

# **Hospital Management System**

## Abstract

The **Hospital Management System** is developed on Salesforce CRM to provide a unified platform for managing hospital operations efficiently. Traditional hospital processes—such as appointment scheduling, patient record management, billing, pharmacy, and laboratory workflows—are often manual, prone to errors, and lack transparency. This system addresses those challenges by leveraging Salesforce’s cloud capabilities to automate and centralize healthcare processes.

The solution manages **core hospital entities**, including patients, doctors, appointments, admissions, prescriptions, medical records, invoices, payments, rooms, and lab tests, with custom Salesforce objects and relationships. Automation is achieved through **Validation Rules, Flows, Approval Processes, and Apex Triggers**, ensuring accuracy and reducing manual effort. Advanced logic such as **double-booking prevention for doctors, automated billing creation, payment reminders, and lab result notifications** enhances operational efficiency and patient experience.

To support decision-making, the system provides **custom dashboards and reports** for revenue tracking, doctor utilization, patient history, and unpaid bills. Role-based security and compliance measures (HIPAA/GDPR) ensure confidentiality of sensitive medical data, while external integrations (SMS/WhatsApp reminders, insurance APIs, and pharmacy/lab systems) extend the platform’s functionality.

## Task 1: OBJECT

**Salesforce Objects** are database tables that store data specific to an organization.

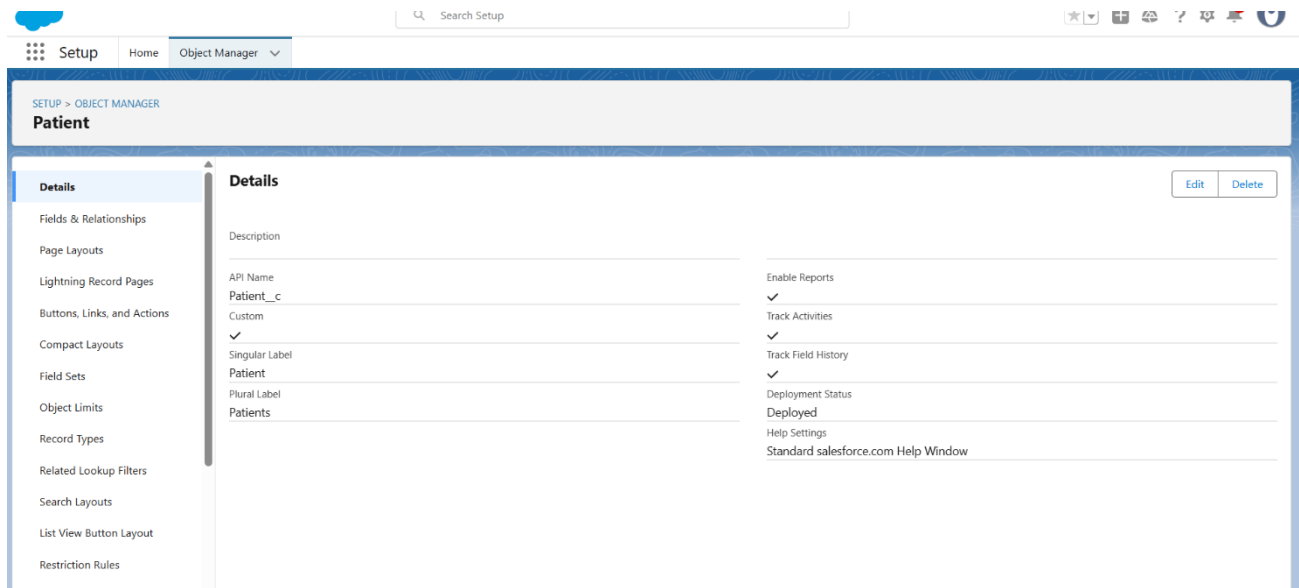
### Types of Salesforce Objects

1. **Standard Objects:** Provided by Salesforce out-of-the-box (e.g., Users, Reports, Dashboards, Accounts, Contacts).
  2. **Custom Objects:** Created by users to store unique business information. They form the backbone of custom applications, enabling tailored processes and structured data management.
- 

### Create Patient Object

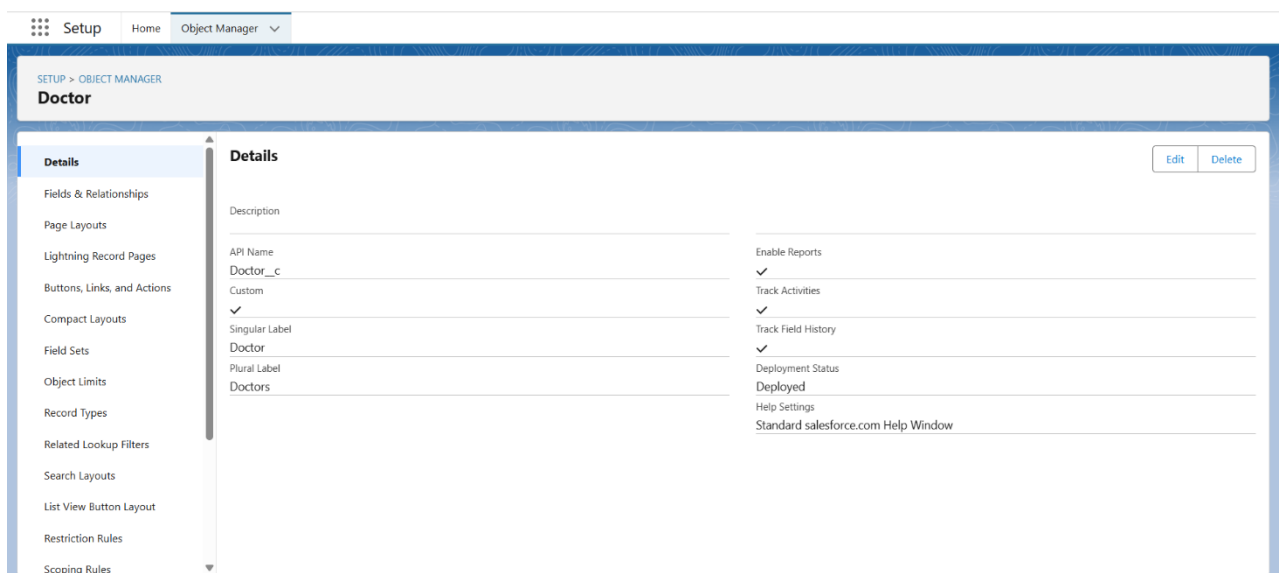
To create the object:

1. Go to **Setup >> Object Manager >> Create >> Custom Object**.
2. Enter details:
  - **Label Name:** Patient
  - **Plural Label Name:** Patients
  - **Record Name Label and Format:**
    - Record Name: Patient ID
    - Data Type: Auto-Number
    - Display Format: PAT-{000000}
3. Select Options:
  - Check **Allow Reports**
  - Check **Track Field History**
  - Check **Allow Activities**
  - Check **Allow Search**
4. Click **Save**.



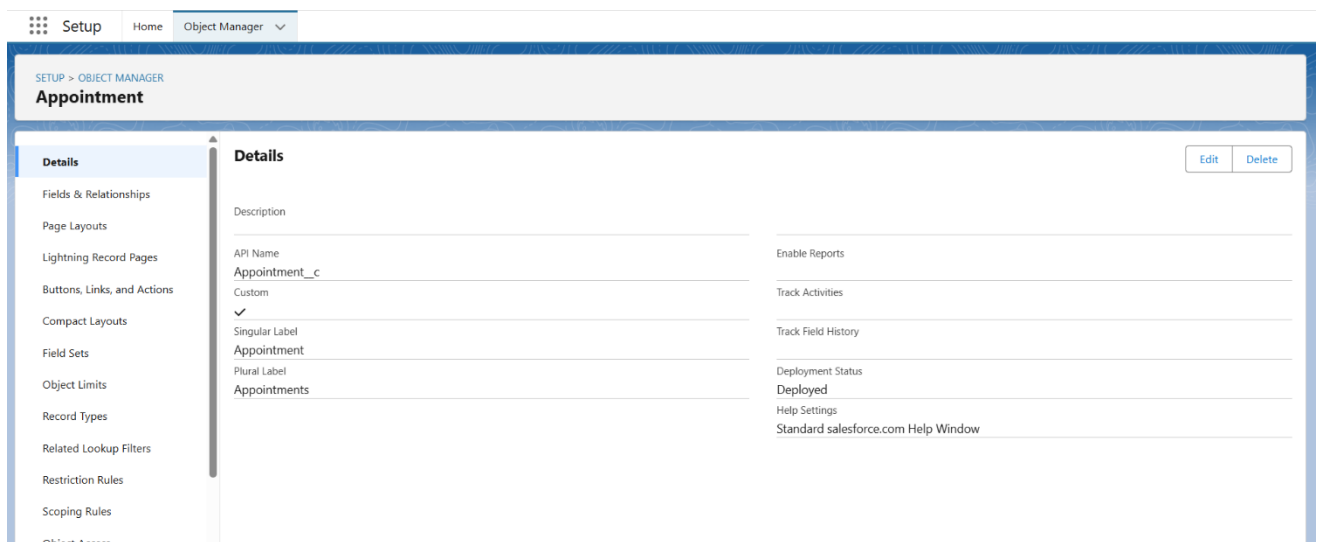
## Create Doctor Object

1. Setup >> Object Manager >> Create >> Custom Object.
2. Enter:
  - **Label Name:** Doctor
  - **Plural Label Name:** Doctors
  - **Record Name:** Doctor Name (Text)
3. Check same options.
4. Save.



## Create Appointment Object

1. Setup >> Object Manager >> Create >> Custom Object.
2. Enter:
  - **Label Name:** Appointment
  - **Plural Label Name:** Appointments
  - **Record Name:** Appointment Number (Auto-Number)
  - **Display Format:** APT-{00000}
3. Save.



The screenshot shows the Salesforce Object Manager configuration page for the 'Appointment' object. The breadcrumb trail at the top reads 'SETUP > OBJECT MANAGER'. The page title is 'Appointment'. On the left, a sidebar lists various configuration options: Details (selected), Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Restriction Rules, and Scoping Rules. The main content area is titled 'Details' and contains the following fields:

Field	Value
Description	
API Name	Appointment__c
Custom	<input checked="" type="checkbox"/>
Singular Label	Appointment
Plural Label	Appointments
Enable Reports	<input type="checkbox"/>
Track Activities	<input type="checkbox"/>
Track Field History	<input type="checkbox"/>
Deployment Status	Deployed
Help Settings	Standard salesforce.com Help Window

At the top right of the main content area, there are 'Edit' and 'Delete' buttons.

## Create Admission Object

1. Setup >> Object Manager >> Create >> Custom Object.
2. Enter:
  - **Label Name:** Admission
  - **Plural Label Name:** Admissions
  - **Record Name:** Admission Number (Auto-Number)
  - **Display Format:** ADM-{00000}
3. Save.

SETUP > OBJECT MANAGER

## Admission

**Details**

- Fields & Relationships
- Page Layouts
- Lightning Record Pages
- Buttons, Links, and Actions
- Compact Layouts
- Field Sets
- Object Limits
- Record Types
- Related Lookup Filters
- Restriction Rules
- Scoping Rules
- Object Access
- Triggers

**Details**

Edit Delete

Description

API Name  
Admission\_\_c

Custom  
✓

Singular Label  
Admission

Plural Label  
Admissions

Enable Reports

Track Activities

Track Field History

Deployment Status  
Deployed

Help Settings  
Standard salesforce.com Help Window

## Create Invoice Object

1. Setup >> Object Manager >> Create >> Custom Object.
2. Enter:
  - **Label Name:** Invoice
  - **Plural Label Name:** Invoices
  - **Record Name:** Invoice Number (Auto-Number)
  - Display Format: INV-{00000}
3. Save.

## Create Payment Object

1. Setup >> Object Manager >> Create >> Custom Object.
2. Enter:
  - **Label Name:** Payment
  - **Plural Label Name:** Payments
  - **Record Name:** Payment Number (Auto-Number)
  - Display Format: PAY-{00000}
3. Save.

### Create Room Object

1. Setup >> Object Manager >> Create >> Custom Object.
2. Enter:
  - **Label Name:** Room
  - **Plural Label Name:** Rooms
  - **Record Name:** Room Number (Text)
3. Save.

### Create Prescription Object

1. Setup >> Object Manager >> Create >> Custom Object.
2. Enter:
  - **Label Name:** Prescription
  - **Plural Label Name:** Prescriptions
  - **Record Name:** Prescription Number (Auto-Number)
  - Display Format: RX-{00000}
3. Save.

### Create Medical Record Object

1. Setup >> Object Manager >> Create >> Custom Object.
2. Enter:
  - **Label Name:** Medical Record
  - **Plural Label Name:** Medical Records
  - **Record Name:** Record Number (Auto-Number)
  - Display Format: MR-{00000}

3. Save.

### **Create Lab Test Object**

1. Setup >> Object Manager >> Create >> Custom Object.
2. Enter:
  - **Label Name:** Lab Test
  - **Plural Label Name:** Lab Tests
  - **Record Name:** Test Number (Auto-Number)
  - **Display Format:** LAB-{00000}
3. Save.

### **Create Department Object**

1. Setup >> Object Manager >> Create >> Custom Object.
2. Enter:
  - **Label Name:** Department
  - **Plural Label Name:** Departments
  - **Record Name:** Department Name (Text)
3. Save.



## Task 2: TABS

A **Tab** in Salesforce is like a “window” into an object. It allows users to **create new records** and **view existing records** for that object. Tabs provide easy navigation and make objects accessible from the app’s navigation bar.

### Steps to Create Custom Tabs

#### 1. Go to Setup Page

- Click the **Gear icon** in Salesforce → **Setup**.
- In the Quick Find bar (left side), type **Tabs**.
- Click on **Tabs**.

#### 2. Create a New Custom Tab

- Under **Custom Object Tabs**, click **New**.
- Select the **Object** from the drop-down list (e.g., Patient).
- Select a **Tab Style** (choose an icon & color to represent the tab).
- Click **Next**.

#### 3. Add to Profiles

- On the profile page, keep the default option (**Tab Visibility = Default On**).
- This ensures that the tab is available for all profiles.
- Click **Next**.

#### 4. Add to Custom Apps

- On this page, **uncheck the “Include Tab”** option if you plan to control app navigation separately (via Lightning App).
- Make sure the option **Append tab to users' existing personal customizations** is checked.
- Click **Save**.
-

## 5. Repeat for All Objects

- Follow steps 1–4 again to create tabs for:
  - **Patients**
  - **Doctors**
  - **Appointments**
  - **Admissions**
  - **Invoices**
  - **Payments**
  - **Rooms**
  - **Prescriptions**
  - **Medical Records**
  - **Lab Tests**
  - **Departments (optional)**

Now, each object has its own tab, and users can access records directly from the navigation bar.

The screenshot shows the Salesforce Setup interface. On the left, the navigation menu is visible with 'User Interface' expanded and 'Rename Tabs and Labels' selected. The main content area is titled 'SETUP Tabs' and contains a description of Lightning Component tabs. Below this, there are two sections: 'Custom Object Tabs' and 'Web Tabs'. The 'Custom Object Tabs' section contains a table with 10 rows, each representing a custom object tab. The 'Web Tabs' section is currently empty.

Action	Label	Tab Style	Description
<a href="#">Edit</a>   <a href="#">Del</a>	Admissions	Boat	
<a href="#">Edit</a>   <a href="#">Del</a>	Appointments	Helicopter	
<a href="#">Edit</a>   <a href="#">Del</a>	Departments	Jewel	
<a href="#">Edit</a>   <a href="#">Del</a>	Doctors	Airplane	
<a href="#">Edit</a>   <a href="#">Del</a>	Invoices	Wrench	
<a href="#">Edit</a>   <a href="#">Del</a>	Lab Tests	Desk	
<a href="#">Edit</a>   <a href="#">Del</a>	Medical Records	Trophy	
<a href="#">Edit</a>   <a href="#">Del</a>	Patients	Bottle	
<a href="#">Edit</a>   <a href="#">Del</a>	Payments	Scales	
<a href="#">Edit</a>   <a href="#">Del</a>	Prescriptions	Red Cross	
<a href="#">Edit</a>   <a href="#">Del</a>	Rooms	Factory	

**Web Tabs**

No Web Tabs have been defined

## Task 3: THE LIGHTNING APP

An **App** in Salesforce bundles together **tabs, objects, reports, dashboards, and utilities** in one place. In Lightning Experience, the navigation bar of the app allows users to quickly access everything they need for their role.

### Steps to Create a Lightning App

#### 1. Go to App Manager

- From Setup, type **App Manager** in the Quick Find bar.
- Click **App Manager**.
- On the top right, click **New Lightning App**.

#### 2. App Details

- Enter **App Name**: *Hospital Management Application*.
- The Developer Name auto-fills.
- Optionally, upload an app logo and choose a brand color.
- Click **Next**.

#### 3. App Options

- Keep default options (Navigation, Setup, and App Visibility).
- Click **Next**.

#### 4. Utility Items

- Keep as default (e.g., History, Notes).
- Optionally, you can add shortcuts like **Recent Items** or **Chatter**.
- Click **Next**.

#### 5. Navigation Items

- Select all custom objects you created earlier.
- Add them one by one from the **Available Items** list to the **Selected Items** list using the arrow button.

- Recommended items to include:
  - **Patients**
  - **Doctors**
  - **Appointments**
  - **Admissions**
  - **Invoices**
  - **Payments**
  - **Rooms**
  - **Prescriptions**
  - **Medical Records**
  - **Lab Tests**
  - **Reports**
  - **Dashboards**
- Arrange them in the order you want to appear in the app.
- Click **Next**.

## 6. Assign Profiles

- Select **System Administrator** (so you can access everything).
- Optionally, add other profiles (Receptionist, Doctor, Billing Manager).
- Click **Save & Finish**.

## 7. Test the App

- Go to the **App Launcher (9 dots icon)** in Salesforce.
- Search for *Hospital Management Application*.
- Open it and confirm all tabs (Patients, Doctors, Appointments, etc.) appear in the navigation bar.



SETUP

## Lightning Experience App Manager

New Lightning App

New External Client App

26 items • Sorted by App Name • Filtered by All appmenuitems - TabSet Type, App Type



	App Name ↑	Developer Name	Description	Last Modified Date	App Type	Visibl...	
1	All Tabs	AllTabSet		19/09/2025, 7:29 pm	Classic		▼
2	Analytics Studio	Insights	Build CRM Analytics dashboards and apps	19/09/2025, 7:29 pm	Classic	✓	▼
3	App Launcher	AppLauncher	App Launcher tabs	19/09/2025, 7:29 pm	Classic	✓	▼
4	Approvals	Approvals	Manage approvals and approval flows	19/09/2025, 7:29 pm	Lightning	✓	▼
5	Automation	FlowsApp	Automate business processes and repetitive tasks.	19/09/2025, 7:36 pm	Lightning	✓	▼
6	Bolt Solutions	LightningBolt	Discover and manage business solutions designed for your industry.	19/09/2025, 7:29 pm	Lightning	✓	▼
7	Community	Community	Salesforce CRM Communities	19/09/2025, 7:29 pm	Classic	✓	▼
8	Content	Content	Salesforce CRM Content	19/09/2025, 7:29 pm	Classic	✓	▼
9	Data Manager	DataManager	Use Data Manager to view limits, monitor usage, and manage recipes.	19/09/2025, 7:29 pm	Lightning	✓	▼
10	Digital Experiences	SalesforceCMS	Manage content and media for all of your sites.	19/09/2025, 7:29 pm	Lightning	✓	▼
11	Hospital Management	Hospital_Management		20/09/2025, 11:54 am	Lightning	✓	▼
12	Lightning Usage App	LightningInstrumentation	View Adoption and Usage Metrics for Lightning Experience	19/09/2025, 7:29 pm	Lightning	✓	▼
13	Marketing CRM Classic	Marketing	Track sales and marketing efforts with CRM objects.	19/09/2025, 7:29 pm	Classic	✓	▼
14	My Service Journey	MSJApp	Discover new customer service capabilities.	19/09/2025, 7:29 pm	Lightning	✓	▼



Lightning App Builder



App Settings



Pages ▼

Hospital Management



Help

## App Settings

## App Details &amp; Branding

App Options

Utility Items (Desktop Only)

Navigation Items

User Profiles

## App Details &amp; Branding

Give your Lightning app a name and description. Upload an image and choose the highlight color for its navigation bar.

## App Details

\* App Name ⓘ

Hospital Management

\* Developer Name ⓘ

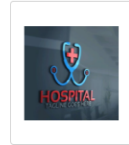
Hospital\_Management

Description ⓘ

Enter a description...

## App Branding

Image ⓘ



Clear

Primary Color Hex Value ⓘ

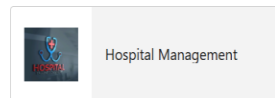


#0070D2

Org Theme Options

☐ Use the app's image and color instead of the org's custom theme

## App Launcher Preview



## Task 4: FIELDS

In Salesforce, **Fields** represent the data stored in the columns of a relational database. They hold valuable information required for a specific object. Fields make it easier to search, update, and manage records.

### Types of Fields

1. **Standard Fields** – Provided by Salesforce (e.g., Record Name, Created Date, Owner).
2. **Custom Fields** – Created by users to capture additional information specific to their process.

### Example 1: Creating Fields for Patient Object

1. Go to **Setup** >> click **Object Manager** >> search for **Patient** >> click on the object.
2. Click on **Fields & Relationships** >> **New**.
3. Select Data Type → e.g., **Text** → Click **Next**.
4. Fill as follows:
  - **Field Label:** First Name
  - **Field Name:** auto-generated
  - Length: 40
  - Required: ☒
  - Click **Next** >> **Next** >> **Save & New**.
5. Repeat the process to create additional fields:
  - **Last Name** → Text (40), Required
  - **Email** → Email, Required
  - **Phone** → Phone
  - **Date of Birth** → Date
  - **Gender** → Picklist (Male, Female, Other, Prefer not to say)
  - **Blood Type** → Picklist (A+, A-, B+, B-, AB+, AB-, O+, O-)

- **Allergies** → Long Text Area (255)
- **Address** → Long Text Area (255)
- **Primary Doctor** → Lookup (Doctor)
- **Active** → Checkbox (default true)

### Example 2: Creating Fields for Doctor Object

- **Email** → Email (Required)
- **Phone** → Phone
- **Specialty** → Picklist (Cardiology, Orthopedics, Pediatrics, General Medicine, Surgery, etc.)
- **Department** → Lookup (Department)
- **License Number** → Text (20)
- **Available** → Checkbox

### Example 3: Creating Fields for Appointment Object

- **Start Time** → Date/Time (Required)
- **End Time** → Date/Time (Required)
- **Patient** → Lookup (Patient)
- **Doctor** → Lookup (Doctor)
- **Room** → Lookup (Room, optional)
- **Status** → Picklist (Scheduled, Completed, Cancelled, NoShow)
- **Reason** → Long Text Area

### Example 4: Creating Lookup Fields

1. Go to **Setup >> Object Manager >>** search for **Appointment >>** open it.
2. Click on **Fields & Relationships >> New**.

3. Select **Lookup Relationship** >> click **Next**.
4. Select the related object → Example: **Patient**.
5. Click **Next** >> **Next** >> **Save & New**.
6. Repeat the same to create Lookup fields for:
  - Appointment → Doctor
  - Appointment → Room
  - Invoice → Patient
  - Payment → Invoice
  - Medical Record → Patient (Master-Detail recommended)

SETUP > OBJECT MANAGER

**Admission**

Details

**Fields & Relationships**

12 Items, Sorted by Field Label

Q Quick Find

New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Admission Number	Name	Auto Number		✓
Created By	CreatedById	Lookup(User)		
Discharge Date	Discharge_Date__c	Date/Time		
Doctor	Doctor__c	Lookup(Doctor)		✓
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Patient	Patient__c	Lookup(Patient)		✓
Primary Diagnosis	Primary_Diagnosis__c	Text(40)		
Room	Room__c	Lookup(Room)		✓

SETUP > OBJECT MANAGER

**Appointment**

Details

**Fields & Relationships**

12 Items, Sorted by Field Label

Q Quick Find

New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Appointment Name	Name	Auto Number		✓
Appointment Number	Appointment_Number__c	Auto Number		
Created By	CreatedById	Lookup(User)		
Doctor	Doctor__c	Lookup(Doctor)		✓
End Time	End_Time__c	Date/Time		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Patient	Patient__c	Lookup(Patient)		✓
Reason	Reason__c	Text Area(255)		
Room	Room__c	Lookup(Room)		✓



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

List View Button Layout

Restriction Rules

Sharing Rules

**Fields & Relationships**

11 Items, Sorted by Field Label

Q Quick Find

New

Deleted Fields

Field Dependencies

Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Available	Available__c	Checkbox		
Created By	CreatedById	Lookup(User)		
Department	Department__c	Lookup(Department)		✓
Doctor Name	Name	Text(80)		✓
Email	Email__c	Email		
Last Modified By	LastModifiedById	Lookup(User)		
License Number	License_Number__c	Text(40)		
Name	Name__c	Text(40)		
Owner	OwnerId	Lookup(User,Group)		✓
...	...	...		

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

List View Button Layout

Restriction Rules

**Fields & Relationships**

16 Items, Sorted by Field Label

Q Quick Find

New

Deleted Fields

Field Dependencies

Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Active	Active__c	Checkbox		
Address	Address__c	Long Text Area(256)		
Allergies	Allergies__c	Long Text Area(256)		
Blood Type	Blood_Type__c	Picklist		
Created By	CreatedById	Lookup(User)		
Date of Birth	Date_of_Birth__c	Date		
Email	Email__c	Email		
First name	First_name__c	Text(40)		
Gender	Gender__c	Picklist		

## Task 5: VALIDATION RULE

**Validation Rules** in Salesforce are used to maintain data quality. They are executed when a user attempts to save a record. If the entered data does not meet the defined criteria, Salesforce displays an error message and prevents the record from being saved until the issue is corrected.

This ensures that records are accurate, consistent, and reliable.

### Example 1: Validation Rule for Appointment Object

**Scenario:** Ensure that the appointment **end time** is always after the **start time**.

#### Steps:

1. Go to **Setup** >> click on **Object Manager**.
2. Select **Appointment** object >> click on **Validation Rules**.
3. Click **New**.
4. Enter Rule Name: **Appointment\_EndTime\_Check**.
5. Enter the Error Condition Formula:

```
AND(  
  NOT(ISBLANK(Start_Time__c)),  
  NOT(ISBLANK(End_Time__c)),  
  End_Time__c <= Start_Time__c  
)
```

6. Enter ErrorMessage:  
    **“End Time must be later than Start Time.”**
7. Error Location: Field → select **End Time**.
8. Click **Save**.

SETUP > OBJECT MANAGER

## Admission

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- Details
- Fields & Relationships
- Page Layouts
- Lightning Record Pages
- Buttons, Links, and Actions
- Compact Layouts
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- Related Lookup Filters
- Restriction Rules
- Scoping Rules
- Object Access

Help for this page

### Admission Validation Rule

[Back to Admission](#)

**Validation Rule Detail**

[Edit](#)   [Clone](#)

Rule Name	Admission Validation Rule ~ Salesforce - Developer Edition	Active	<input checked="" type="checkbox"/>
Error Condition Formula	AND( NOT(ISBLANK(Discharge_Date__c)), Discharge_Date__c <= Admission_Date__c )		
Error Message Description	Discharge Date must be later than Admission Date.	Error Location	Discharge Date
Created By	Shoshkek Sandela, 25/09/2025, 4:04 pm	Modified By	Shoshkek Sandela, 25/09/2025, 4:04 pm

[Edit](#)   [Clone](#)

### **Example 3: Validation Rule for Patient Object**

**Scenario:** Ensure that the **Date of Birth** is not in the future.

**Formula:**

Date\_of\_Birth\_\_c > TODAY()

**Error Message:** *“Date of Birth cannot be in the future.”*

## Task 6: DUPLICATE RULE

In Salesforce, **Duplicate Rules** prevent the creation of duplicate records by comparing data across specified fields. They work together with **Matching Rules** to identify records that share the same values. This ensures data quality and avoids redundancy in the system.

### Example: Creating a Matching Rule for the Patient Object

#### Steps:

1. Go to **Setup** >> in the **Quick Find box**, search for **Matching Rules**.
2. Click on **Matching Rules** >> click on **New Rule**.
3. Select the object as **Patient** >> click **Next**.
4. Enter:
  - **Rule Name:** Matching Patient Details
  - **Unique Name:** auto-populated
5. Define the matching criteria:
  - **Field 1:** Email → Matching Method: **Exact**
  - **Field 2:** Phone → Matching Method: **Exact**
6. Click **Save**.
7. After saving, click **Activate**.

### Example: Creating a Duplicate Rule for the Patient Object

1. In **Setup**, search for **Duplicate Rules** in the Quick Find box.
2. Click on **Duplicate Rules** >> **New Rule**.
3. Select **Object:** Patient.
4. Enter:
  - **Rule Name:** Patient Duplicate Rule
  - **Unique Name:** auto-populated
5. Under **Matching Rule**, select the one you created earlier (*Matching Patient Details*).
6. Define the action when a duplicate is found:
  - **Block:** Prevent users from saving the record.
  - **Allow:** Allow saving but alert the user with a warning.  
(*Recommended: Block for strict hospital data accuracy*).
7. Click **Save** and then **Activate**.

## Task 7: EMAIL TEMPLATES

In Salesforce, **Email Templates** are predefined formats that allow sending professional and consistent emails quickly. They can include **merge fields** to pull dynamic data (like patient name, appointment date, or invoice number) from Salesforce records.

Types of email templates in Salesforce:

1. **Text** – Simple plain text emails.
2. **HTML (with Letterhead)** – Branded emails with letterhead.
3. **Custom HTML** – Fully customizable HTML templates.
4. **Lightning Email Templates** – Modern version, supports rich text, merge fields, and dynamic content.

### Steps to Create an Email Template


1. Go to **Setup** >> In the **Quick Find Box**, type **Email Templates**.
2. Click on **Email Templates** >> **New Template**.
3. Choose the type (e.g., **Text** or **Lightning Email Template**).
4. Fill in details:
  - **Template Name**
  - **Subject Line** (you can insert merge fields here too)
  - **Email Body** (write your content and use merge fields for dynamic values).
5. Click **Save**.
6. Mark the template as **Available for Use**.

### Example 1: Appointment Reminder

- **Template Name:** Appointment\_Reminder
- **Subject:** Reminder: Your Appointment on {!Appointment\_\_c.Start\_Time\_\_c}
- **Body:**
  - Dear {!Appointment\_\_c.Patient\_\_r.Name},
  - 
  - This is a reminder for your appointment scheduled on {!Appointment\_\_c.Start\_Time\_\_c} with Dr. {!Appointment\_\_c.Doctor\_\_r.Name}.
  - Location: {!Appointment\_\_c.Room\_\_r.Room\_Number}

- If you need to reschedule, please contact us.
- Regards,

Hospital Admin

 SETUP

Classic Email Templates

Email Template Detail

EditDeleteClone

Email Templates from Salesforce

Unfiled Public Classic Email Templates

Email Template Name

Procedure Approval Request

Available For Use

✓

Template Unique Name

Procedure\_Approval\_Request

Last Used Date

Encoding

Unicode (UTF-8)

Times Used

Author

Shoshek Sandela [\[Change\]](#)

Description

Created By

Shoshek Sandela, 25/09/2025, 4:58 pm

Modified By

Shoshek Sandela, 25/09/2025, 5:11 pm

EditDeleteClone

Email Template

Send Test and Verify Merge Fields

Subject

Approval Required: High Cost Procedure

Plain Text Preview

Dear {User.Name},

A new invoice requires your approval.

Invoice Number: {Invoice.Name}

Total Amount: {Invoice.Total\_Amount\_\_c}

Please review and approve/reject in Salesforce.

Thank you,

Billing Team

## Task 8: USERS

A **User** in Salesforce is anyone who can log in to the system. Users are hospital staff such as **administrators, doctors, receptionists, billing managers, pharmacy staff, and lab technicians** who need access to records. Every user in Salesforce has a **user account**, which defines:

- The user's identity.
- Login details.
- Role in the organization.
- Features and records they can access (based on Profiles, Roles, and Permission Sets).

This ensures **secure and role-based access** to sensitive hospital data.

### Steps to Create a New User

1. Go to **Setup**.
2. In the **Quick Find Box**, type **Users** >> select **Users**.
3. Click on **New User**.
4. Fill in the required fields:
  - **First Name**: Niklaus
  - **Last Name**: Mikaelson
  - **Alias**: e.g., NMIKA
  - **Email**: your personal email (used for login verification and notifications).
  - **Username**: must be in the format text@text.text (e.g., niklaus.mikaelson@hospitalcrm.com).
  - **Nickname**: e.g., NikMik
  - **Role**: Manager (decides hierarchy and data visibility).
  - **User License**: Salesforce (provides CRM features).
  - **Profile**: Manager (defines access permissions).
5. Click **Save**.

### Example Hospital Users

You can create users for different roles in the hospital:

- **System Administrator** – Full access (for IT/admin staff).
- **Doctor** – Can view their patients, appointments, and medical records.



- **Receptionist** – Can create and manage appointments.
- **Billing Manager** – Can create invoices, manage payments, and approvals.
- **Pharmacy Staff** – Can view prescriptions and manage medicine availability.
- **Lab Technician** – Can view and update lab test results.

Users

Permission Set Groups
Permission Sets
Profiles
Public Groups
Queues
Roles
User Management Settings

Users

Feature Settings
Data.com
Prospector Users

Didn't find what you're looking for?  
Try using Global Search.

SETUP

Users

## All Users

On this page you can create, view, and manage users.

To get more licenses, use the Your Account app. [Let's Go](#)

View: All Users [Edit](#) [Create New View](#)

New User

Reset Password(s)

Add Multiple Users

<input type="checkbox"/>	Action	Full Name ↑	Alias	Username	Role	Active	Profile
<input type="checkbox"/>	<a href="#">Edit</a>	Chatter Expert	Chatter	chatty.00dd00000cx6ruae.cm@ven5tveb@chatter.salesforce.com		✓	Chatter Free User
<input type="checkbox"/>	<a href="#">Edit</a>	Sandela Shoshek	SSand	shoshekb03@gmail.com		✓	System Administrator
<input type="checkbox"/>	<a href="#">Edit</a>	User Integration	integ	integration@00dd00000cx6ruae.com		✓	Analytics Cloud Integration User
<input type="checkbox"/>	<a href="#">Edit</a>	User Security	sec	insightssecurity@00dd00000cx6ruae.com		✓	Analytics Cloud Security User

New User

Reset Password(s)

Add Multiple Users

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Other All

## Task 9: Reporting, Dashboards & Security Review

**Goal:** The purpose of this phase is to **monitor hospital KPIs (Key Performance Indicators)** and ensure **data security and compliance** with healthcare standards. Accurate reports and dashboards help management make data-driven decisions, while security controls protect sensitive patient information.

### Reports

Reports in Salesforce provide detailed insights into hospital operations. Some key reports include:

- **Doctor Utilization Report** – Tracks the number of appointments handled by each doctor.
- **Department-wise Revenue Report** – Shows earnings across different departments (Cardiology, Pediatrics, Surgery, etc.).
- **Patient Visit History Report** – Provides a complete record of visits and treatments for each patient.
- **Unpaid Bills Report** – Identifies invoices that are overdue or pending payment.

### Dashboards

Dashboards visually summarize the reports and display them in real-time. Example dashboards include:

- **Admin Dashboard (Revenue Overview)** – Gives management a view of hospital earnings and unpaid amounts.
- **Doctor Dashboard (Appointments)** – Shows upcoming appointments, completed consultations, and cancellations for each doctor.
- **Billing Dashboard (Payments Collected)** – Tracks daily, weekly, and monthly payments received by the hospital.

### Dynamic Dashboards

Dynamic dashboards are configured so that users see only the data relevant to them:

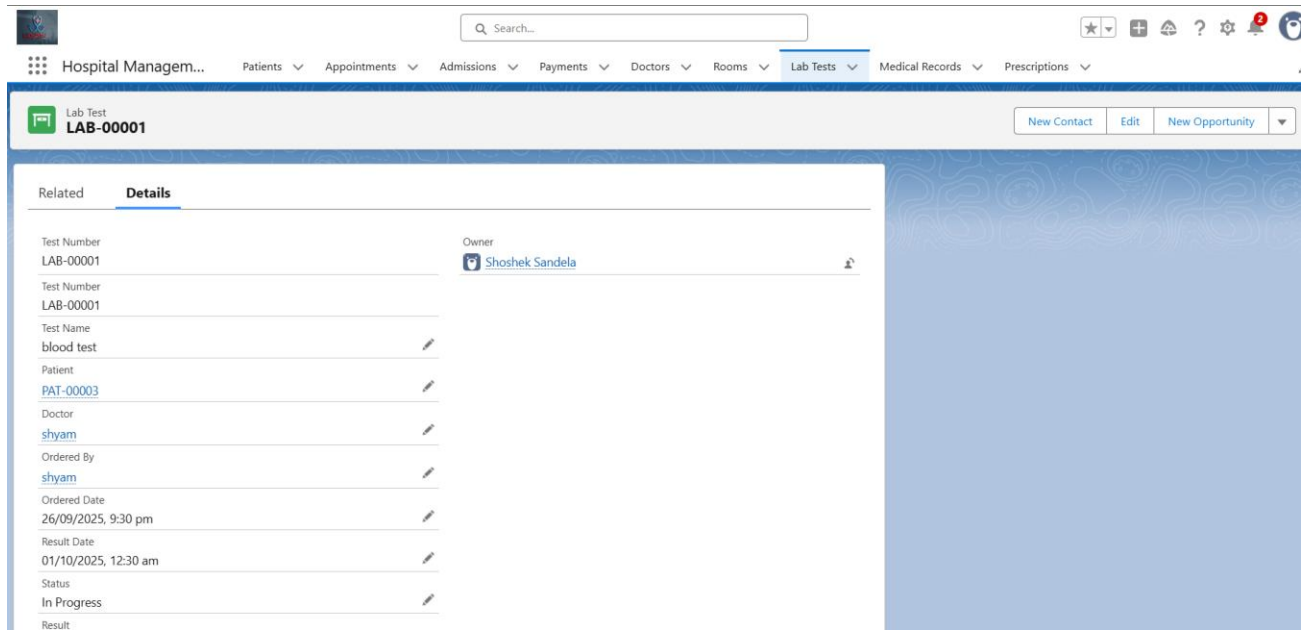
- Doctors see **only their appointments and patients**.
- Billing staff see **only financial transactions**.
- Admins see **all hospital-wide reports**.

### Security Review

Protecting sensitive healthcare data is critical. Salesforce provides security controls to enforce this:

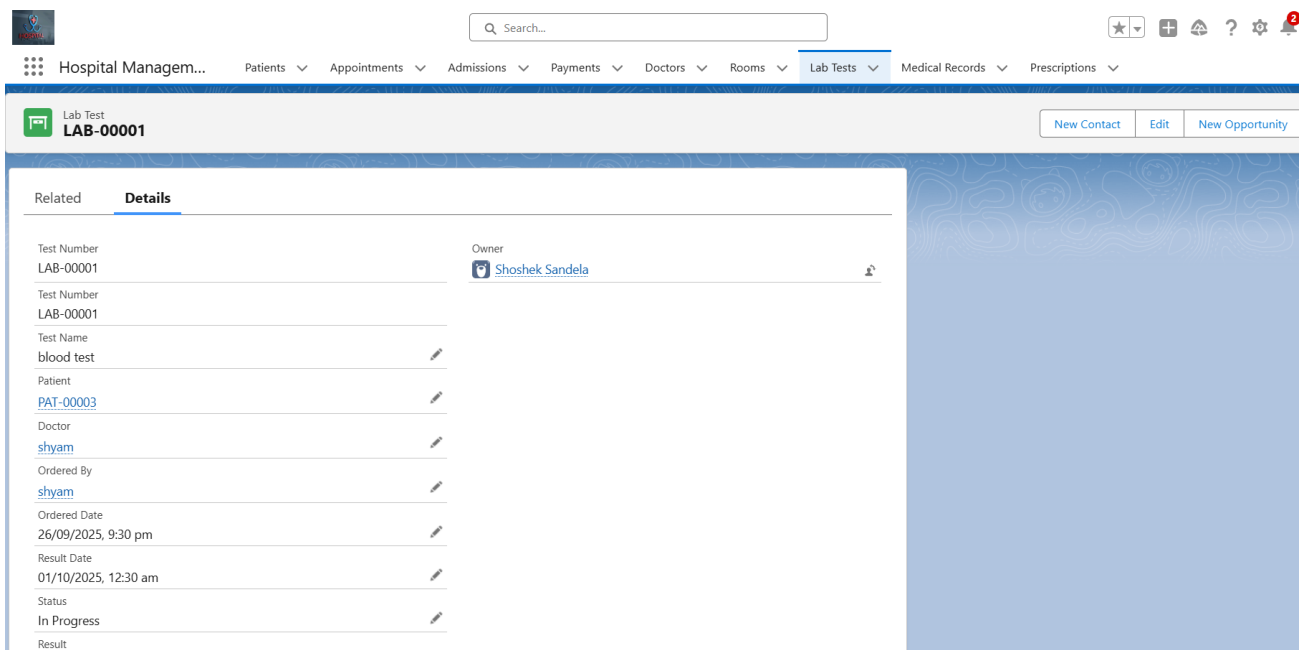
- **Field-Level Security** – Hide confidential fields (e.g., *Medical History*) from unauthorized users like receptionists.
- **Role-Based Access Control** – Ensure doctors can access only their patients' data.

- **HIPAA/GDPR Compliance** – Safeguard patient data according to healthcare privacy regulations.
- **Audit Trail** – Track all changes made to sensitive fields such as diagnosis, prescriptions, and lab results.



The screenshot shows a web application for Hospital Management. The top navigation bar includes a search bar and several menu items: Patients, Appointments, Admissions, Payments, Doctors, Rooms, Lab Tests (selected), Medical Records, and Prescriptions. The main header displays 'Lab Test LAB-00001' with buttons for 'New Contact', 'Edit', and 'New Opportunity'. The 'Details' tab is active, showing a list of fields with their values and edit icons:

Field	Value	Edit
Test Number	LAB-00001	
Owner	Shoshek Sandela	
Test Number	LAB-00001	
Test Name	blood test	
Patient	PAT-00003	
Doctor	shyam	
Ordered By	shyam	
Ordered Date	26/09/2025, 9:30 pm	
Result Date	01/10/2025, 12:30 am	
Status	In Progress	
Result		



This screenshot is identical to the one above, showing the same Hospital Management System interface. The 'Lab Test LAB-00001' details are displayed under the 'Details' tab, with fields for Test Number, Owner, Test Name, Patient, Doctor, Ordered By, Ordered Date, Result Date, Status, and Result. The interface includes a top navigation bar with a search bar and menu items, and a main header with buttons for 'New Contact', 'Edit', and 'New Opportunity'.



Q Search...



Hospital Managem... Patients Appointments Admissions Payments Doctors Rooms Lab Tests Medical Records Prescriptions

Admission  
ADM-00001

New Contact Edit New Opportunity

Related

Details

Admission Number	ADM-00001	Owner	Shoshek Sandela
Admission Number	ADM-00001		
Patient	PAT-00003		
Admission Date	26/09/2025, 12:00 pm		
Discharge Date	02/10/2025, 12:00 pm		
Room	101		
Doctor	shyam		
Status	Transferred		
Primary Diagnosis			
Created By		Last Modified By	



Q Search...



Hospital Managem... Patients Appointments Admissions Payments Doctors Rooms Lab Tests Medical Records Prescriptions

Appointment  
APT-00001

New Contact Edit New Opportunity

Related

Details

Appointment Name	APT-00001	Owner	Shoshek Sandela
Appointment Number	APT-00001		
Start Time	11/10/2025, 10:58 pm		
End Time	31/10/2025, 12:00 pm		
Patient	PAT-00004		
Doctor	shyam		
Room	101		
Status	Scheduled		
Reason			
Created By		Last Modified By	

THANK YOU