Salesforce Project Implementation – Hospital Patient & Appointment Management System

# Phase 1: Problem Understanding & Industry Analysis

* Requirement Gathering: Manage hospital operations like patient registration, doctor schedules, and appointments.
* Stakeholder Analysis: Patients, Doctors, Receptionists, Admin staff, Hospital Management.
* Business Process Mapping: Patient booking → Doctor assignment → Consultation → Billing → Follow-up.
* Industry-specific Use Case: Healthcare (appointment system, patient records, digital hospital management).
* AppExchange Exploration: Explore healthcare add-ons (e.g., Health Cloud, scheduling apps).

# Phase 2: Org Setup & Configuration

* Select Salesforce Edition (Enterprise/Developer Org for project).
* Configure Company Profile: Hospital info, business hours, holidays.
* Create Users & Licenses: Doctor, Patient, Receptionist, Admin roles.
* Setup Profiles & Permission Sets: Control who can view/edit patient/appointment data.
* Define Role Hierarchy: Admin → Doctor → Receptionist → Patient.
* Sharing Rules & OWD: Secure patient medical records (private access).

# Phase 3: Data Modeling & Relationships

* Custom Objects: Patient\_\_c, Doctor\_\_c, Appointment\_\_c, Billing\_\_c.
* Relationships: Patient ↔ Appointment (1-to-Many), Doctor ↔ Appointment (1-to-Many), Appointment ↔ Billing (1-to-1).

# Phase 4: Process Automation (Admin)

* Validation Rules: Prevent double booking of doctors.
* Workflow/Process Builder: Auto-update appointment status after doctor confirmation.
* Approval Process: Admin approval required for appointment cancellation.
* Flow Builder: Patient self-registration, appointment booking flow.
* Email Alerts & Notifications: Send booking confirmations/reminders to patients.

# Phase 5: Apex Programming (Developer)

* Apex Classes: AppointmentService, BillingService.
* Apex Triggers: Prevent overlapping appointments, auto-generate billing record.
* SOQL Queries: Fetch patient history & doctor schedules.
* Batch Apex: Monthly patient reports.
* Queueable/Scheduled Apex: Daily reminder notifications.
* Test Classes: Ensure 75%+ coverage.

# Phase 6: User Interface Development

* Lightning App Builder: Create a Hospital Management App.
* Record Pages: Patient record, Appointment record.
* LWC Components: Patient Registration Form, Doctor Availability Calendar, Appointment Booking Screen, Billing & Invoice Viewer.
* Navigation Service: Easy patient/doctor portal access.

# Phase 7: Integration & External Access

* Named Credentials: Connect to external lab systems (for test results).
* REST/SOAP Services: Integration with external pharmacy or insurance systems.
* Platform Events: Notify doctors when a new patient books.
* Salesforce Connect: External system data view.

# Phase 8: Data Management & Deployment

* Import existing patient/doctor data via Data Loader.
* Duplicate Rules: Prevent duplicate patient entries.
* Backup & export hospital records regularly.
* Deployment via Change Sets / SFDX / GitHub repo.

# Phase 9: Reporting, Dashboards & Security Review

* Reports: Appointments by Doctor, Patient Visit History, Daily Revenue Reports.
* Dashboards: Doctor workload, Patient inflow.
* Field-Level Security: Sensitive medical data restricted.
* Audit Trail: Track appointment changes.

# Phase 10: Final Presentation & Demo Day

* Pitch: 'A Salesforce-powered Hospital Management System to improve healthcare efficiency.'
* Demo: Patient registration → Appointment booking → Doctor confirmation → Billing.
* Documentation: Admin & User guide.
* Portfolio Showcase: Publish on GitHub & LinkedIn.