

## Dental Backend – Developer Integration & Deployment Sheet (One-Page)

### 1. Combine All Backend Parts

Extract both dental-backend-final.zip and dental-backend-final-deploy.zip into one folder. Overwrite when asked.

### 2. Install Dependencies

Run: `npm install`

### 3. Database Setup

Use `docker-compose up --build` or connect your own Postgres instance.

### 4. Prisma Initialization

Run: `npx prisma migrate dev --name init`

### 5. Environment Variables

Create `.env` with: `PORT`, `NODE_ENV`, `DATABASE_URL`, `ADMIN_PIN`, `USD_PKR_API_URL`.

### 6. Build & Run

Dev: `npm run dev`

Prod: `npm run build && npm start`

Docker: `docker-compose up --build`

### 7. Cron Jobs

Wire hourly USD→PKR, daily Drive backup, daily reminders, auto 11PM no show.

### 8. API Docs

Open `openapi-core.yaml` in Swagger/Stoplight/Postman.

### 9. Replace Dummy Providers

Replace SMS, Email, Drive, and PDF providers with real services.

### 10. Core Integration Architecture

Use `routes/index.master.ts`, `workflows.service.ts`, and `events.ts`.

### 11. Deployment Checklist

Enable HTTPS reverse proxy, configure env vars, run build, apply migrations, verify health endpoints.