

# Clinic Management System - Phase 1 Specification

## 1. Overview

The Phase 1 MVP focuses on delivering a functional clinic management system for a single clinic. It enables staff to manage patients, appointments, billing, and users with a secure login system. The system is designed with scalability in mind, hosted on a cloud server.

## 2. Tech Stack

Frontend: JavaFX Desktop Application

Backend: Spring Boot (Java)

Database: PostgreSQL (Cloud-hosted)

Hosting: Cloud VM (Azure preferred)

Authentication: Spring Security

## 3. Core Features (Phase 1 MVP)

- Patient Management: Register, update, and search records
- Appointments: Create/manage appointments, assign doctors
- Billing: Record services, generate invoices
- User Management: Staff login with role-based permissions

## 4. Architecture

The system follows a client-server architecture.

JavaFX (desktop client) communicates with Spring Boot backend via HTTPS. The backend interacts with PostgreSQL database hosted on a cloud server.

## 5. Future Extensions

- Audio-to-text transcription (doctor notes)
- Dialogue-to-summary conversion
- Mobile app (Android/iOS)
- Cloud-native scaling (load balancer, managed DB)

## 6. Deployment

For MVP, deploy on a single cloud VM with Spring Boot backend and PostgreSQL database. Staff desktops connect via JavaFX application over HTTPS.

## 7. User Roles

Role	Description
Admin	Full system access, manage staff and settings

Doctor	Access to patient records, appointments, billing
Receptionist	Register patients, manage appointments, assist with billing