

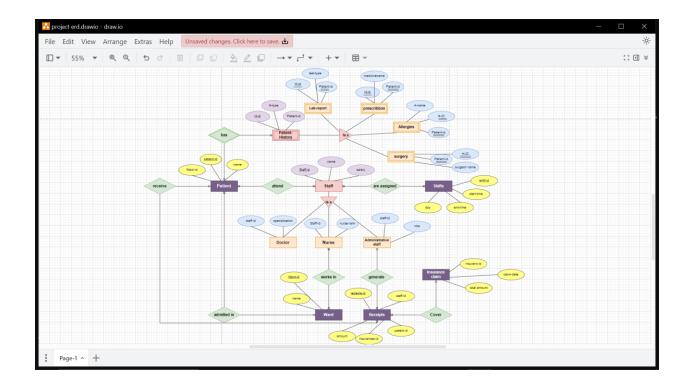
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# **Hospital System with Shifts and Medical History Logs**

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:** 



### Orange represent specialization

Attributes of specialization is blue

Superclass is red

Attributes of superclass is light purple

Relationships are green

Simple entities are dark purple

Attributes of Simple entities are yellow

## **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) (3<sup>rd</sup> table of staff and shift)

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

Patientstaff (patient-Id, Staff-id) (3<sup>rd</sup> table of staff and patient)

Ward (Ward-id, name)

wardNurse (Ward-Id, staff-id) (3<sup>rd</sup> 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)

normalization is not

# **Before Normalization**