

# Telerxs Platform – Detailed API Development Plan & Timeline

This document outlines the complete backend API development plan for the Telerxs platform, covering Admin Panel, Doctor (Provider) App, and Patient App. The system will be built from scratch using JavaScript (Node.js + Express) and MongoDB.

## Technology Stack

- Backend: Node.js, Express.js
- Database: MongoDB (Mongoose ODM)
- Authentication: JWT, Role-Based Access Control (Admin, Doctor, Patient, Compliance)
- Security: Data encryption, audit logs, HIPAA/GDPR-ready architecture, 2FA support
- Payments: Stripe, PayPal, Authorize.net (API-level integration)
- Notifications: Email, SMS, Push Notifications
- Reports & Exports: PDF, CSV, Excel

## Overall Delivery Timeline

Total Estimated Time: **6 Weeks**

- Week 1: Architecture & Core Setup
- Week 2–3: Admin APIs
- Week 4: Doctor APIs
- Week 5: Patient APIs
- Week 6: Testing, Security & Documentation

## Phase 1 – Architecture & Core Setup (Week 1)

- Project initialization and environment configuration
- Scalable folder and module structure
- MongoDB schema design for Users, Doctors, Patients, Prescriptions, Orders, Payments, Notifications
- Authentication APIs (Register, Login, OTP, JWT refresh)
- Role-based access control (RBAC)
- Common middleware (validation, logging, error handling)
- Audit log framework for compliance

## Phase 2 – Admin Panel APIs (Week 2–3)

### Admin Authentication & Profile

- Admin register, login, profile update
- Two-factor authentication APIs

### Dashboard & Analytics

- Active consultations, prescriptions, orders, deliveries
- Revenue, pharmacy sales, daily metrics
- Filters by region, doctor, medication category
- Heatmap data APIs
- AI-ready analytics endpoints

### Provider (Doctor) Management

- Add, verify, approve/reject doctors
- License and credential verification
- Set consultation fees and roles
- Performance and rating monitoring

### Patient Management

- View patient profiles and medical history
- KYC verification and consent management
- Suspend, delete, or reactivate users
- Medical interaction logs for compliance

## **Prescription & Order Management**

- View all prescriptions
- Track order lifecycle (prescription → pharmacy → delivery)
- Send prescription details to pharmacy
- Handle disputes and escalations
- Medicine refunds (excluding consultation fees)

## **Financial & Payment Oversight**

- Platform-wide transactions
- Doctor and pharmacy payouts
- Automated invoices and settlements
- Payment failure analytics

## **Compliance & Security**

- Audit trails for all actions
- Role-based access enforcement
- Encrypted document management

## **Marketing & Notifications**

- Campaign management APIs
- Email, SMS, push notifications

## **Reports & Exports**

- Consultation, prescription, finance reports
- Export to PDF, CSV, Excel

## **Phase 3 – Doctor (Provider) App APIs (Week 4)**

### **Doctor Registration & Onboarding**

- Secure registration with license verification
- Profile update, certificates, specialization upload
- Compliance verification APIs

### **Patient Consultation**

- Receive consultation and prescription requests
- View patient medical history and reports
- Update patient information

### **Prescription Management**

- Search medicine database
- Create, modify, cancel prescriptions
- Pharmacy integration for fulfillment
- Refill and instruction handling

### **Payments & Earnings**

- Earnings summary and history
- Payout requests and auto-transfer

### **Communication & Support**

- Secure chat with patients
- Admin notifications and compliance reporting

### **Doctor Reports & Analytics**

- Consultations, prescriptions, ratings
- Download daily/weekly reports

## **Phase 4 – Patient App APIs (Week 5)**

### **Registration & Medical Profile**

- Email/mobile signup with OTP
- Medical details, allergies, conditions
- Upload ID and prescriptions

### **Prescription & Medication Management**

- View active and past prescriptions
- Reorder medicines
- Download prescription PDFs
- Medication reminders

### **Payments & Invoicing**

- Consultation and medicine payments
- Multiple payment methods
- Invoice generation and refunds

### **Delivery Tracking**

- Real-time order status tracking
- Delivery notifications

### **Notifications & Support**

- Refill alerts and offers
- Chat support and AI chatbot

### **Health Records & Sharing**

- Consultation history and doctor notes
- Share records securely

## **Phase 5 – Testing, Security & Documentation (Week 6)**

- Complete API testing and validation
- Role and permission testing
- Security and compliance checks
- Postman collection delivery
- Final API documentation

### **Final Delivery Commitment**

All backend APIs for Admin, Doctor, and Patient platforms will be completed within **6 weeks**, fully documented, tested, and ready for frontend integration.

**Best Regards,**  
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