



Software Requirements Specification (SRS)

Project Title: Ankapee Eyewear Management System

Version: 1.1

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Client: Ankapee Eyewear

1. Introduction

1.1 System Overview

Ankapee Eyewear is a modern optical organization specializing in eye diagnosis and eyewear sales. While the company operates an eCommerce platform for online eyewear sales, daily in-person operations such as diagnosis, prescription management, and internal sales tracking remain largely manual.

The **Ankapee Eyewear Management System (AEMS)** is designed to automate and simplify the management of client records, diagnosis reports, prescriptions, eyewear inventory, staff activities, and in-store sales — ensuring operational efficiency and improved customer service.

1.2 Purpose

The purpose of this document is to outline the complete functional and non-functional requirements for the Ankapee Eyewear Management System. It serves as a guide for developers, testers, and stakeholders to understand the system's intended behavior, scope, and performance expectations.

1.3 Objectives

- To streamline client diagnosis and prescription management.
- To provide accurate and efficient inventory and stock tracking.
- To synchronize in-store and online eyewear sales.
- To generate insightful analytics and performance reports.
- To improve customer engagement through reminders, promotions, and follow-ups.

1.4 Target Users

- **Optometrists** – manage diagnosis and prescriptions.
- **Sales Representatives** – handle in-store sales and product issuance.
- **Receptionists** – schedule appointments and manage client information.
- **Managers/Administrators** – oversee system operations, generate reports, and manage users.

1.5 System Scope

The AEMS will serve as a web-based management system integrated with the Ankapee eCommerce platform. It will manage all internal workflows including

eye tests, prescription fulfillment, inventory control, staff management, and reporting.

2. System Description

2.1 System Perspective

The AEMS will function as a **standalone management system** that can optionally synchronize with:

- Ankapee's existing **eCommerce website** (for product and sales data sync).
- **Firebase Firestore** (for online backups and remote access).
- **Arkesel SMS API** (for appointment and delivery notifications).

2.2 System Environment

- **Frontend:** ReactJS
- **Backend:** Python (Flask/Django for web or Tkinter for desktop)
- **Database:** SQLite3 (local) + Firebase Firestore (cloud sync)
- **Integration APIs:** Arkesel SMS API, Ankapee eCommerce REST API

2.3 Users and Access Levels

Role	Description	Access Level
Admin	Full control, manages users, reports, and configurations.	All modules
Optometrist	Conducts eye tests and creates prescriptions.	Diagnosis & Clients
Sales Representative	Manages eyewear sales and invoicing.	Sales & Inventory
Receptionist	Registers clients and books appointments.	Clients & Appointments

3. Functional Requirements

3.1 Client & Diagnosis Management

Description: Manage client data and medical records.

Functions:

- Register new clients and update details.
- Record eye test results (Left/Right eye, vision power, diagnosis notes).
- Generate and print digital prescriptions.
- Schedule, reschedule, or cancel appointments.
- View past diagnosis records for each client.
- Assign optometrists to clients.
- Capture optometrist's signature on prescriptions.

3.2 Eyewear Inventory Management

Description: Handle all eyewear products and supplier data.

Functions:

- Add, edit, and delete eyewear items.
- Categorize products (Frames, Lenses, Sunglasses, Accessories).
- Track stock quantity and availability.
- Manage suppliers and purchase records.
- Receive low-stock alerts.
- View fast-moving and slow-moving products.

3.3 Sales & Billing Management

Description: Manage all sales transactions, both in-store and synced from eCommerce.

Functions:

- Record in-store sales.
- Generate receipts and invoices.
- Manage multiple payment types (cash, MoMo, card, transfer).

- Apply discounts and promotions.
- Sync online sales data from the eCommerce site.
- Generate daily, weekly, and monthly sales reports.

3.4 Prescription Fulfillment

Description: Link diagnosis data with product sales.

Functions:

- Match prescriptions with suitable lenses/frames.
- Track order processing status (Pending → Processing → Completed → Delivered).
- Notify clients via SMS/email when eyewear is ready.
- Print order summary with breakdown of charges.

3.5 Staff Management

Description: Manage staff information, attendance, and performance.

Functions:

- Add and manage staff records.
- Define user roles and permissions.
- Track attendance (Clock-in/Clock-out).
- View performance metrics (appointments handled, sales achieved).
- Send internal notifications or memos.

3.6 Customer Relationship Management (CRM)

Description: Maintain long-term engagement with clients.

Functions:

- Follow-up reminders for next eye check-up.
- Collect feedback on diagnosis or eyewear satisfaction.
- Reward loyal customers through a points system.

- Send promotional campaigns via SMS/email.

3.7 Reports & Analytics

Description: Generate visual and data-driven insights.

Functions:

- Sales and revenue reports by product, staff, or date.
- Diagnosis statistics (common vision issues, patient demographics).
- Inventory analytics (stock movement trends).
- Client visit frequency and loyalty analysis.
- Export reports as PDF, Excel, or CSV.

3.8 System Administration

Description: Configuration and control panel for system management.

Functions:

- Manage users and access rights.
- Backup and restore data (local or cloud).
- Track system activity (audit trail).
- Customize notification templates.
- Manage synchronization settings (Firebase, eCommerce API).

4. Non-Functional Requirements

Category	Requirement
Performance	The system should process transactions and load dashboards within 3 seconds.
Security	Password encryption, role-based access, and data backup mechanisms.
Usability	Intuitive UI with clear navigation for both technical and non-technical staff.

Reliability	Automatic backup every 24 hours and manual restore option.
Scalability	Must support multi-branch expansion (optional module).
Maintainability	Modular codebase allowing easy updates or feature additions.
Portability	Browser-compatible for web version.

5. System Models

5.1 Use Case Diagram (Summary)

Actors: Admin, Optometrist, Receptionist, Sales Rep

Core Use Cases:

- Register Client
- Conduct Eye Test
- Generate Prescription
- Manage Inventory
- Process Sale
- View Reports
- Manage Staff
- Send Notifications

5.2 Data Flow (Simplified)

1. Receptionist registers client → Appointment booked.
2. Optometrist performs diagnosis → Prescription generated.
3. Sales Rep processes eyewear order → Payment recorded.
4. Inventory updated → Notification sent.
5. Admin reviews reports and manages system users.

6. Conclusion

The Ankapee Eyewear Management System (AEMS) will serve as a comprehensive solution that integrates diagnosis, sales, and client management under one digital platform. It will enhance productivity, reduce manual errors, and strengthen client relationships, positioning Ankapee as a technologically advanced eyewear brand.

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