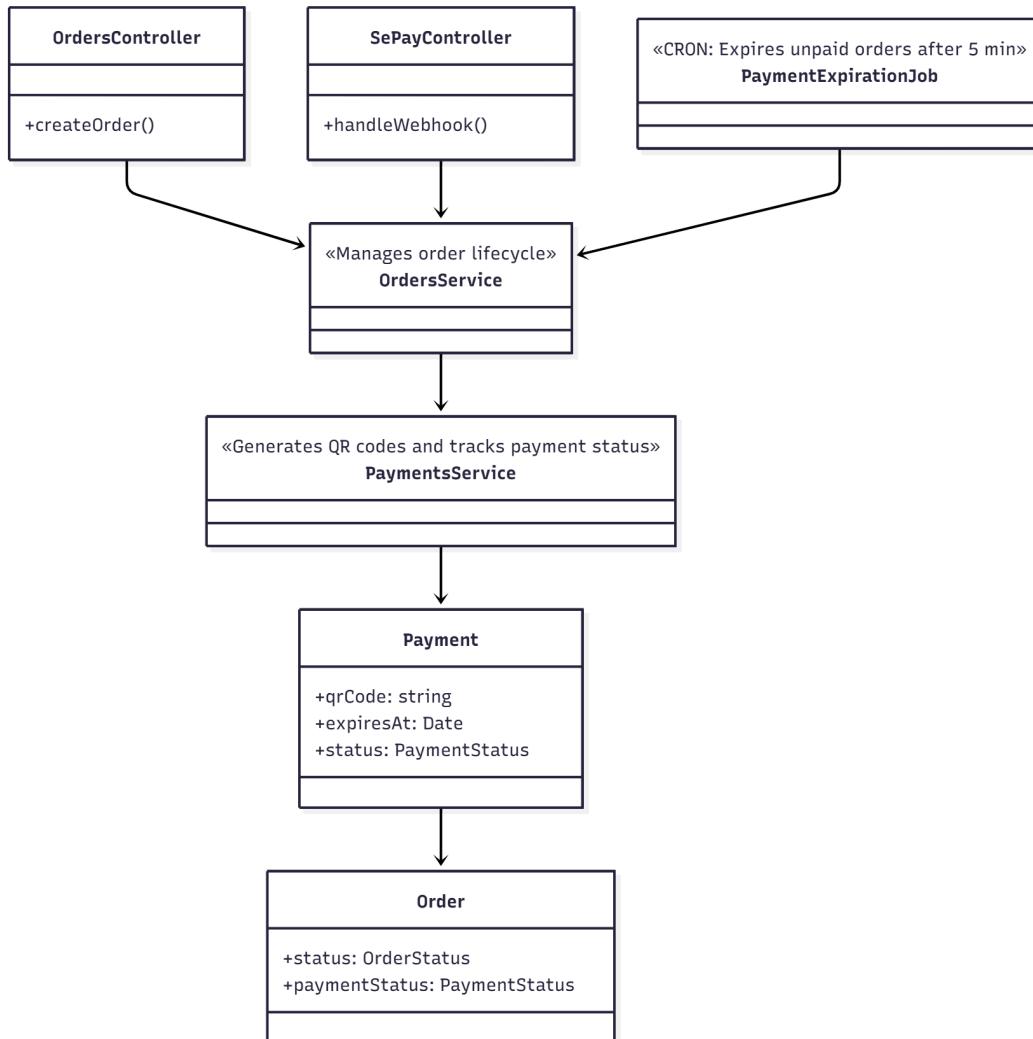


3.2.2 Cart Management Sequence Diagram

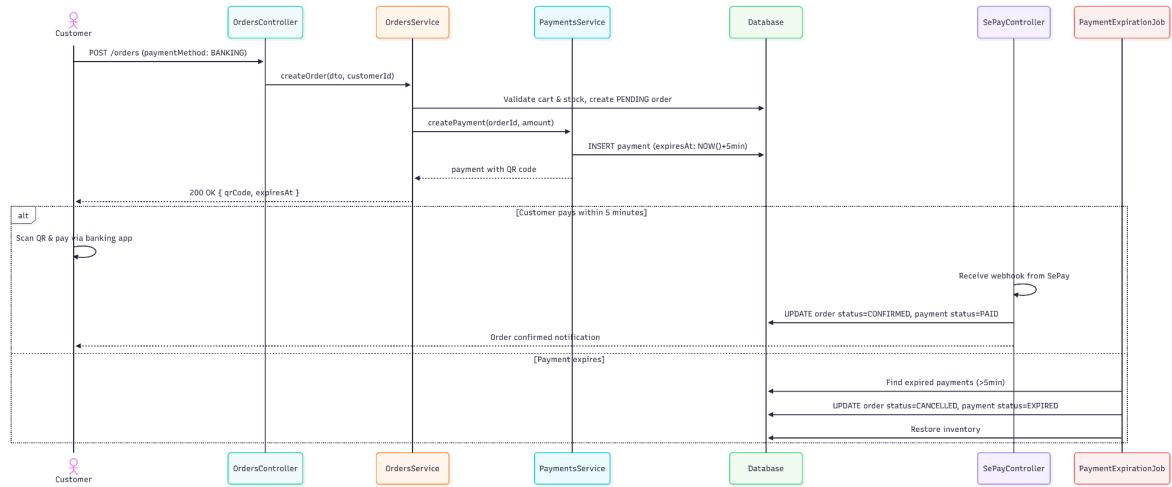


3.3 Order Checkout

3.3.1 Order Checkout Class Diagram

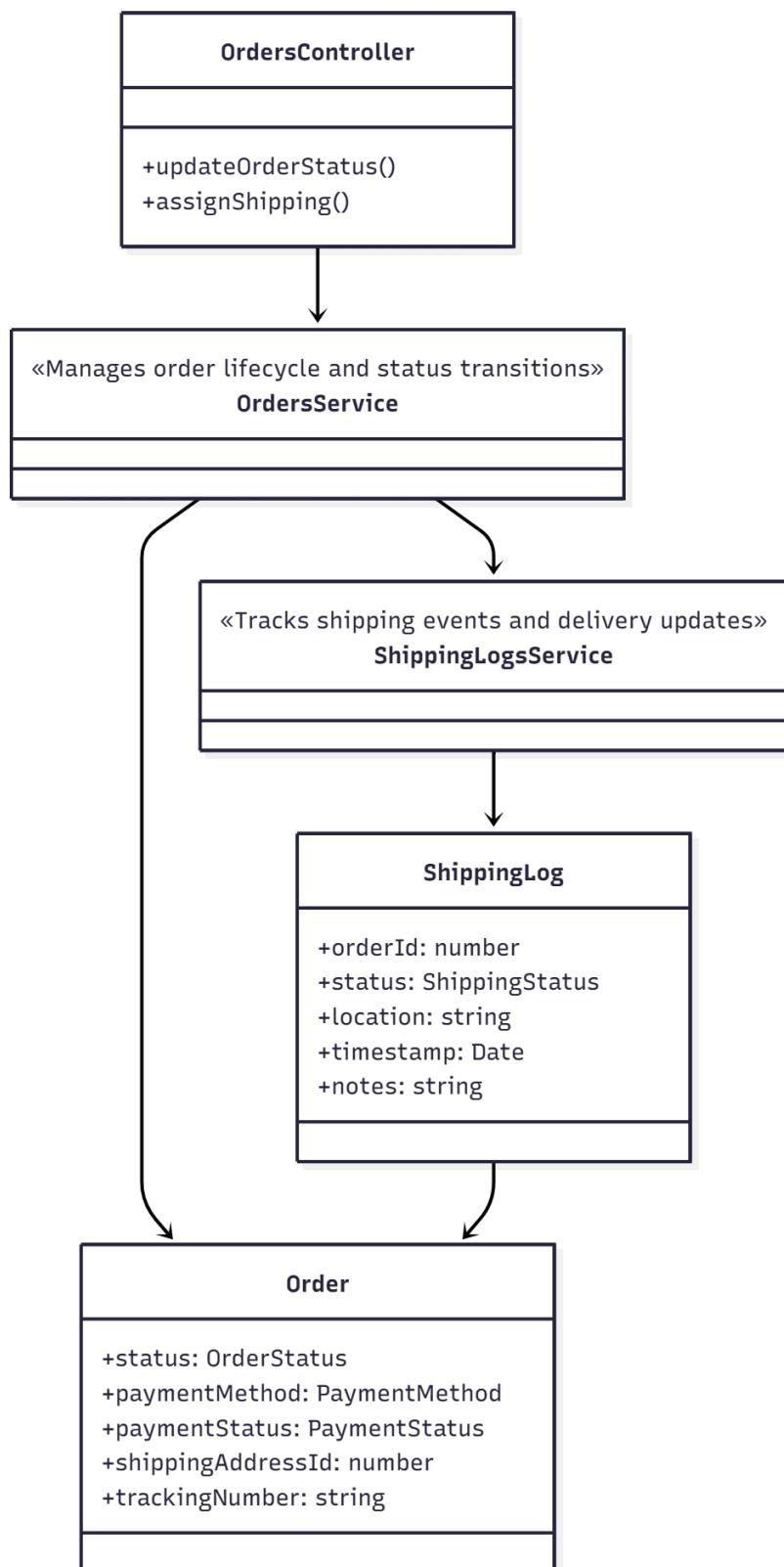


3.3.2 Order Checkout Sequence Diagram

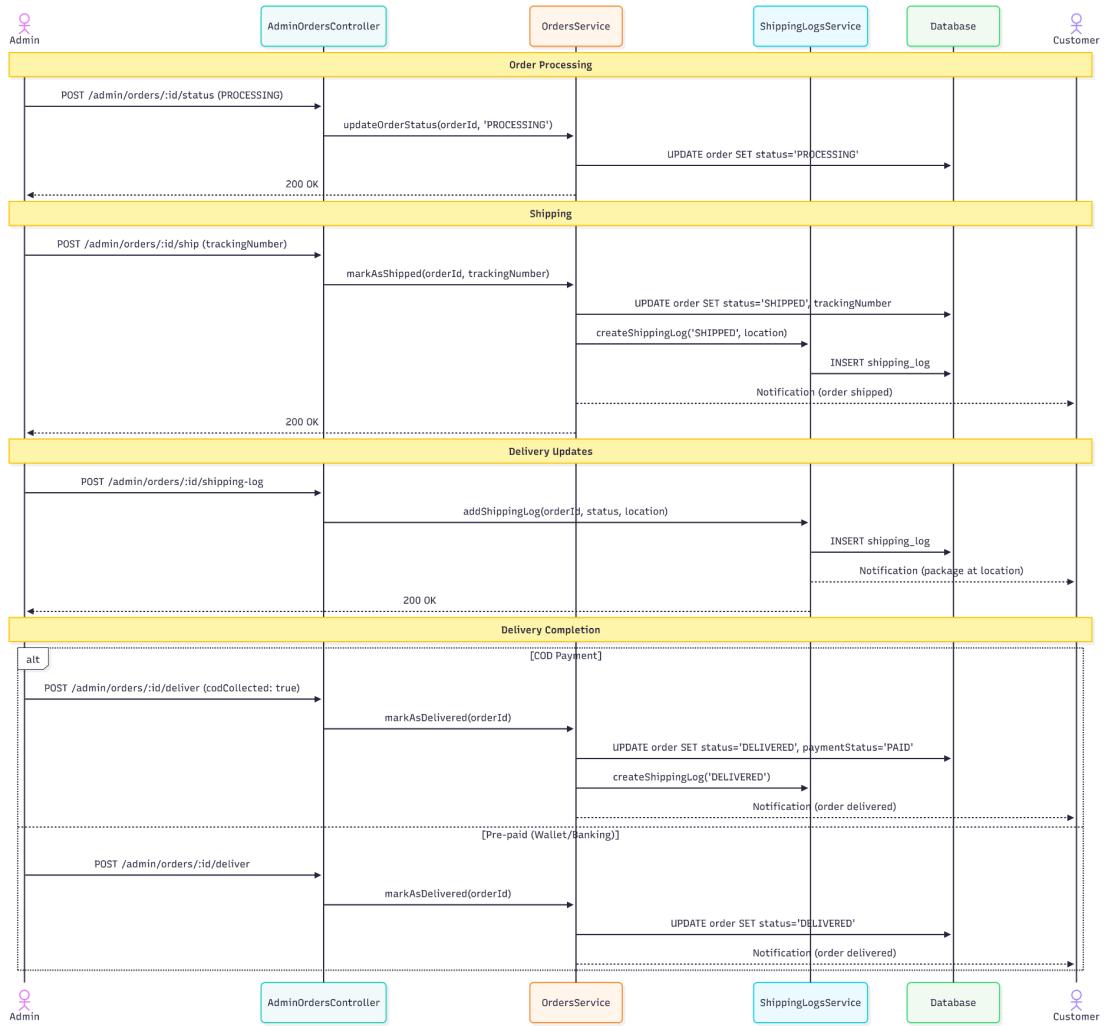


3.4 Order Process and Shipping

3.4.1 Order Process and Shipping Class Diagram

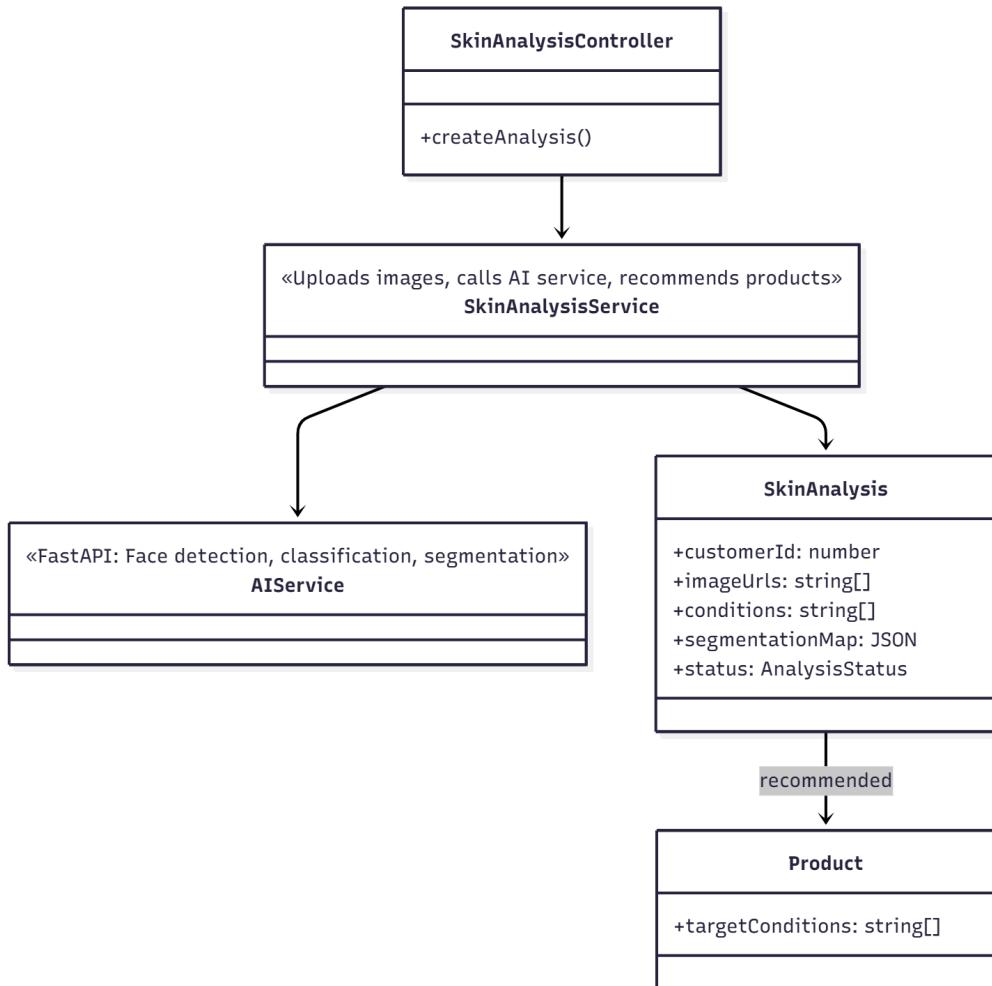


3.4.2 Order Process and Shipping Sequence Diagram

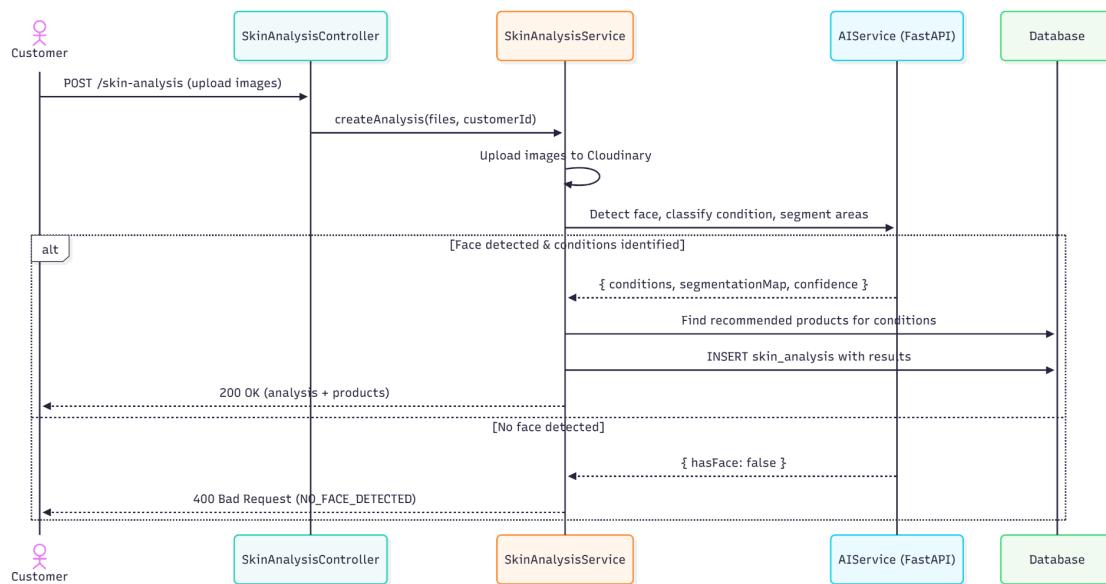


3.5. Skin Analysis

3.5.1 Skin Analysis Class diagram

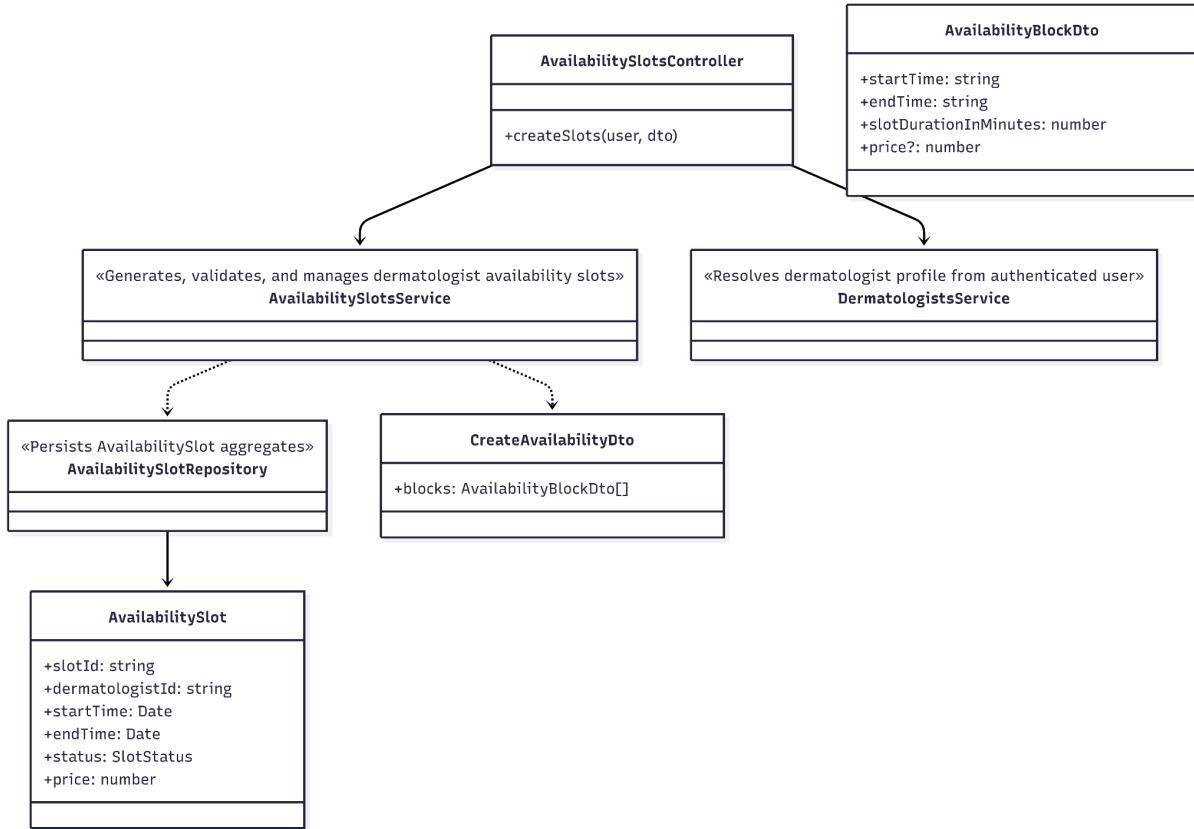


3.5.2 Skin Analysis Sequence Diagram

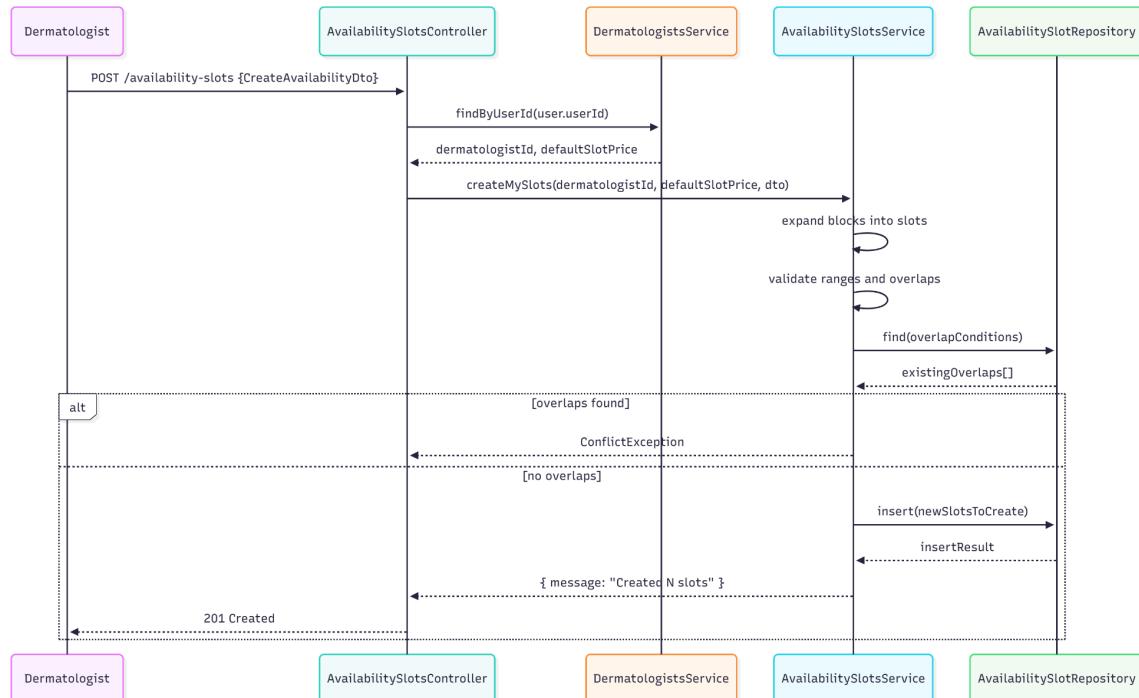


3.6. Create Availability

3.6.1 Create Availability Class Diagram

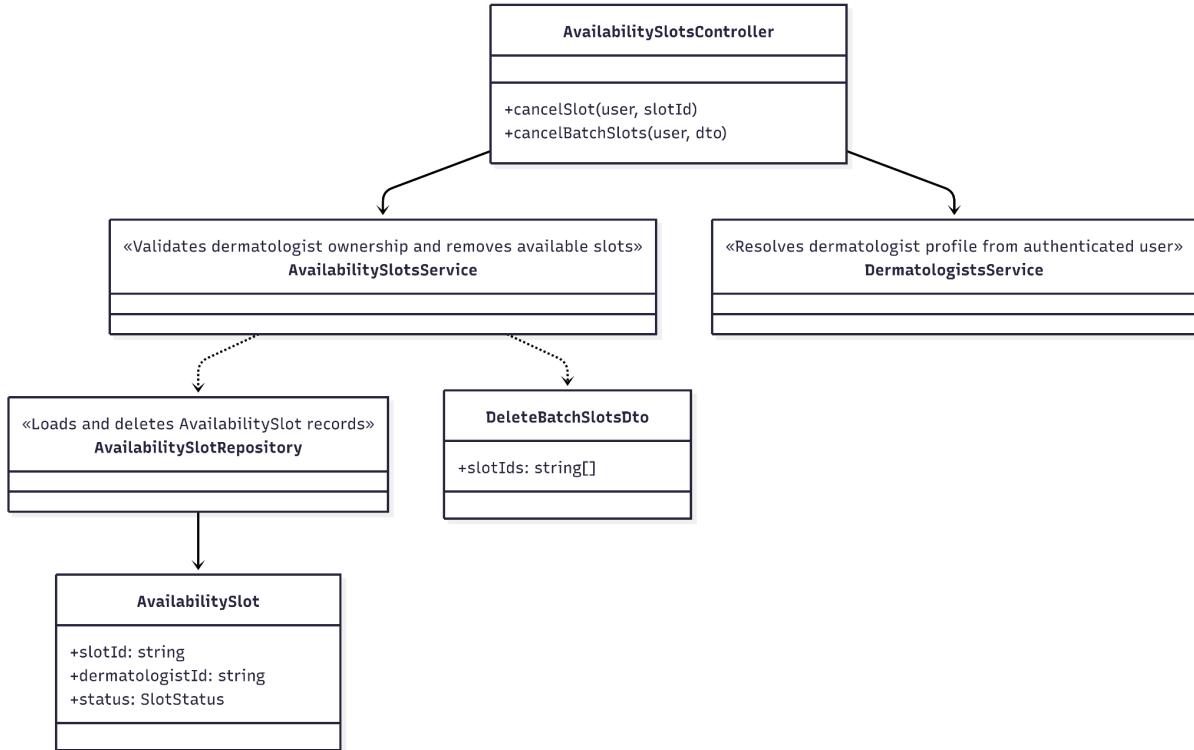


3.6.2 Create Availability Sequence Diagram

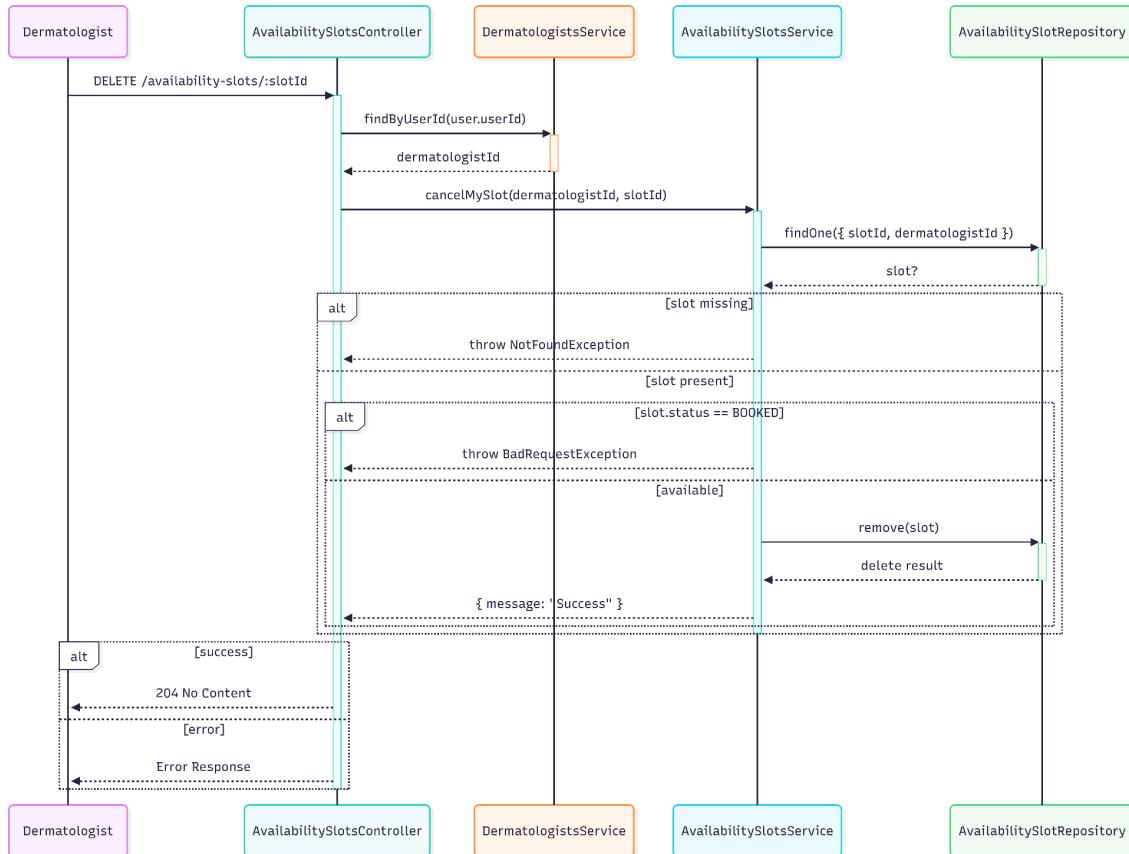


3.7. Cancel Availability

3.7.1 Cancel Availability Class Diagram

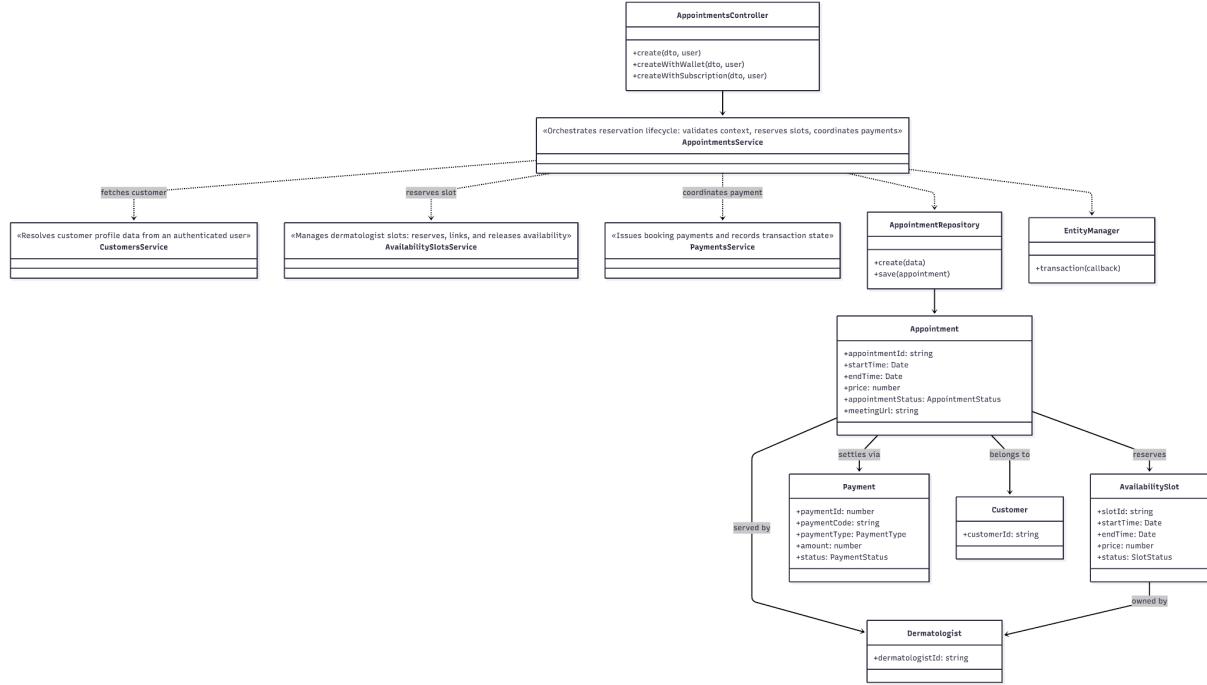


3.7.2 Cancel Availability Sequence Diagram

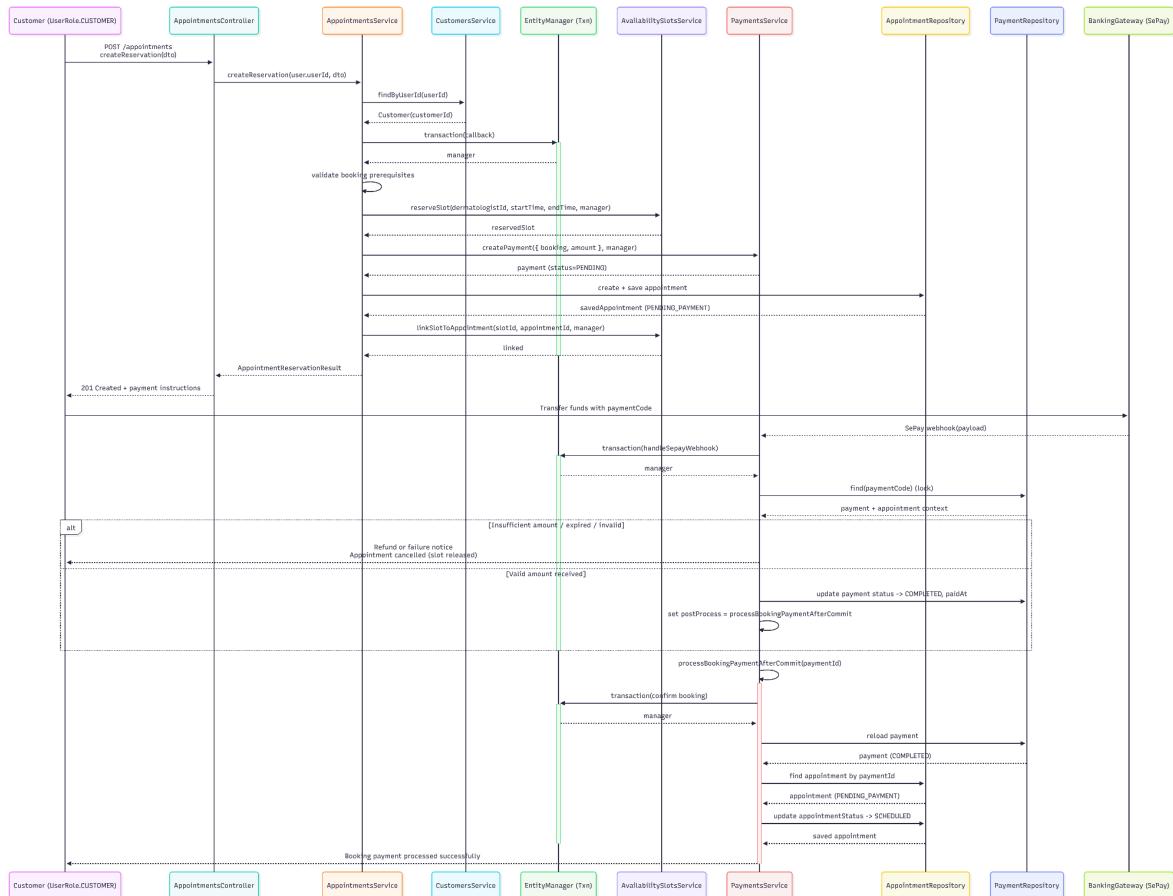


3.8. Appointment Booking

3.8.1 Appointment Booking Class Diagram

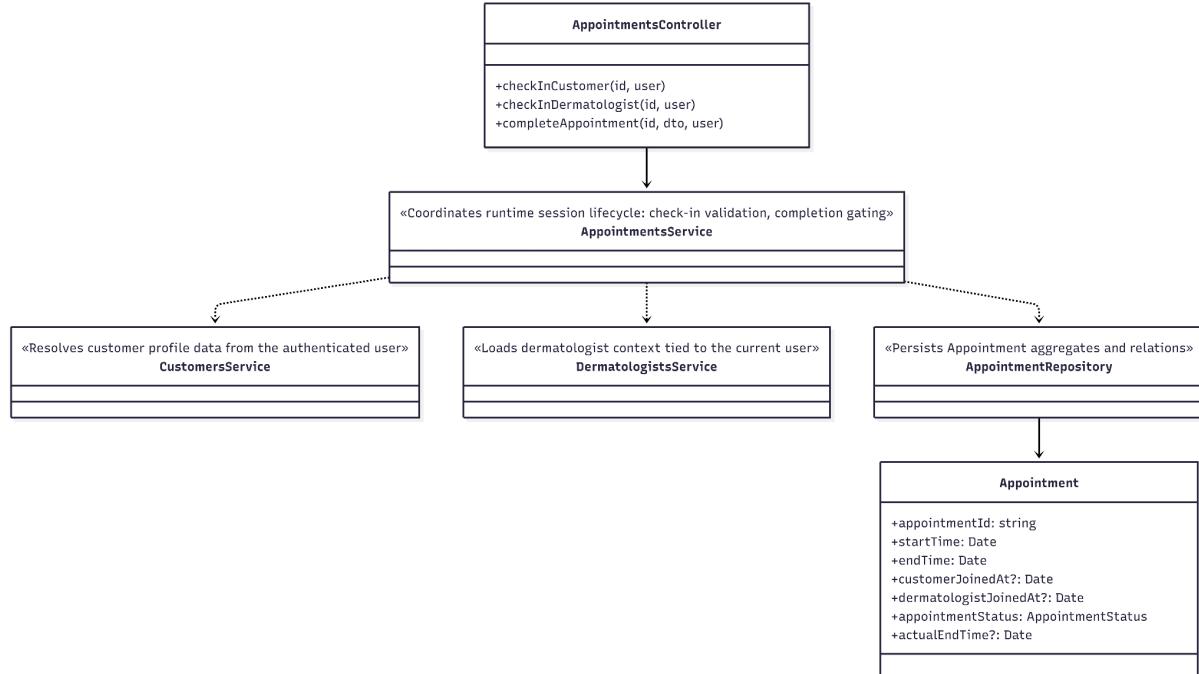


3.8.2 Appointment Booking Sequence Diagram

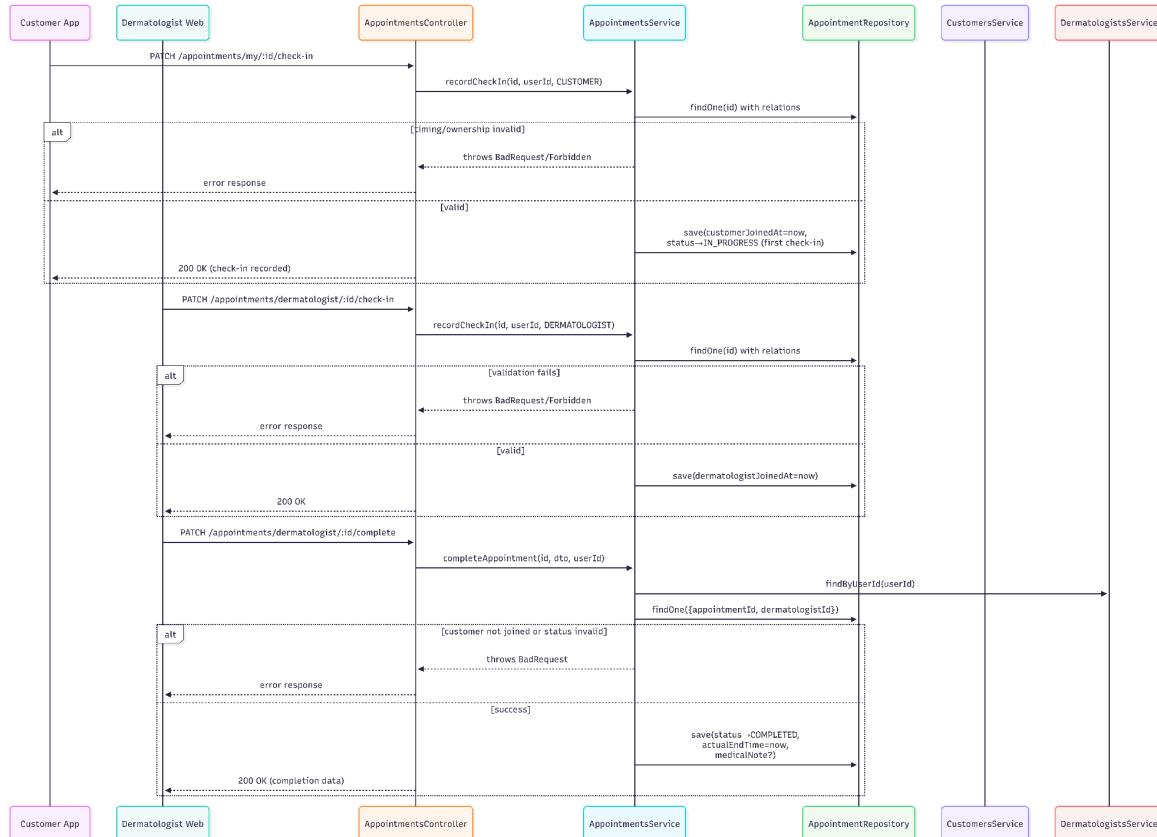


3.9 Appointment Live Session

3.9.1 Appointment Live Session Class Diagram

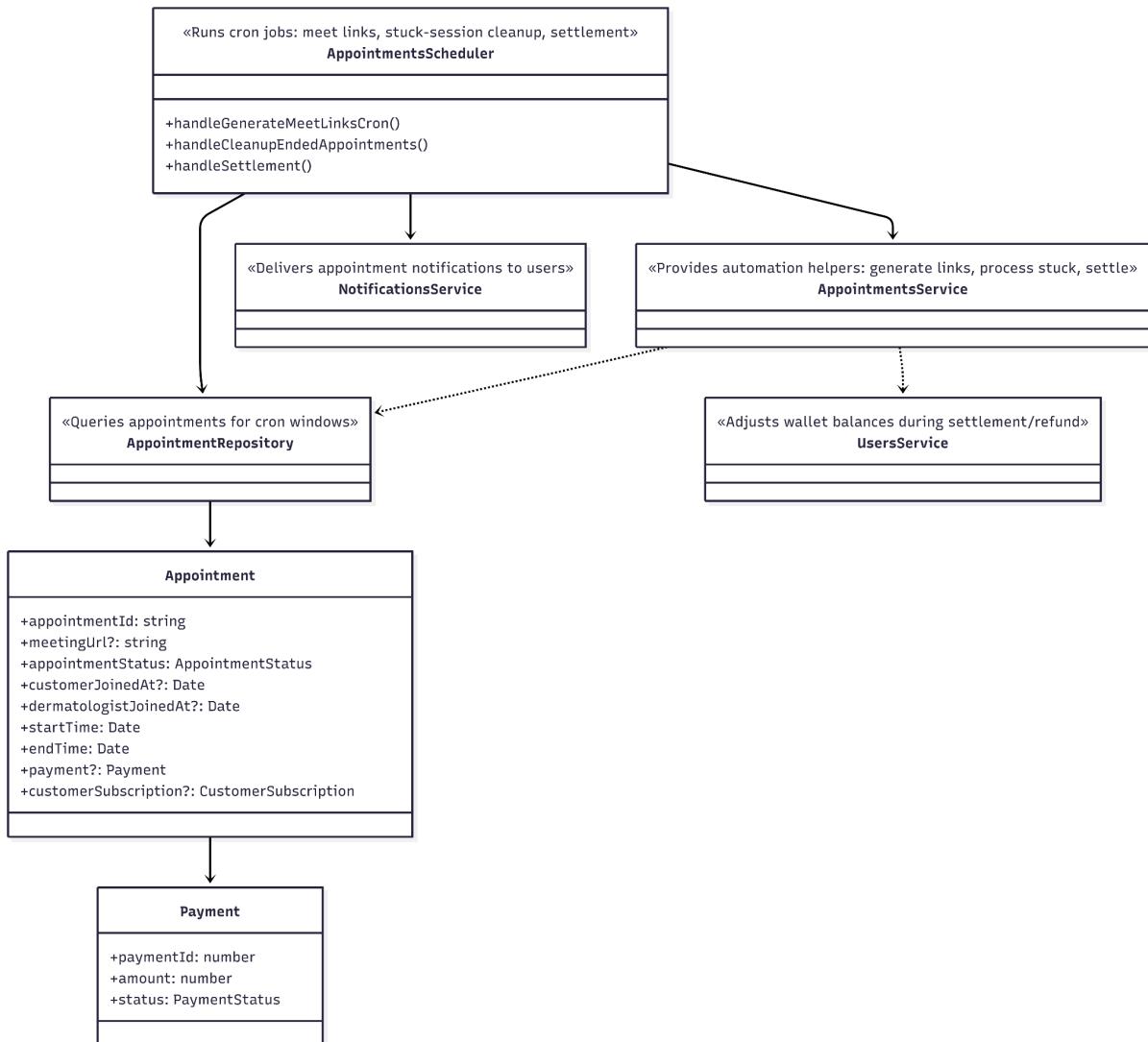


3.9.2 Appointment Live Session Sequence Diagram

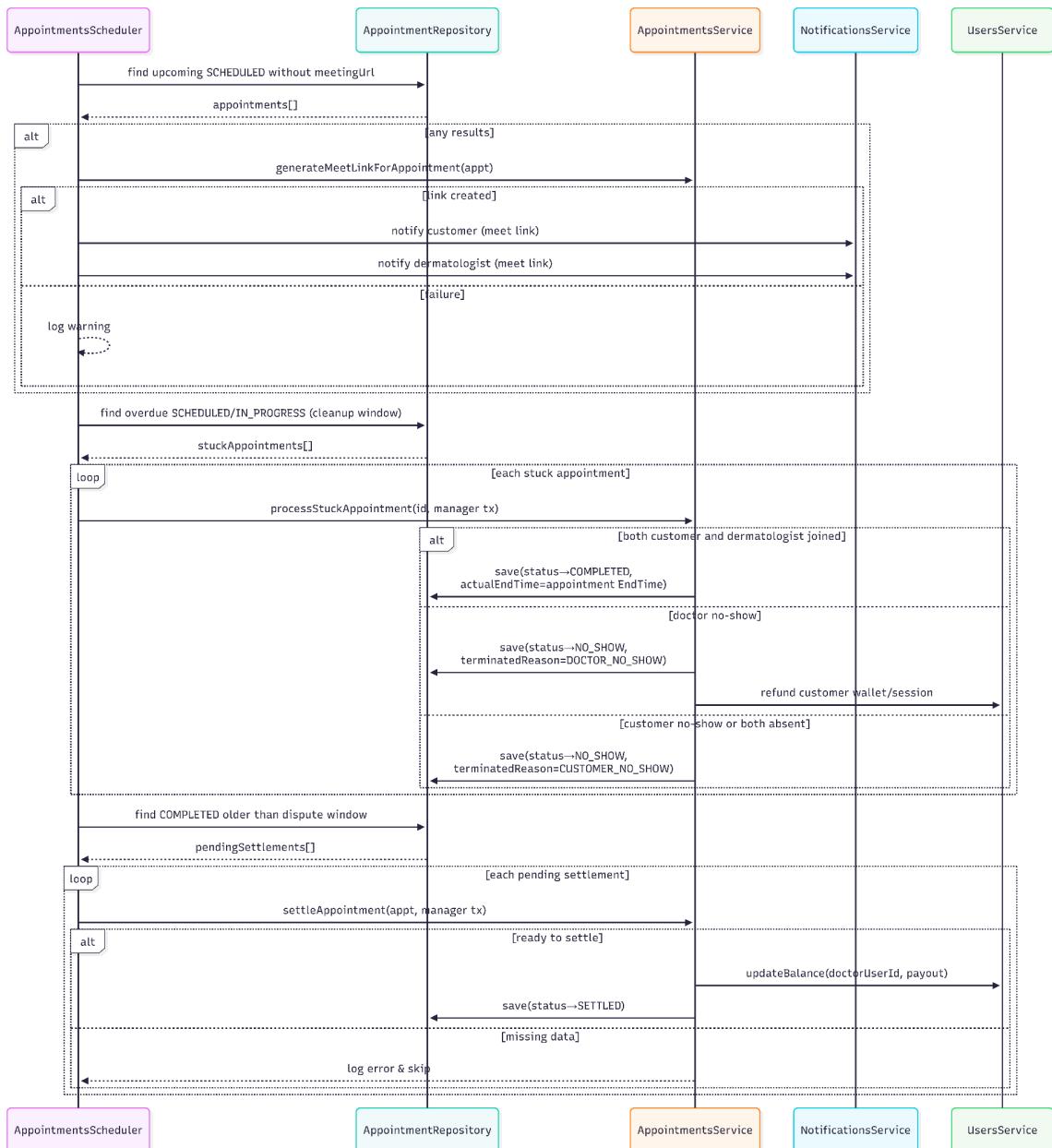


3.10 Appointment Automation Jobs

3.10.1 Appointment Automation Jobs Class Diagram

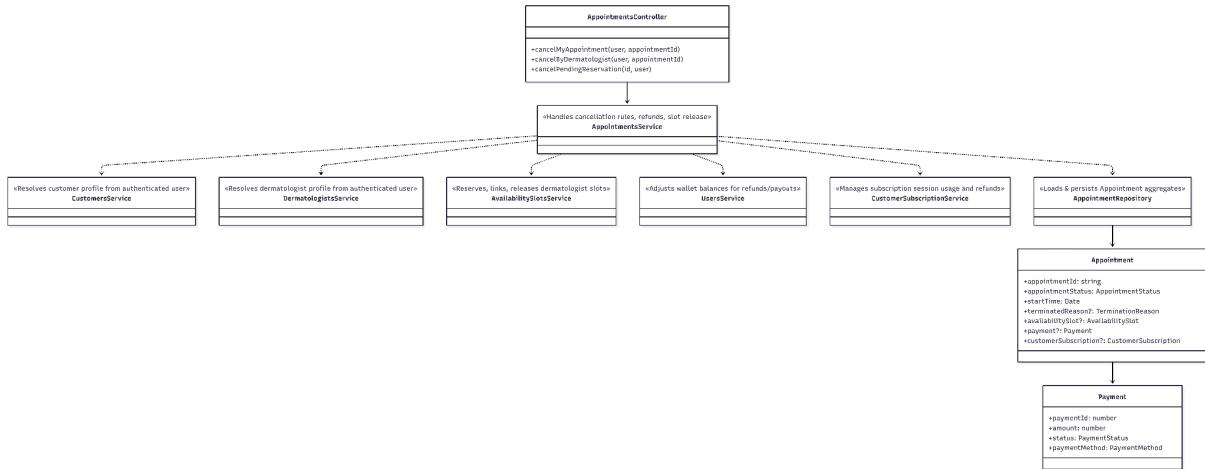


3.10.2 Appointment Automation Jobs Sequence Diagram

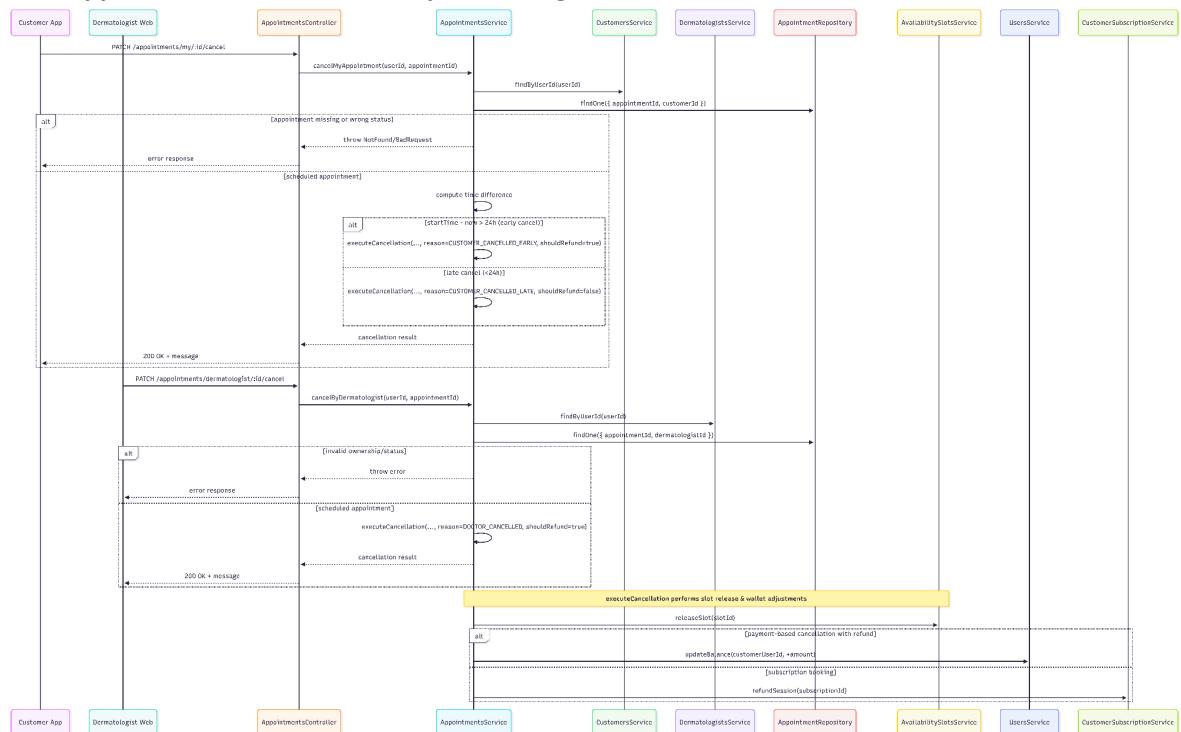


3.11 Appointment Cancellation

3.11.1 Appointment Cancellation Class Diagram

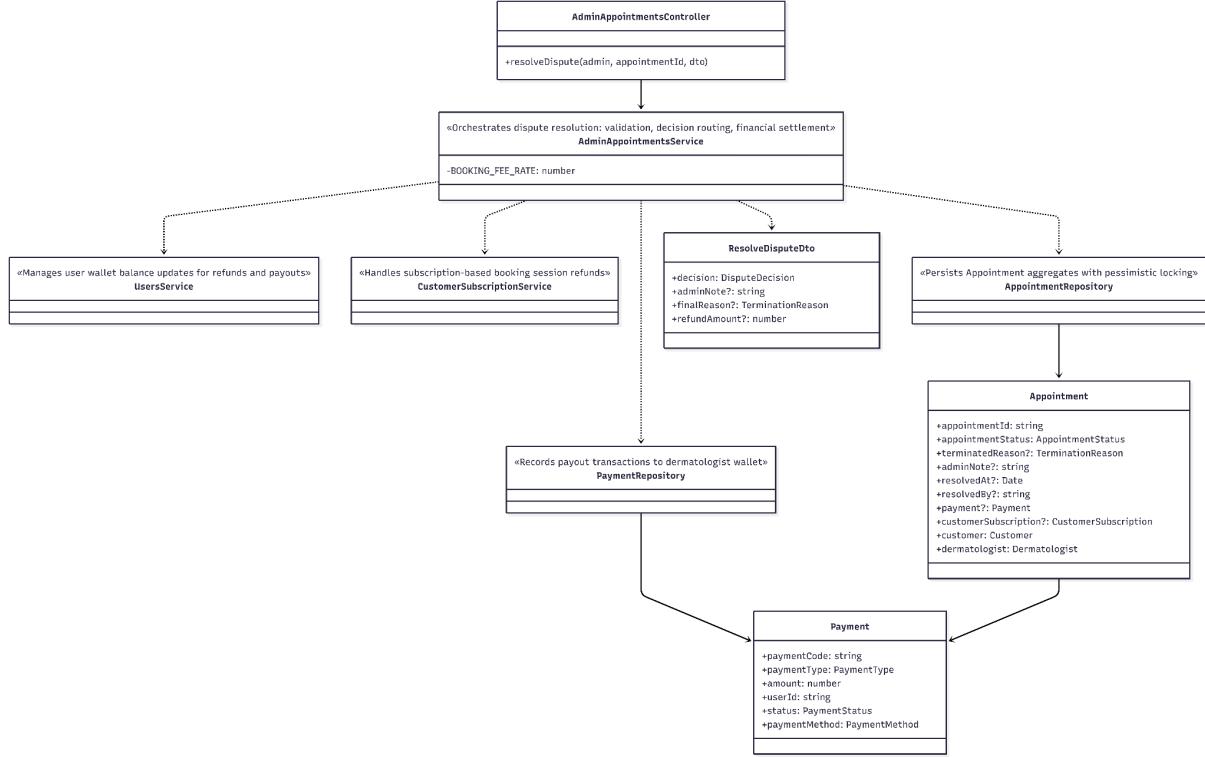


3.11.2 Appointment Cancellation Sequence Diagram

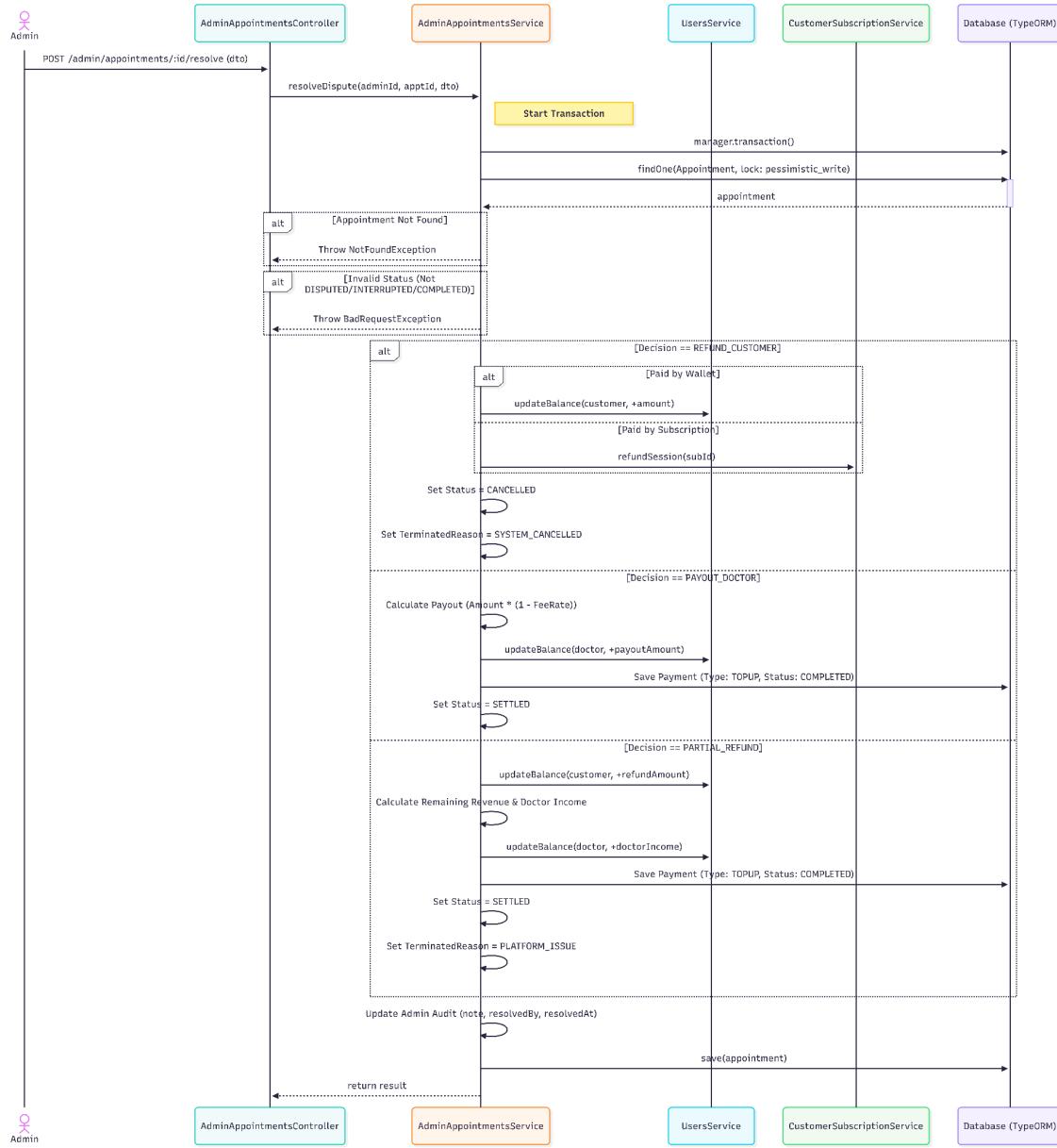


3.12 Appointment Report Resolution

3.12.1 Appointment Report Resolution Class Diagram

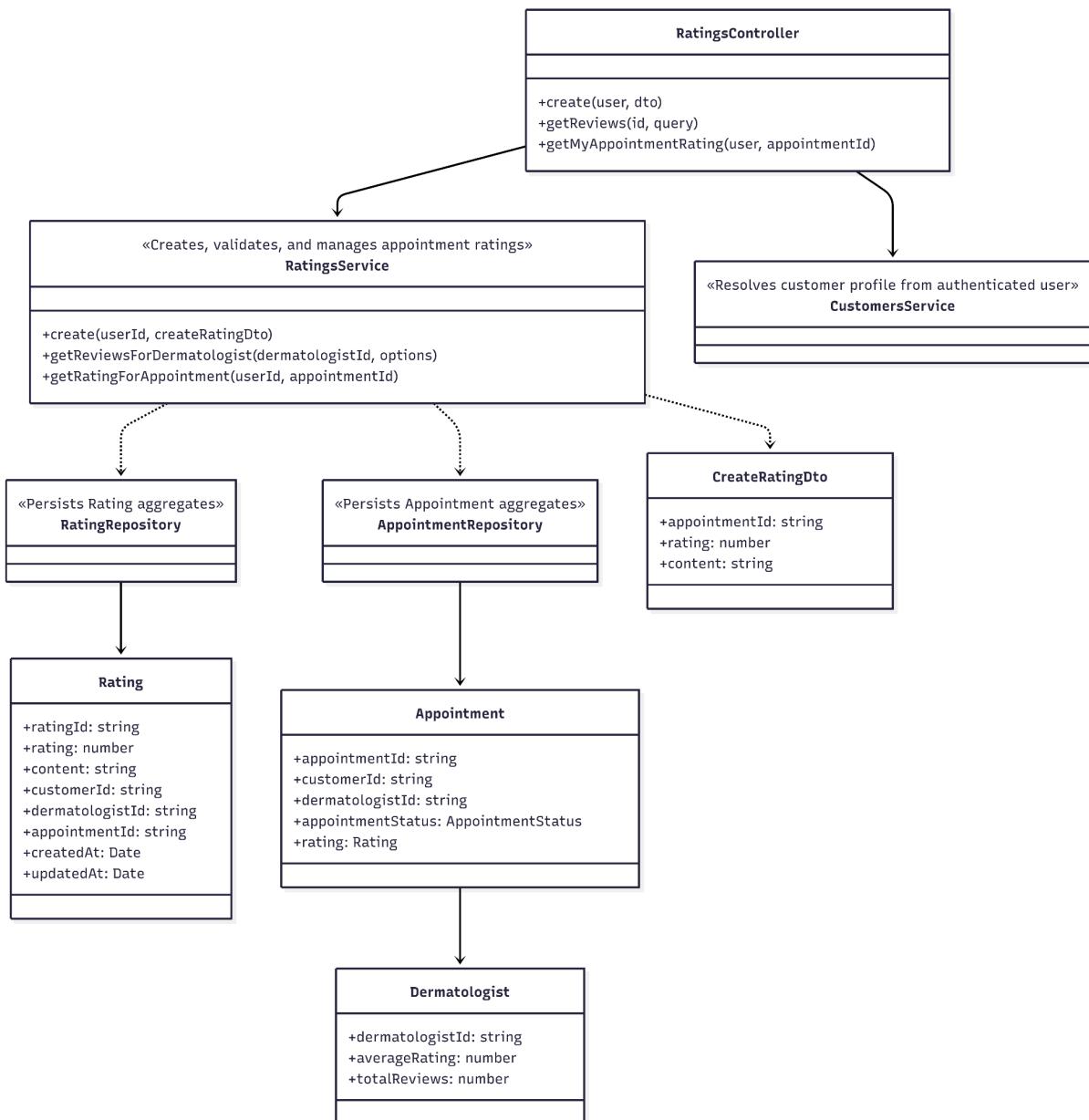


3.12.2 Appointment Report Resolution Sequence Diagram

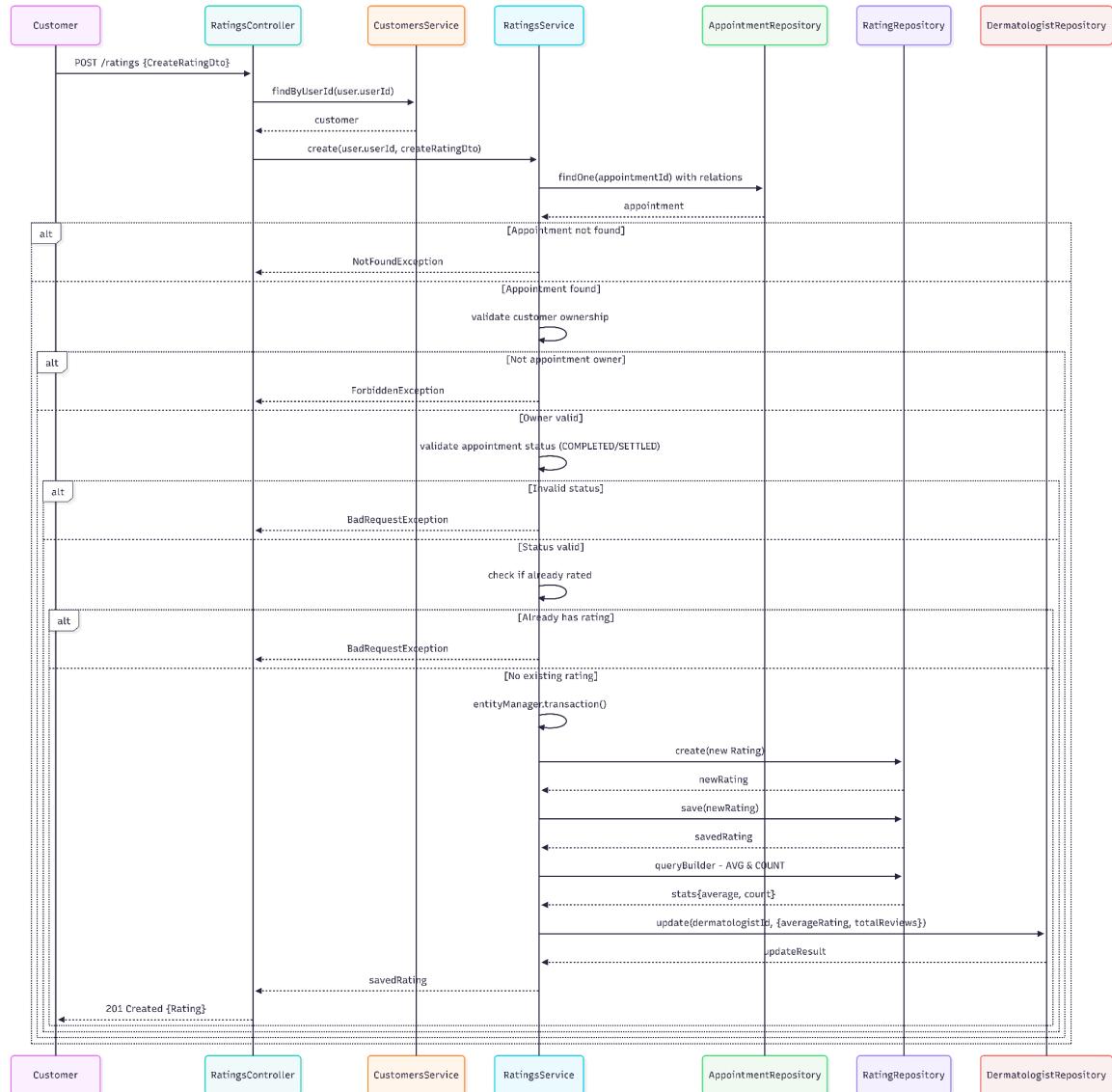


3.13 Review Dermatologist

3.13.1 Review Dermatologist Class Diagram

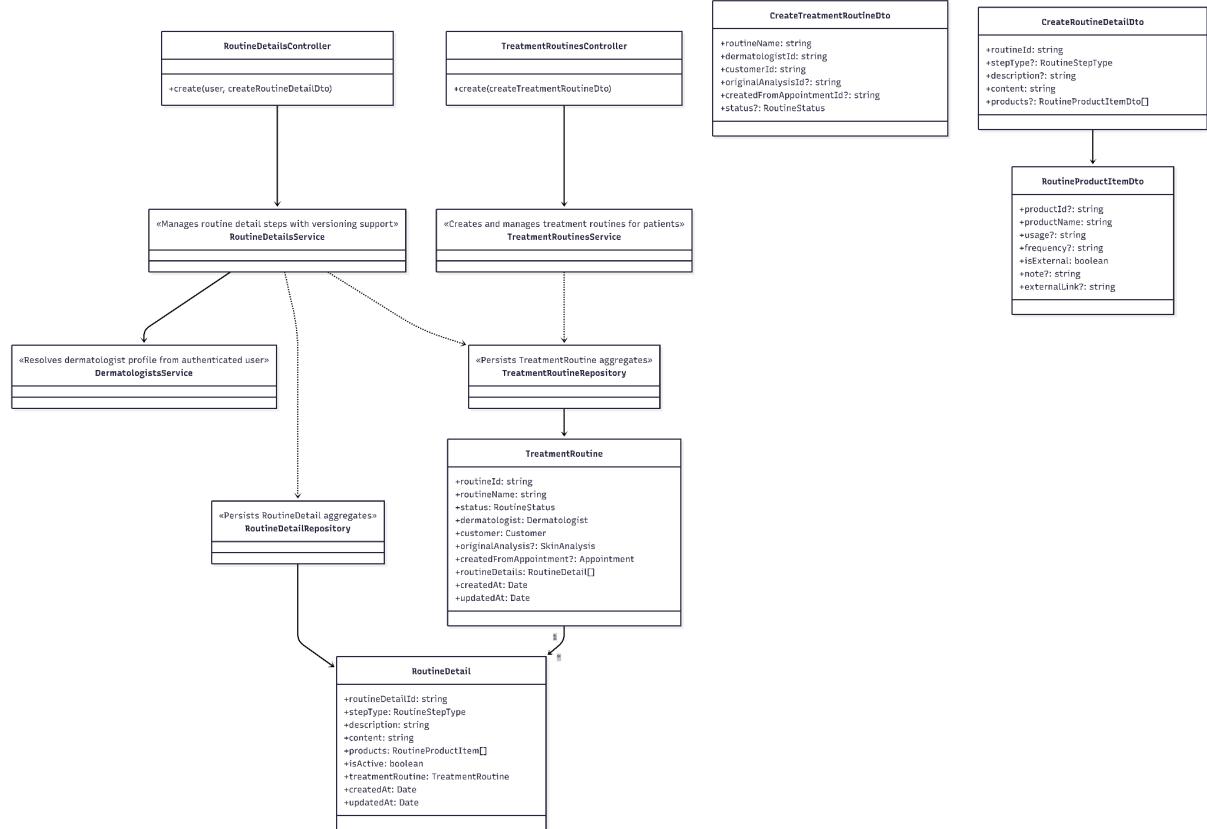


3.13.2 Review Dermatologist Sequence Diagram

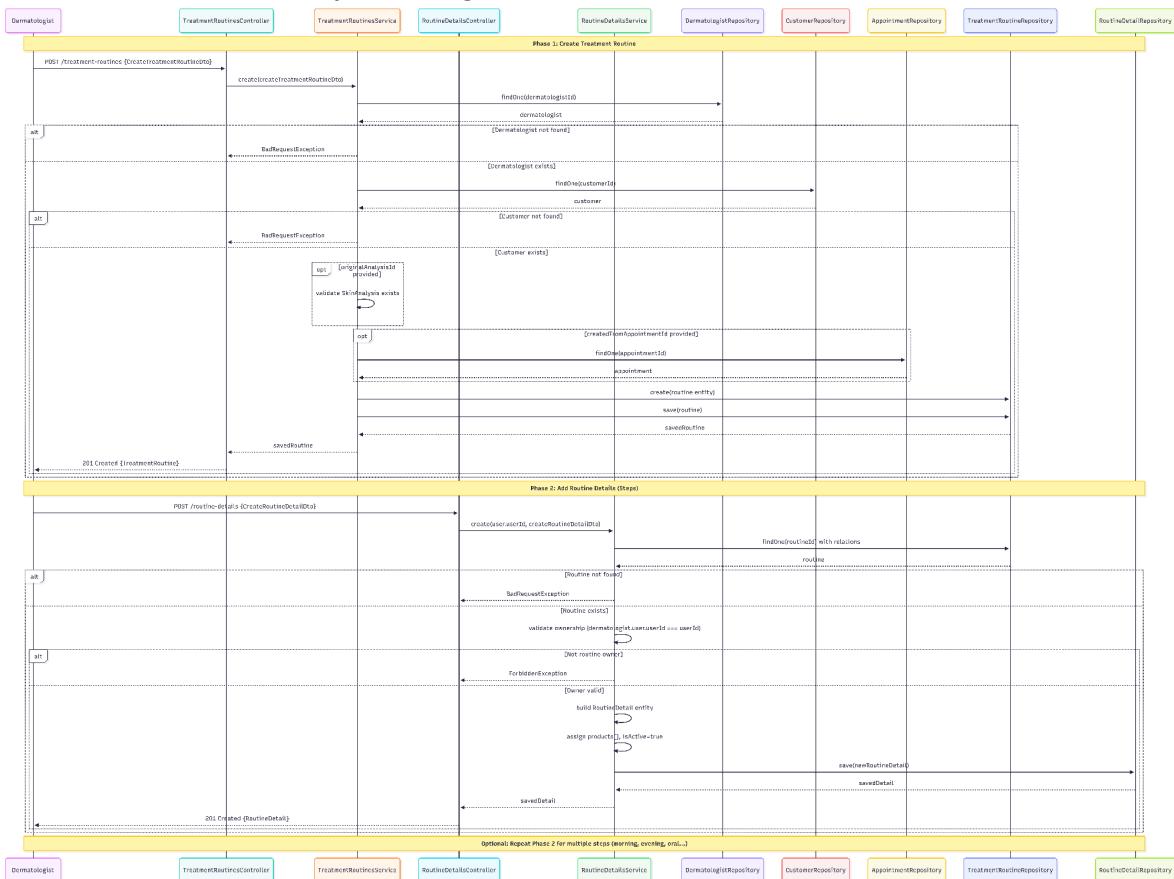


3.14 Treatment Routine

3.14.1 Treatment Routine Class Diagram

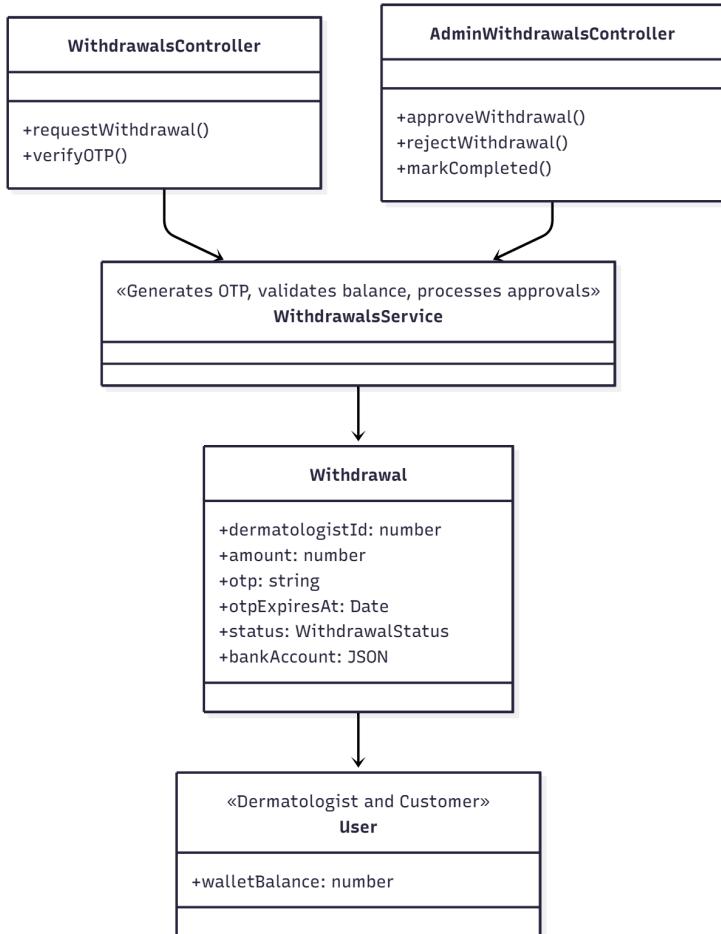


3.14.2 Treatment Routine Sequence Diagram

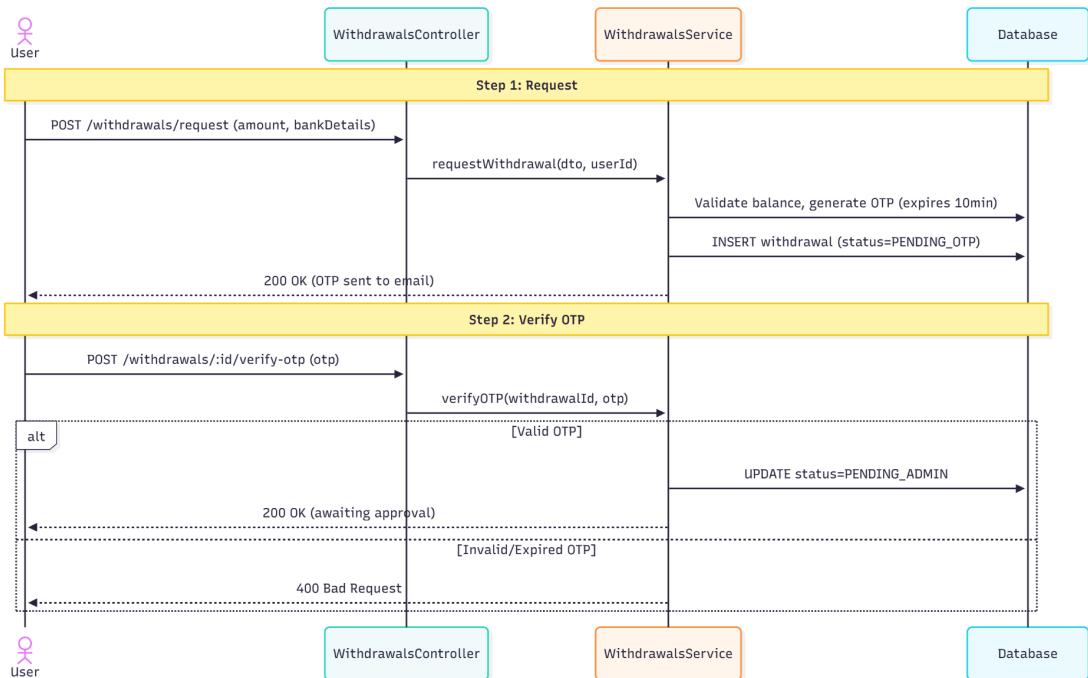


3.15 Withdrawal Request and Processing

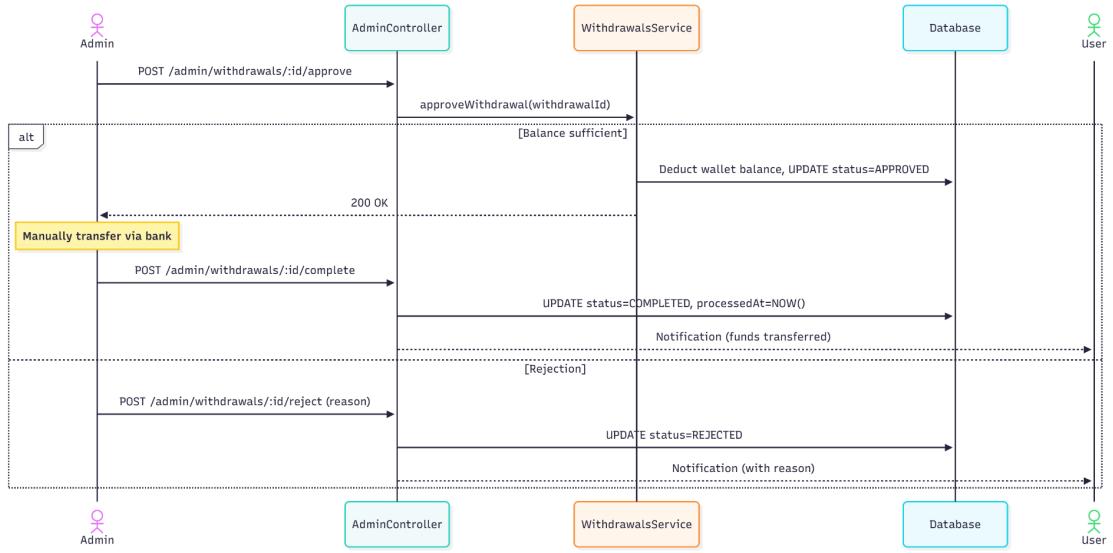
3.15.1 Withdrawal Request and Processing Class Diagram



3.15.2 Withdrawal Request Sequence Diagram

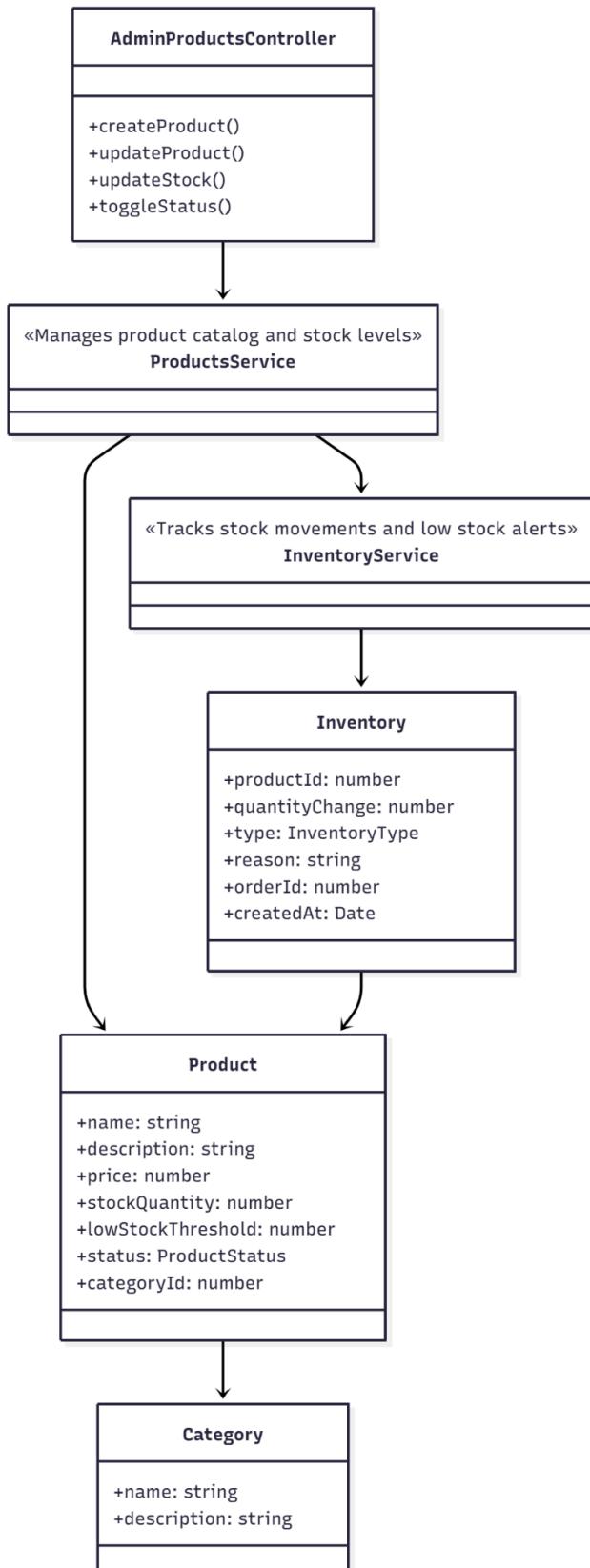


3.16.3 Withdrawal Processing Sequence Diagram

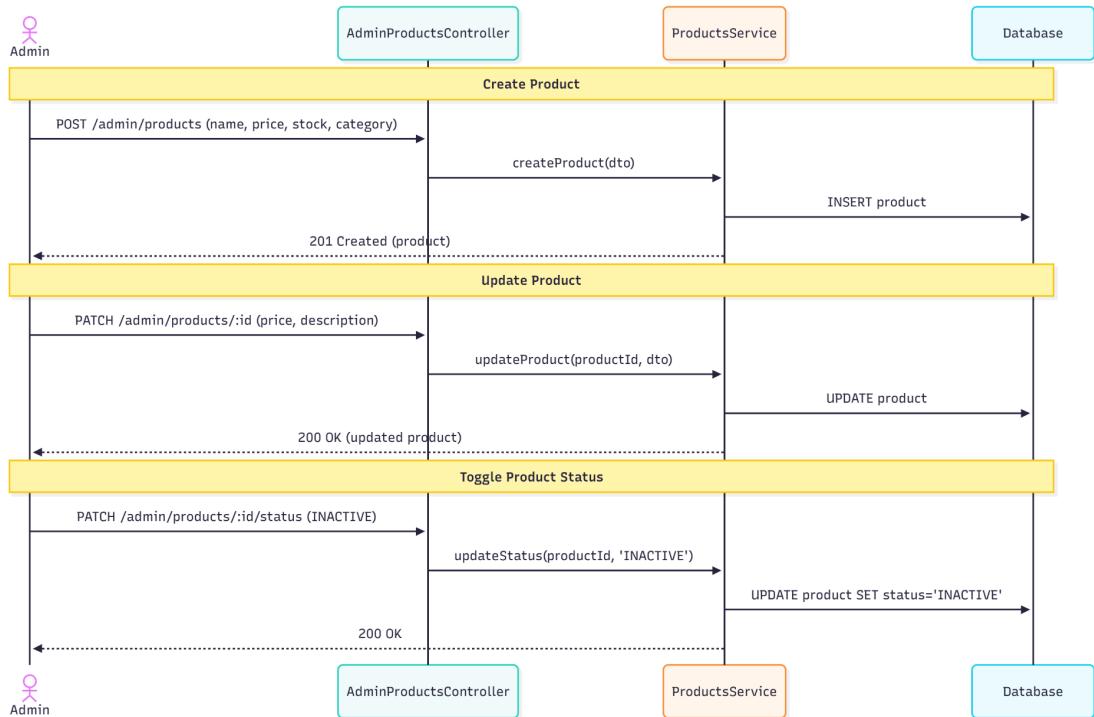


3.16 Product Management

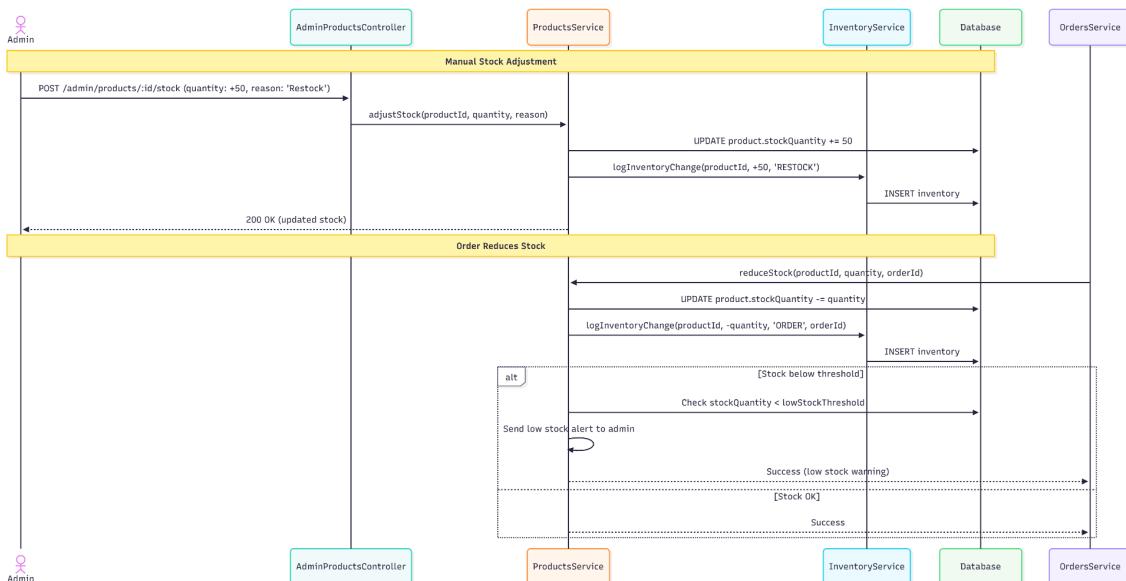
3.16.1 Product Management Class Diagram



3.16.2 Create/Update Product

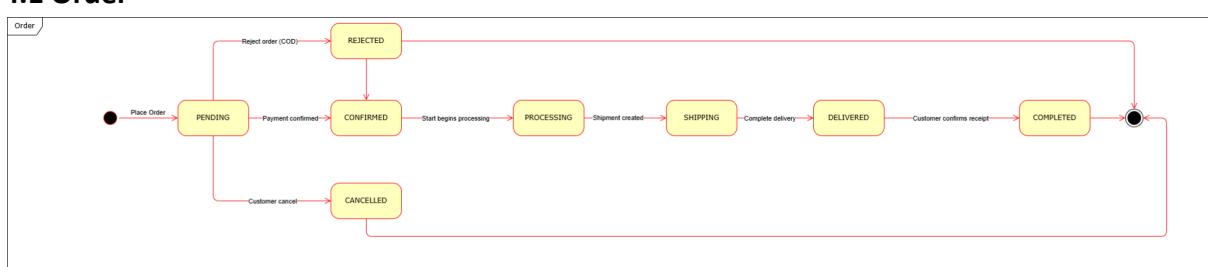


3.16.3 Stock Management

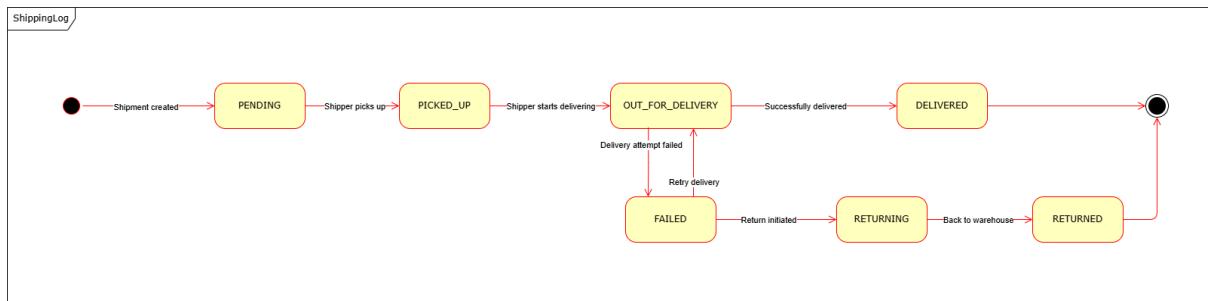


4. State Diagrams

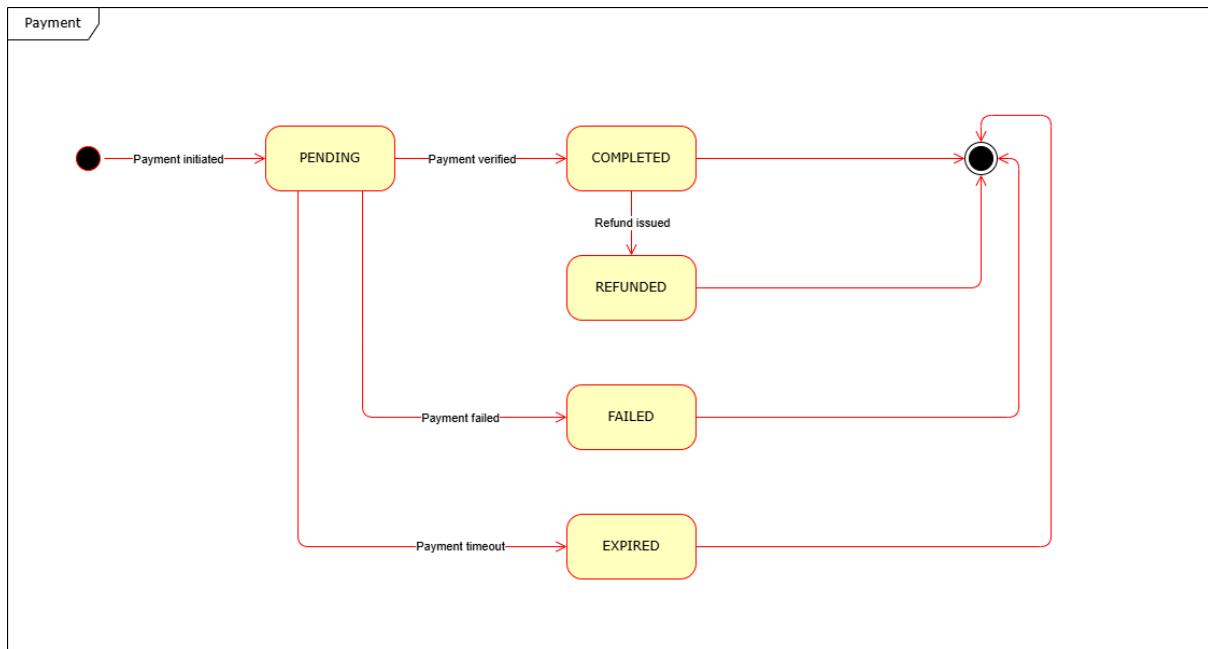
4.1 Order



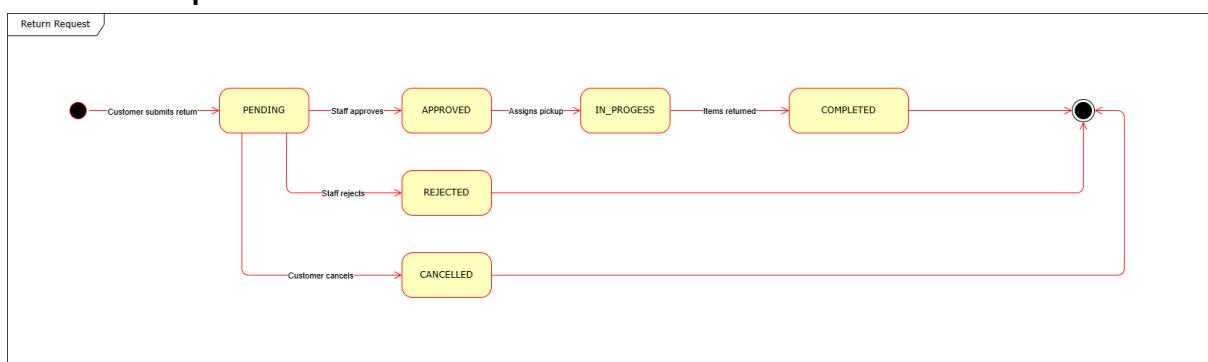
4.2 Shipping



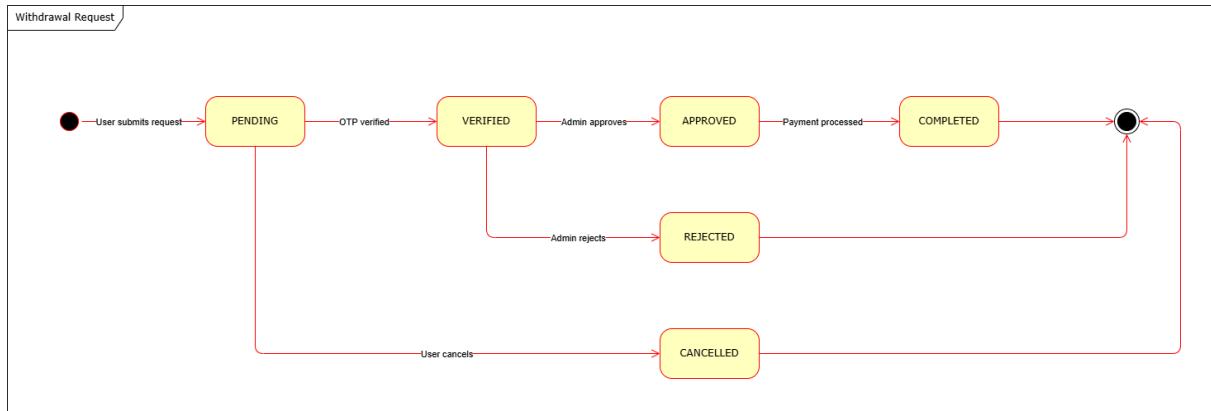
4.3 Payment



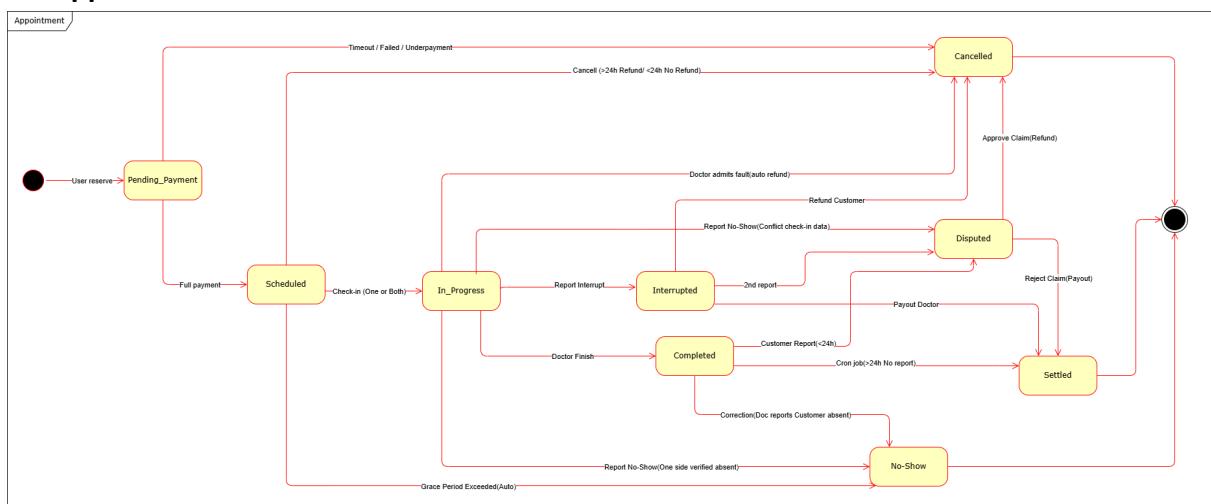
4.4 Return Request



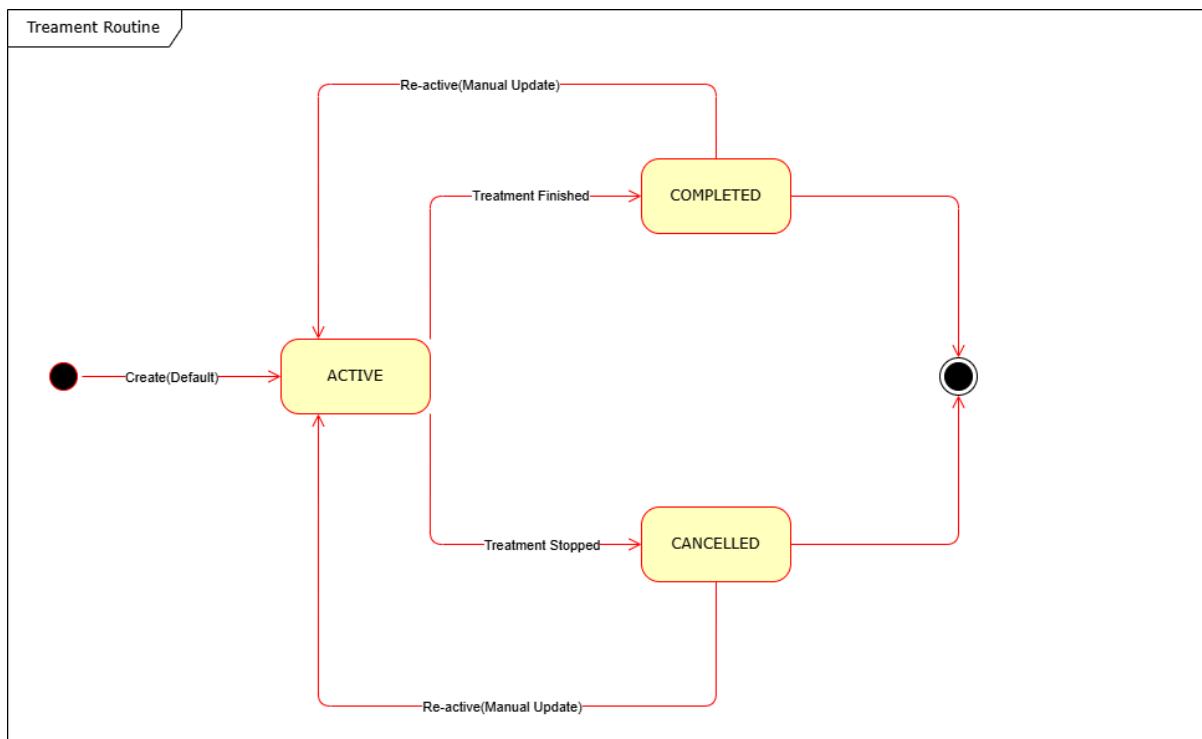
4.5 Withdrawal Request



4.6 Appointment



4.7 Treatment routine



V. Software Testing Documentation

The testing scope for Skinalyze focuses on validating the functionality, reliability, and security of the web and mobile platforms. The goal is to ensure the system effectively bridges AI diagnostics with retail management and telemedicine services.

1. Scope of Testing

- **Cart & Order Management:** Adding/Updating items, Checkout, Order Confirmation, and Cancellation logic.
- **Payment & Wallet:** Creating payments (SePay/Banking), Wallet transactions, and balance validation.
- **Shipping Logistics:** Batch delivery creation, auto-assignment cron jobs, and status updates.
- **AI Skin Analysis Integration:** Face detection, Disease classification/segmentation, and Manual entry processing.
- **Appointment Booking:** Slot availability management (Dermatologist side), Reservation creation, Check-in logic, and Completion/Settlement workflows.

2. Test Strategy

- **Backend-First Approach:** Testing focuses on the API layer (/api/v1/...) to ensure business logic is correct before UI integration.
- **Data Integrity:** Verifying that critical transactions (payments, stock reservations) maintain ACID properties.
- **Error Handling:** Validating that the system gracefully handles invalid inputs (e.g., negative quantities, overlapping slots) with appropriate HTTP 400/404/409 responses.

2.1 Testing Types

- **Functional Testing:** Verifying 38 core backend functions against business requirements.
- **Boundary Testing:** Testing edge cases like minimum/maximum order quantities, zero wallet balance, and date range limits.
- **Abnormal/Negative Testing:** Deliberately sending invalid data (e.g., non-existent IDs, expired slots) to test system resilience.

2.2 Test Levels

Level 1: Unit Testing:

- **Scope:** Individual Service methods (e.g., addToCart, createReservation).
- **Metric:** Tested **38 functions** with **190 Test Cases**.
- **Coverage:** Achieved **97.89%** test coverage.

Level 2: Integration Testing:

- **Scope:** End-to-end API flows involving Database triggers and External Services (Cloudinary, AI Service).
- **Metric:** Executed **188 Test Cases**.
- **Result:** **98.4%** Success rate (3 failed cases pending fix).

2.3 Supporting Tools

Tool	Purpose
Postman	Manual API testing and collection automation for AI services.
Swagger	Manual API testing.

3. Test Plan

3.1 Human Resources

Role	Members	Responsibilities
Test Manager	Le Nguyen Chi Bao	Define test strategy, approve test plans, manage defect tracking.
Tester	Chu Phan Nhat Long	Creator of Test Reports

3.2 Test Environment

● Development Environment (Local):

- Localhost: 5173 (FE), Localhost:8181 (Mobile), Localhost:3000 (BE NestJS), Localhost:8000 (FastAPI).
- Database: Local MySQL instance.
- Tools: VS Code, Postman, Swagger.

- **Staging Environment (Test Server):**
 - **Frontend:** Deployed on Vercel (Preview branch).
 - **Backend:** Deployed on Digital Ocean Droplet (Test container), Hugging Face Space.
 - **Database:** Digital Ocean Managed Database (Staging).
 - **Data:** Populated with dummy data (50 Users, 1285 Products, 10 Dermatologists) to simulate real-world usage.
- **Devices:**
 - Desktop: Chrome, Edge, Opera GX, Brave (Latest versions).
 - Mobile: Android Emulator (Pixel 4, API 32), Oppo Reno 4, Samsung Galaxy A04s, Xiaomi Note 11

3.3 Test Milestones

Milestone	Deliverable	Start Date	End Date
Unit Test Phase	Unit Test Reports (97.9% coverage)	15/11/2025	07/12/2025
Integration Test Phase	API Test Results (98.4% Pass Rate)	15/11/2025	07/12/2025
System Test Phase	Defect Report (End-to-End Scenarios)	08/12/2025	22/12/2025

4. Test Cases

 Report5_Unit_Test.xls

5. Test Reports

 Report5_Test-Report.xlsx

VI. Release Package & User Guides

1. Deliverable Package

[The section will list all source programs, scripts, documents with version number in this release. You can see the example following table for reference, can customize or delete if not using belong to each project characteristics]

No.	Deliverable Item	Description
1	Schedule/Task Tracking	https://docs.google.com/spreadsheets/d/1bHd0x1jJDB4rDCgP1IdQKDTWMv1N3oJDvTeHfm1JsWk/edit?usp=sharing
2	Project Backlog	https://docs.google.com/spreadsheets/d/1bHd0x1jJDB4rDCgP1IdQKDTWMv1N3oJDvTeHfm1JsWk/edit?usp=sharing
3	Source Codes	User app: https://github.com/CheeseBout/skinalyze-mobile Shipping app: https://github.com/ChuPhanNhatLong-SE183738/skinalyze-shipper Backend, Frontend: https://github.com/ChuPhanNhatLong-SE183738/skinalyze AI Service: https://github.com/CheeseBout/skinalyze-ai
4	Database Script(s)	https://drive.google.com/file/d/1TR_ZqEN9gRYfT370LV48a81facDL65P1/view?usp=sharing

No.	Deliverable Item	Description
5	Final Report Document	https://docs.google.com/document/d/1tJ43AKmPgTV3mHDZDXkopKWAs9JE0EET8eo0Nos6sBY/edit?tab=t.0
6	Test Cases Document	https://docs.google.com/spreadsheets/d/1NOVXcFXoJaKHOEUHrsT6PCOo_IjallBu/edit?usp=sharing&ouid=100559714330911116502&rtpof=true&sd=true
7	Test Report Document	https://docs.google.com/spreadsheets/d/1age8lmdjxlwTDVt797iiThjDIhAtWxd5/edit?usp=sharing&ouid=100559714330911116502&rtpof=true&sd=true
8	Slide	https://www.canva.com/design/DAG6RZmpxA0/ZPxHJEGzT8jkDN-KRqhhbw/edit

2. Installation Guides

2.1 System Requirements

Hardware Requirements

Minimum

- **CPU:** 2 cores
- **RAM:** 4 GB
- **Storage:** 10 GB available space
- **Network:** Stable internet connection

Recommended

- **CPU:** 4+ cores
- **RAM:** 8 GB or more
- **Storage:** 20 GB SSD
- **Network:** High-speed internet connection

Software Requirements

Required Software

Software	Version	Purpose
Node.js	18.x or 20.x	JavaScript runtime

npm	9.x or higher	Package manager
MySQL	8.0 or higher	Database server
Git	2.x or higher	Version control

Optional Software

Software	Purpose
Docker	Containerization
Redis	Caching (production)
Postman	API testing
MySQL Workbench	DB management

Operating System Support

- **Windows:** 10/11 (64-bit)

External Service Requirements

Required APIs & Services

Service	Purpose	Required For
Resend	Email delivery	Notifications, password reset
Cloudinary	Image storage	Product images, profile photos
Google Cloud	Google Meet API	Video consultations
Firebase	Push notifications	Mobile notifications
GHN	Shipping	Delivery tracking
FastAPI Service	AI skin analysis	Skin detection

Optional Services

- **Gemini AI**
 - **Goong Maps**
-

Network Requirements

- **443 (HTTPS)**: External API calls
 - **3306**: MySQL
 - **3000**: NestJS backend
 - **Public webhook URL**: Needed for SePay payments (production)
-

Development Tools

Recommended: **VS Code** with:

- ESLint
- Prettier
- TypeScript / JavaScript
- REST Client / Thunder Client

Package manager: **npm** or **yarn**

2.2 Installation Instructions

2.2.1. Backend NestJS Installation

Step 1: Install Prerequisites

Install Node.js

1. Download from nodejs.org

The screenshot shows the Node.js download page with a dark theme. At the top, it says "Download Node.js®". Below that, there are dropdown menus for "Get Node.js® v25.2.1 (Current)", "for Windows", "using Docker", and "with npm". A code block displays a PowerShell script for Docker installation:

```

1 # Docker has specific installation instructions for each operating system.
2 # Please refer to the official documentation at https://docker.com/get-started/
3
4 # Pull the Node.js Docker image:
5 docker pull node:25-alpine
6
7 # Create a Node.js container and start a Shell session:
8 docker run -it --rm --entrypoint sh node:25-alpine
9
10 # Verify the Node.js version:
11 node -v # Should print "v25.2.1".
12
13 # Verify npm version:
14 npm -v # Should print "11.6.2".

```

Below the code block are "PowerShell" and "Copy to clipboard" buttons. A note states: "Docker is a containerization platform. If you encounter any issues please visit [Docker's website](#)". There are dropdown menus for "Or get a prebuilt Node.js® for Windows running a x64 architecture". Two download buttons are shown: "Windows Installer (.msi)" and "Standalone Binary (.zip)".

2. Install normally

Verify:

`node --version`

`npm --version`

Install MySQL

- Download MySQL from mysql.com

The screenshot shows the MySQL website. The header includes the MySQL logo, a search bar, and links for "CONTACT MySQL", "LOG IN", and "REGISTER". The main navigation menu has items: "MySQL.COM", "DOWNLOADS" (which is highlighted with an orange underline), "DOCUMENTATION", and "DEVELOPER ZONE".

A large banner features the text "MySQL HeatWave" and a list of features:

- OLTP MySQL cloud service—built on MySQL Enterprise Edition
- Integrated and automated generative AI with MySQL HeatWave GenAI
- Accelerate query performance with MySQL HeatWave
- Query data in object storage and MySQL with MySQL HeatWave Lakehouse
- Automate the machine learning pipeline with MySQL HeatWave AutoML

Below the banner are two buttons: "Try Free" and "Technical Guides". To the right, a callout box for "MySQL Enterprise Edition for Developers" offers a free trial with the text: "Free! Access the full range of MySQL Enterprise Edition features while learning, developing, and prototyping." It includes a "Download Now »" button.

MySQL Community Downloads

- MySQL Yum Repository
- MySQL APT Repository
- MySQL SUSE Repository
- MySQL Community Server
- MySQL NDB Cluster
- MySQL Router
- MySQL Shell
- MySQL Operator
- MySQL NDB Operator
- MySQL Workbench
- MySQL Installer for Windows

- C API (libmysqlclient)
- Connector/C++
- Connector/J
- Connector/.NET
- Connector/Node.js
- Connector/ODBC
- Connector/Python
- MySQL Native Driver for PHP
- MySQL Benchmark Tool
- Time zone description tables
- Download Archives

MySQL Enterprise Edition for Developers
Free for learning, developing, and prototyping.

Download Now »

ORACLE © 2025 Oracle
Privacy | Do Not Sell My Info | Terms of Use | Trademark Policy | Cookie Preferences

- Use MySQL Installer → set root password → enable service
-

Install Git

- Download from git-scm.com

git --fast-version-control

Git is a **free and open source** distributed version control system designed to handle everything from small to very large projects with speed and efficiency.

Git is **lightning fast** and has a huge ecosystem of **GUIs**, **hosting services**, and **command-line tools**.

About
Git's performance and ecosystem

Tools
Command line tools, GUIs, and hosting services

Install
Binary releases for all major platforms.

Learn
Pro Git book, videos, tutorials, and cheat sheet

Reference
Git's reference documentation

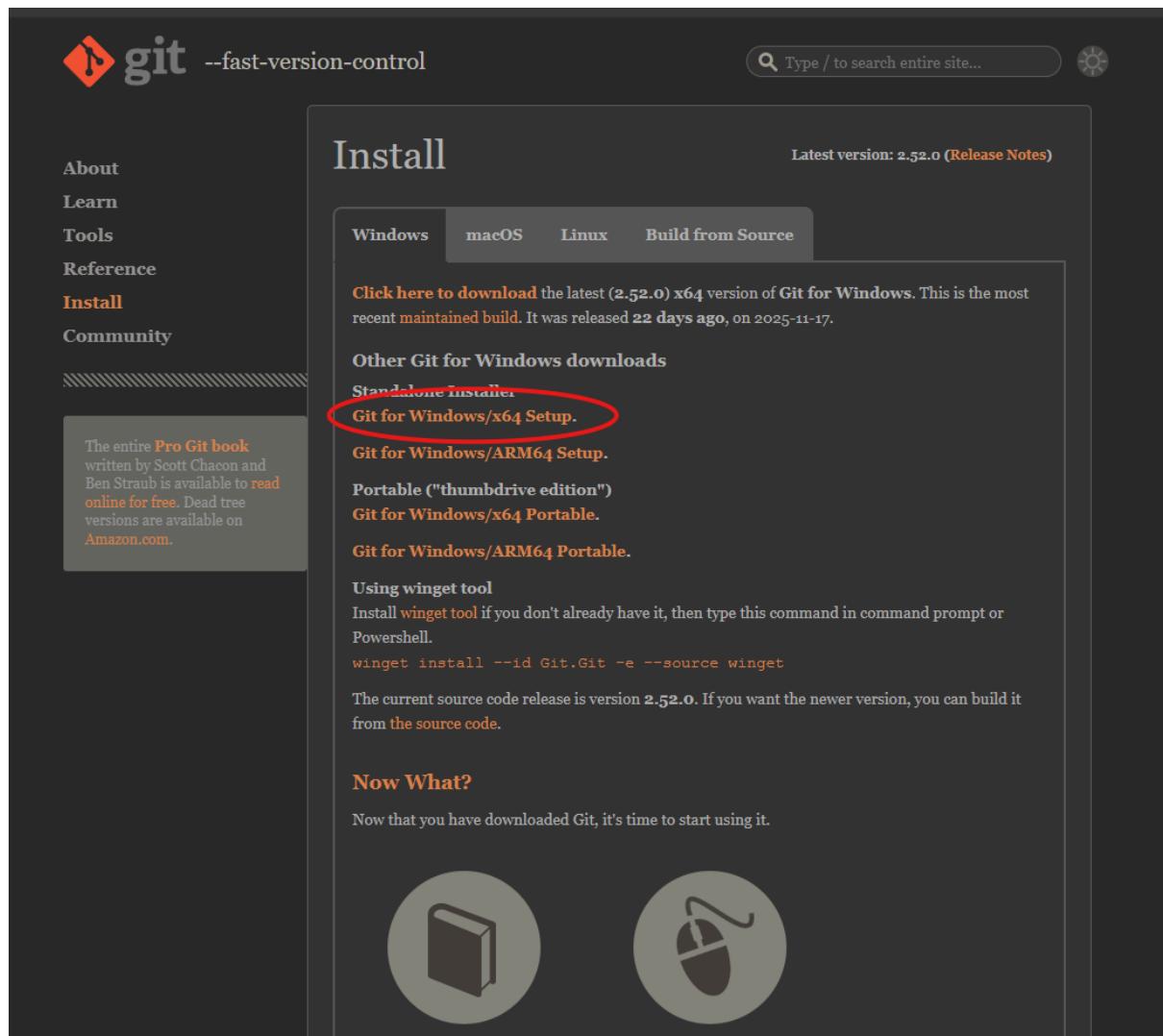
Community
Get involved! Bug reporting, mailing list, chat, development and more.

Latest source release **2.52.0**
[Release Notes \(2025-11-17\)](#)

Install for Windows

[GitHub Repository](#)

Pro Git by Scott Chacon and Ben Straub is available to [read online for free](#). Dead tree versions are available on [Amazon.com](#).



Step 2. Install specific repository

The detailed installation instructions have been omitted for security reasons.

3. User Manual

3.1 Overview

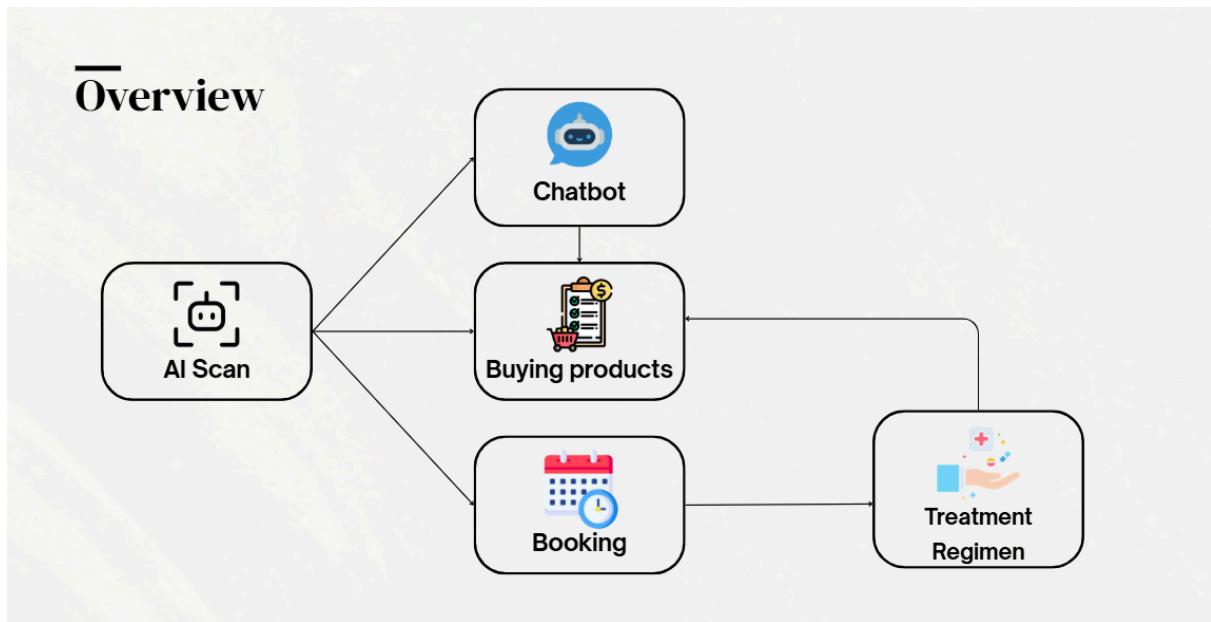
Skinalyze is a comprehensive healthcare platform that connects customers with certified dermatologists for skin analysis, treatment consultation, and product recommendations. The application combines AI-powered skin disease detection with professional medical consultation to provide personalized skincare solutions.

Application Purpose

Skinalyze serves as a digital healthcare platform designed to:

- Enable customers to analyze their skin conditions using AI technology
- Facilitate video consultations between customers and dermatologists
- Provide personalized treatment routines and product recommendations
- Offer e-commerce capabilities for skincare products

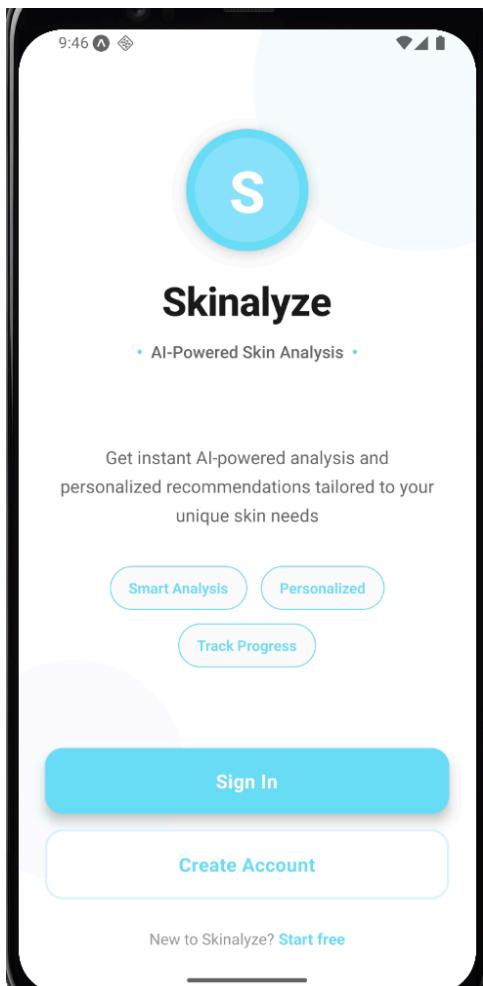
- Support subscription-based healthcare services



3.2 Customer Workflows

3.2.1 Registration and Login Workflows

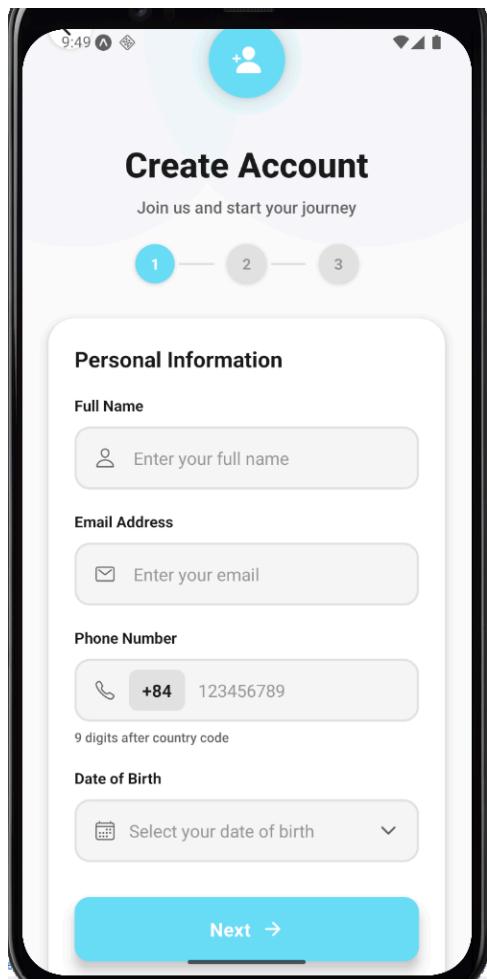
1. Download Skinalyze app (.apk) and install to your device



Welcome Screen

2. Launch the app and select "Create Account" if don't have any account
3. Personal Information (Step 1/3)

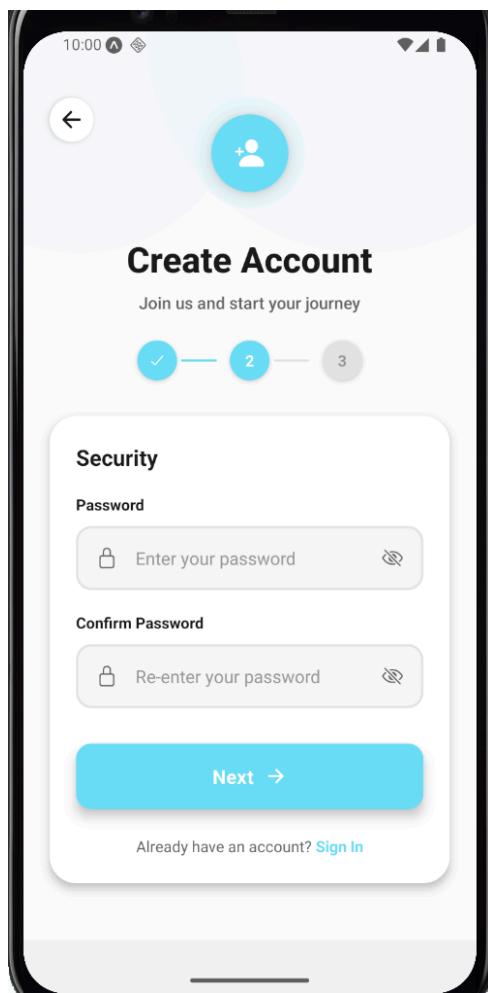
Enter full name
Input email address
Enter phone number
Select date of birth
Tap "Next"



Personal Information Screen (Step 1/3)

4. Personal Information (Step 2/3)

Enter password
Repeat the same password in "Confirm Password"
Tap "Next"



Personal Information Screen (Step 2/3)

5. Personal Information (Step 3/3)

Enter Street field

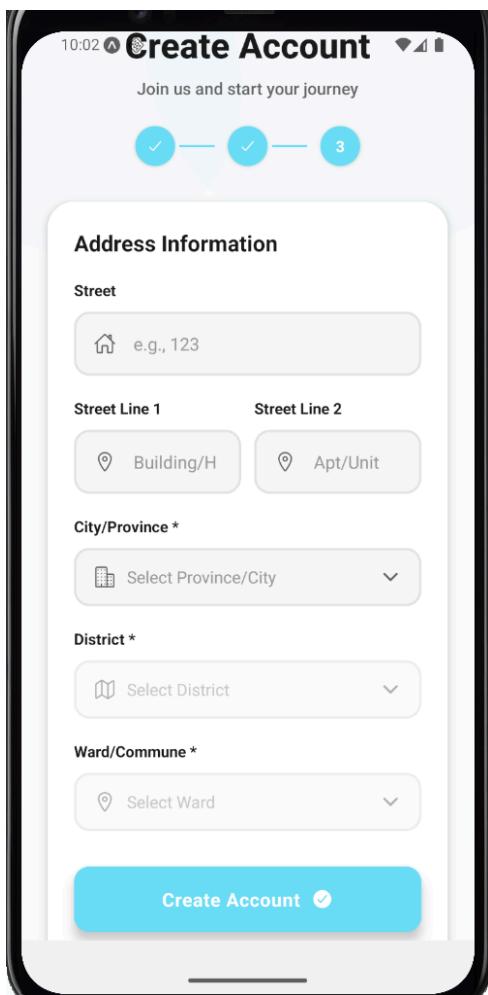
Enter Street Line 1 field, Street Line 2 field is optional

Select City/Province from list

Select District from list

Select Ward/Commune from list

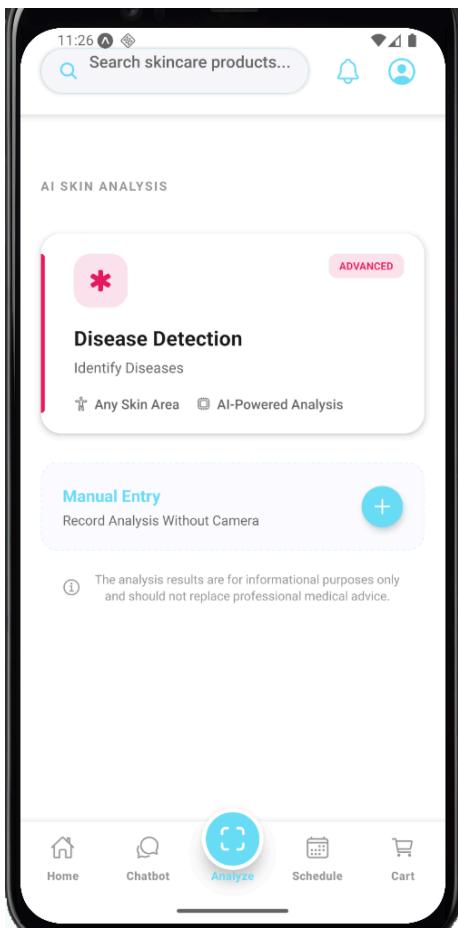
Tap "Create Account"



Personal Information Screen (3/3)

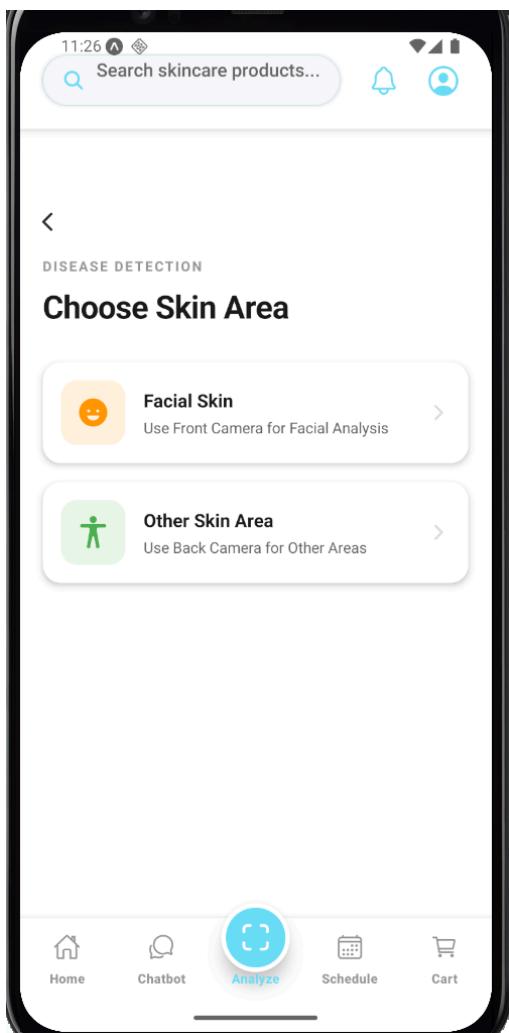
3.2.2 Skin Analysis Workflows

1. Tap “Analyze” button
2. Choose option between use AI or create manual



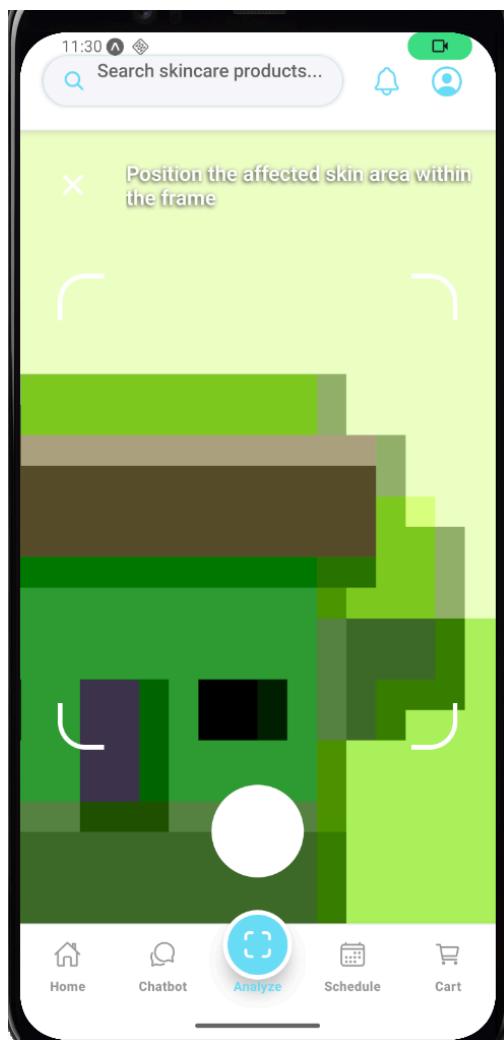
Analyze screen

3. If “Disease Detection” is selected, the screen display 2 options: “Facial Skin” and “Other Skin Area”



Choose Skin Area

4. If "Facial Skin" option is selected



Facial Camera Screen

5. If “Other Skin Area” option is selected



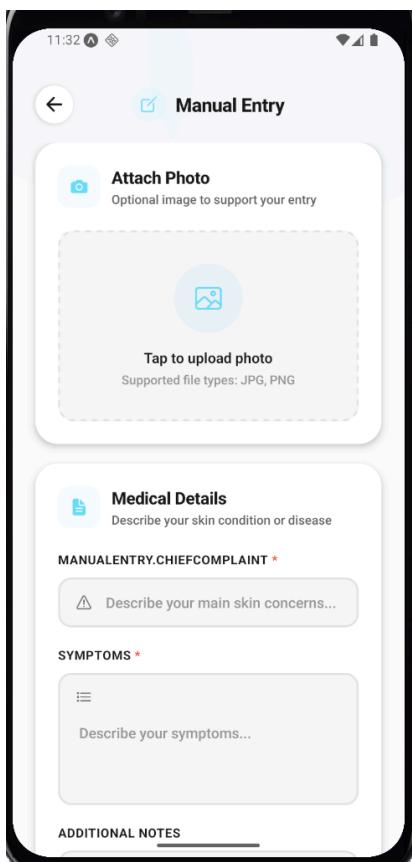
Other Skin Area Screen

6. If “Manual Entry” option is selected

Press “Tap to Upload” for upload image from gallery

Enter all fields

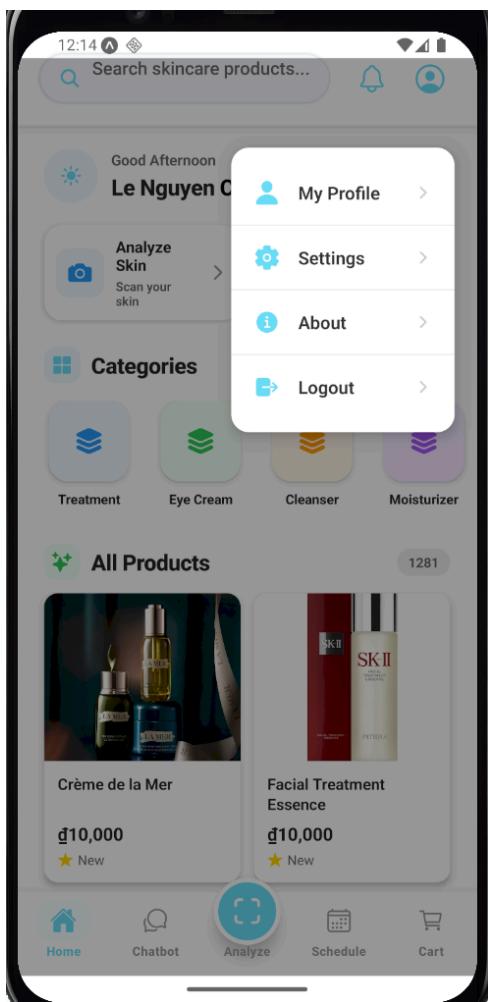
Hit “Save Records”



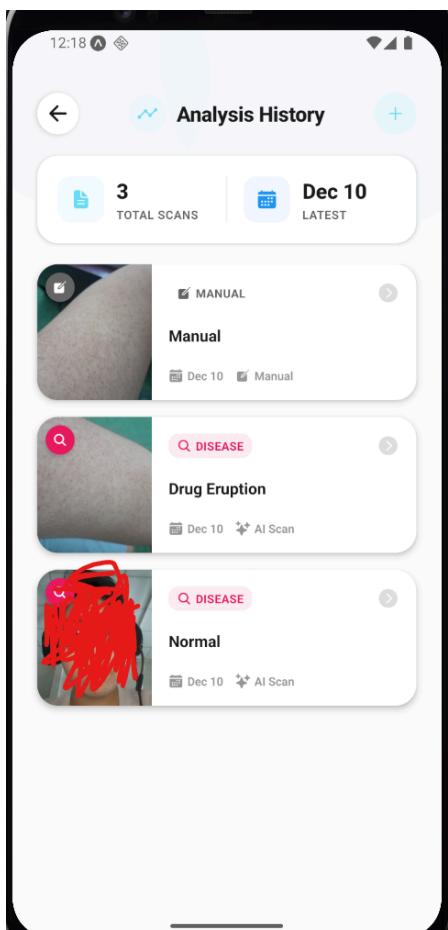
7. View all Analysis

Hit profile icon

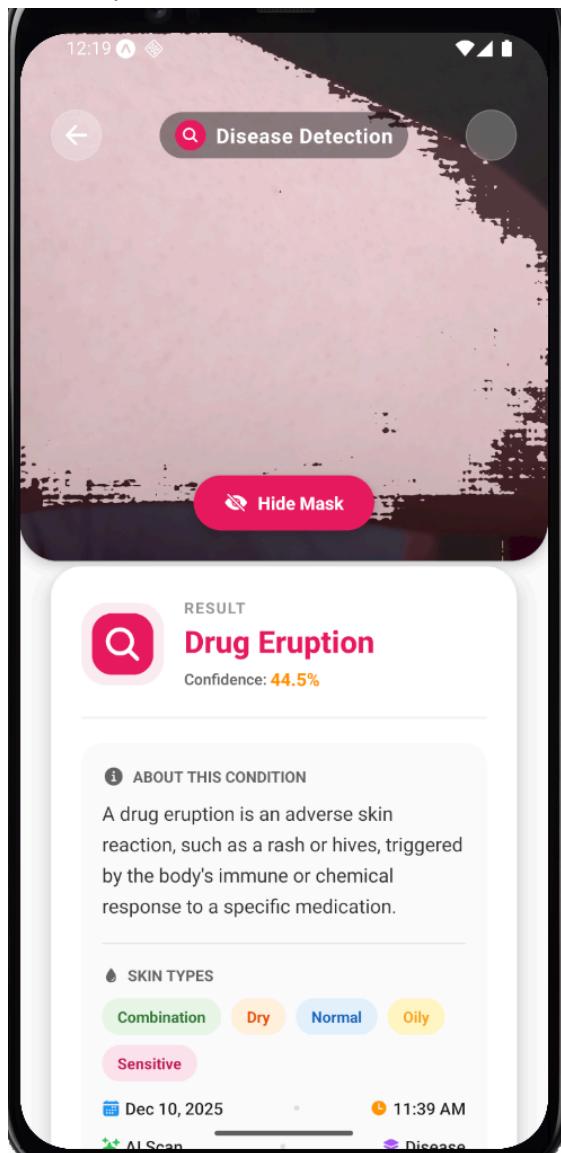
Select "My Profile"



Choose “Analysis” option

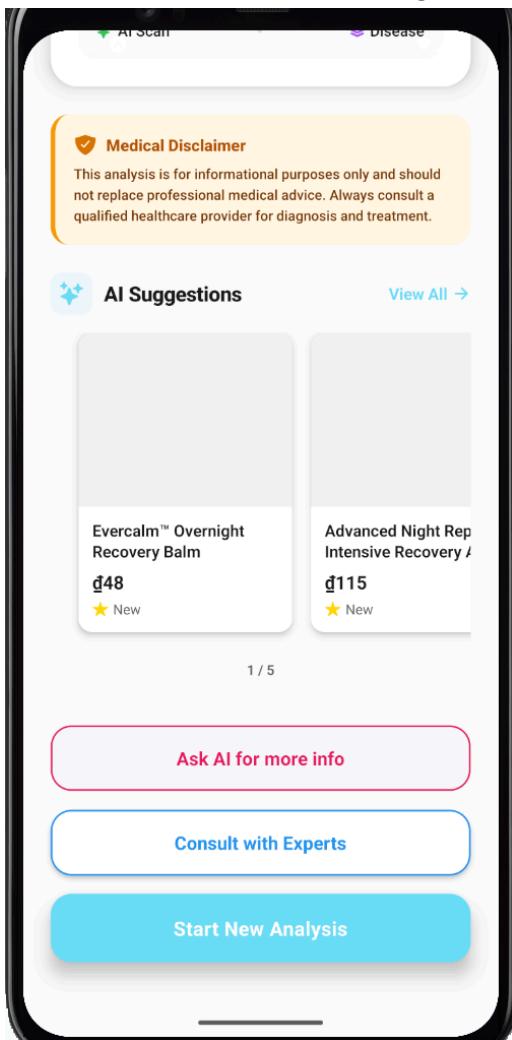


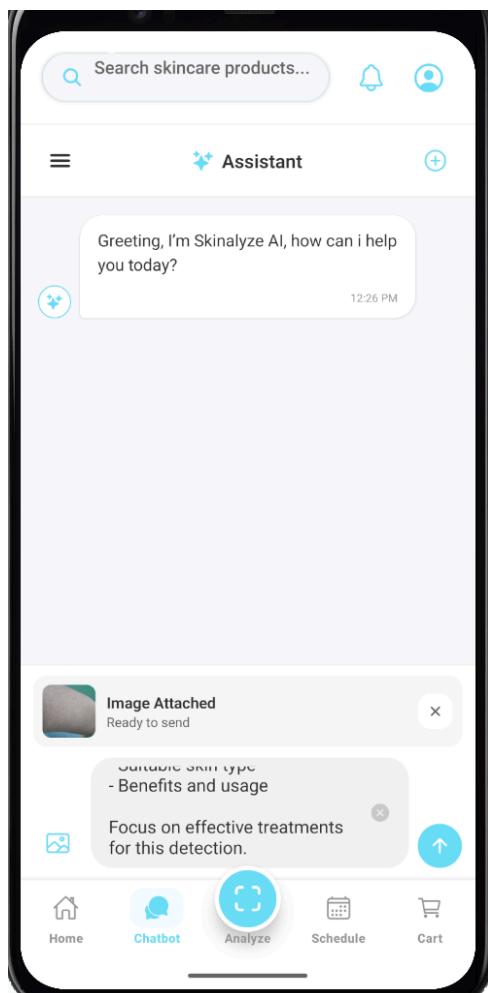
Select any record for detail



8. Using AI Chatbot

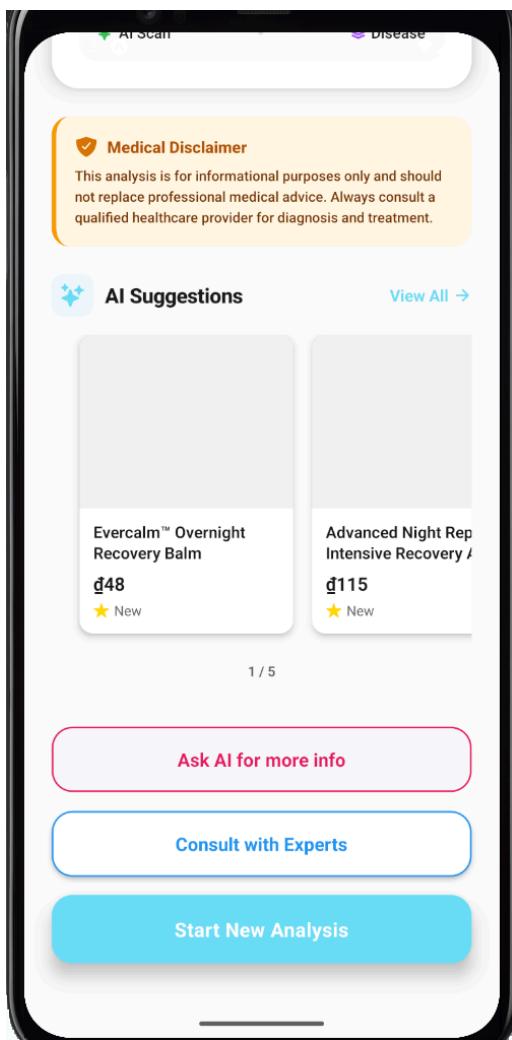
Press “Ask AI for more info” to navigate to Chatbot screen with prefilled information





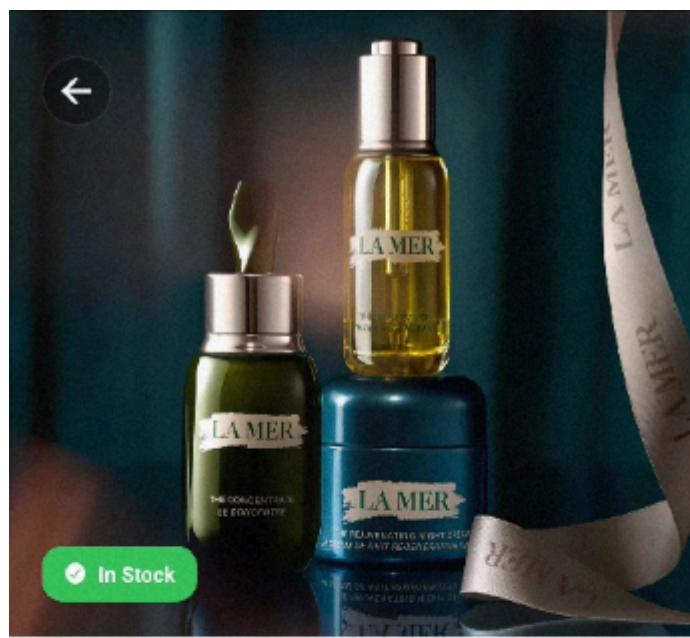
9. Booking for consultation with dermatologists

Press “Consult with Experts” button for Booking workflow



3.2.3 Order Workflows

1. Add Product to Cart



LA MER

Crème de la Mer

☆☆☆☆☆ No ratings

0 reviews

đ10,000

148 units available



Categories

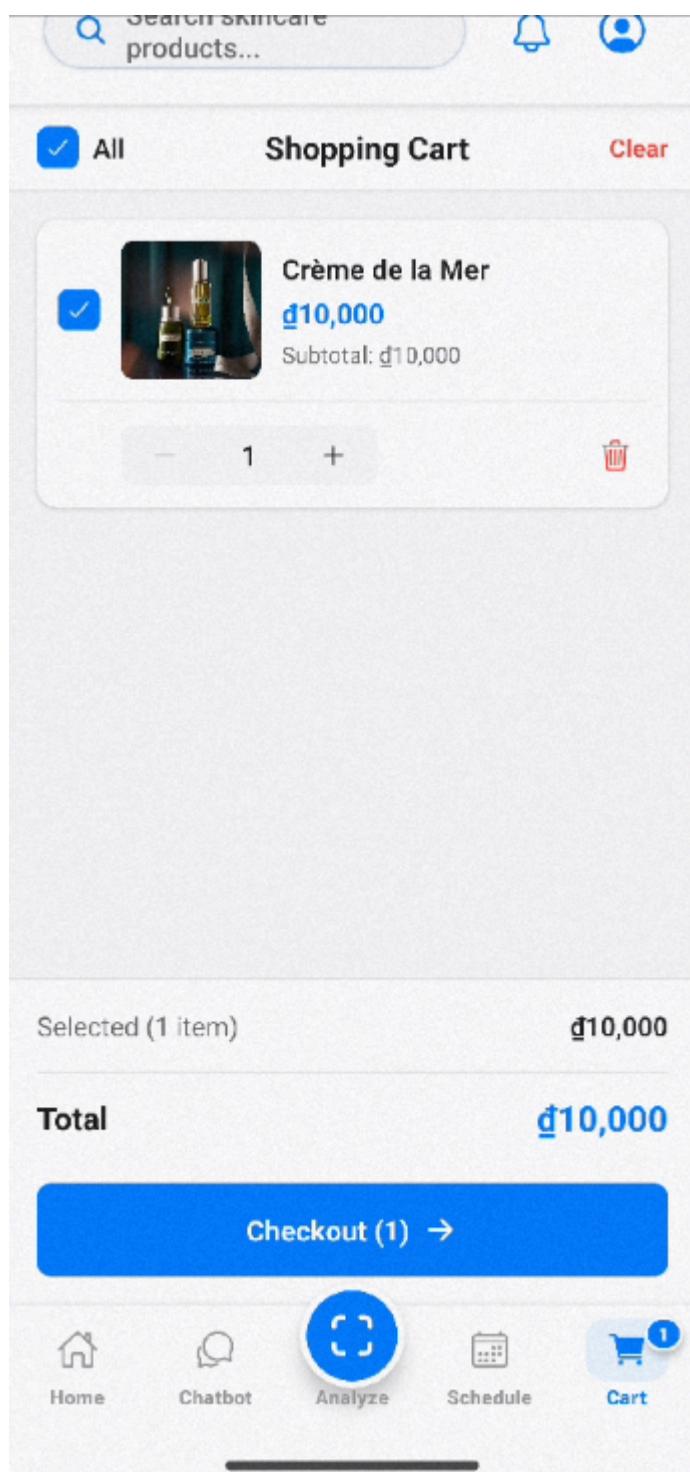
Moisturizer

- 1 +

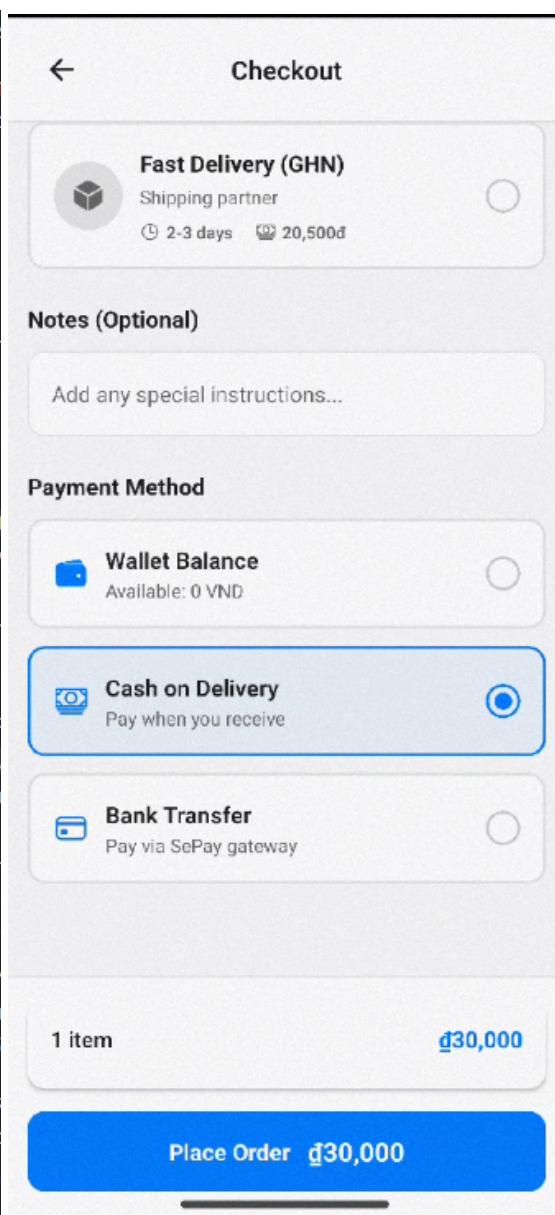
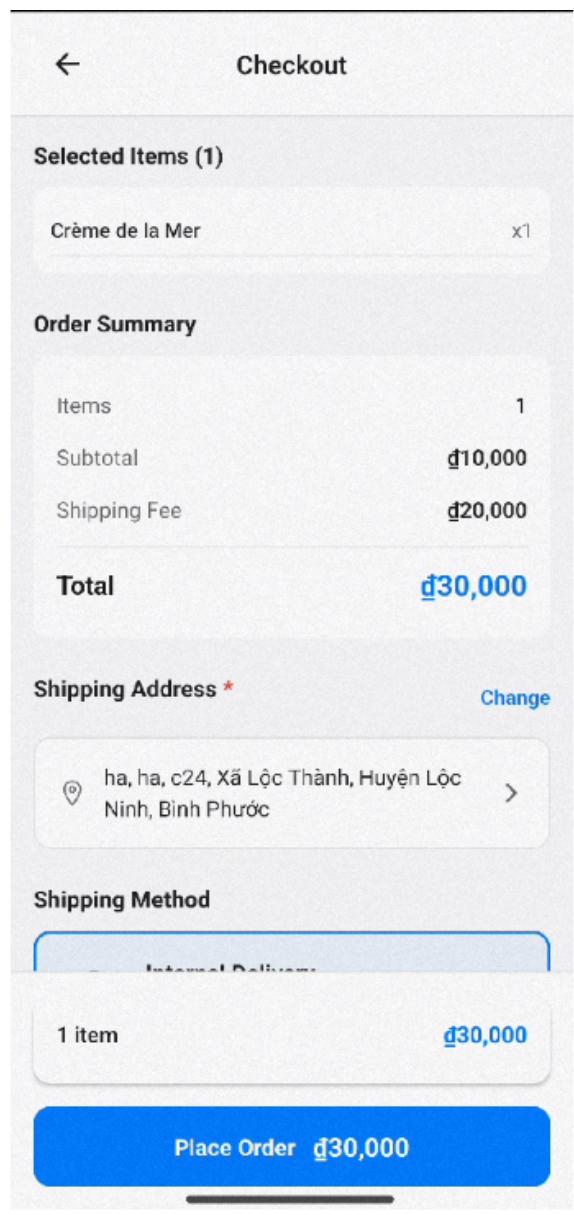
Add to Cart



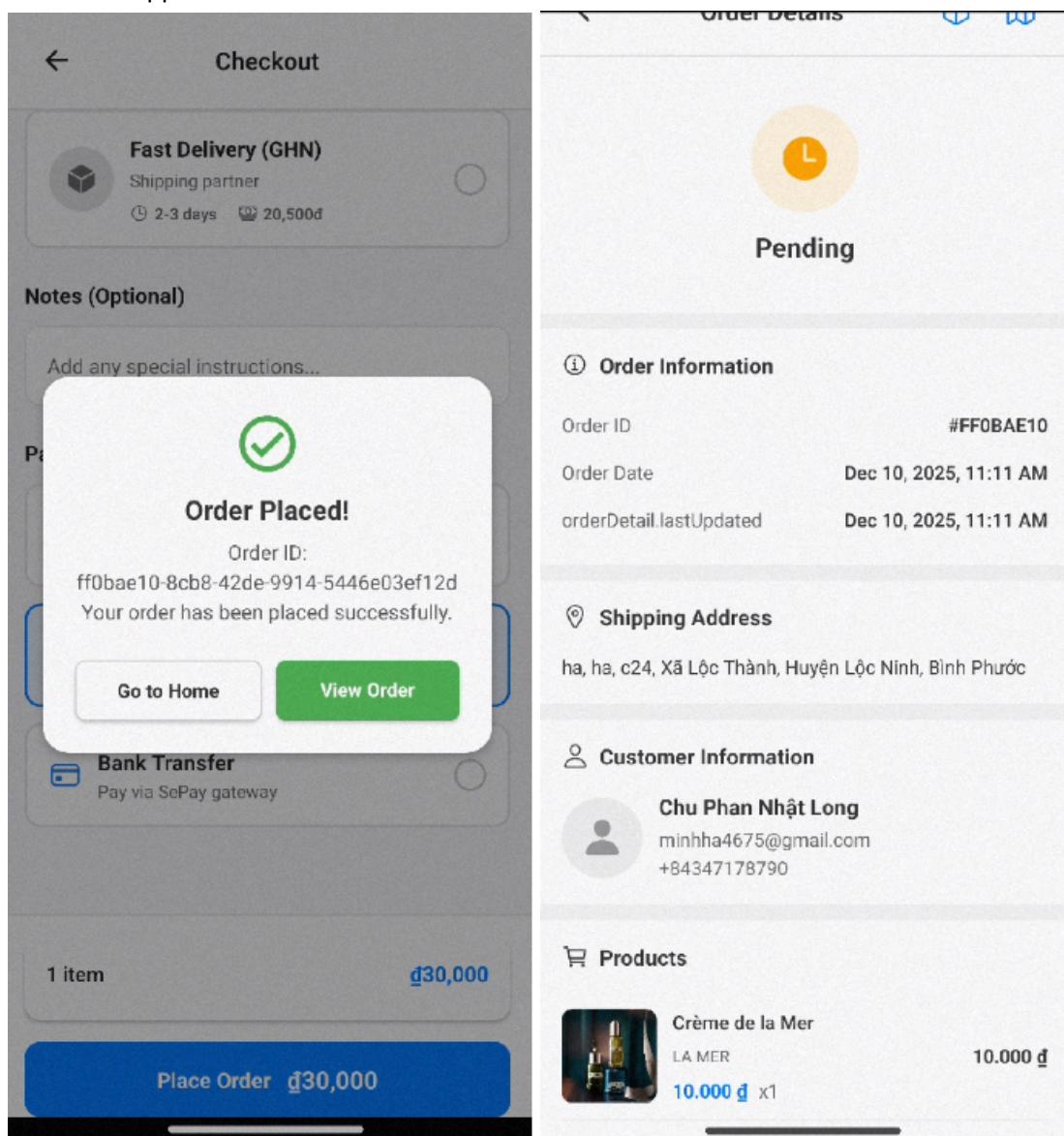
2. Checkout cart



3. Click the “Checkout” button to select the shipping method, payment method and confirm your order.

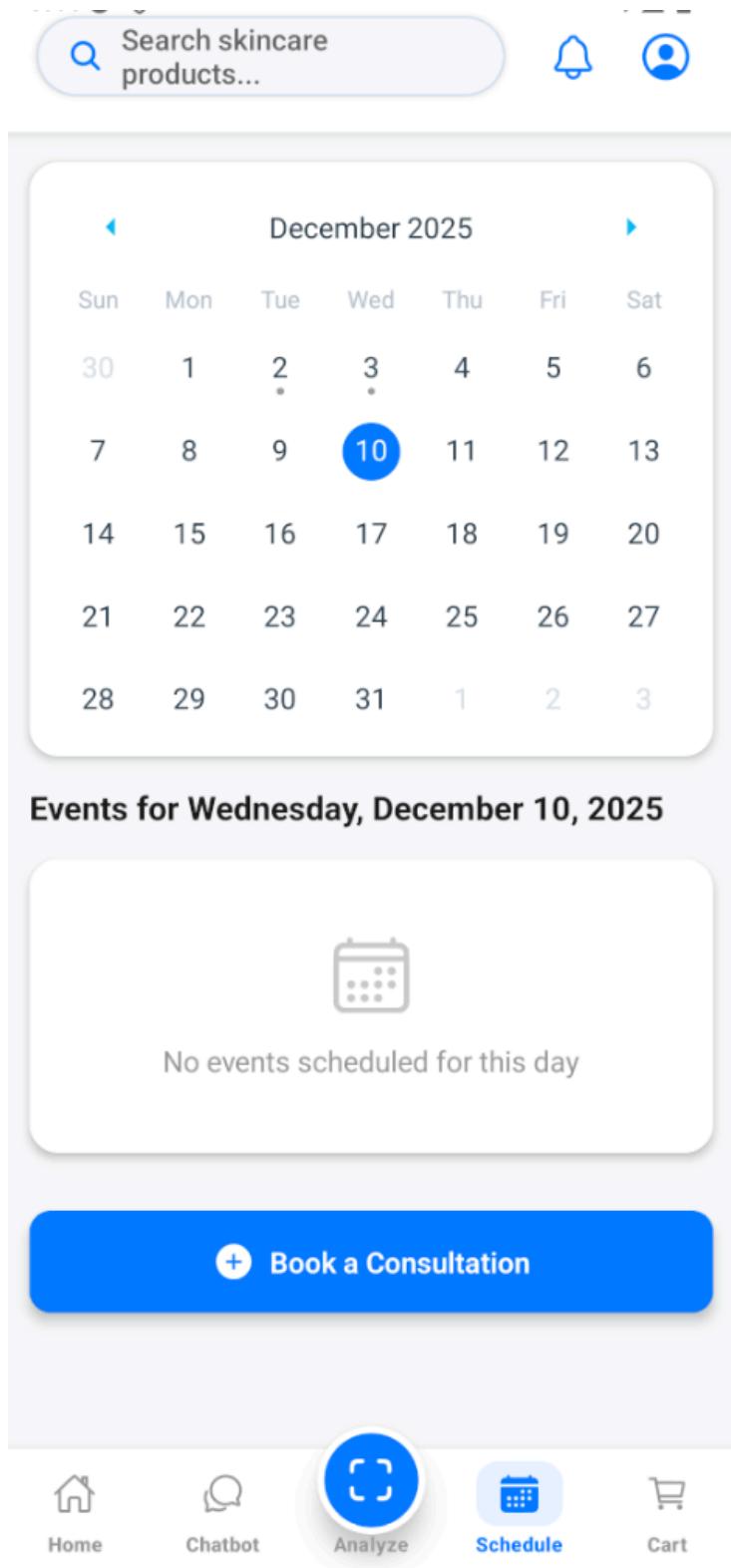


4. If the user selects the “Thanh toán khi nhận hàng” method, an order will be created and sent to Staff for approval.



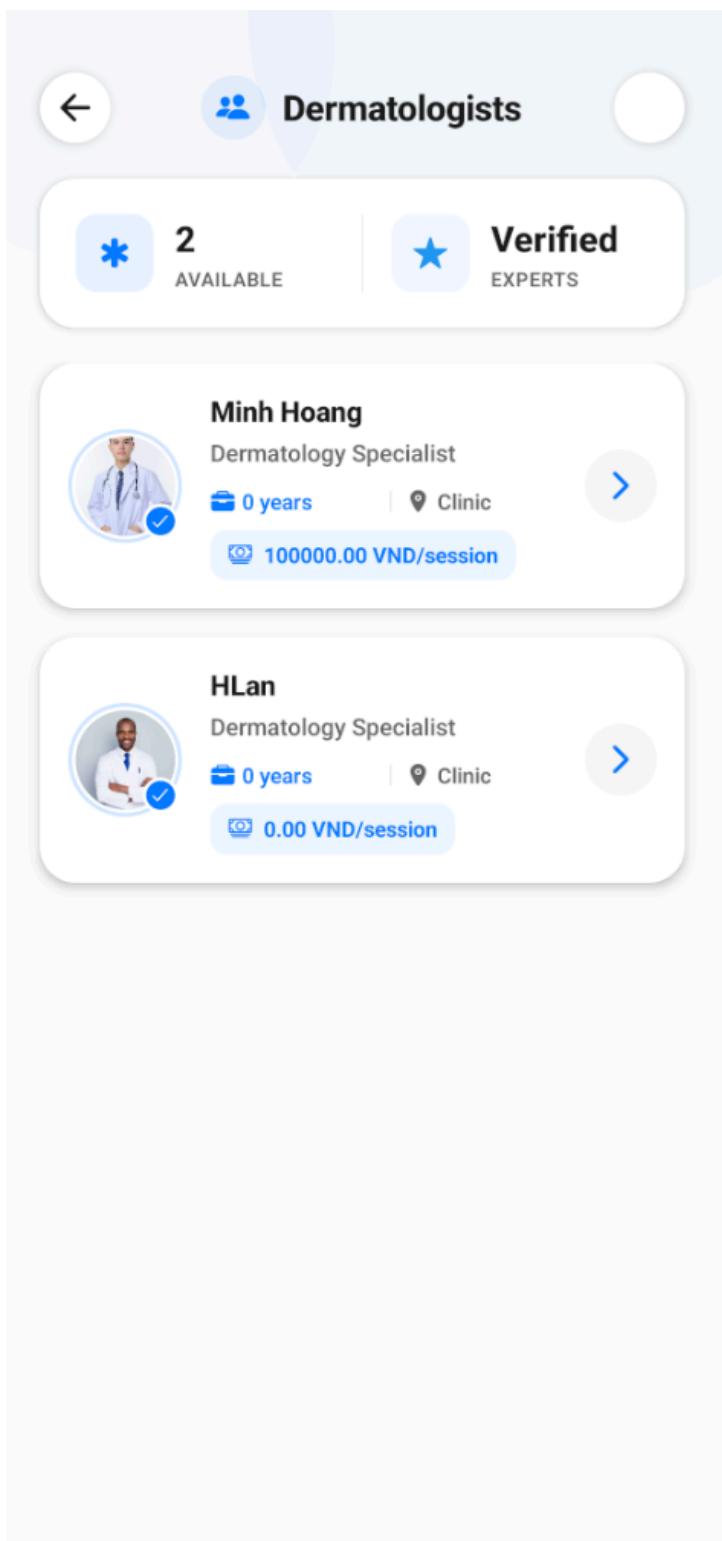
3.2.4 Booking Workflows

1. Open Schedule Screen(Navigate to the Schedule tab from the bottom navigation)
View your calendar with existing appointments (marked dates have colored dots)
Tap any date to see appointments scheduled for that day



2. Tap the "Book a Consultation" button at the bottom of the screen to browse the list of available dermatologists

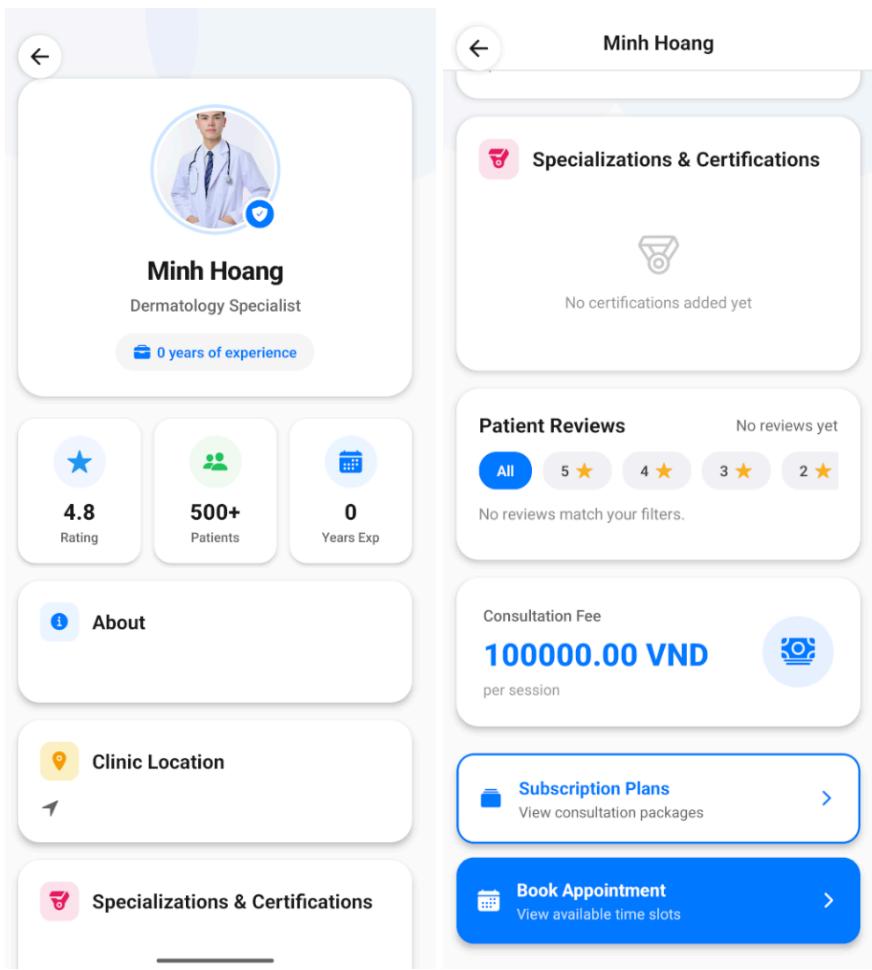
Tap on a dermatologist to view their full profile



3. View Dermatologist Details

Check consultation default price per session

Tap "Book Appointment" button



4. Choose Date & Time

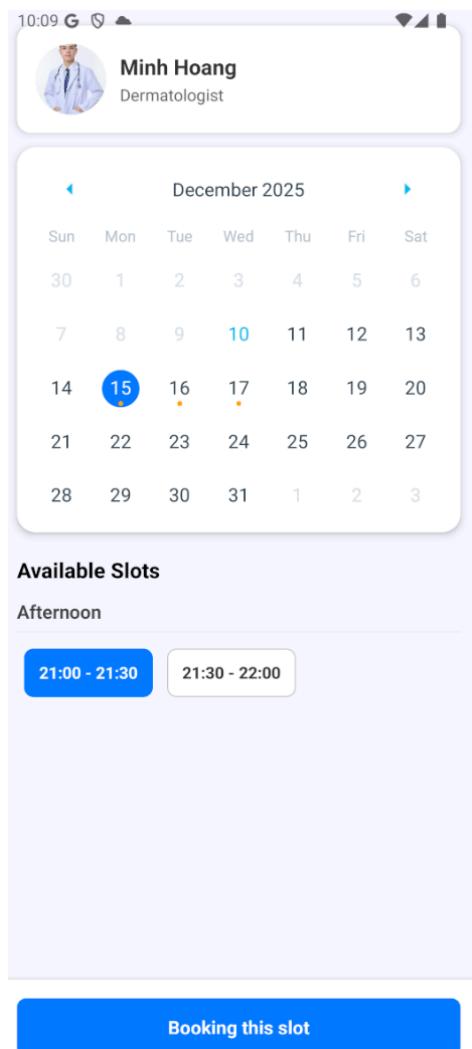
View calendar with available dates (marked with orange dots)

Tap an available date to see time slots

Slots are grouped by Morning and Afternoon

Select your preferred time slot

Tap "Booking this slot" button



5. Confirm Booking Details

Review appointment summary

Select Appointment Purpose:

- + New Problem
- + Follow-up (requires selecting a treatment routine)

Select a Skin Analysis result to share with doctor

Add optional notes

Choose Payment Method:

- + Pay Now (Bank Transfer)
- + Wallet Balance
- + Use Subscription (if available)

Tap "Proceed to Payment" button

Consultant

Minh Hoang
Dermatologist

Appointment Details

Date: 15/12/2025
Time: 21:00 - 21:30

Patient Information

HLong
long@gmail.com

Phone: 0357838153
Date of Birth: 18/03/2004
Gender: N/A

Allergies:
Medical History: None provided

Appointment Purpose

New Problem Follow-up

Analysis to review:
+ Create new manual entry

Redness on cheeks

Bank Transfer (VietQR)
100,000 VND

Skinalyze Wallet
Balance: 2,655.000 VND

VIP30
29 sessions remaining

VIP30
30 sessions remaining

Proceed to Payment

Proceed to Payment

6. Complete Payment

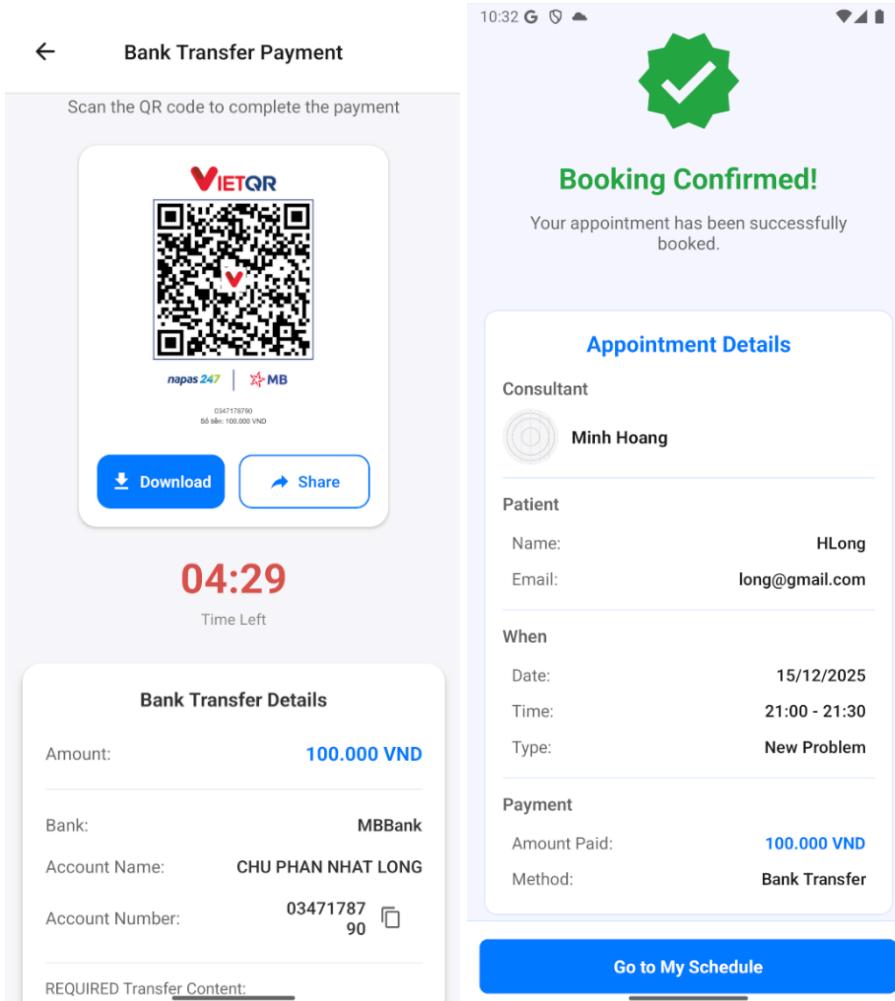
Scan QR Code with your banking app or manually transfer using displayed bank details

Important: Do not leave the page until payment is confirmed

Payment success screen appears

View appointment confirmation details

Return to Schedule to see your new appointment



7. Go to Schedule tab and tap on any appointment to View appointment details

Before the Appointment

- + The "Join Meeting" button becomes active 10 minutes before your scheduled time
- + Cancel Appointment (Available only for Scheduled appointments)

Tap "Cancel Appointment" button

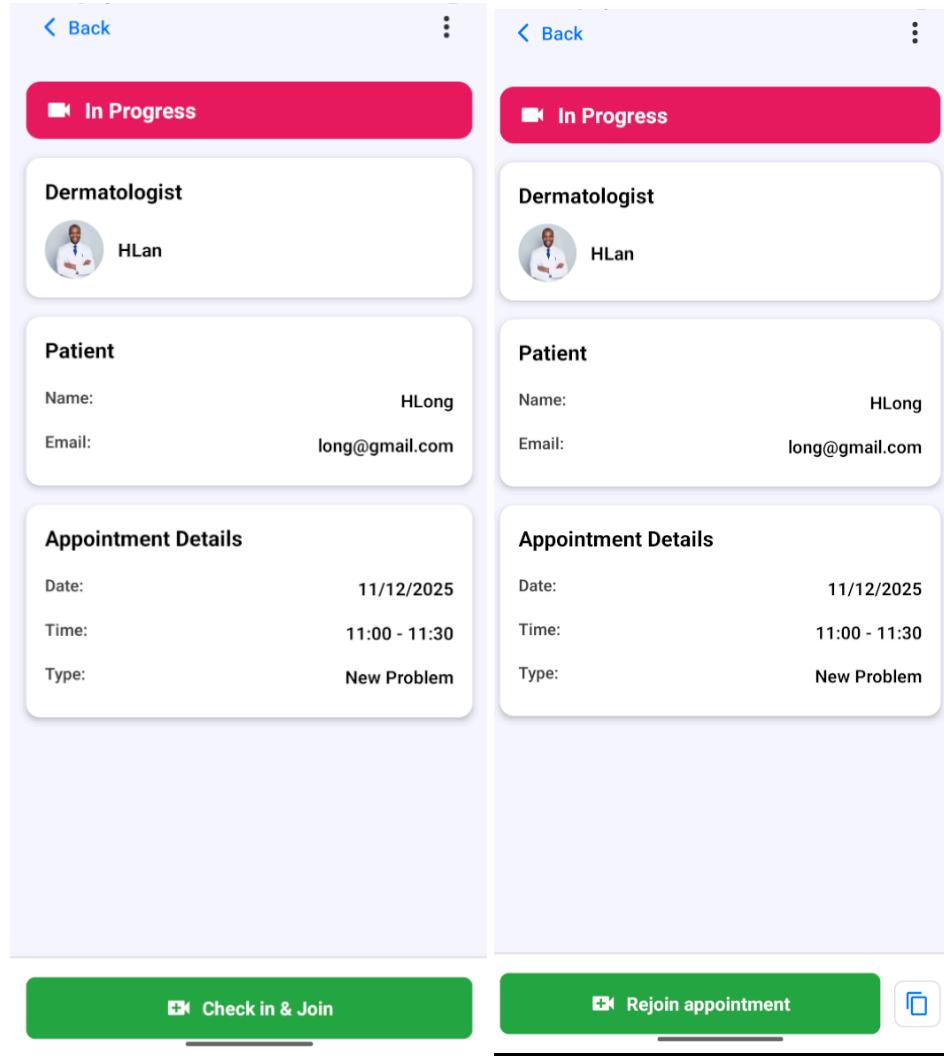
Refund Policy:

Cancel more than 24 hours before: Full refund

Cancel less than 24 hours before: No refund

Starting the Consultation

- + Tap "Check-in & Join" button when available



The app will:

- + Record your check-in time
- + Open the video meeting link in your browser

If you need to rejoin, tap "Rejoin Meeting" button

Use Copy Link icon to copy meeting URL if needed

During/After Consultation:

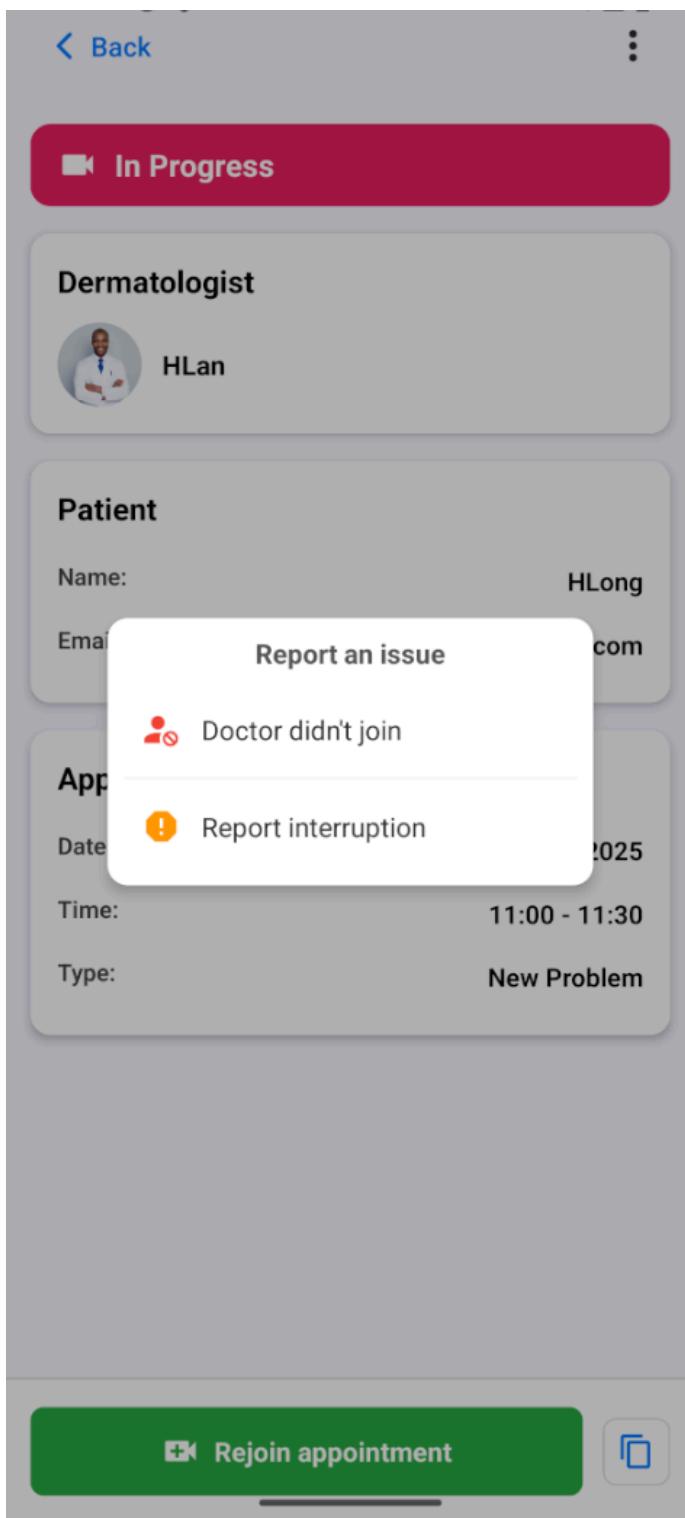
- + Report Issues (Available during/after session)

Tap : menu icon (top right)

Options:

Report No-Show: Doctor didn't join the meeting

Report Issue: Technical problems or interruptions



- + Rate Your Experience with the dermatologist(Available after appointment is Completed)

[Back](#)

Completed

Dermatologist



HLan

Rate Your Dermatologist

How was your consultation with HLan ?



I had a very positive experience with Dr. HLan. The consultation was thorough and professional. The doctor carefully examined my facial skin, explained the causes of my inflamed acne and irritation, and

[Submit Rating](#)

Patient

Name: HLong

Email: long@gmail.com

Appointment Details

Date: 28/10/2025

[View treatment routine](#)

+ View Treatment Routine

If doctor created a routine, tap "View Treatment Routine"

Access your personalized skincare plan

Back

Long Routine

Created: 28 Oct 2025 COMPLETED

Follow the instructions below for best results.

Morning Routine

Rửa mặt nhẹ nhàng. Vỗ serum khi da còn ẩm. Luôn luôn dùng kem chống nắng.

Hydrating Cleanser
Dose: 1 pump • Morning
 ko co

CO serum
Dose: 1 lit • cách 2 ngày 1 lần
 Kích ứng thi dung

Kẽm zinc
Dose: 1 viên • 2 lần/ tuần

Noon Routine

Luôn rửa tay sạch trước khi chạm lên mặt. Chỉ thấm dầu, không rửa mặt lại

Duong da 333
Dose: 1 Hat dau • 2x Morning

Serum Possay
Dose: 3 giot • Night x2
 Xai vua du

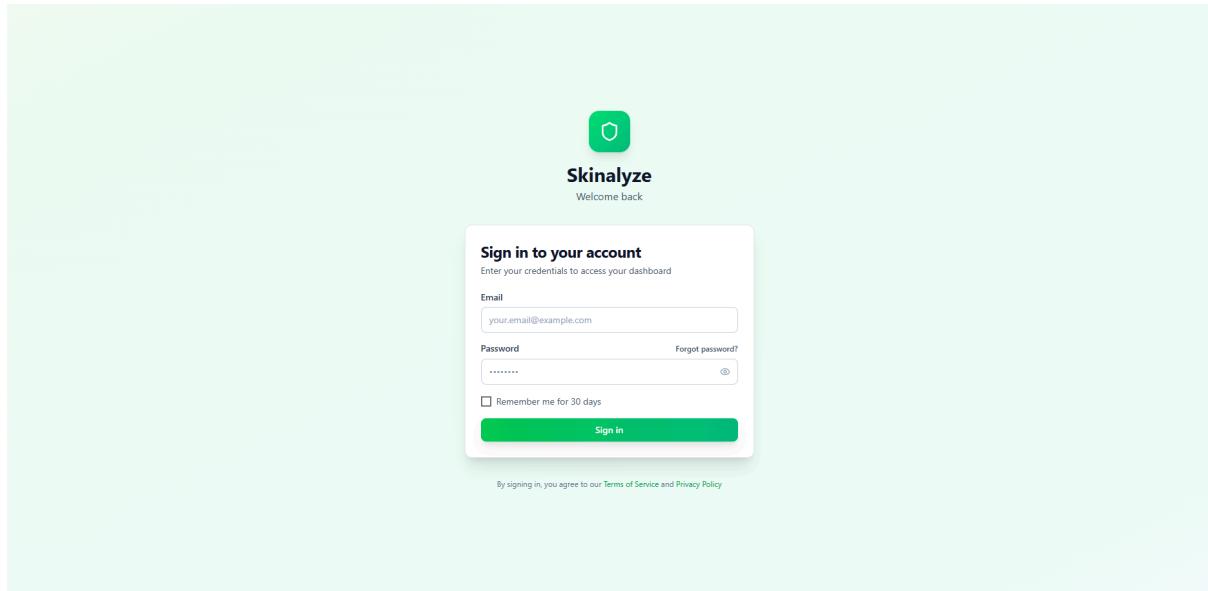
3.3 Staff Workflows

3.3.1 Introduction

This guide provides step-by-step instructions for **staff members** to log in to the Skinalyze **Staff** Management System and utilize its features to manage **orders, shipping, and inventory**. The system is accessible via the **staff** portal at [Skinalyze](#).

3.3.2 Login

1. Navigate to the Skinalyze portal



2. Enter your staff credentials:

- Email address: dtrong206@gmail.com
- Password: SecurePass123!

3. Click "Sign In"

4. You will be automatically redirected to the Staff Dashboard

3.3.3 Dashboard Overview

3.3.3.1 Order Management

This section allows staff members to track, review, and process customer orders. The interface displays a comprehensive list of orders with their current status (e.g., Pending, Confirmed). Staff can access detailed information for each order to make approval decisions based on the following rules:

- Order Processing:** Staff can manually **Approve** or **Deny** orders by clicking "View Details".
- Bank Transfer Automation:** Orders paid via **Bank Transfer** are automatically verified and approved by the system, requiring no manual intervention.
- Denial Policy:** When denying an order, the staff member is **required to provide a reason** for the rejection to notify the customer.

ORDER ID	CUSTOMER	ITEMS	TOTAL	STATUS	DATE	ACTIONS
ff0bae10...	Chu Phan Nhật Long minhha4675@gmail.com	1 item(s)	10.000 ₫	Pending	Dec 10, 2025, 11:11 AM	View Details
d1838a77...	Le Nguyen Chi Bao baopnct153721@ptl.edu.vn	1 item(s)	10.000 ₫	Pending	Dec 10, 2025, 11:06 AM	View Details
7185714b...	Chu Phan Nhật Long minhha4675@gmail.com	1 item(s)	10.000 ₫	Pending	Dec 10, 2025, 11:05 AM	View Details

Orders Manager

View and manage all customer orders

Total Orders: 3

ORDER ID: ff0bae10..., d1830a77..., 7185714b...

Customer Information: Chu Phan Nhát Long, minhha4675@gmail.com

Shipping Address: ha, lô, c24, Xã Lộc Thành, Huyện Lộc Ninh, Bình Phước
Shipping Method: Internal Delivery

Order Items (1): Crème de la Mer LA MER Qty: 1 10.000 ₫ each

Order Total: Pending Payment Total Amount: 10.000 ₫

Timeline: Created: Dec 10, 2025, 11:11 AM Last Updated: Dec 10, 2025, 11:11 AM

ACTIONS: View Details, View Details, View Details

Logout

Orders Management

View and manage all customer orders

Total Orders: 3

Pending: 3

Confirmed: 0

Delivered: 0

Search by order ID, customer ID, or address...

ORDER ID: ff0bae10..., d1830a77..., 7185714b...

CUSTOMER: Chu Phan Nhát Long, minhha4675@gmail.com; Le Nguyen Chi Bao, baodincse183721@fpt.edu.vn; Chu Phan Nhát Long, minhha4675@gmail.com

Note (Optional): e.g. Đã kiểm tra hàng, sẵn sàng giao...

Add any notes about the order confirmation

Confirm Order

DATE: Dec 10, 2025, 11:11 AM, Dec 10, 2025, 11:06 AM, Dec 10, 2025, 11:05 AM

ACTIONS: View Details, View Details, View Details

Logout

Orders Management

View and manage all customer orders

Total Orders: 3

Pending: 2

Confirmed: 1

Delivered: 0

Search by order ID, customer ID, or address...

ORDER ID: ff0bae10..., d1830a77..., 7185714b...

CUSTOMER: Chu Phan Nhát Long, minhha4675@gmail.com; Le Nguyen Chi Bao, baodincse183721@fpt.edu.vn; Chu Phan Nhát Long, minhha4675@gmail.com

ITEMS: 1 item(s)

TOTAL: 10.000 ₫

STATUS: Confirmed, Pending

DATE: Dec 10, 2025, 11:11 AM, Dec 10, 2025, 11:06 AM, Dec 10, 2025, 11:05 AM

ACTIONS: View Details, View Details, View Details

Logout

3.3.3.2 Shipping Management

The Shipping Management interface is designed for staff to oversee logistics and track order shipments efficiently, **supported by a dedicated mobile app for on-the-go delivery management.**

The dashboard provides a real-time summary of shipment statuses, such as "In Transit" or "Delivered". Key functionalities include:

- **Shipment Tracking:** Staff can view a detailed list of shipments, including Shipping ID, Order ID, Carrier, and current Status (e.g., Picked Up).
- **Create Logs:** The "Create Shipping Log" button allows staff to initiate new shipment records for processed orders.
- **Task Assignment & Mobile App:** The interface allows staff to manage tasks via tabs like "Available for Pickup" and "My Deliveries." **Additionally, delivery staff utilize a dedicated mobile application** to view assigned routes and update shipment statuses in real-time while performing deliveries.

Screenshot of the Skinalyze Staff Portal Shipping Management dashboard. The dashboard shows a summary of shipments: Total Shipments (1), In Transit (0), Out for Delivery (0), and Delivered (0). A search bar and a dropdown for 'All Status' are visible. Below the summary, a table lists a single shipment with columns: SHIPPING ID, ORDER ID, CARRIER, STATUS, SHIPPING FEE, EST. DELIVERY, and ACTIONS. The shipment details are: a8db8674..., ff0bae10..., Chu Phan Nhật Long, Picked Up, N/A, N/A, and View Details. A Logout link is at the bottom left.

Đơn hàng

Đơn mới (1) Đơn của tôi (1)

#7185714B Chờ nhận 30.000đ

Chu Phan Nhật Long
+84347178790

Lấy hàng
FPT University - HCMC Campus, Ho Chi Minh City, Vietnam

Giao hàng
ha, ha, c24, Xã Lộc Thành, Huyện Lộc Ninh, Bình Phước

Nhận đơn

← Chi tiết đơn hàng

23.09 km 58 phút

#7185714B Chờ nhận 30.000đ

Thông tin khách hàng

Chu Phan Nhật Long
+84347178790
minhha4675@gmail.com

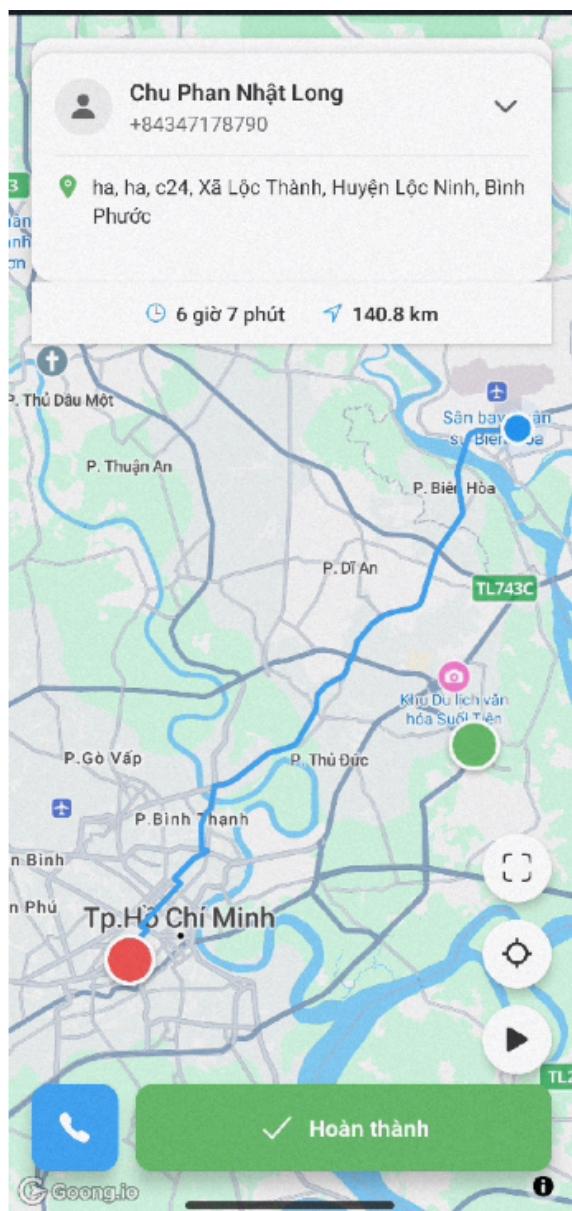
Địa điểm

Lấy hàng
FPT University - HCMC Campus, Ho Chi Minh City, Vietnam

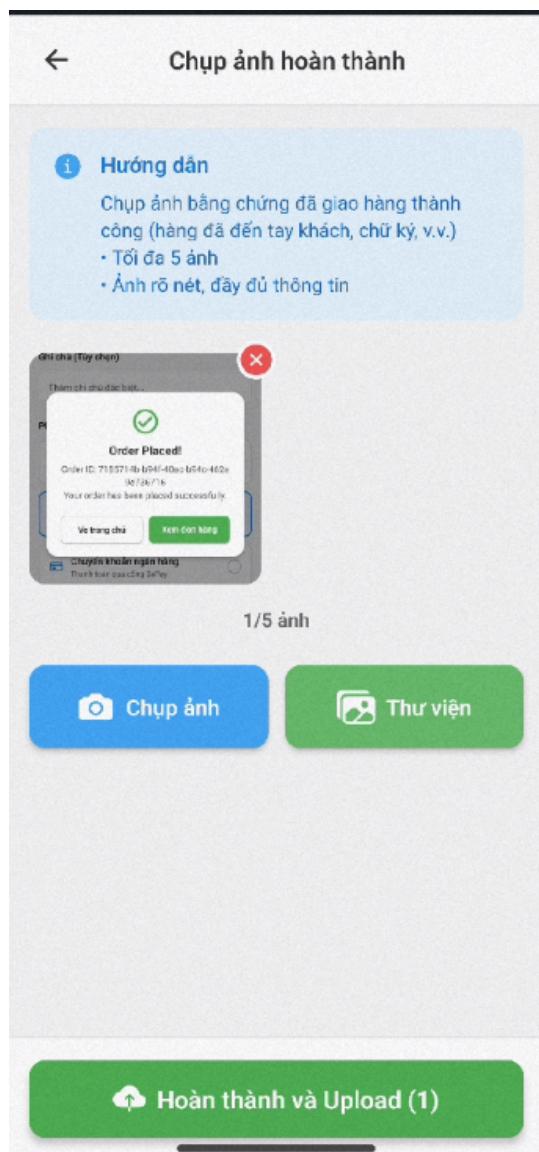
Giao hàng
ha, ha, c24, Xã Lộc Thành, Huyện Lộc Ninh, Bình Phước

Tạo đơn gộp

Nhận đơn



To complete an order, staff must have to upload picture for proof to finish an order.



3.3.3 Stocking Management

The Inventory Management section is the central hub for tracking product availability and valuation. Staff can monitor real-time stock levels through key metrics displayed at the top, such as Total Products, Low Stock alerts, and Total Value. The interface provides a detailed product list with the following capabilities:

- **Stock Monitoring:** View comprehensive details for each product, including Brand, Current Stock, Reserved Quantity, and Available Quantity.

- **Status Indicators:** Quickly identify product availability with status tags like "In Stock" or alerts for "Low Stock" and "Out of Stock" items.
- **Stock Adjustment:** Staff can perform manual inventory updates by clicking the "**Stock Adjustment**" button next to any product to correct discrepancies or update stock counts.

PRODUCT	BRAND	CURRENT STOCK	RESERVED	AVAILABLE	STATUS	PRICE	ACTIONS
Crème de la Mer	LA MER	147	0	147	In Stock	175 ₣	<button>Stock Adjustment</button>
Facial Treatment Essence	SK-II	150	0	150	In Stock	179 ₣	<button>Stock Adjustment</button>
Protini Polypeptide Cream	DRUNK ELEPHANT	150	0	150	In Stock	68 ₣	<button>Stock Adjustment</button>
The Moisturizing Soft Cream	LA MER	150	0	150	In Stock	175 ₣	<button>Stock Adjustment</button>
Your Skin But Better CC+ Cream with SPF 50+	IT COSMETICS	150	0	150	In Stock	38 ₣	<button>Stock Adjustment</button>
The Water Cream	TATCHA	150	0	150	In Stock	68 ₣	<button>Stock Adjustment</button>
Lala Retro Whipped Cream	DRUNK ELEPHANT	150	0	150	In Stock	60 ₣	<button>Stock Adjustment</button>

3.4 Dermatologist Workflows

3.4.1 Login

1. Navigate to the Skinalyze portal

2. Enter your dermatologist credentials:

- Email address: derma@gmail.com

- Password: derma123

3. Click "Sign In"

4. You will be automatically redirected to the Dermatologist Dashboard

3.4.2 Manage availability

1. Viewing Availability

- + Scroll and switch views (Week/Month/Day) to browse slots.
- + Click a slot to open details; page auto-scrolls to the detail card.

The screenshot displays the Skinalyze Dermatologist Portal interface. On the left, a sidebar menu includes links for Dashboard, Manage Availability (which is currently selected and highlighted in blue), My Appointments, Subscription Plan, My Patients, and Profile. A Logout button is also present. The main content area features two calendar views: a detailed daily grid and a monthly overview.

Manage Availability
Review your calendar, delete existing slots, or drag to create new availability.

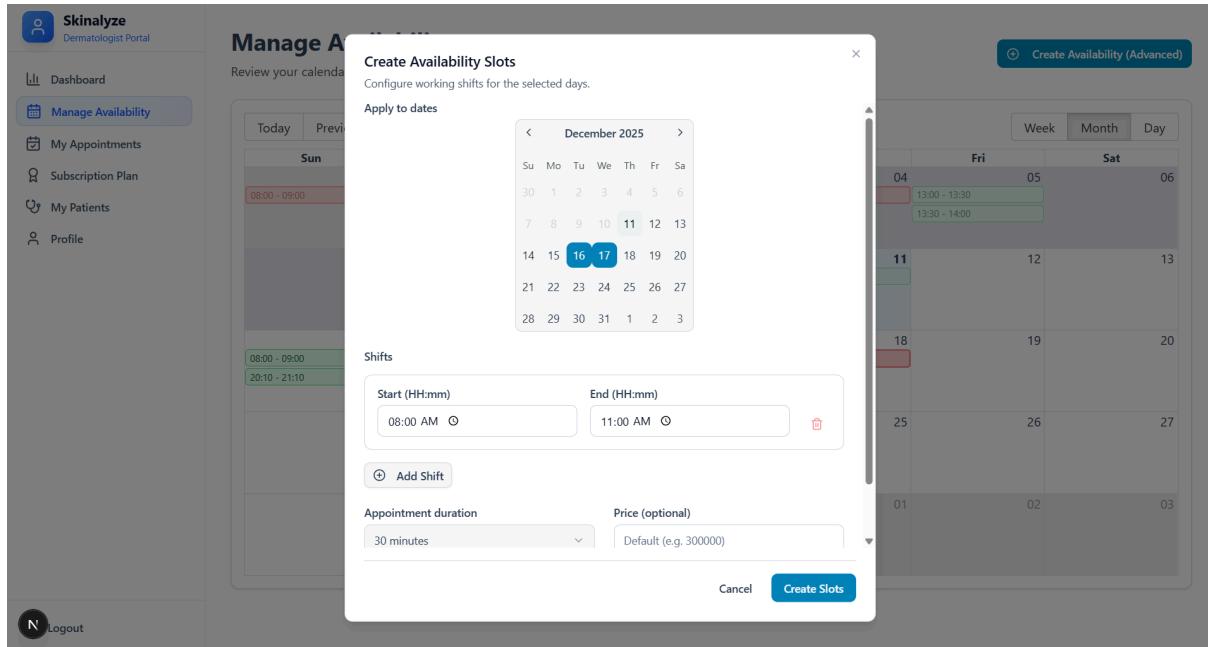
December 07 – 13

Slot Details
11:30, 11/12/2025
Time: 11:30 - 12:00
Status: Booked
Price: 10.000 VND

Cannot delete a booked slot. [View Appointment Details](#)

2. Creating Availability:

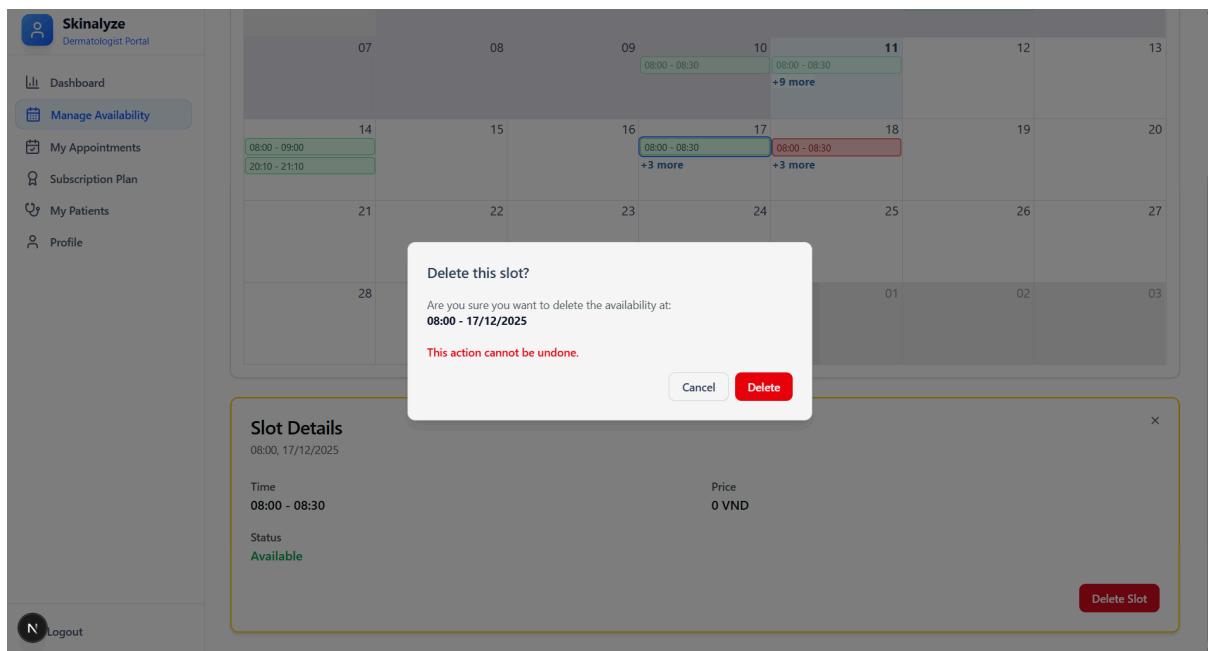
- + Drag on calendar
- + Advanced button



3. Deleting Slots

Select a slot → detail card → if status is Available, click “Delete Slot” to confirm.

Booked slots cannot be deleted; instead, a notice appears with a link to view the appointment.



3.4.3 Manage appointment

1. Browse Appointments

Tabs group appointments: Upcoming/In Progress, Completed/Settled, Disputed/Interrupted, Canceled/No-Show.

Each row shows patient info, time, type (New Concern/Follow-up), start alerts (e.g., “Starts in 10m”), and status badge.

Click any row to open its details.

Customer	Time	Appointment Type	Start Alert	Status
HLong	14:30 18 December, 2025	New Concern	—	Scheduled
HLong	08:00 18 December, 2025	New Concern	—	Scheduled

2. Appointment Details Screen

Left column: patient profile, contact, DOB, history, skin analysis (if available), notes.

Medical note card: write or edit notes; they save on draft or before completion.

Routines: create or open treatment routine via the button provided.

The screenshot displays the Skinalyze Dermatologist Portal interface. On the left, a sidebar menu includes Dashboard, Manage Availability, My Appointments, Subscription Plan, My Patients, and Profile. The main content area shows an appointment for patient Trinh Long (ID: 44808050-66df-4120-9362-34d9fe1cc236). The appointment details are as follows:

- Status:** Completed
- Dermatologist:** Minh Hoang
- Appointment Type:** New concern
- Schedule:** 11:30, December 12, 2025
- Price:** 10,000 VND

The Patient's Skin Analysis section lists:

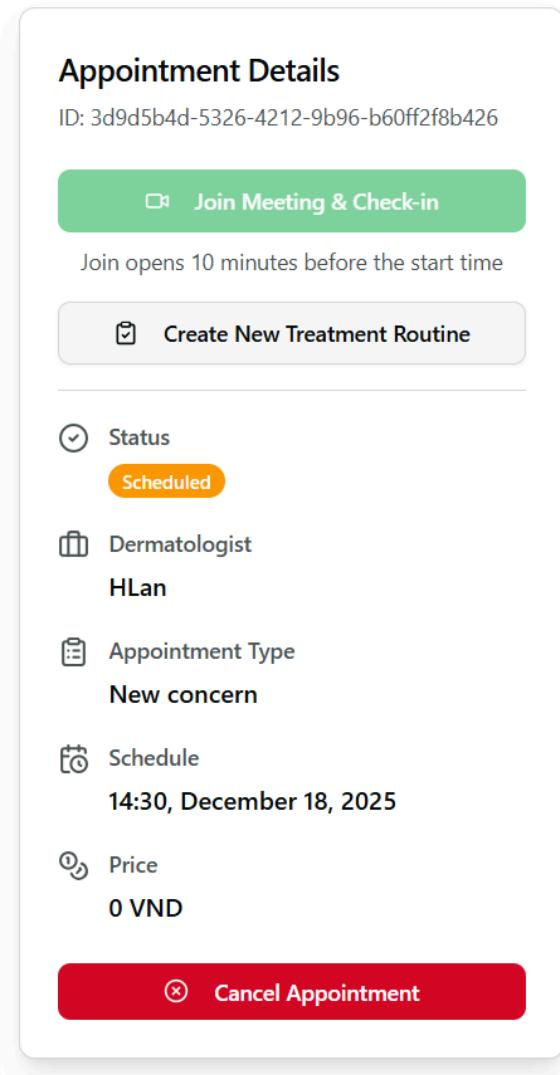
- Chief Complaint:** Da mun nhieu
- Patient Symptoms:** Do kich ung
- Notes:** Mong muon duoc dieu tri cai thien trong 2 tuan

A small image of a patient's face is shown under Submitted Images.

The Medical Notes section is titled "Medical Notes" and describes "Your private medical diagnosis & observations." It features a large text input field with the placeholder "Start typing your medical notes here...". A "Save Draft" button is located in the top right corner of this section. A note at the bottom states: "* Note: This content is saved automatically when you click "Save Draft" or "Complete Appointment".

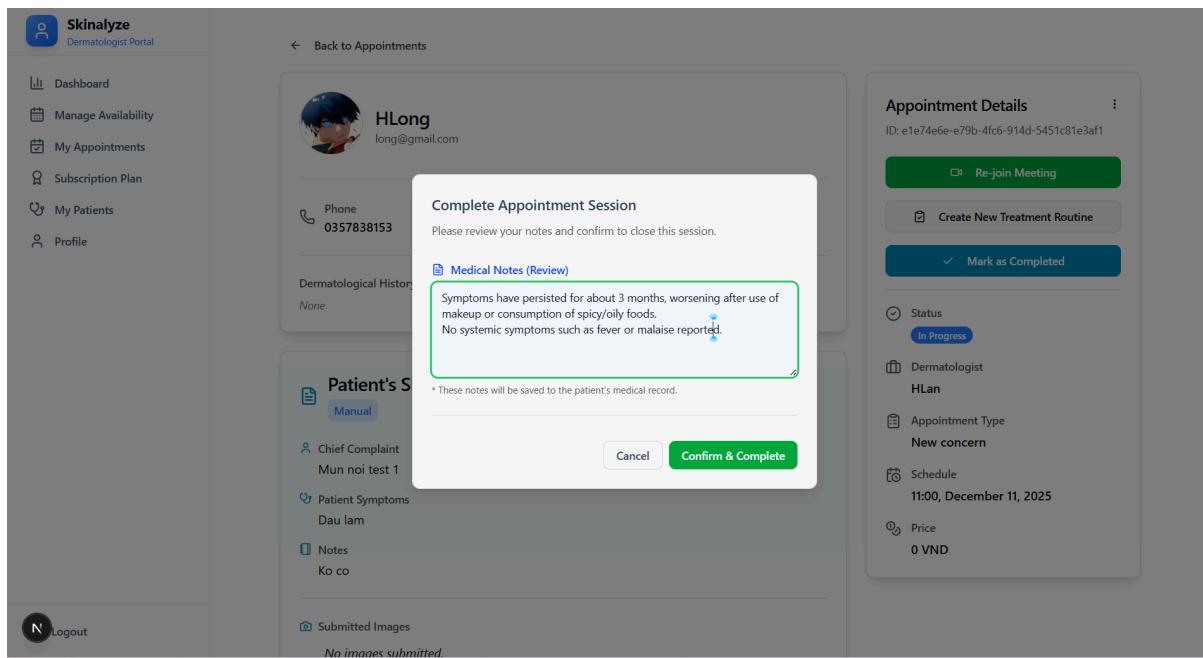
At appointment Details(right column)

- Join & Check-in/Rejoin meeting (records check-in if first join); button shows when status is Scheduled/In Progress and window is open.
- Cancel Appointment (only when Scheduled).

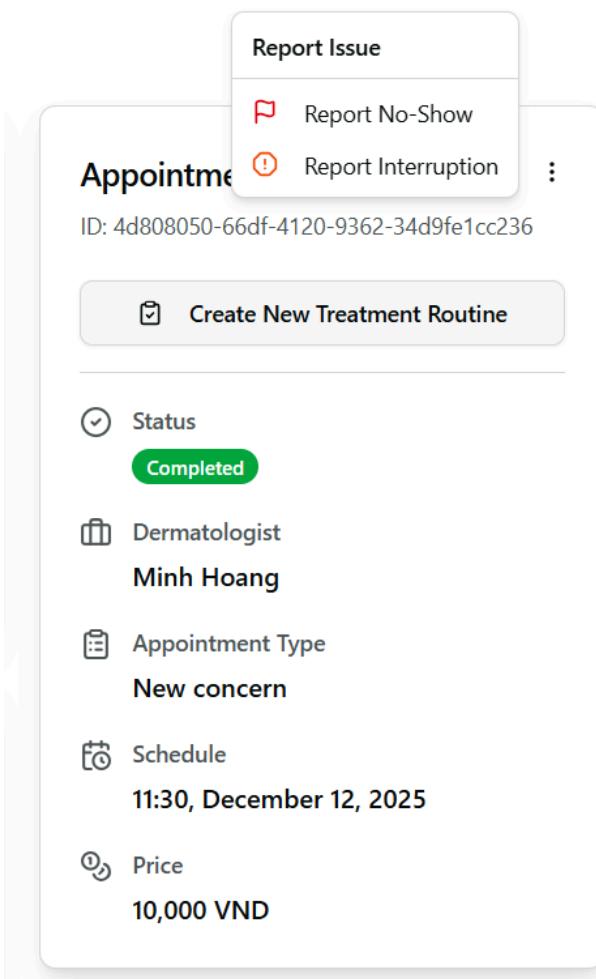


- Completion Flow

Review/edit medical notes in the completion dialog → Confirm & Complete to close the session.



- Report menu: report No-Show or Interruption.



- Status badge shows current state; admin/system note may appear for resolutions.

Appointment Details

ID: 9c9901f7-33d5-4884-a6e6-e7a526cf293d

[View / Update Treatment Routine](#)

Status Disputed

SYSTEM NOTE

System recorded No-Show report but
Customer has Check-in history.
Awaiting Admin review.

Dermatologist
HLan

Appointment Type
New concern

Schedule
23:10, November 21, 2025

Price
123 VND

- No-Show: add optional note → submit to log absence.

The screenshot shows the Skinalyze Dermatologist Portal interface. On the left, there's a sidebar with navigation links: Dashboard, Manage Availability, My Appointments, Subscription Plan, My Patients, and Profile. The main area displays a patient profile for "Trinh Long" (trinhlong1803@gmail.com) with a phone number (+84357838153). A central modal window titled "Report No-Show" contains the message "Report that the other party did not show up for the appointment." Below this is an "Additional Note (Optional)" field with placeholder text "E.g. Waited for 15 minutes but no one joined...". At the bottom of the modal are "Cancel" and "Submit Report" buttons. To the right of the modal, the "Appointment Details" section is visible, showing the appointment ID (4d808050-66df-4120-9362-34d9fe1cc236), status (Completed), dermatologist (Minh Hoang), appointment type (New concern), schedule (11:30, December 12, 2025), and price (10,000 VND). The "Patient's S" section shows a manual entry for the patient.

- Interruption: pick reason (platform/patient/doctor issue) and optional description → submit.

This screenshot shows the same portal interface as the previous one. The "Report Interruption" modal is open, prompting the user to "Report an issue that interrupted the appointment session." It has a "Reason for Interruption" dropdown set to "Platform/System Issue" and a "Detailed Description (Optional)" text area with placeholder text "Describe what happened...". The "Submit Report" button is at the bottom of the modal. The "Appointment Details" section on the right is identical to the previous screenshot, showing a completed appointment for Minh Hoang on December 12, 2025.

3.4.4 Manage Subscription Plans

1.

List: shows all plans with create/edit/delete/filter actions

The screenshot shows the Skinalyze Dermatologist Portal interface. On the left, there is a sidebar with the following navigation options:

- Dashboard
- Manage Availability
- My Appointments
- Subscription Plan** (highlighted with a blue box)
- My Patients
- Profile

On the right, the main content area is titled "Manage Subscription Plans" and has the sub-instruction "Create, publish, and maintain subscription offerings for your patients." Below the title is a search bar with the placeholder "Search by plan name..." and three dropdown filters: "All statuses", "Newest first", and "Descending". A blue button labeled "Create New Plan" is located in the top right corner of this section.

The main content area contains a table with the following data:

Plan Name	Price (VND)	Sessions	Duration (days)	Status	Actions
VIP30	10000.00	30	365	Active	

2. Create/Update a Plan

- Click "Create New Plan" for creating a new plan → fill plan details in the modal → save.
- Click "Update icon" for updating the existing plan → fill plan details in the modal → save.

Manage Subscription Plans

Create, publish, and maintain subscription offerings for your patients.

Create Subscription Plan

Provide the information below to publish a new plan.

Plan Name	e.g. Premium Acne Care
VIP30	
Description (optional)	
Describe the benefits of this plan...	
Base price (VND)	1000000
Total sessions	5
Duration (days)	
90	
<input checked="" type="checkbox"/> Active Allow patients to view and purchase this plan.	

Cancel **Save Plan**

3. Delete a plan

- Click “Trash icon” for remove the existing plan → Confirm

Manage Subscription Plans

Create, publish, and maintain subscription offerings for your patients.

Plan Name	Price (VND)	Sessions	Duration (days)	Status	Actions
VIP30	10000.00	30	365	Active	

Delete this plan?

This will remove the plan **VIP30**.
This action cannot be undone.

Cancel **Delete**

3.4.5 Patient Management

1. List of patients

Browse “My patients”, see last/next appointments, and open profiles.

Search: Type name or phone in the search box; click Reset to clear.

Stats: Top cards show totals (patients, upcoming visits, today's visits, recently completed).

View Profile: Click the eye icon to open the patient's profile page.

Patient	Last Appointment	Next Appointment	Actions
HLong 0357838153 • 21 yrs	PENDING PAYMENT Dec 11, 2025, 11:30:00 AM New Problem 2 days ago	SCHEDULED Dec 18, 2025, 8:00:00 AM New Problem in 5 days	(edit)

Showing 1 patients

2. Patients details

View a patient's snapshot, contact info, appointments, and routines.

Navigate: Use “Back to patients” to return to the list.

Header summary: Shows name, photo, contact chips, last-seen note, and active routine badge.

Metrics: Cards for total visits, upcoming, completed, canceled/no-show.

Next appointment: Highlights the next scheduled/in-progress visit with status badge and key details.

Appointment history: Recent visits table with status, type, and date.

Patient details: Email, phone, address count, age, gender, DOB.

Treatment routines: Lists routines with status; click a routine to open it.

Skinalyze
Dermatologist Portal

[← Back to patients](#)

HLong 3 ACTIVE Routines

Last seen 2 days ago. Stay close to your patient by reviewing their routines and appointment history.

0357838153 | long@gmail.com

TOTAL VISITS 43
UPCOMING 2
COMPLETED 7
CANCELED / NO-SHOW 32

Next Appointment
Keep an eye on what is coming up for this patient.

SCHEDULE

Thursday, December 18th, 2025 NEW PROBLEM Scheduled

Dec 18, 2025 8:00 AM [View appointment](#)

Patient Details

Email	long@gmail.com
Phone	0357838153
Address on file	Not provided
Age	21 years
Gender	Not specified
Date of birth	Mar 18, 2004

Skinalyze
Dermatologist Portal

Appointment History
A concise history of the most recent visits with this patient.

RECENT

Date	Type	Status	Actions
December 18th, 2025 2:30 PM	New Problem	Scheduled	⋮
December 18th, 2025 8:00 AM	New Problem	Scheduled	⋮
December 11th, 2025 11:00 AM	New Problem	Completed	⋮
December 11th, 2025 10:00 AM	New Problem	Canceled	⋮
December 11th, 2025 10:00 AM	New Problem	Canceled	⋮
December 4th, 2025 4:00 AM	New Problem	No Show	⋮

Treatment Routines
Overview of routines prescribed for this patient. 6 TOTAL

- NhatLongBaki Active
Created Dec 2, 2025
4 steps Updated 8 days ago
- Skinalyze VIP Active
Created Nov 29, 2025
0 steps Updated 14 days ago
- Routine cho Long Active
Created Nov 21, 2025
4 steps Updated 22 days ago

3.4.6 Dermatologist Profile Editing

Profile Sections Overview

Skinalyze
Dermatologist Portal

Profile

My Profile
Manage your professional information and settings [Edit Profile](#)

Personal Information

Full Name	Email Address
John Uma	duclord12@gmail.com
Phone Number	Date of Birth
0908705620	7 tháng 12, 2000
Balance	Gender
\$ 0 ₫	Male
Member Since	
14 tháng 12, 2025	

Professional Info

Experience	7 years
Default Fee	10.000 ₫
Joined	14 tháng 12, 2025

Professional Settings

Years of Experience	Default Consultation Fee (VND)
7 years	10.000 ₫
About Me	
I cure	

Specializations & Certifications [+ Add Specialization](#)

Your profile is divided into three main sections:

1. Personal Information Card

- Full Name
- Email (read-only)
- Phone Number
- Date of Birth
- Gender
- Account Status (Active/Inactive)
- Email Verification Status

2. Professional Information Card

- Years of Experience
- Default Consultation Price (VND)
- About/Bio section
- Average Rating (read-only)
- Total Reviews (read-only)

3. Specializations Section

- List of all your specializations
- Certificates and credentials
- Add, edit, and delete specializations

Editing Personal Information

The screenshot shows the 'My Profile' section of the Skinalyze Dermatologist Portal. At the top, there's a summary card for 'John Uma' (Dermatologist), showing he is active and unverified, with 7 years of experience. Below this are four main cards:

- Personal Information:** Fields include Full Name (John Uma), Email Address (duclord12@gmail.com), Phone Number (0908705620), Date of Birth (12/07/2000), Balance (\$ 0 ₫), Gender (Male), and Member Since (14 tháng 12, 2025). An 'Edit' button is in the top-right corner.
- Professional Info:** Shows Experience (7 years), Default Fee (10.000 ₫), and Joined (14 tháng 12, 2025).
- Professional Settings:** Shows Years of Experience (7 years) and Default Consultation Fee (VND) (10.000 ₫). An 'Edit' button is in the top-right corner.
- Specializations & Certifications:** A section with a '+ Add Specialization' button.

A sidebar on the left contains links for Dashboard, Manage Availability, My Appointments, My Wallet, Subscription Plan, My Patients, and Profile (which is selected). At the bottom left is a 'Logout' link.

To Edit Your Personal Details:

1. Locate the Personal Information Card at the top of your profile page
2. Click the "Edit" button (pencil icon) in the top-right corner of the card
3. Update any of the following fields:
 - Full Name: Your complete professional name
 - Phone Number: Contact number (format: +84XXXXXXXXXX)
 - Date of Birth: Select from the date picker
 - Gender: Select Male, Female, or leave unspecified
4. Click "Save Changes" to submit your updates
5. Wait for Confirmation:
 - Success message: "Personal information updated successfully"
 - Your profile will refresh with the new information

To Cancel Editing:

- Click the "Cancel" button to discard changes
- Your profile will return to view mode without saving

To Update Professional Details:

The screenshot shows the Skinalyze Dermatologist Portal interface. On the left is a sidebar with navigation links: Dashboard, Manage Availability, My Appointments, My Wallet, Subscription Plan, My Patients, and Profile (which is selected). The main area displays a professional information card for a user named JOHN VIDAL. The card includes fields for Experience (7 years), Phone Number (0908705620), Date of Birth (7 tháng 12, 2000), Balance (\$ 0 ₫), Gender (Male), and Member Since (14 tháng 12, 2025). Below this is a 'Professional Settings' section with fields for Years of Experience (7) and Default Consultation Fee (VND) (10000 ₫). There is also an 'About Me' text area containing 'I cure'. At the bottom right of the card is a 'Save' button. To the right of the card is a 'Specializations & Certifications' section, which currently displays a message: 'No specializations added yet. Click "Add Specialization" to get started.' A small 'Logout' link is visible at the bottom left of the sidebar.

1. Scroll to the Professional Information Card
2. Click the "Edit" button in the top-right corner
3. Update the following fields:

Years of Experience:

- Enter a number (e.g., 5, 10, 15)
- Represents your total years practicing dermatology

Default Consultation Price:

- Enter amount in VND (Vietnamese Dong)
- Must be a positive number
- This is the default price for your consultation slots
- Example: 500000 (for 500,000 VND)

About/Bio:

- Write a professional description about yourself
- Include your expertise, approach to patient care, education background
- Keep it professional and patient-friendly
- Recommended length: 100-500 characters

4. Click "Save Changes"

5. Confirmation:

- Success message: "Professional information updated successfully"
- The card will return to view mode with updated information

Professional Information Display:

After saving, your professional card shows:

- Years of Experience with a clock icon
- Consultation Price formatted as currency

Managing Specializations

Specializations showcase your expertise areas and certifications. You can add, view, edit, and delete specializations.

Adding a New Specialization

The screenshot shows the Skinalyze Dermatologist Portal interface. On the left, there's a sidebar with links: Dashboard, Manage Availability, My Appointments, My Wallet, Subscription Plan, My Patients, and Profile (which is selected). At the bottom of the sidebar is a Logout link. The main content area has a header 'About Me' with the text 'I cure'. Below this is a section titled 'Specializations & Certifications' with a 'Add Specialization' button. The form fields include: 'Specialization Name' (e.g., Cosmetic Dermatology), 'Specialty' (e.g., Anti-aging treatments), 'Level' (Select level dropdown), 'Issuing Authority' (e.g., American Board of Dermatolog), 'Issue Date' (mm/dd/yyyy input field), 'Expiry Date' (mm/dd/yyyy input field), 'Description' (text area with placeholder 'Describe your expertise in this area'), and a 'Certificate Image (Optional)' file input field with 'Choose File' and 'Add Specialization' buttons. At the bottom of the dialog, it says 'No specializations added yet. Click "Add Specialization" to get started.'

1. Scroll to the Specializations section
2. Click the "Add Specialization" button (Plus icon)
3. A dialog form will appear with the following fields:

Required Fields:

- Specialization Name:
 - Examples: "Acne Treatment Specialist", "Cosmetic Dermatology"
 - Clear, professional title of your specialization
- Specialty:
 - Specific area of expertise
 - Examples: "Laser Therapy", "Pediatric Dermatology", "Skin Cancer Treatment"

Optional Fields:

- Description: Detailed information about your expertise in this area
- Level: Your proficiency level (e.g., "Expert", "Advanced", "Certified")

- Issuing Authority: Organization that granted the certification
- Issue Date: When you received the certification
- Expiry Date: When the certification expires (if applicable)
- Certificate Image: Upload proof of certification

4. To Upload Certificate Image:

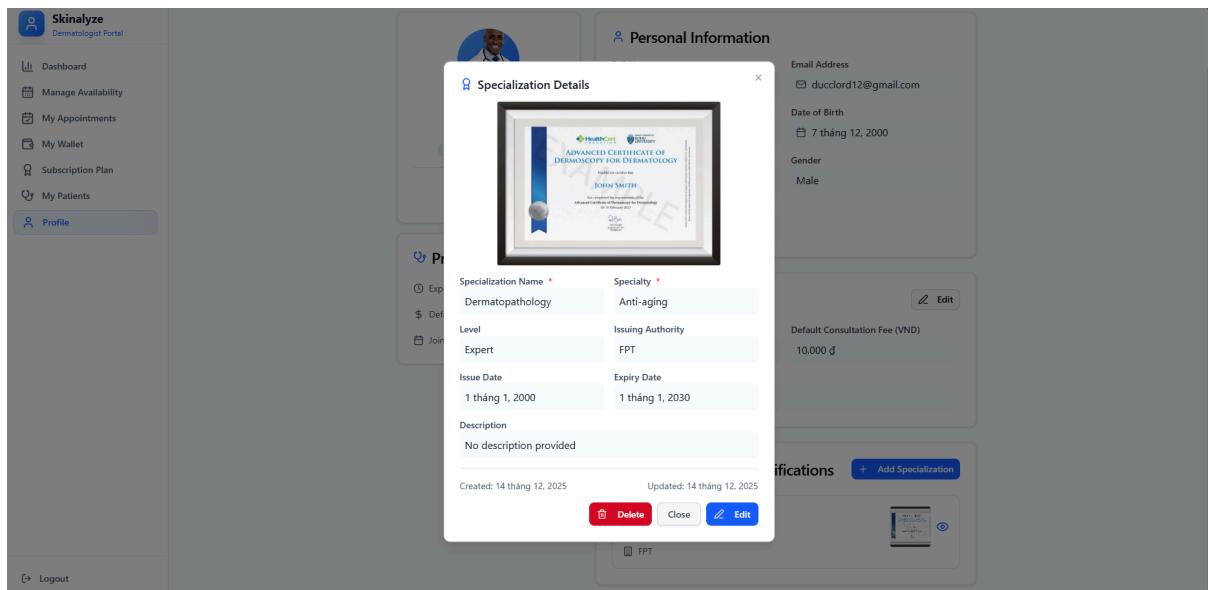
- Click "Upload Certificate" button
- Select an image file (JPG, JPEG, PNG, WEBP, or PDF)
- Maximum file size: 5MB
- The filename will appear after successful selection

5. Click "Add Specialization" to save

6. Success Confirmation:

- Message: "Specialization added successfully"
- The new specialization appears in your list
- Dialog closes automatically

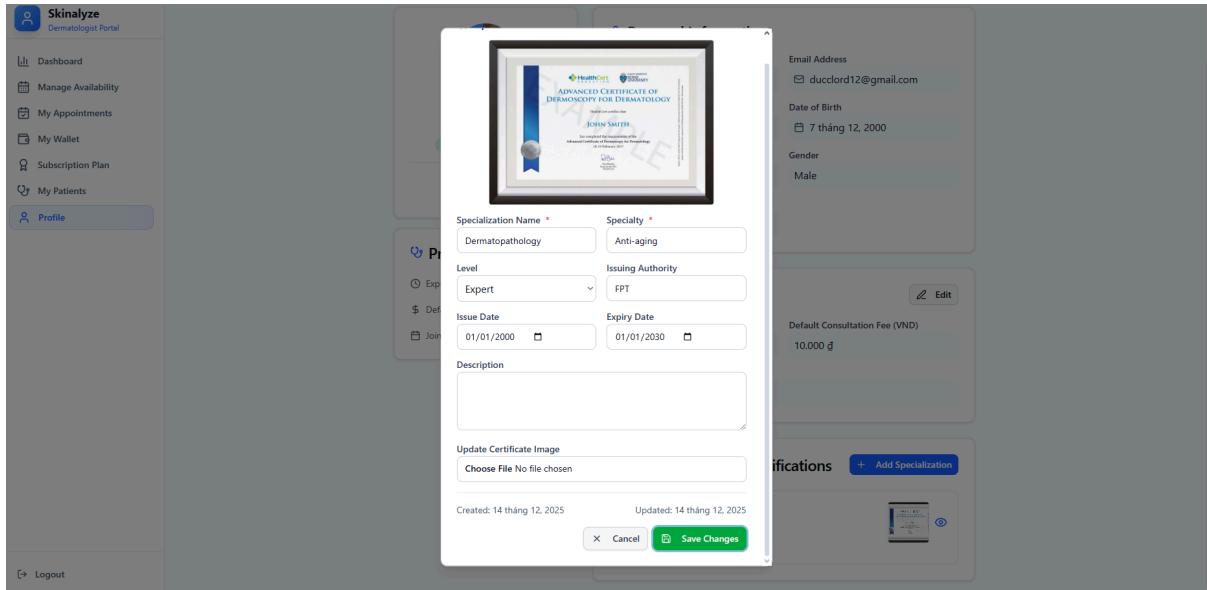
Viewing Specialization Details



1. Find the specialization in your specializations list
2. Click the "View Details" button (Eye icon)
3. A detail modal opens showing:
 - Complete specialization information
 - Certificate image (if uploaded)
 - All dates and authority information

- Edit and Delete options

Editing a Specialization



1. Open the specialization detail modal (see "Viewing Specialization Details")

2. Click the "Edit" button at the bottom of the modal

3. The form fields become editable

4. Update any information:

- Specialization Name

- Specialty

- Description

- Level

- Issuing Authority

- Issue Date

- Expiry Date

5. To Update Certificate Image:

- Click "Upload New Certificate"

- Select a new image file

- Old certificate will be replaced

6. Click "Save Changes"

7. Success Confirmation:

- Message: "Specialization updated successfully"

- Modal remains open showing updated information

- Edit mode is disabled
- List refreshes with new data

Deleting a Specialization

1. Open the specialization detail modal
2. Click the "Delete" button (Trash icon)
3. Confirmation Dialog:
 - A browser confirmation appears
 - Message: "Are you sure you want to delete this specialization? This action cannot be undone."
4. Click "OK" to confirm deletion or "Cancel" to abort
5. On Successful Deletion:
 - Message: "Specialization deleted successfully"
 - Modal closes automatically
 - Specialization is removed from your list
 - Data is permanently deleted

3.4.7 Dermatologist Wallet Management

Purpose: Track earnings, view balance, and request payouts to your bank account.

1. Transaction History:
 - View: See a list of all earnings (Settled), top-ups, and withdrawals.
 - Search: Use the search bar to find specific transactions by code or status.
 - Details: Click on any Settled transaction row to open the details of the corresponding appointment.

My Wallet

Manage your earnings and withdrawal requests

Total Balance	100.000 ₫	Total Earnings	1.000.000 ₫	Total Withdrawn	900.000 ₫	Pending Withdrawals	1

Request Withdrawal **Transaction History**

PAYMENT CODE	TYPE	AMOUNT	METHOD	STATUS	DATE
SKWSTAPP1765695814161925	Settled	1.000.000 ₫	Wallet	Completed	14:03 14/12/2025
SKW7FECF8DF906016	Withdrawal	450.000 ₫	Banking	Pending	13:31 14/12/2025
SKW55E8C0F8010240	Withdrawal	450.000 ₫	Banking	Completed	13:16 14/12/2025

2. Send withdraw request:

- Click the Request Withdrawal button.
- Fill in the Amount and your Bank Details (Name, Account Number).
- Click Withdraw to receive an OTP via email.
- Enter the OTP code and click Submit Withdrawal Request.

My Wallet

Manage your earnings and withdrawal requests

Total Balance	100.000 ₫	Total Earnings	1.000.000 ₫	Total Withdrawn	900.000 ₫	Pending Withdrawals	1

Request Withdrawal

Amount (VND) Enter amount (Min: 50,000 VND)

Full Name Enter full name

Bank Name Select a bank

Account Number Enter account number

Notes (Optional) Enter any additional notes

Withdraw

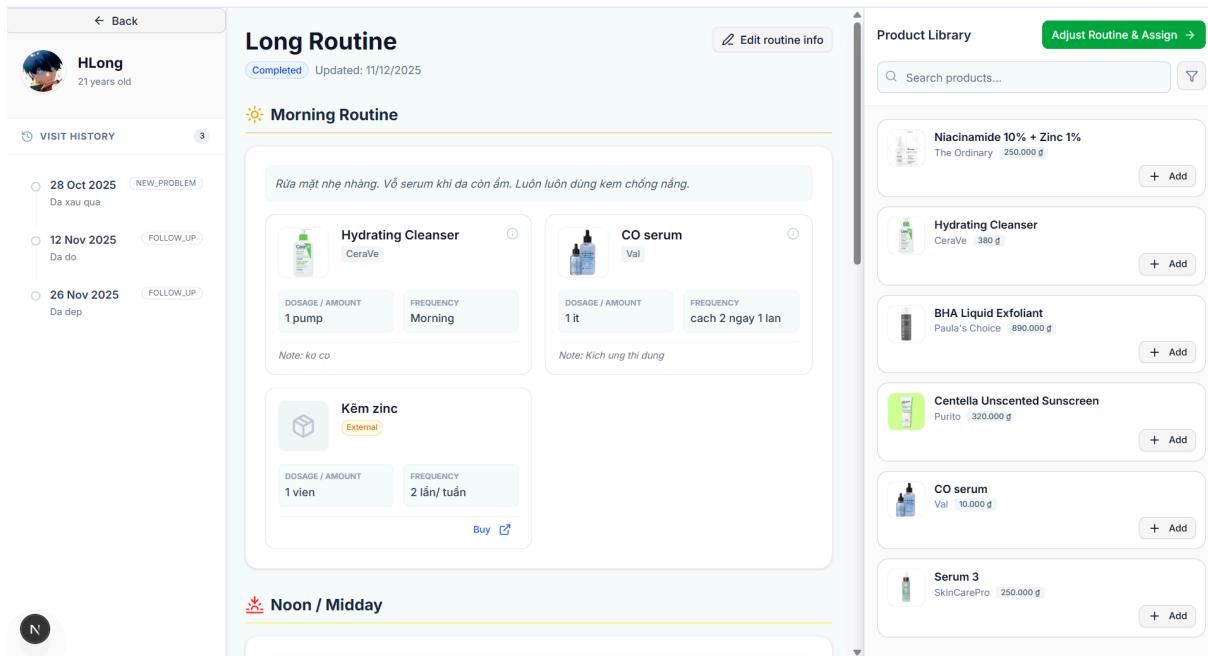
Transaction History

3.4.8 Treatment Routine Management

1. Screen Layout

- The workspace is divided into three distinct columns to help you manage care efficiently:

- Left (Patient profile): Patient profile summary and visit history.
- Center (The Routine): The active treatment plan.
- Right (Adjustment Tools): Product library and tools to modify the routine.



2. Patient History (Left Sidebar)

- Profile: Quickly verify patient details (Name, Age, Gender) at the top.
- Timeline: A scrollable list of all past visits and routine snapshots.
- View History: Click any date in the timeline to preview the routine as it existed on that day.
- Exit Preview: When viewing a past record, a banner appears in the center. Click "Back to Current Routine" to return to the live plan.

3. Managing the Routine (Center Pane)

- Structure: The routine is visually grouped into sections: Morning, Noon, Evening, Oral Medications, and Other.
- Clinical Context: If linked to an appointment, doctor notes and skin analysis results appear at the top for reference.
- Edit Info: Click the "Edit routine info" button (top right of center pane) to:
 - Rename the routine.
 - Change status (e.g., mark as Completed or Cancelled).

4. Modifying Treatment (Right Panel)

- Product Library: Use this panel to search and browse the catalog of available skincare products and medications.
- Adjustment Engine: Use this area to add products to the center routine, configure usage instructions, set frequency, and define quantities.

The image shows two side-by-side screens from the Skinalyze mobile application.

Left Screen (Patient Profile):

- User Info:** HLong, 21 years old.
- Visit History:**
 - 28 Oct 2025: NEW_PROBLEM, Da xau qua
 - 12 Nov 2025: FOLLOW_UP, Da do
 - 26 Nov 2025: FOLLOW_UP, Da dep

Middle Screen (Patient Routine):

Long Routine

Completed Updated: 11/12/2025

Morning Routine

Rửa mặt nhẹ nhàng. Vỗ serum khi da còn ẩm. Luôn luôn dùng kem chống nắng.

- Hydrating Cleanser (CeraVe):** Dosage: 1 pump, Frequency: Morning. Note: ko co.
- CO serum (Val):** Dosage: 1 lit, Frequency: cach 2 ngay 1 lan. Note: Kich ung thi dung.
- Kẽm zinc (External):** Dosage: 1 viên, Frequency: 2 lần/ tuần. Buy button.

Bottom Section: Noon / Midday

Right Screen (Adjustment Mode):

Adjustment Mode

Oral Routine

INSTRUCTIONS: Uống đều đặn mỗi sáng sau ăn, tránh quên thuốc.

PRODUCTS (Drag to reorder):

- Duong da 333 (External): 1 Hạt đậu • 2x Morning
- Serum Possay (External): 3 giọt • Night x2
- Manually Add Custom Product

Morning Routine

INSTRUCTIONS: Rửa mặt nhẹ nhàng. Vỗ serum khi da còn ẩm. Luôn luôn dùng kem chống nắng.

PRODUCTS (Drag to reorder):

- Hydrating Cleanser (External): 1 pump • Morning
- CO serum (External): 1 lit • cach 2 ngay 1 lan
- Kẽm zinc (External)

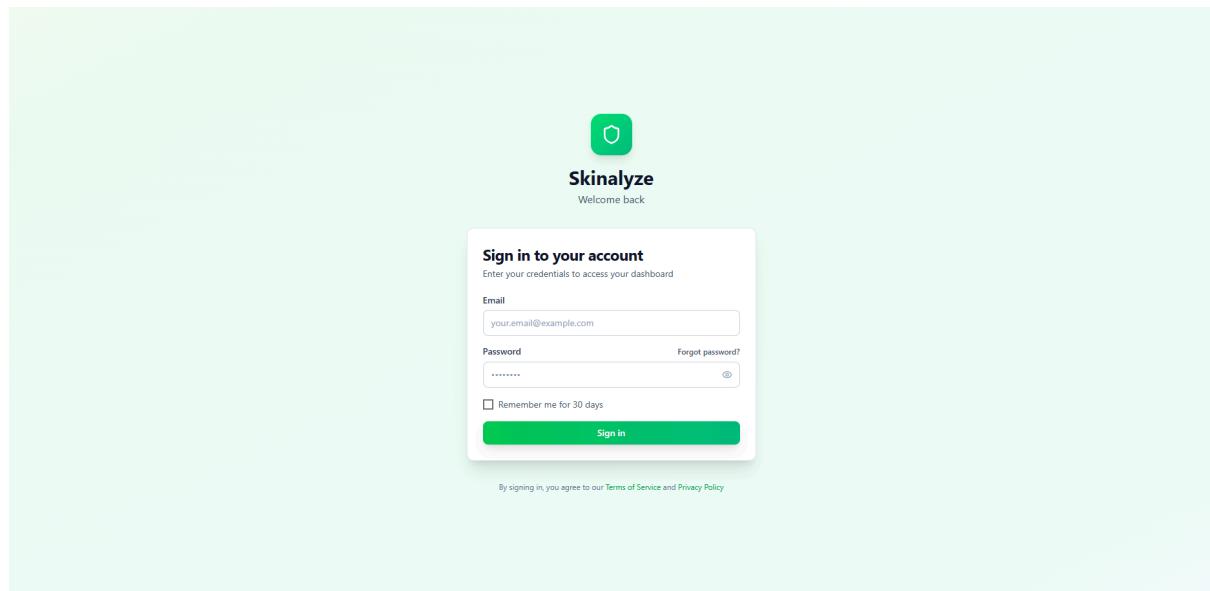
3.5 Admin Workflows

3.5.1 Introduction

This guide provides step-by-step instructions for administrators to log in to the **Skinalyze Admin Management System** and utilize its features to manage users, products, categories, orders, inventory, shipping logs, withdrawal requests, reports, and notifications. The system is accessible via the admin portal at [Skinalyze](#)

3.5.2 Login

1. Navigate to the Skinalyze admin portal



2. Enter your admin credentials:

- Email address: duclord12@gmail.com

- Password: SecurePass123!

3. Click "Sign In"

4. You will be automatically redirected to the Admin Dashboard

3.5.3 Dashboard Overview

The screenshot displays the Skinalyze Admin Dashboard. At the top left is the logo and 'Admin Portal'. The main header says 'Admin Dashboard' and 'Welcome back, Phạm Nguyễn Vũ'. On the left, a sidebar menu includes: Dashboard (selected), Orders, Reports, Withdrawals, Shipping, Products, Categories, Inventory, Users, and Notifications. Below the sidebar are two 'Logout' buttons.

The dashboard features several cards:

- Total Revenue:** 0 ₫ (From completed orders)
- Total Orders:** 0 (All time orders)
- Active Users:** 4 (Currently active)
- System Health:** 99.9% (All systems operational)

Below these are three main sections:

- Revenue Trend (Last 6 Months):** A chart showing revenue over time.
- Orders by Status:** A chart showing the count of orders by status.
- Users by Role:** A bar chart comparing the count of users between Customer and Staff roles.

At the bottom, there are three more cards:

- Administrator Profile:** Name: Phạm Nguyễn Vũ, Email: duclord12@gmail.com, Role: Administrator, Status: Active.
- Quick Actions:** View All Orders, Manage Users.
- System Overview:** Pending Orders: 0, Active Users: 4, Total Products: 0, Total Orders: 0.

Key Metrics

- Total Users - Count of all registered users
- Total Orders - Cumulative order count
- Total Revenue - Total sales revenue (VND)
- Pending Orders - Orders awaiting processing

3.5.4 Product Management

Accessing Product Management

Path: Admin → Products

Product Catalog Overview

Products Management

Manage your product catalog and inventory

Total Products	Total Stock	Inventory Value	Low Stock
10	1499	\$ 3,073.550 đ	0 Items below 10 units

Search products by name, brand, or description...

PRODUCT	BRAND	PRICE	STOCK	SALE	CATEGORIES	ACTIONS
Crème de la Mer	LA MER	10.000 đ	149 units	-	Moisturizer	Edit Delete
Facial Treatment Essence	SK-II	10.000 đ	150 units	-	Treatment Moisturizer	Edit Delete
Protini™ Polypeptide Cream	DRUNK ELEPHANT	68 đ	150 units	-	Moisturizer	Edit Delete
The Moisturizing Soft Cream	LA MER	175 đ	150 units	-	Moisturizer	Edit Delete
Your Skin But Better™ CC+™ Cream with S...	IT COSMETICS	38 đ	150 units	-	Moisturizer	Edit Delete
The Water Cream	TATCHA	68 đ	150 units	-	Moisturizer	Edit Delete

View all products with:

- Product image thumbnail
- Product name and Brand
- Category
- Price (VND)
- Stock quantity
- Status (Active/Inactive)

Adding a New Product

Add New Product

Product Name *

Brand *

Description *

Ingredients *

Water, L-Ascorbic Acid, Hyaluronic Acid...

Price (đ) * Stock * Sale (%)

0	0	0
---	---	---

Product Images

Click to upload or drag and drop
PNG, JPG, GIF up to 10MB

Categories

1. Click "Add Product" button

2. Basic Information tab:

- Product Name (max 255 characters)
- Brand
- Description
- Ingredients

3. Pricing and Stock tab:

- Price(VND)
- Stock (initial stock quantity)
- Sale (optional, for discounts)

4. Media tab:

- Upload product images (max 5 images, 5MB each)
- Drag to reorder images
- First image becomes primary thumbnail

5. Categories tab:

- Categories (select from existing categories)
- Suitable For

7. Click "Create Product"

Editing a Product

1. Search or browse to find the product
2. Click "Edit" button on product card
3. Modify fields across all tabs
4. Click "Update Product"

Managing Products Images

- Upload: Drag & drop or click to browse (JPG, PNG, WebP)
- Reorder: Drag images to change display order
- Delete: Click X icon on image thumbnail
- Set Primary: First image is always primary thumbnail

Product Search

- Search: Product name, brand, or description

3.5.4 Category Management

Accessing Categories

Path: Admin → Categories

Category Display

Categories
Manage product categories

Total Categories **6**

+ Add Category

Category	Description	Created	Action
Treatment	Targets specific skin concerns such as acne, dark spots, aging, or uneven texture. Treatments often contain active ingredients like acids, retinol, o...	Created Dec 10, 2025	
Eye Cream	Specially formulated for the delicate skin around the eyes. Eye creams help reduce puffiness, dark circles, and fine lines while keeping the eye...	Created Dec 10, 2025	
Cleanser	Removes dirt, oil, impurities, and makeup from the skin. Cleansers help keep pores clear, prevent breakouts, and prepare the skin to better...	Created Dec 10, 2025	
Moisturizer	Hydrates and nourishes the skin to maintain a healthy moisture barrier. Moisturizers help soften the skin, prevent dryness, and keep it looking...	Created Dec 10, 2025	
Sun Protect	Shields the skin from harmful UV rays to prevent sunburn, premature aging, and long-term skin damage. Sun protection products are essent...	Created Dec 10, 2025	
Face Mask	Provides intensive care to address particular skin needs, from hydration and brightening to deep cleansing. Face masks give an instant boost an...	Created Dec 10, 2025	

N Logout

Categories are shown with:

- Category name
- Category description
- Edit/Delete actions

Creating a Category

Categories
Manage product categories

Total Categories **6**

+ Add Category

Add New Category

Category Name *

Description *

Cancel **Create Category**

Category	Description	Created	Action
Treatment	Targets specific skin concerns such as acne, dark spots, aging, or uneven texture. Treatments often contain active ingredients like acids, retinol, o...	Created Dec 10, 2025	
Eye Cream	Specially formulated for the delicate skin around the eyes. Eye creams help reduce puffiness, dark circles, and fine lines while keeping the eye...	Created Dec 10, 2025	
Cleanser	Removes dirt, oil, impurities, and makeup from the skin. Cleansers help keep pores clear, prevent breakouts, and prepare the skin to better...	Created Dec 10, 2025	
Moisturizer	Hydrates and nourishes the skin to maintain a healthy moisture barrier. Moisturizers help soften the skin, prevent dryness, and keep it looking...	Created Dec 10, 2025	
Sun Protect	Shields the skin from harmful UV rays to prevent sunburn, premature aging, and long-term skin damage. Sun protection products are essent...	Created Dec 10, 2025	
Face Mask	Provides intensive care to address particular skin needs, from hydration and brightening to deep cleansing. Face masks give an instant boost an...	Created Dec 10, 2025	

N Logout

1. Click "Add Category" button

2. Fill in details:

- Category Name
- Description (optional)

3. Click "Create Category"

Editing a Category

The screenshot shows the Skinalyze Admin Portal's 'Categories' section. On the left, there's a sidebar with links like Dashboard, Orders, Reports, Withdrawals, Shipping, Products, and Categories (which is selected). The main area shows a list of categories: Treatment, Moisturizer, Sun Protect, Cleanser, and Face Mask. Each category has a card with a description and creation date. A modal window titled 'Edit Category' is open over the 'Treatment' card. It contains fields for 'Category Name *' (set to 'Treatment') and 'Description *' (with placeholder text about skin concerns). At the bottom of the modal are 'Cancel' and 'Update Category' buttons.

1. Click "Edit" icon on category card

2. Modify:

- Category name

- Description

3. Click "Update Category"

Deleting a Category

1. Click "Delete" icon on category card

2. Warning Dialog appears:

- "Are you sure you want to delete this category? This action cannot be undone."

3. Click "Confirm"

3.5.5 Order Management

Accessing Orders

Path: Admin → Orders

Order List View

Orders Management

View and manage all customer orders across the platform

ORDER ID	CUSTOMER	DATE	TOTAL	STATUS	ACTIONS
ff0bae10-8cb8-42de-9914-5446e03ef12d	Chu Phan Nhật Long minhha4675@gmail.com	Dec 10, 2025, 11:11 AM	10.000 ₫	Shipping	View Details
d1830a77-e047-4ea1-8ca7-695a12fb90ce	Le Nguyen Chi Bao baolince183721@ftpt.edu.vn	Dec 10, 2025, 11:06 AM	10.000 ₫	Pending	View Details
7185714b-b94f-40ac-b94c-462a9e736716	Chu Phan Nhật Long minhha4675@gmail.com	Dec 10, 2025, 11:05 AM	10.000 ₫	Pending	View Details

View all orders with:

- Order ID and date
- Customer name
- Total amount (VND)
- Payment status (Paid/Pending/Failed)
- Order status (Pending/Confirmed/Completed/Cancelled)
- Action buttons

Viewing Order Details

Order Details

Order ID: ff0bae10...

Order Status

Processed by: Chu Phan Nhật Long (staff)

Customer Information

Name: Chu Phan Nhật Long
Email: minhha4675@gmail.com

Shipping Address

ha, ha, c24, Xã Lộc Thành, Huyện Lộc Ninh, Bình Phước
Shipping Method: Internal Delivery

Order Items (1)

	Crème de la Mer LA MER Qty: 1	10.000 ₫
--	-------------------------------------	----------

Order Total

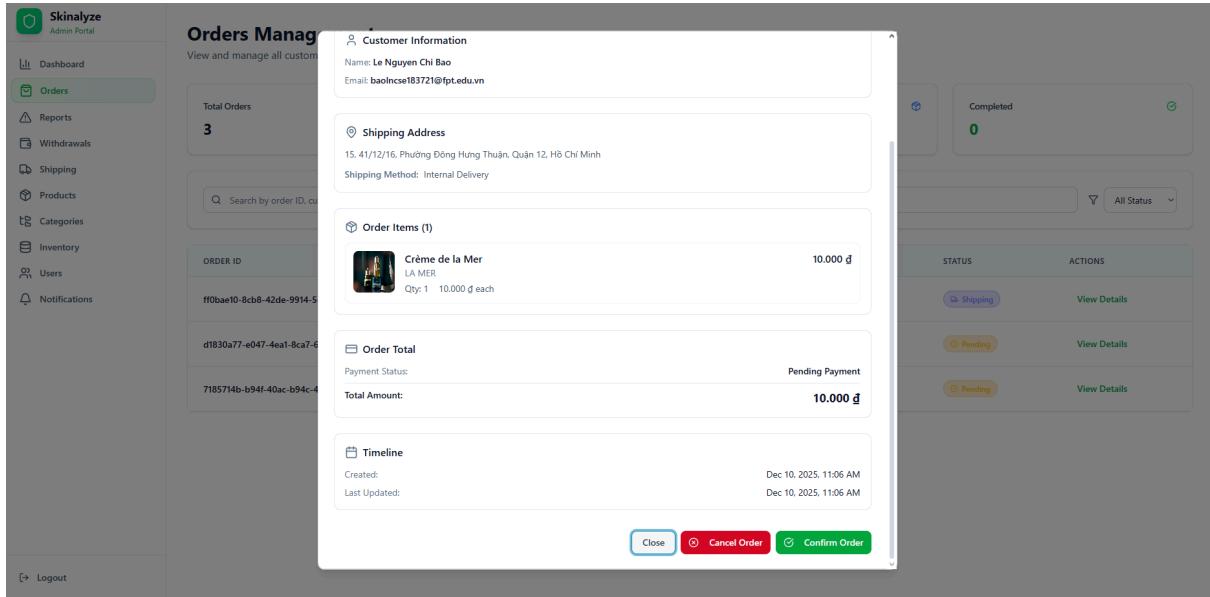
Payment Status: Pending Payment
Total Amount: 10.000 ₫

1. Click on "View Details" button

2. Order Detail Modal displays:

- Customer Information: Name, phone, email, delivery address
- Order Items: Product list with quantities and prices
- Payment Details: Method, status, amount
- Shipping Information: Method (Internal/GHN)
- Order Timeline: Status change history with timestamps

Confirming an Order



1. Open order with PENDING status
2. Review order details carefully
3. Click "Confirm Order" button
4. Status changes to CONFIRMED

Note: Once confirmed, order items are reserved from inventory.

Cancelling an Order

The screenshot shows the Skinalyze Admin Portal's Orders Management section. A modal window is open over the main dashboard, displaying details of an order. The order summary includes:

- Customer Information:** Name: Le Nguyen Chi Bao, Email: baolnse183721@fpt.edu.vn
- Shipping Address:** 15, 41/12/16, Phường Đông Hưng Thuận, Quận 12, Hồ Chí Minh. Shipping Method: Internal Delivery.
- Order Items (1):** Crème de la Mer LA MER, Qty: 1, 10.000 ₫ each.
- Order Total:** Payment Status: Pending Payment, Total Amount: 10.000 ₫.
- Timeline:** Created: Dec 10, 2025, 11:06 AM, Last Updated: Dec 10, 2025, 11:06 AM.

At the bottom of the modal, there are three buttons: Close, Cancel Order (highlighted in red), and Confirm Order.

1. Open order with PENDING status

2. Click "Cancel Order" button

3. Cancellation Dialog appears:

- Enter cancellation reason

4. Click "Cancel Order"

5. Status changes to CANCELLED

6. Stock quantities are restored

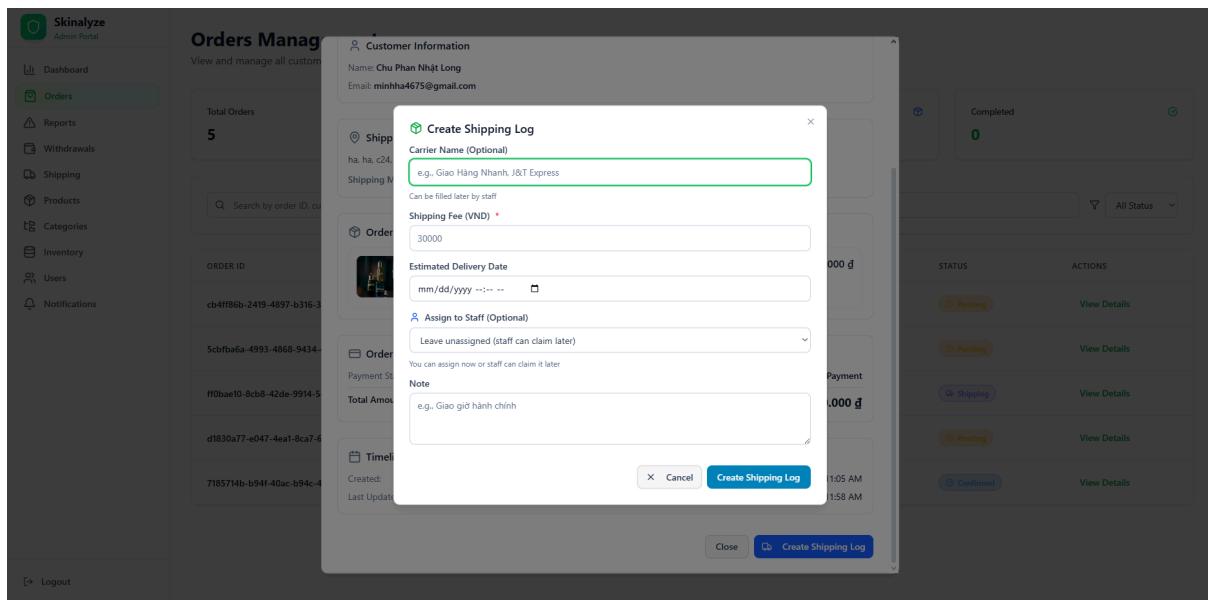
3.5.6 Shipping Management

Creating Shipping Label

The screenshot shows the Skinalyze Admin Portal's Orders Management section. A modal window is open over the main dashboard, displaying details of an order. The order summary includes:

- Customer Information:** Name: Chu Phan Nhật Long, Email: minhha4675@gmail.com
- Shipping Address:** ha, c24, Xã Lộc Thành, Huyện Lộc Ninh, Bình Phước. Shipping Method: Internal Delivery.
- Order Items (1):** Crème de la Mer LA MER, Qty: 1, 10.000 ₫ each.
- Order Total:** Payment Status: Pending Payment, Total Amount: 10.000 ₫.
- Timeline:** Created: Dec 10, 2025, 11:05 AM, Last Updated: Dec 10, 2025, 11:58 AM.

At the bottom of the modal, there are two buttons: Close and Create Shipping Log (highlighted in blue).

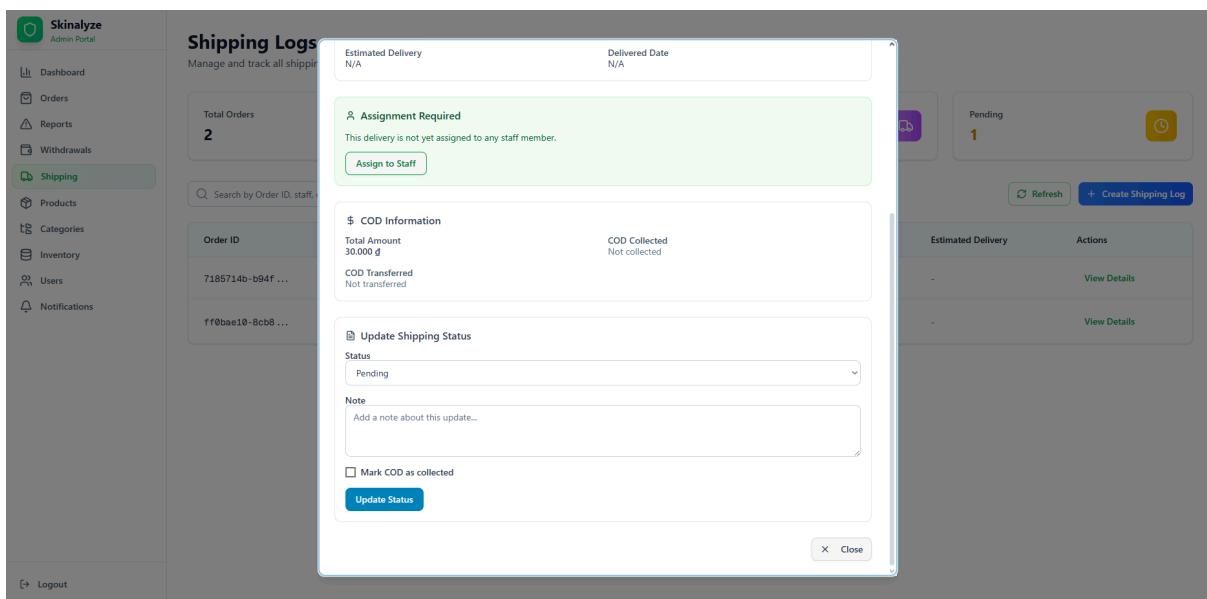
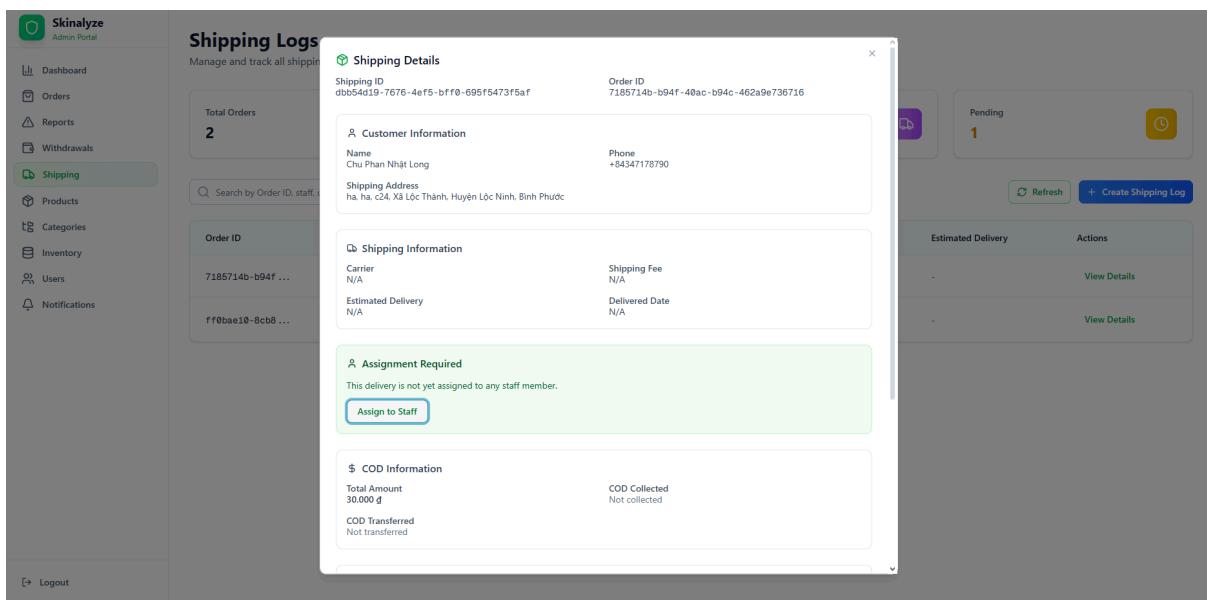


For INTERNAL shipping method only:

1. Open CONFIRMED order with shipping method = "INTERNAL"
2. Click "Create Shipping Log" button
3. Shipping Form opens:
 - Carrier Name
 - Shipping Fee
 - Assign to Staff (optional)
 - Estimated Delivery (select date)
 - Notes (optional)
4. Click "Create Shipping Log"
5. Shipping log created and assigned to carrier

Note: GHN (external) shipping labels are created automatically via API integration.

Viewing Shipping Details



1. Click on Shipping Log ID or "View Details" button

2. Shipping Detail Modal displays:

Order Information Tab

- Order ID: Order reference number
- Customer Name: Full name of the recipient
- Customer Phone: Contact number for delivery coordination
- Delivery Address: Complete shipping address including ward, district, and city

Shipping Information Tab

- Carrier Name: Staff member or shipping service handling delivery
- Shipping Fee

- Estimated Delivery: Expected delivery date
- Delivered Date: When package was delivered (if completed)

Staff Assignment Tab

- Assigned Staff Member: Name and ID of delivery person

Delivery Proof Tab

- Photos: Images uploaded as proof of delivery
- Click to view full size
- Delivery Notes: Any notes added at time of delivery

Actions Available

From the shipping detail view, you can:

- Update Status: Change shipment status
- Assign Staff: Change delivery person assignment
- Upload Proof: Add delivery confirmation photos
- Add Notes: Include additional information

Updating Shipping Status

1. Open shipping log details
2. Click "Update Status" button
3. Status Update Form:
 - New Status (select from dropdown)
 - Delivery Photos(for DELIVERED status)
4. Click "Update Status"
5. Status changed

Assigning Staff to Delivery

For INTERNAL shipping only:

1. Open shipping log with PENDING status
2. Click "Assign to Staff" button
3. Staff Assignment Dialog:
 - Select staff member from dropdown
 - Optionally update carrier name
4. Click "Assign"
5. Carrier name updated if changed

3.5.7 Withdrawal Management

Accessing Withdrawals

Path: Admin → Withdrawals

Withdrawal Request Overview

The screenshot shows the Skinalyze Admin Portal interface. On the left is a sidebar with navigation links: Dashboard, Orders, Reports, Withdrawals (which is highlighted in green), Shipping, Products, Categories, Inventory, Users, and Notifications. At the bottom of the sidebar is a Logout link. The main content area is titled "Withdrawal Requests" and includes a subtitle "Manage and process customer withdrawal requests". It features a summary bar with counts for Total (1), Pending (0), Verified (1), Approved (0), Completed (0), and Rejected (0). Below this is a search bar with placeholder text "Search by name, bank, account number, or request ID..." and a dropdown menu set to "All Status". A table lists withdrawal details:

REQUEST ID	CUSTOMER	BANK INFO	AMOUNT	STATUS	CREATED AT	ACTIONS
267124ce...	chu PHAN NHAT long OTP: 1831293658	Ngân hàng TMCP Ngoại Thương Việt Nam	67.000 ₫	Verified	12:29 10/12/2025	View

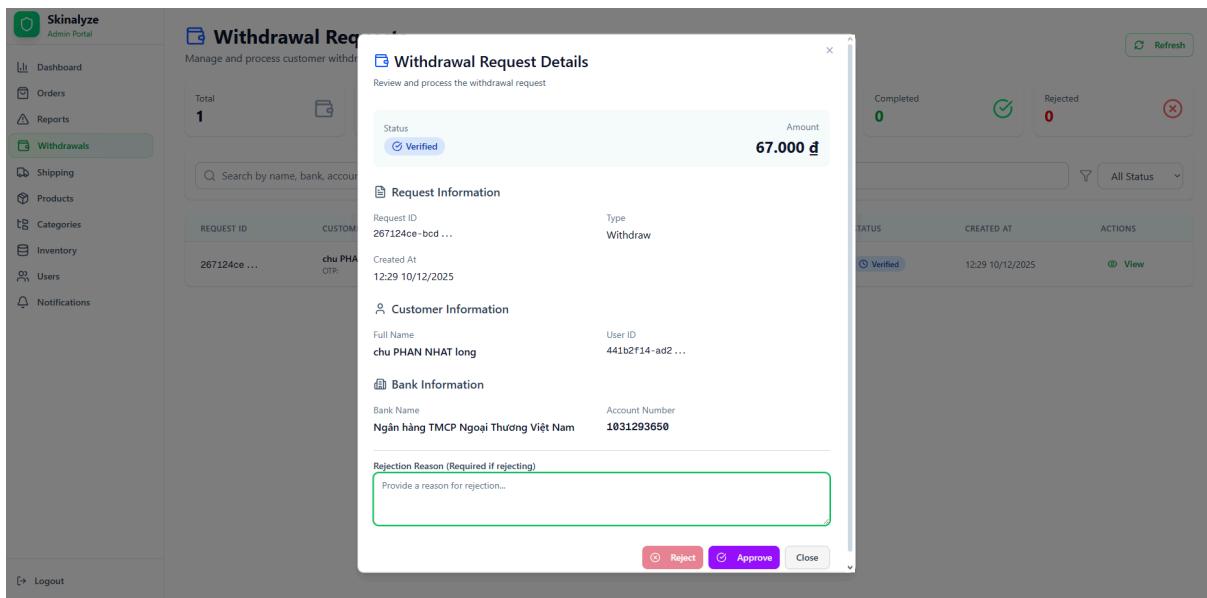
Manage financial withdrawal requests from:

- Dermatologists: Payment for consultations
- Customers: Balance withdrawals

Display shows:

- Request ID and date
- Requestor name
- Amount (VND)
- Bank account details
- Status

Viewing Withdrawal Details



1. Click on "Details" button

2. Withdrawal Detail Modal displays:

- Requestor Information: Name, ID
- Withdrawal Amount: Requested amount in VND
- Bank Account: Bank name, account number, account holder

Approving a Withdrawal Request

1. Open verified withdrawal request

2. Perform final checks:

- ✓ All information accurate
- ✓ Compliance requirements met
- ✓ Authorization confirmed

3. Click "Approve" button

4. Status changes to APPROVED

Rejecting a Withdrawal Request

1. Open withdrawal request (any status except COMPLETED)

2. Click "Reject" button

3. Rejection Dialog opens:

- Rejection Reason

4. Click "Confirm Rejection"

5. Status changes to REJECTED

3.5.8 User Management

Accessing User Management

Path: Admin → Users

User Overview

The screenshot shows the Skinalyze Admin Portal's User Management section. The sidebar on the left has a 'Users' button highlighted in green. The main area is titled 'User Management' with the subtitle 'Manage system users and their roles'. It features a summary bar with icons and counts for Total Users (3), Active (3), Staff (1), Dermatologists (0), and Customers (2). Below this is a search bar and a table of users:

NAME	EMAIL	PHONE	ROLE	STATUS	ACTIONS
Chu Phan Nhật Long	minhha4675@gmail.com	+84347178790	Customer	Active	
Chu Phan Nhật Long	dtrong206@gmail.com	+84347178790	Staff	Active	
Le Nguyen Chi Bao	baolnse183721@fpt.edu.vn	+84932133157	Customer	Active	

The user management interface displays:

- User's name, email, phone number
- Role (Customer, Staff, Dermatologist, Admin)
- Status (Active/Inactive)

Creating a New User

The screenshot shows the 'Add New User' dialog box overlaid on the User Management page. The dialog fields are: Email * (empty), Full Name * (empty), Phone Number (empty), Password * (empty), and Role * (Customer selected). At the bottom are 'Cancel' and 'Create User' buttons.

1. Click "Add New User" button (top-right)

2. Fill in required fields:

- Full Name
- Email Address
- Phone Number
- Role (Select from dropdown)
- Password

3. Click "Create User"

Editing User Information

The screenshot shows the Skinalyze Admin Portal's User Management interface. On the left, there's a sidebar with links like Dashboard, Orders, Reports, Withdrawals, Shipping, Products, Categories, Inventory, and a highlighted 'Users' link. The main area has tabs for Total Users (3), Active (3), Staff (1), Dermatologists (0), and Customers (2). A search bar is at the top of the user list. An 'Add User' button is in the top right. In the center, a modal window titled 'Edit User' is open, showing fields for Email (minhha4675@gmail.com), Full Name (Chu Phan Nhật Long), Phone Number (+84347178790), and a password field. The Role dropdown is set to Customer. Below the modal is a table of users with columns for ROLE, STATUS, and ACTIONS.

ROLE	STATUS	ACTIONS
Customer	Active	
Staff	Active	
Customer	Active	

1. Locate user using search bar (search by name, email, or phone)

2. Click the pen icon on the user row

3. Modify fields as needed:

- Personal information (name, email, phone)
- Role
- Password

4. Click "Update User"

Resetting User Password

The screenshot shows the Skinalyze Admin Portal's User Management section. On the left is a sidebar with various navigation links like Dashboard, Orders, Reports, etc., and a 'Users' link which is currently selected. The main area has a title 'User Management' and a subtitle 'Manage system users and their roles'. It displays summary statistics: Total Users (3), Active (3), Staff (1), Dermatologists (0), and Customers (2). Below this is a search bar and a table of user accounts. One row in the table is highlighted, showing 'Chu Phan Nhật Long' with email 'minhha4675@gmail.com'. A modal window titled 'Reset Password' is open over this row, containing the message: 'Are you sure you want to reset the password for minhha4675@gmail.com? A new temporary password will be generated.' with 'Cancel' and 'Reset Password' buttons.

1. Find the user account
2. Click "Reset Password"button (key icon)
3. Confirm the action in the popup dialog
4. A new temporary password will be sent to the user's email
5. User must change password on next login

Deleting a User

This screenshot is identical to the one above, showing the User Management page with the 'Users' link selected in the sidebar. The 'Reset Password' modal is still open over the user account for 'Chu Phan Nhật Long'. Now, a second modal window titled 'Delete User' is overlaid on the first, containing the message: 'Are you sure you want to delete Chu Phan Nhật Long? This action cannot be undone.' with 'Cancel' and 'Delete' buttons.

1. Find the user account
2. Click "Delete" button (trash icon)
3. Confirmation Dialog will appear:
 - "Are you sure you want to delete this user? This action cannot be undone."

4. Click " Delete"

3.5.9 Notifications

Accessing Notifications

Path: Admin → Notifications

Notification System Overview

The screenshot shows the Skinalyze Admin Portal with the 'Notifications' tab selected in the sidebar. The main area is titled 'Notification Management' and includes three options: 'Send to User', 'Broadcast', and 'Customizable'. Below these are buttons for 'Send to User', 'Broadcast to All', and 'All Notifications'. The 'Send to Specific User' section is active, showing fields for 'Select User', 'Notification Type' (set to 'System'), 'Priority' (set to 'Medium'), 'Title' (e.g., 'Your Order Has Been Shipped'), 'Message' (a large text area for the notification message), and 'Action URL (Optional)' (e.g., '/orders/12345'). A sidebar on the left lists other admin sections like Dashboard, Orders, Reports, etc.

The notification system allows admins to:

- Send targeted messages to specific users
- Broadcast announcements to all users
- Attach images to notifications

Notification Types

1. Send to Specific User - Target individual user
2. Broadcast to All Users - Platform-wide announcement

Sending a Notification to a Specific User

The screenshot shows the Skinalyze Admin Portal interface. On the left, there's a sidebar with various menu items: Dashboard, Orders, Reports, Withdrawals, Shipping, Products, Categories, Inventory, Users, and Notifications. The 'Notifications' item is highlighted with a green box. The main content area is titled 'Send to Specific User' and contains fields for 'Select User', 'Notification Type', 'Priority', 'Title', 'Message', 'Action URL (Optional)', and 'Image'. A large blue button at the bottom right says 'Send Notification'.

Step-by-Step Process:

1. Click "Send to User" tab
2. Select Recipient:
 - Use dropdown to search users
 - Search by name or email
 - Select target user
3. Compose Notification:
 - Title
 - Example: "Your Order Has Been Shipped"
 - Message
 - Write clear, concise message
 - Use proper grammar and punctuation
 - Type (select from dropdown):
 - Order
 - Appointment
 - Treatment Routine
 - Product
 - System
 - Promotion
 - Anything
 - Action URL (optional)
 - Link to specific page
 - Example: "/orders/123"

4. Attach Image (optional):

- Click "Choose File"
- Select image (JPG, PNG)
- Max size: 5MB
- Image preview displays

5. Review Notification:

- Check for typos
- Verify recipient
- Test action link

6. Click "Send Notification"

7. User receives notification immediately

Broadcasting to All Users

The screenshot shows the Skinalyze Admin Portal interface. On the left is a sidebar with various menu items: Dashboard, Orders, Reports, Withdrawals, Shipping, Products, Categories, Inventory, Users, and Notifications. The Notifications item is highlighted with a green background. The main content area has a title 'Broadcast Notification' with a subtitle 'Send a notification to all users in the system'. It includes fields for 'Notification Type' (set to 'System'), 'Priority' (set to 'Medium'), 'Title' (e.g., 'System Maintenance Notice'), and 'Message' (Enter the notification message...). Below these are fields for 'Action URL (Optional)' (e.g., '/promotions/sale') and 'Image' (Upload Image or OR USE URL, with an example URL 'https://example.com/image.jpg'). At the bottom is a large green 'Broadcast Notification' button.

Use Cases:

- System maintenance announcements
- New feature launches
- Policy updates
- Holiday greetings
- Platform-wide promotions

Step-by-Step Process:

1. Click "Broadcast to All" tab

2. Compose Broadcast:

- Title

- Example: "System Maintenance Scheduled"

- Message

- Provide complete information

- Include dates/times if relevant

- Explain impact on users

- Type(select dropdown):

- Order
- Appointment
- Treatment Routine
- Product
- System
- Promotion
- Anything

- Priority:

- High (push notification)

- Normal (in-app only)

- Action URL (optional)

- Link to blog posts, help articles, etc.

3. Attach Image (optional):

- Upload promotional banner

- Upload feature screenshot

- Max 5MB

4. Schedule (optional):

- Send Now (immediate)

- Schedule for Later (select date/time)

5. Preview:

- Review how notification appears

- Check mobile and desktop views

6. Click "Broadcast Notification"

7. Click "Broadcast Notification"

8. All active users receive notification

3.5.10 Handle appointment report

1. Manage reports:

Purpose: Monitor and resolve appointments flagged as Interrupted or Disputed.

Tabs:

- + Interrupted: Sessions stopped due to technical or other issues.
- + Disputed: Appointments where a party has raised a formal dispute.

Note: Red badges on tabs indicate the number of pending cases.

Action: Click View Details to open the resolution screen for a specific appointment.

The screenshot shows the Skinalyze Admin Portal. On the left is a sidebar with various menu items: Dashboard, Orders, Reports (which is highlighted), Payments, Withdrawals, Shipping, Products, Categories, Inventory, Users, and Notifications. At the bottom of the sidebar is a button labeled 'Sync GHN Orders'. The main content area has a header 'Problematic Appointments' with a red warning icon. Below it is a sub-header 'Disputed Cases'. A table lists two entries:

Appointment ID	Date	Dermatologist	Customer	Action
9c9981f7...	Nov 21, 23:10	H Lan derma@example.com	H Long 0357838153	View Details
9778956d...	Dec 14, 21:20	H Lan derma@example.com	H Long 0357838153	View Details

2. Dispute Resolution

Purpose: Review evidence and issue a final financial decision for interrupted or disputed appointments.

- Review Case Details
- Participants: Verify Customer and Dermatologist identities and contact info.
- Evidence: Read the reports submitted by both the Customer (blue) and Dermatologist (green).
- System Logs: Check scheduled times vs. actual duration, check-in timestamps, and payment status to verify attendance.

- Make a Decision (Resolution Panel):

Click Show Resolution Panel at the bottom of the screen.

Final Reason: Select the official reason for the issue (e.g., Doctor No-Show, Platform Issue).

Admin Note: Write a mandatory explanation for your decision.

- Select Outcome:

Refund Customer: Returns 100% of funds to the customer.

Payout Doctor: Releases 100% of funds to the dermatologist.

Partial Refund (Split):

Click to open the split tool.

Enter a specific Amount or Percentage to refund the customer; the remaining balance goes to the doctor.

Confirm the calculated split.

- Execution

Confirm your choice in the final dialog. This action is irreversible.