

List of Relations

Relation	Attributes	Keys / Notes
Patients	patient_id INT, first_name VARCHAR(50), last_name VARCHAR(50), dob DATE, gender ENUM('M','F','Other')	PK: patient_id
Providers	provider_id INT, first_name VARCHAR(50), last_name VARCHAR(50), specialty VARCHAR(80), license_no VARCHAR(30), department VARCHAR(80)	PK: provider_id
StaffUsers	staff_id INT, username VARCHAR(50), password_hash VARCHAR(255), role ENUM('PATIENT','DOCTOR','PHARMACIST','NURSE','TECH','ADMIN'), access_level INT	PK: staff_id
Encounters	encounter_id INT, patient_id INT, provider_id INT, encounter_date DATETIME, visit_type ENUM('INPATIENT','OUTPATIENT','ER')	PK: encounter_id FK: patient_id → Patients, provider_id → Providers
Observations	observation_id INT, encounter_id INT, observation_code VARCHAR(30), value VARCHAR(50), unit VARCHAR(20), recorded_at DATETIME	PK: observation_id FK: encounter_id → Encounters
Medications	med_id INT, drug_name VARCHAR(120), drug_class VARCHAR(80)	PK: med_id

Prescriptions	<pre> prescription_id INT, patient_id INT, provider_id INT, med_id INT, dosage VARCHAR(50), frequency VARCHAR(50), start_date DATE, end_date DATE, status ENUM('ACTIVE','STOPPED','C OMPLETED') </pre>	PK: prescription_id FK: patient_id → Patients, provider_id → Providers, med_id → Medications
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Admin

Page	Who Uses It	Inputs	Database Action	Output
Login Page	All users	username, password	Authenticate user + load role	Redirect to dashboard
Patient Dashboard	Patient	filters (date, visit type)	SELECT own records	Medical summary
Patient Lookup	Providers	patient_id / name	SELECT patient profile	Patient overview
Create Prescription	Doctor	med, dosage, dates	INSERT prescription + interaction check	Warnings / success
Review Alerts	Pharmacist	severity filters	SELECT flagged interactions	Approve / flag
Add Observation	Nurse/Tech	vitals, labs	INSERT observation	Updated flowsheet
Manage Users	Admin	roles, access	INSERT/ UPDATE users	User list