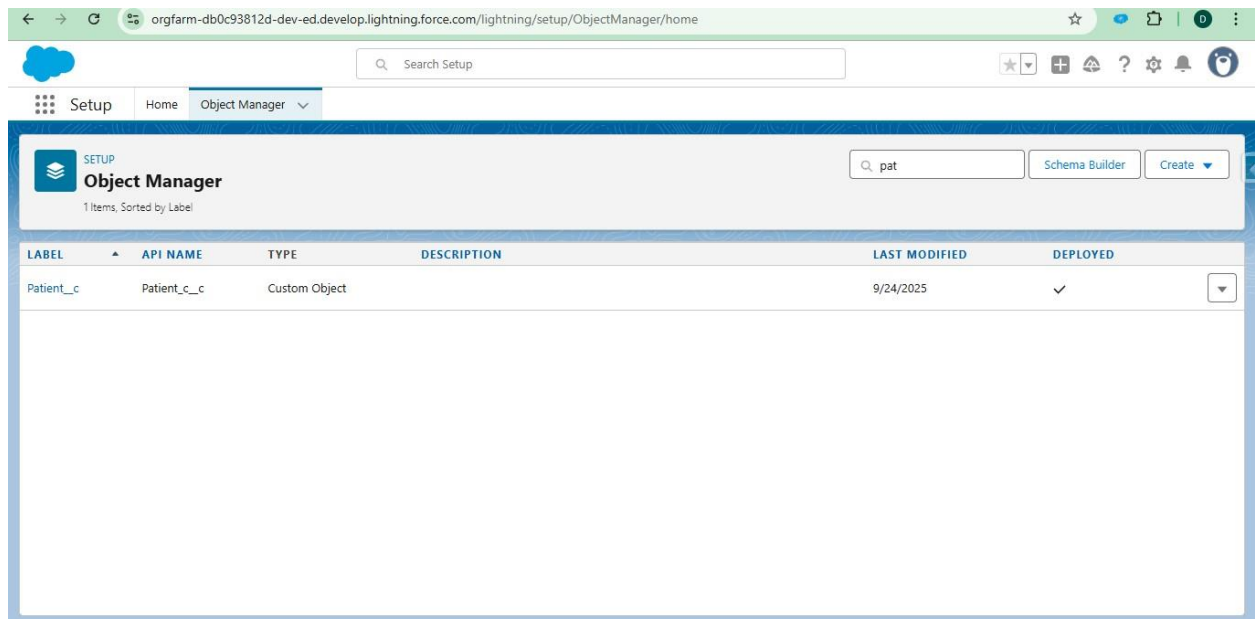


Phase 3: Data Modeling & Relationships

Standard & Custom Objects

For effective patient management, Salesforce standard objects are complemented with custom objects tailored to hospital workflows. The following custom objects were created: **Patient__c**, **Appointment__c**, **Treatment__c**, **Lab_Result__c**, and **Care_Plan__c**. These objects ensure that patient information, appointments, treatments, and care plans are stored in a structured, healthcare-specific format.



Fields

Each custom object contains fields designed to capture essential hospital data.

- **Patient__c** → Patient ID, Name, Age, Department, Email, Phone.
 - **Appointment__c** → Date, Time, Doctor, linked Patient.
 - **Treatment__c** → Diagnosis, Medication, Therapy, linked Patient.
 - **Lab_Result__c** → Test Name, Date, Result, linked Patient.
 - **Care_Plan__c** → Plan Name, Follow-up Date, Assigned Doctor, linked Patient.
-

Record Types

Record types allow differentiation between healthcare services.

- **Appointment__c** → In-Person, Telemedicine.
- **Treatment__c** → Surgery, Medication, Therapy.

This ensures flexibility in categorizing healthcare encounters.

The screenshot shows the Salesforce Setup interface. The top navigation bar includes a search bar labeled "Search Setup" and several utility icons. The left sidebar contains a menu with options: Setup, Home, and Object Manager (selected). The main content area is titled "Appointment__c" and "Record Type In-Person Appointment". It includes a "Back to Custom Object: Appointment__c" link and an "Edit" button. Below this, a table displays the record type properties:

Record Type Label	In-Person Appointment	Active	✓
Record Type Name	In_Person_Appointment		
Namespace Prefix			
Description			
Created By	Dasam Harisaran, 9/24/2025, 10:36 AM	Modified By	Dasam Harisaran, 9/24/2025, 10:36 AM

The screenshot shows the Salesforce Setup interface for the "Telemedicine Appointment" record type. The layout is identical to the previous screenshot, but the record type name is "Telemedicine Appointment". The table displays the following properties:

Record Type Label	Telemedicine Appointment	Active	✓
Record Type Name	Telemedicine_Appointment		
Namespace Prefix			
Description			
Created By	Dasam Harisaran, 9/24/2025, 10:38 AM	Modified By	Dasam Harisaran, 9/24/2025, 10:38 AM

Setup

Home

Object Manager

Search Setup

SETUP > OBJECT MANAGER

Treatment_c

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Record Types

3 Items, Sorted by Record Type Label

Q Quick Find

New

Page Layout Assignment

RECORD TYPE LABEL	DESCRIPTION	ACTIVE	MODIFIED BY	
Medication		✓	Dasam Harisaran, 9/24/2025, 10:42 AM	
Surgery		✓	Dasam Harisaran, 9/24/2025, 10:41 AM	
Therapy		✓	Dasam Harisaran, 9/24/2025, 10:41 AM	

Page Layouts

Custom page layouts were developed for different roles.

- **Doctors:** Treatments and Appointments.
- **Nurses:** Patient details and Medication schedules.
- **Care Coordinators:** Care Plans and Follow-ups.
- **Patients:** Their own Appointments and Lab Results.

This role-based design ensures relevant data visibility.

Setup

Home

Object Manager

Search Setup

SETUP > OBJECT MANAGER

Patient_c

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Page Layouts

4 Items, Sorted by Page Layout Name

Q Quick Find

New

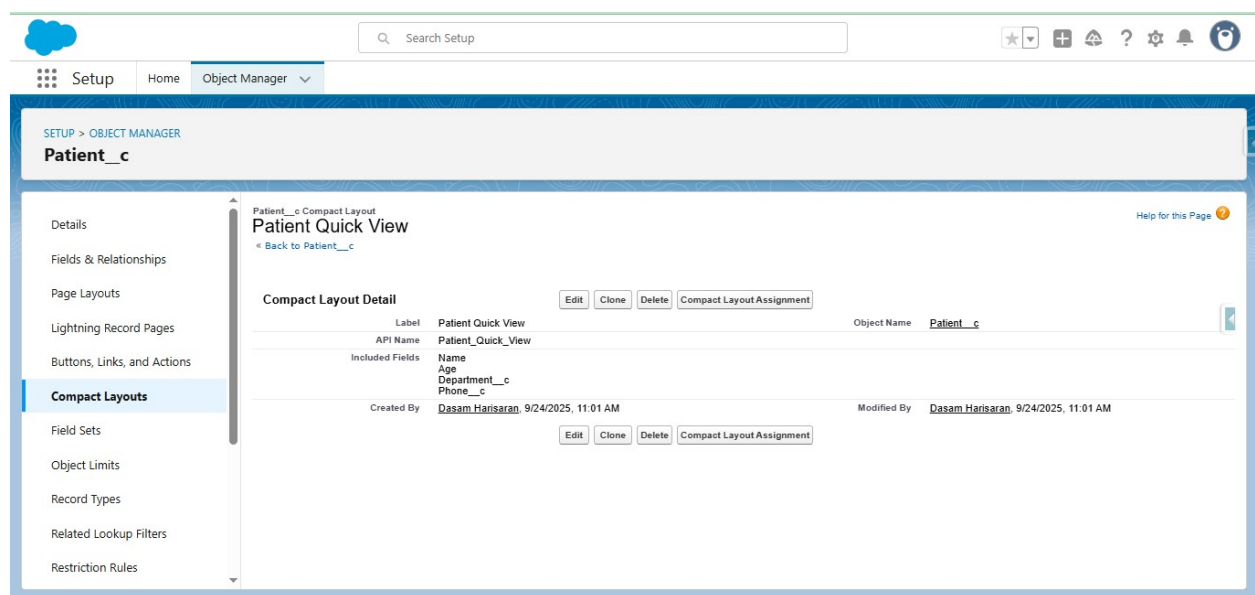
Page Layout Assignment

PAGE LAYOUT NAME	CREATED BY	MODIFIED BY	
Care Coordinator Layout	Dasam Harisaran, 9/24/2025, 10:48 AM	Dasam Harisaran, 9/24/2025, 10:48 AM	
Doctor Layout	Dasam Harisaran, 9/24/2025, 10:44 AM	Dasam Harisaran, 9/24/2025, 10:46 AM	
Nurse Layout	Dasam Harisaran, 9/24/2025, 10:47 AM	Dasam Harisaran, 9/24/2025, 10:47 AM	
Patient_c Layout	Dasam Harisaran, 9/24/2025, 10:19 AM	Dasam Harisaran, 9/24/2025, 10:46 AM	

Compact Layouts

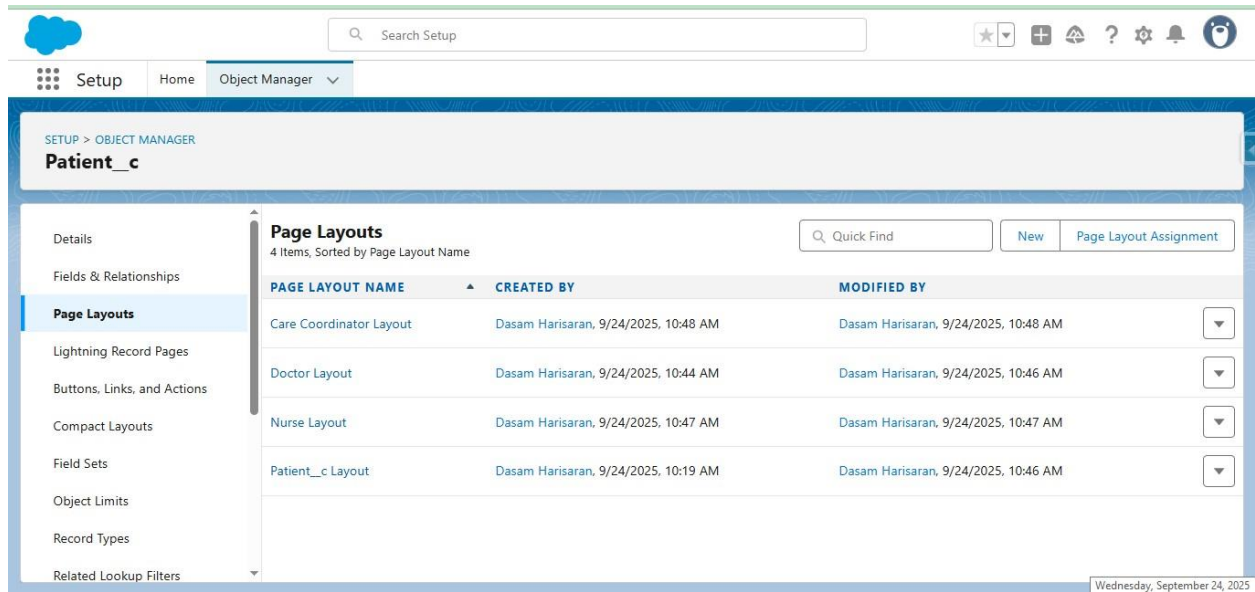
Compact layouts provide quick previews of essential fields.

- **Patient__c** → Name, Age, Department, Phone.
- **Appointment__c** → Date, Doctor, Status.



Schema Builder

The Schema Builder was used to visualize the entire healthcare data model. It highlights how **Patient__c** is the central object connected with Appointments, Treatments, Lab Results, and Care Plans, providing a clear understanding of data flow.



Lookup vs Master-Detail vs Hierarchical Relationships

Relationships were designed to reflect hospital workflows:

- Patient ↔ Appointment → Master-Detail
- Patient ↔ Treatment → Master-Detail
- Patient ↔ Lab_Result → Lookup
- Patient ↔ Care_Plan → Lookup

Additionally, a junction object **Doctor_Patient__c** was introduced to support many-to-many relationships between doctors and patients.

Junction Objects

Doctor_Patient__c serves as a junction object, enabling many-to-many relationships between patients and doctors. This ensures that multiple doctors can treat the same patient, and a doctor can handle multiple patients.

External Objects

To accommodate data from hospital systems such as Laboratory Information Systems (LIS), external objects were implemented. For instance, **External_Lab_Report__x** allows real-time integration with external lab data while linking results to **Patient__c**.

✓**Final Deliverables (Phase 3):**

1. Custom Objects & Fields created.
2. Record Types for healthcare scenarios.
3. Page Layouts & Compact Layouts by role.
4. Schema Builder diagram showing data model.
5. Relationships (Master-Detail, Lookup, Junction).
6. External Object for lab system integration.