Project Documentation

Hospital Appointment & Health Tracker System on Salesforce

Phase 3: Data Modeling & Relationships

1. Introduction

In this stage, the focus is on building the Salesforce data model that supports hospital appointments and health monitoring. A well-planned structure ensures the system is secure, scalable, and capable of generating efficient reports.

This phase covers standard and custom objects, their fields, record types, page and compact layouts, schema visualization, relationships, and junction objects.

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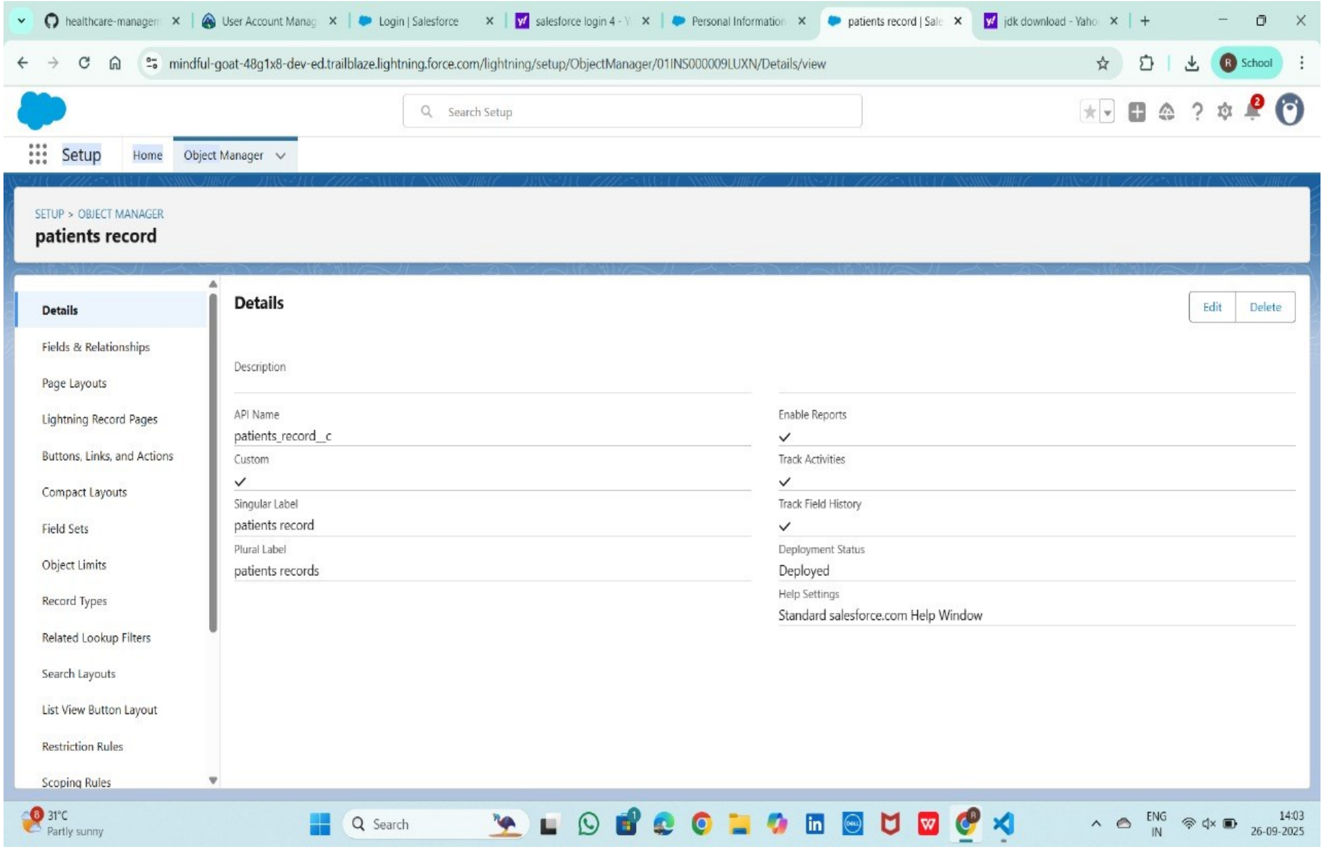
2. Objects (Standard & Custom)

Standard Objects:

- **Account** → Represents hospital departments or external partner hospitals.
- **Contact** → Used for storing information about patients and doctors..
- **Case** → Can track patient service requests or complaints.

Custom Objects (specific to project):

- **Patient__c** → Stores patient details (Name, Age, Gender, Contact Info, Medical History).
- **Doctor__c** → Represents doctors (Name, Specialization, Availability, Contact Info).
- **Appointment__c** → Tracks patient-doctor appointments (Date, Time, Status, Reason).
- **HealthRecord__c** → Stores patient medical history (Symptoms, Diagnosis, Prescription, Reports).
- **Department__c** → Represents hospital departments (Name, Services, Doctors linked).
- **PatientDoctor__c (Junction Object)** → Links Patients and Doctors for many-to-many relationships.



SETUP > OBJECT MANAGER

patients record

Details

Description

API Name
patients_record__c

Custom
✓

Singular Label
patients record

Plural Label
patients records

Enable Reports
✓

Track Activities
✓

Track Field History
✓

Deployment Status
Deployed

Help Settings
Standard salesforce.com Help Window

3. Fields

Each object has standard fields plus additional custom fields.

Patient__c Fields:

Patient Name (Text)

Age (Number)

Gender (Picklist → Male, Female, Other)

Phone (Phone)

Email (Email)

Medical History (Long Text Area)

Doctor__c Fields:

Doctor Name (Text)

Specialization (Picklist → Cardiologist, Orthopedic, Pediatrician, etc.)

Contact Info (Phone, Email)

Availability (Picklist → Available, On Leave, Busy)

Department (Lookup → Department__c)

Appointment__c Fields:

Appointment Date (Date/Time)

Status (Picklist → Scheduled, Completed, Cancelled, Rescheduled)

Reason for Visit (Text Area)

Patient (Lookup → Patient__c)

Doctor (Lookup → Doctor__c)

HealthRecord__c Fields:

Symptoms (Long Text Area)

Diagnosis (Long Text Area)

Prescription (Long Text Area)

Report Upload (File)

Related Patient (Lookup → Patient__c)

Related Appointment (Lookup → Appointment__c)

Department__c Fields:

Department Name (Text)

Services Offered (Long Text Area)

PatientDoctor__c (Junction Object):

Patient (Master-Detail → Patient__c)

Doctor (Master-Detail → Doctor__c)

Status (Picklist → Active, Inactive)

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4. Record Types

Appointment__c Record Types:

OPD Appointment

Emergency Appointment

Surgery Appointment

HealthRecord__c Record Types:

General Consultation

Lab Report

Prescription

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5. Page Layouts

Patient__c Layouts:

Basic Info Layout → Shows patient demographics.

Medical History Layout → Includes appointments and health records.

Doctor__c Layouts:

Doctor Profile Layout → Shows specialization and contact details.

Availability Layout → Includes schedules and appointments.

Appointment__c Layouts:

OPD Layout → Basic check-up details.

Surgery Layout → Pre-op & post-op details.

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6. Compact Layouts

Patient__c Compact Layout: Patient Name, Age, Phone, Gender.
Doctor__c Compact Layout: Doctor Name, Specialization, Availability.
Appointment__c Compact Layout: Appointment Date, Status, Doctor, Patient.
HealthRecord__c Compact Layout: Symptoms, Diagnosis, Prescription.

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7. Schema Builder

Schema Builder will be used to:

Visualize relationships between Patient, Doctor, Appointment, HealthRecord, and Department.

Arrange objects to represent **ERD (Entity Relationship Diagram)**.

Validate **junction objects** and field dependencies.

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8. Relationships

Patient__c → **Appointment__c** → Lookup (one patient can have many appointments).

Doctor__c → **Appointment__c** → Lookup (one doctor can have many appointments).

Patient__c → **HealthRecord__c** → Master-Detail (a patient can have many health records).

Appointment__c → **HealthRecord__c** → Lookup (each record tied to appointment).

Department__c → **Doctor__c** → Lookup (department has many doctors).

Patient__c ↔ **Doctor__c** → Many-to-Many (managed by junction object PatientDoctor__c).

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9. Junction Objects

PatientDoctor__c → Junction between Patient and Doctor.

Purpose: Track ongoing doctor-patient associations beyond single appointments.

Helps in long-term treatment tracking and follow-ups.

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10. External Objects

External_LabReports__x → Connects Salesforce to external lab systems for diagnostics.

External_WearableData__x → Connects Salesforce with health trackers (Fitbit, Apple Health) for real-time monitoring.

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11. Documentation Deliverables

ERD Diagram (Patient, Doctor, Appointment, HealthRecord, Department, PatientDoctor).

Custom Object & Field Tables (Name, API Name, Type, Description).

Record Type & Layout Mapping.

Junction Object Mapping.

Screenshots: Schema Builder, Page Layouts, Compact Layouts.

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12. Benefits of This Phase

Provides a **clear and scalable data structure** for hospital processes.

Supports **appointment scheduling, tracking, and automation**.

Enables **doctor-patient history visibility**.

Prepares the model for **automation, reporting, and integrations** in later phases.

Phase 3 Deliverable:

Defined objects, fields, and relationships.

Mapped record types, layouts, and compact layouts.

Designed ERD using Schema Builder.

Established junction objects for many-to-many relationships.

This forms the foundation for **Phase 4: Process Automation (Admin)**.