



Entity relationship diagram

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Hospital System with Shifts and Medical History Logs

Doctors, nurses, and administrative staff are assigned shifts based on availability and department load. Patient histories include lab reports, prescriptions, allergies, surgeries, and emergency visits. Each ward has capacity rules. The billing system integrates lab, pharmacy, and consultation charges and generates receipts. Insurance claims are digitally filed and tracked through the portal.

Entity Relationship Diagram:



Schema of ER diagram

Staff (Staff-Id, name, salary)

Specialization:

- **Doctor** (Staff-Id, specialization)
- **Nurse** (Staff-Id, nurse-rank)
- **Administrative staff** (Staff-Id, role)

Shift (Staff-Id, start-time, end-time, day)

Staffshift (Staff-Id, shift-Id) (3rd table of staff and shift)

Patient (Patient-Id, Ward-id, name)

Patientstaff (patient-Id, Staff-id) (3rd table of staff and patient)

Ward (Ward-id, name)

wardNurse (Ward-Id, staff-id) (3rd table of Ward and nurse)

Receipts (Receipts-id, staff-id, patient-id, insurance-id, amount)

Insurance claim (insurance-id, total-amount, claim-date)

Patient history (H-id, patient-id, H-type)

- **Specialization:**

Lab report (patient-id, H-id, test-type)

Surgery (patient-id, H-id, surgeon-name)

Prescription (patient-id, H-id, medicine-name)

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Before Normalization