### **Starlight General Hospital**

### **Actors**

### 1. Patient Registration and Appointment Booking

### 2. Patient Check-In and Check-Out

### 3. View Medical Records

### 4. Patient Diagnosis and Treatment

### 5. Order and Conduct Lab Tests

### 6. Prescription Management

### 7. Billing and Payment Processing

### 8. Inventory Management

### 9. Staff Management and Scheduling

### 10. Emergency Response and Triage

### 11. System Maintenance and Data Security

### 12. Insurance Claim Processing

**Use case**

### 1. Patient Registration and Appointment Booking

### 2. View Medical Records

### 3. Patient Diagnosis and Treatment

### 4. Order and Conduct Lab Tests

### 5. Prescription Management

6. Billing and Payment Processing

**Data flow**

* Patient Registration and Appointment. Data flows from Patients to Patient Registration and Appointment Booking and is stored.
* Medical Record Access.Requests are made by Doctors and Nurses to View Medical Records, accessing data from MedicalRecords.
* Diagnosis and Treatment. Data is updated by Doctors through Patient Diagnosis and Treatment, stored in MedicalRecords, and relevant data flows to Prescriptions.
* Lab Test Orders initiated by Doctors go to Order and Conduct Lab Tests, stored in LabTests and linked to MedicalRecords for result documentation.
* Prescription Data, from Doctors flows into Prescription Management and updates Inventory as prescriptions are dispensed by Pharmacists.
* Billing Data for services rendered flows into Billing and Payment Processing, generating invoices stored in Billing and payment statuses updated in Payments.

### **Actors and Use Cases Relationships**

1.Patient Registration and Appointment Booking

a .Actors Patient, Receptionist

**Relationships**.

* + 1. Patient initiates Patient Registration and Appointment Booking
    2. Receptionist assists with Patient Registration and Appointment Booking

1. View Medical Records
   1. Actors: Patients, Doctors, Nurses

**Relationships.**

* + 1. Patients can view their own Medical Records.
    2. Doctors access Medical Records for diagnosis and treatment.
    3. Nurse accesses Medical Records to assist in patient care.
    4. Doctor and Nurse have View Medical Records as an Include relationship, as it's part of Patient Diagnosis and Treatment.

1. Patient Diagnosis and Treatment
   1. Actors: Doctors, Nurses

**Relationships**.

* + 1. Doctor initiates Patient Diagnosis and Treatment.
    2. Nurse supports Patient Diagnosis and Treatment.
    3. Patient Diagnosis and Treatment includes Order and Conduct Lab Tests and Prescription Management, as these processes are integral to patient care.

1. Order and Conduct Lab Tests
   1. Actors: Doctors, Laboratory Technicians.

**Relationships.**

* + 1. Doctor requests Order and Conduct Lab Tests.
    2. Laboratory Technician conducts Order and Conduct Lab Tests.
    3. Order and Conduct Lab Tests are included in Patient Diagnosis and Treatment, as lab results are required for treatment decisions.

1. Prescription Management
   1. Actors: Doctors, Pharmacists, Patients

**Relationships.**

* + 1. Doctor initiates Prescription Management by prescribing medication.
    2. Pharmacists fulfill the prescription in Prescription Management.
    3. Patients receive medication via Prescription Management.
    4. Prescription Management is included in Patient Diagnosis and Treatment, as prescriptions are part of the treatment process.

1. Billing and Payment Processing
   1. Actors: Patient, Receptionist

**Relationships.**

* + 1. Patient is billed and processes payments in Billing and Payment Processing.
    2. Receptionist manages Billing and Payment Processing for patient services.
    3. Billing and Payment Processing is extended to handle Insurance Claim Processing, if applicable.

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