

# Salesforce Hackathon Project: Smart Healthcare Outreach Platform

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A community-based healthcare delivery system built on Salesforce Experience Cloud, leveraging automation, custom data models, and role-based access.

## Project Overview

The Smart Healthcare Outreach Platform is designed to enable community health workers, doctors, and patients to collaborate on healthcare delivery. The platform addresses the problem of fragmented healthcare access by providing a single system where patients can track immunizations, doctors can provide structured notes, and health workers can log visits. High-level goals include improving immunization coverage, reducing missed visits, and enabling health administrators to monitor program effectiveness.

## Business Functionalities Implemented

1. Patient and healthcare worker management through Contact record types.
2. Health program and immunization tracking using custom objects.
3. Patient intake and follow-up automation using Salesforce Flows.
4. Experience Cloud site for patient self-service access.
5. Reports and dashboards for analyzing regional health trends.

## Assigned Use Cases

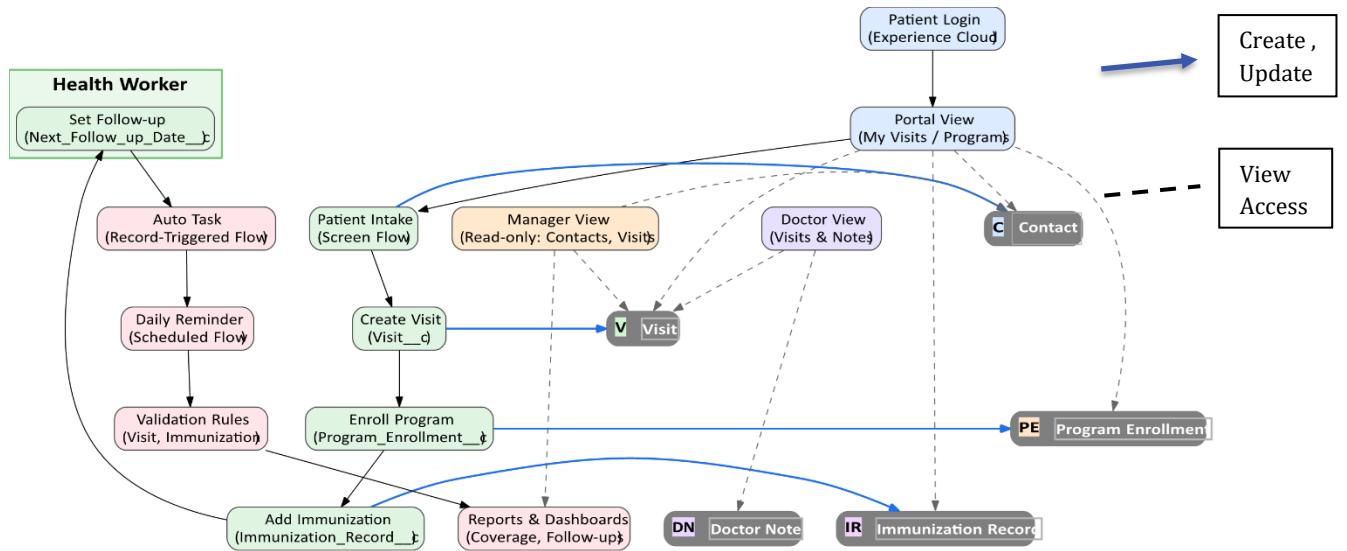
- **Patient Intake Flow** – Register new patients and enroll them into health programs automatically.
- **Visit Logging** – Health workers record visits, mark high-risk cases, and schedule follow-ups.
- **Immunization Tracking** – Capture vaccine doses and monitor adherence to immunization programs.

## Additional Use Cases

- **Doctor Notes** – Doctors provide structured notes for patient visits.
- **Immunization Reminder Automation** – Patients and health workers receive automated reminders for upcoming vaccinations.

- **Experience Cloud Portal** – Patients can log in to review their visit history, immunization status, and assigned health programs.

## Project Flow Diagram



## User Personas & Roles Involved

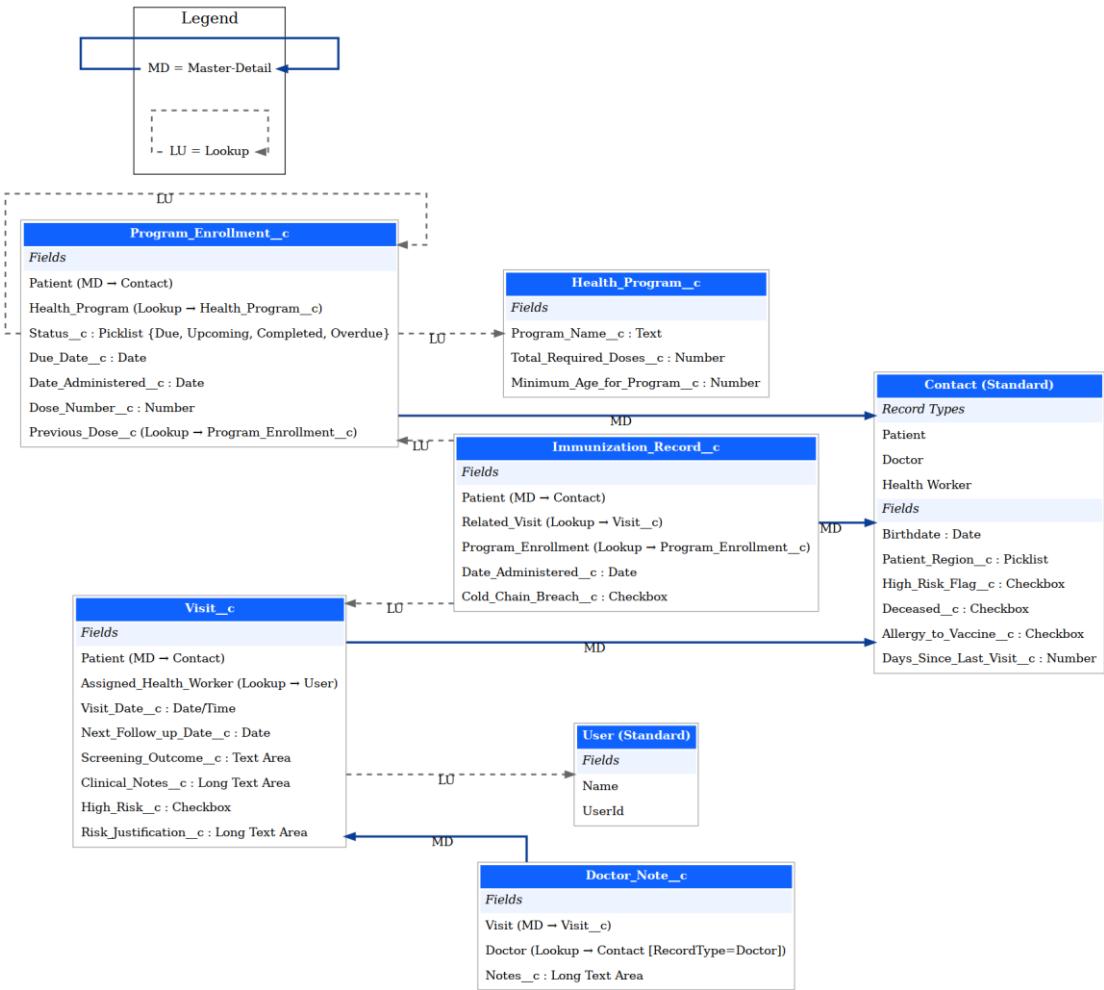
| User Role               | Responsibilities  |
|-------------------------|---|
| Health Worker           | Registers patients, logs visits, and administers immunizations. |
| Doctor                  | Provides medical notes and treatment guidance.                  |
| Patient                 | Accesses personal health data via Experience Cloud.             |
| Facility Manager        | Oversees health workers and ensures compliance.                 |
| Regional Health Officer | Monitors health programs and evaluates data.                    |
| System Admin            | Configures, maintains, and secures the Salesforce platform.     |

## Key Features Implemented

- Custom Objects – Health Program, Program Enrollment, Visit, Doctor Note, Immunization Record.
- Validation Rules – Prevent invalid data entry (e.g., birthdate in the future, allergy-based vaccine restriction).
- Automation with Flows – Patient intake, visit follow-ups, and immunization reminders.
- Experience Cloud Site – Patients access records securely.
- Reports & Dashboards – Program coverage and immunization trend analysis.

## Data Model

| Object Name         | Type (Standard/Custom) | Relationships  |
|---------------------|------------------------|--|
| Contact             | Standard               | Record Types: Patient, Doctor, Health Worker                           |
| Health Program      | Custom                 | Independent object for health initiatives                              |
| Program Enrollment  | Custom                 | MD to Contact (Patient), Lookup to Health Program                      |
| Visit               | Custom                 | MD to Contact (Patient), Lookup to User (Health Worker)                |
| Doctor Note         | Custom                 | MD to Visit, Lookup to Contact (Doctor)                                |
| Immunization Record | Custom                 | MD to Contact (Patient), Lookup to Visit, Lookup to Program Enrollment |



## Security & Sharing Settings

**Role Hierarchy:** Health Worker → Facility Manager → Regional Health Officer → System Admin

**OWD Settings:** Contact (Private), Visit (Private), Health Program (Public Read-Only), Program Enrollment (Controlled by Parent), Doctor Note (Controlled by Parent).

**Sharing Rules:** Regional Health Officers have read-only access to Contacts and Visits.

## Validation Rules Used

| Validation Rule Name             | Field/Logic Applied On | Purpose  |
|----------------------------------|------------------------|--|
| High_Risk_Requires_Justification | Visit_c                | AND(High_Risk_c = TRUE, ISBLANK(Risk_Justification_c)) |
| No_Vaccine_if_Allergy            | Immunization_Record_c  | Patient_r.Allergy_to_Vaccine_c = TRUE                  |
| Birthdate_Cannot_be_Future       | Contact                | Birthdate > TODAY()                                    |

## Custom Formulas

- **Age (on Contact):** FLOOR((TODAY() - Birthdate) / 365.25)
- **Immunization Status (on Program Enrollment):**  
IF(NOT(ISBLANK(Date\_Administered\_c)), "Completed", IF(Due\_Date\_c < TODAY(), "Overdue", IF(Due\_Date\_c - TODAY() <= 7, "Upcoming", "Due")))

## Record Types

Contact object has three record types: Patient, Doctor, Health Worker.

## Automation with Flows

- Patient Intake Flow (Screen Flow) – Registers new patients, creates first visit, and enrolls them into programs.
- Visit Follow-up Flow (Record-Triggered) – Creates a task when a follow-up date is set.
- Immunization Reminder Flow (Scheduled) – Runs daily to send reminders for upcoming doses.

## Experience Cloud Site

Patient portal built with Digital Experiences. Patients can log in to access their visits, immunizations, and health programs. Sharing Sets restrict patients to only their records.

## **Reports & Dashboards**

- Health Program Coverage Report – Tracks immunization completion across patients.
- Regional Trends Dashboard – Provides visual summary of overdue, due, and completed doses.

## **Lessons Learned**

- Leveraging Experience Cloud improves patient engagement.
- Automation significantly reduces manual effort in tracking follow-ups.
- Data integrity rules ensure accurate and safe healthcare delivery.
- Role-based security ensures patient privacy while enabling oversight.