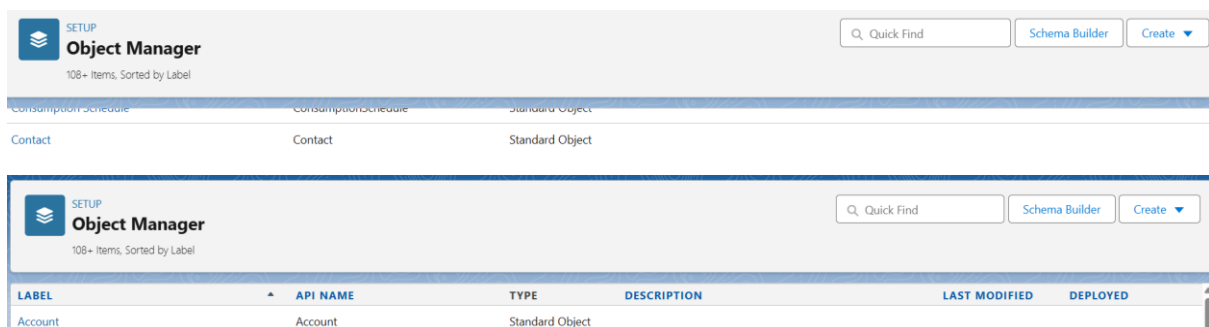# Phase 3: Data Modelling & Relationships

Goal: Build the data structure for TCS MediConnect so patient, doctor, appointment, billing, feedback, and chatbot information can be stored, accessed, and related efficiently in Salesforce.

1. Standard & Custom Objects

- **Standard Objects:**

    - **Contact:** Can represent Patients or Doctors (optional).

    - **User:** Already exists, for staff, doctors, admins, managers.

- **Custom Objects:**

1. **Patient:** Stores patient details like name, contact info, medical history.

2. **Doctor:** Stores doctor details like name, specialization, shift schedule.

3. **Appointment:** Stores appointment info (patient ↔ doctor mapping, status, date & time).

4. **Billing:** Stores payment info, insurance details, QR/Payment gateway info.

5. **Feedback:** Stores patient feedback and NLP sentiment score.

6. **Chatbot Logs:** Stores chatbot interactions for reporting and analysis.

Authorization Form Text	AuthorizationFormText	Standard Object				
Billing	Billing__c	Custom Object		9/25/2025	✓	▼
Chatbot Log	Chatbot_Log__c	Custom Object		9/25/2025	✓	▼

Doctor	Doctor__c	Custom Object	Stores doctor details like name, specialization, and shift schedule.	9/25/2025	✓	▼
Duplicate Record Item	DuplicateRecordItem	Standard Object				
Duplicate Record Set	DuplicateRecordSet	Standard Object				
Email Message	EmailMessage	Standard Object				
Engagement Channel Type	EngagementChannelType	Standard Object				
Engagement Channel Work Type	EngagementChannelWorkType	Standard Object				
Entitlement	Entitlement	Standard Object				
Entitlement Contact	EntitlementContact	Standard Object				
Event	Event	Standard Object				
Feedback	Feedback__c	Custom Object		9/25/2025	✓	▼
Patient	Patient__c	Custom Object	Stores patient details, medical history, and contact information.	9/25/2025	✓	▼

1. Patient Object

Label : Patient

Plural Label : Patients

Object Name : Patient

Description : Stores patient details, medical history, and contact information.

Record Name : Patient Name (Data Type: Text). Alternatively, you could use an Auto Number like P-{00000}.

Fields to Create :

Contact Details (Lookup to Contact Object)

Medical History (Long Text Area)

Medication Schedule (Lookup to a custom Medication object)

Primary Caregiver (Lookup to a Contact)

Health Feedback (Lookup to a custom Feedback object)

2. Doctor Object

Label: Doctor

Plural Label : Doctors

Object Name : Doctor

Description : Stores doctor details like name, specialization, and shift schedule.

Record Name : Doctor Name (Data Type: Text)

Fields to Create*:

Specialization (Picklist)

Shift Schedule (Text)

Contact Info (Lookup to a Contact)

Associated Hospital (Lookup to an Account)

3. Appointment Object

Label : Appointment

Plural Label : Appointments

Object Name : Appointment

Description : Manages appointment information including the patient-to-doctor mapping, status, date, and time.

Record Name : Appointment ID (Data Type: Auto Number)

Fields to Create :

Patient (Lookup to a custom Patient object)

Doctor (Lookup to a custom Doctor object)

Appointment Date/Time (Date/Time)

Status (Picklist: e.g., Scheduled, Completed, Cancelled)

Follow-up Required? (Checkbox)

4. Billing Object

Label : Billing

Plural Label : Billing

Object Name : Billing

Description : Manages payment information, insurance details, and payment gateway info.

Record Name : Invoice ID (Data Type: Auto Number)

Fields to Create :

Patient (Lookup to a custom Patient object)

Total Amount (Currency)

Status (Picklist: e.g., Pending, Paid, Claim Submitted)

Insurance Provider (Text)

Payment Gateway Info (Text)

5. Feedback Object

Label : Feedback

Plural Label : Feedback

Object Name : Feedback

Description : Stores patient or family feedback and the NLP sentiment score.

Record Name : Feedback ID (Data Type: Auto Number)

Fields to Create :

Patient (Lookup to a custom Patient object)

Feedback Details (Text Area)

Sentiment Score (Number)

Date Submitted (Date)

6. Chatbot Logs

Label : Chatbot Log

Plural Label : Chatbot Logs

Object Name : Chatbot_Log

Description : Stores chatbot interactions for reporting and analysis.

Record Name : Log ID (Data Type: Auto Number)

Fields to Create :

Interaction ID (Text)

User Input (Long Text Area)

Bot Response (Long Text Area)

Timestamp (Date/Time)

User (Lookup to a User)

Intent (Picklist or Text)

2. Fields

- **Patient:** Name, Contact Number, Email, Medical History, Appointment Status, Patient ID.

- **Doctor:** Name, Specialization, Availability, Shift Schedule, Doctor ID.

- **Appointment:** Patient Lookup, Doctor Lookup, Appointment Date, Time, Status (Booked, Completed, Cancelled), Notes.

- **Billing:** Appointment Lookup, Payment Status, Insurance Provider, Amount, Payment Mode, Transaction ID.

- **Feedback:** Appointment Lookup, Patient Lookup, Feedback Text, NLP Sentiment Score.

- **Chatbot Logs:** Patient Lookup, Query Text, Response Text, Timestamp.

SETUP > OBJECT MANAGER
Patient

	Fields & Relationships					
Details	8 Items, Sorted by Field Label		Q Quick Find	New	Deleted Fields	Field Dependencies	Set History Tracking
Fields & Relationships						
Page Layouts	FIELD LABEL ▲	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED	
Lightning Record Pages	Contact	Contact__c	Lookup(Contact)		✓	▾
Buttons, Links, and Actions	Created By	CreatedById	Lookup(User)			
Compact Layouts	Last Modified By	LastModifiedById	Lookup(User)			
Field Sets	Medical History	Medical_History__c	Long Text Area(32768)			▾
Object Limits	Medication Schedule	Medication_Schedule__c	Lookup(Medication)		✓	▾
Record Types	Owner	OwnerId	Lookup(User,Group)		✓	
Related Lookup Filters	Patient Name	Name	Text(80)		✓	▾
Search Layouts	Primary Caregiver	Primary_Caregiver__c	Lookup(Contact)		✓	▾

Doctor

Fields & Relationships
8 Items, Sorted by Field Label

Details					
Fields & Relationships			Quick Find	New	Deleted Fields	Field Dependencies	Set History Tracking

FIELD LABEL ▲	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED	
Associated Hospital	Associated_Hospital__c	Lookup(Account)		✓	▼
Contact Info	Contact_Info__c	Lookup(Contact)		✓	▼
Created By	CreatedById	Lookup(User)			
Doctor Name	Name	Text(80)		✓	▼
Last Modified By	LastModifiedById	Lookup(User)			
Owner	OwnerId	Lookup(User,Group)		✓	
Shift Schedule	Shift_Schedule__c	Text(255)			▼
Specialization	Specialization__c	Picklist			▼

Sidebar: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts

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Appointment

Fields & Relationships
10 Items, Sorted by Field Label

FIELD LABEL ▲	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED	
Appointment Date/Time	Appointment_Date_Time__c	Date/Time			▼
Appointment End Time	Appointment_End_Time__c	Date/Time			▼
Appointment ID	Name	Auto Number		✓	▼
Created By	CreatedById	Lookup(User)			
Doctor	Doctor__c	Lookup(Doctor)		✓	▼
Follow-up Required	Follow_up_Required__c	Checkbox			▼
Last Modified By	LastModifiedById	Lookup(User)			

Sidebar: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts

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Appointment

Fields & Relationships
10 Items, Sorted by Field Label

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED	
Appointment ID	Name	Auto Number		✓	▼
Created By	CreatedById	Lookup(User)			
Doctor	Doctor__c	Lookup(Doctor)		✓	▼
Follow-up Required	Follow_up_Required__c	Checkbox			▼
Last Modified By	LastModifiedById	Lookup(User)			
Owner	OwnerId	Lookup(User,Group)		✓	
Patient	Patient__c	Lookup(Patient)		✓	▼
Status	Status__c	Picklist			▼

Sidebar: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts

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Billing

Fields & Relationships
9 Items, Sorted by Field Label

FIELD LABEL ▲	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED	
Appointment	Appointment__c	Master-Detail(Appointment)		✓	▼
Created By	CreatedById	Lookup(User)			
Insurance Provider	Insurance_Provider__c	Text(255)			▼
Invoice ID	Name	Auto Number		✓	▼
Last Modified By	LastModifiedById	Lookup(User)			
Patient	Patient__c	Lookup(Patient)		✓	▼
Payment Gateway Info	Payment_Gateway_Info__c	Text(255)			▼

Sidebar: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts

Details				
Fields & Relationships	**Fields & Relationships**		Quick Find	New Deleted Fields Field Dependencies Set History Tracking
Page Layouts	8 Items, Sorted by Field Label			

FIELD LABEL ▲	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED	
Appointment	Appointment__c	Master-Detail(Appointment)		✓	▼
Created By	CreatedById	Lookup(User)			
Date Submitted	Date_Submitted__c	Date			▼
Feedback Details	Feedback_Details__c	Text Area(255)			▼
Feedback ID	Name	Auto Number		✓	▼
Last Modified By	LastModifiedById	Lookup(User)			
Patient	Patient__c	Lookup(Patient)		✓	▼

Left sidebar: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts

Fields & Relationships
10 Items, Sorted by Field Label

Quick Find   New   Deleted Fields   Field Dependencies   Set History Tracking

FIELD LABEL ▲	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED	
Bot Response	Bot_Response__c	Long Text Area(32768)			▼
Created By	CreatedById	Lookup(User)			
Intent	Intent__c	Picklist			▼
Interaction ID	Interaction_ID__c	Text(255)			▼
Last Modified By	LastModifiedById	Lookup(User)			
Log ID	Name	Auto Number		✓	▼
Owner	OwnerId	Lookup(User,Group)		✓	
Timestamp	Timestamp__c	Date/Time			▼

Left sidebar: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts

3. Record Types

- **Appointment Record Types:**
  - "Regular Consultation"
  - "Emergency Consultation"

- **Billing Record Types:**
  - "Insurance Payment"
  - "Self-Payment"

This allows different page layouts and automation rules for each type.

4. Page Layouts

- **Patient Layout:** Shows personal info, medical history, and upcoming appointments.

- **Doctor Layout:** Shows specialization, availability, appointments assigned, and feedback.

- **Appointment Layout:** Shows patient & doctor info, date/time, status, and billing link.

- **Billing Layout:** Shows appointment, patient, payment status, and insurance details.

- **Feedback Layout:** Shows patient, appointment, feedback text, and sentiment score.

SETUP > OBJECT MANAGER
Billing

SETUP > OBJECT MANAGER
Feedback

SETUP > OBJECT MANAGER
Chatbot Log

5. Compact Layouts

- **Mobile view:**

  - Patient → Name, Contact, Appointment Status

  - Doctor → Name, Specialization, Shift

  - Appointment → Patient Name, Doctor Name, Status

    o   Billing → Payment Status, Amount

Appointment

Details	Appointment Compact Layout
Fields & Relationships	**Appointment Mobile Summary**
Page Layouts	« Back to Appointment
Lightning Record Pages	
Buttons, Links, and Actions	**Compact Layout Detail** Edit Clone Delete Compact Layout Assignment
Compact Layouts	Label Appointment Mobile Summary Object Name Appointment
Field Sets	API Name Appointment_Mobile_Summary
Object Limits	Included Fields Appointment ID
Record Types	Patient
	Doctor
Related Lookup Filters	Status
Search Layouts	Appointment Date/Time

Help for this Page

Created By   Parnika Jonnala, 9/25/2025, 11:24 AM   Modified By   Parnika Jonnala, 9/25/2025, 11:24 AM

Edit   Clone   Delete   Compact Layout Assignment

Patient

Details	Patient Compact Layout
Fields & Relationships	**Patient Mobile Summary**
Page Layouts	« Back to Patient
Lightning Record Pages	
Buttons, Links, and Actions	**Compact Layout Detail** Edit Clone Delete Compact Layout Assignment
Compact Layouts	Label Patient Mobile Summary Object Name Patient
Field Sets	API Name Patient_Mobile_Summary
Object Limits	Included Fields Patient Name
Record Types	Contact
	Primary Caregiver
Related Lookup Filters	Medication Schedule
Search Layouts	

Help for this Page

Created By   Parnika Jonnala, 9/25/2025, 11:21 AM   Modified By   Parnika Jonnala, 9/25/2025, 11:21 AM

Edit   Clone   Delete   Compact Layout Assignment

Doctor

Details	Doctor Compact Layout
Fields & Relationships	**Doctor Mobile Summary**
Page Layouts	« Back to Doctor
Lightning Record Pages	
Buttons, Links, and Actions	**Compact Layout Detail** Edit Clone Delete Compact Layout Assignment
Compact Layouts	Label Doctor Mobile Summary Object Name Doctor
Field Sets	API Name Doctor_Mobile_Summary
Object Limits	Included Fields Specialization
Record Types	Shift Schedule
	Contact Info
Related Lookup Filters	
Search Layouts	

Help for this Page

Created By   Parnika Jonnala, 9/25/2025, 11:22 AM   Modified By   Parnika Jonnala, 9/25/2025, 11:22 AM

Edit   Clone   Delete   Compact Layout Assignment
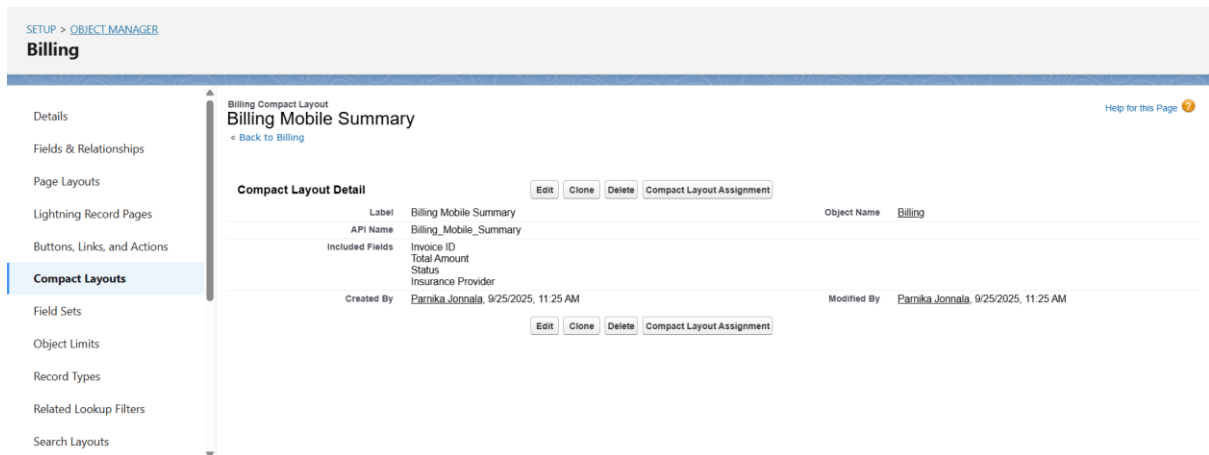
6. Schema Builder

- Use Setup → Schema Builder to visually connect objects.

- Draw relationships: Patient ↔ Appointment ↔ Doctor ↔ Billing ↔ Feedback.

- Chatbot Logs linked to Patient and optionally Appointment.

7. Lookup vs Master-Detail vs Hierarchical Relationships

- **Patient ↔ Appointment → Lookup** (Appointments can exist independently, patient may have multiple).

- **Doctor ↔ Appointment → Lookup** (Doctor can have multiple appointments).

- **Appointment ↔ Billing → Master-Detail** (Billing depends on appointment).

- **Appointment ↔ Feedback → Master-Detail** (Feedback depends on appointment).

- **Doctor ↔ Manager → Hierarchical** (if you want to track reporting).

SETUP > OBJECT MANAGER
Patient

Details	**Fields & Relationships**
Fields & Relationships	8 Items, Sorted by Field Label
Page Layouts	
Lightning Record Pages	
Buttons, Links, and Actions	
Compact Layouts	
Field Sets	
Object Limits	
Record Types	
Related Lookup Filters	
Search Layouts	

Q Quick Find   New   Deleted Fields   Field Dependencies   Set History Tracking

FIELD LABEL ▲	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED	
Contact	Contact__c	Lookup(Contact)		✓	▼
Created By	CreatedById	Lookup(User)			
Last Modified By	LastModifiedById	Lookup(User)			
Medical History	Medical_History__c	Long Text Area(32768)			▼
Medication Schedule	Medication_Schedule__c	Lookup(Medication)		✓	▼
Owner	OwnerId	Lookup(User,Group)		✓	
Patient Name	Name	Text(80)		✓	▼
Primary Caregiver	Primary_Caregiver__c	Lookup(Contact)		✓	▼

SETUP > OBJECT MANAGER
Doctor

Details	**Fields & Relationships**
Fields & Relationships	8 Items, Sorted by Field Label
Page Layouts	
Lightning Record Pages	
Buttons, Links, and Actions	
Compact Layouts	
Field Sets	
Object Limits	
Record Types	
Related Lookup Filters	
Search Layouts	

Q Quick Find   New   Deleted Fields   Field Dependencies   Set History Tracking

FIELD LABEL ▲	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED	
Associated Hospital	Associated_Hospital__c	Lookup(Account)		✓	▼
Contact Info	Contact_Info__c	Lookup(Contact)		✓	▼
Created By	CreatedById	Lookup(User)			
Doctor Name	Name	Text(80)		✓	▼
Last Modified By	LastModifiedById	Lookup(User)			
Owner	OwnerId	Lookup(User,Group)		✓	
Shift Schedule	Shift_Schedule__c	Text(255)			▼
Specialization	Specialization__c	Picklist			▼

SETUP > OBJECT MANAGER
Appointment

Details	**Fields & Relationships**
Fields & Relationships	10 Items, Sorted by Field Label
Page Layouts	
Lightning Record Pages	
Buttons, Links, and Actions	
Compact Layouts	
Field Sets	
Object Limits	
Record Types	
Related Lookup Filters	
Search Layouts	

Q Quick Find   New   Deleted Fields   Field Dependencies   Set History Tracking

FIELD LABEL ▲	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED	
Appointment Date/Time	Appointment_Date_Time__c	Date/Time			▼
Appointment End Time	Appointment_End_Time__c	Date/Time			▼
Appointment ID	Name	Auto Number		✓	▼
Created By	CreatedById	Lookup(User)			
Doctor	Doctor__c	Lookup(Doctor)		✓	▼
Follow-up Required	Follow_up_Required__c	Checkbox			▼
Last Modified By	LastModifiedById	Lookup(User)			

Appointment

Fields & Relationships
10 Items, Sorted by Field Label

Field Label	Field Name	Data Type		Indexed	
Appointment ID	Name	Auto Number		✓	▼
Created By	CreatedById	Lookup(User)			
Doctor	Doctor__c	Lookup(Doctor)		✓	▼
Follow-up Required	Follow_up_Required__c	Checkbox			▼
Last Modified By	LastModifiedById	Lookup(User)			
Owner	OwnerId	Lookup(User,Group)		✓	
Patient	Patient__c	Lookup(Patient)		✓	▼
Status	Status__c	Picklist			▼

Billing

Fields & Relationships
9 Items, Sorted by Field Label

Field Label	Field Name	Data Type	Controlling Field	Indexed	
Appointment	Appointment__c	Master-Detail(Appointment)		✓	▼
Created By	CreatedById	Lookup(User)			
Insurance Provider	Insurance_Provider__c	Text(255)			▼
Invoice ID	Name	Auto Number		✓	▼
Last Modified By	LastModifiedById	Lookup(User)			
Patient	Patient__c	Lookup(Patient)		✓	▼
Payment Gateway Info	Payment_Gateway_Info__c	Text(255)			▼

Feedback

Fields & Relationships
8 Items, Sorted by Field Label

Field Label	Field Name	Data Type	Controlling Field	Indexed	
Appointment	Appointment__c	Master-Detail(Appointment)		✓	▼
Created By	CreatedById	Lookup(User)			
Date Submitted	Date_Submitted__c	Date			▼
Feedback Details	Feedback_Details__c	Text Area(255)			▼
Feedback ID	Name	Auto Number		✓	▼
Last Modified By	LastModifiedById	Lookup(User)			▼
Patient	Patient__c	Lookup(Patient)		✓	▼

8. Junction Objects

- Only needed if one appointment could involve multiple doctors.

- For now, assume one appointment → one doctor, so junction object is not needed.

9. External Objects

- Use if hospital data exists outside Salesforce, e.g., insurance database, lab results, or external EHR systems.

- Can connect via Salesforce Connect for real-time access without importing data.