Project report on Clinic Schedular

Phase1 problem Statement

In many clinics, patient information—including appointments, prescriptions, and medical histories—is recorded manually using handwritten notes. This traditional approach is prone to errors, misplacement, and data loss, which can compromise the accuracy of patient records. Consequently, retrieving reliable information for follow-up consultations becomes challenging, potentially affecting the quality of care provided.

Phase 2 Org setup & configuration

Salesforce edition: we use the enterprise edition as it has more functions because:

Advanced Customization: You can create custom objects, fields, and page layouts for patients, appointments, doctors, and medical records**.**

Automation: Workflows, process builders, and approval processes help automate appointment scheduling and notifications**.**

Profiles & Permissions: Detailed control over who can access or modify data, which is important for separating admin and staff roles.

Record-Level Security: Enterprise Edition supports sharing rules, role hierarchy, and organization-wide defaults (OWD) to keep sensitive patient information secure.

Integration & Scalability: Supports future enhancements, like integrating with virtual consultation tools or analytics dashboards.

Profiles:

1 System Administrator Profile:

- Full access to all objects, records, and setup configurations.
- Can manage users, permissions, and app customization.
- Ideal for clinic managers or IT staff overseeing the system.

2 Standard User Profile:

- Access to core objects like Patients, Appointments, and Medical Records with limited permissions.
- Can view, create, and edit records assigned to them but cannot modify system-wide settings.

- Ideal for clinic staff managing daily operations.

Phase 3 Data Modeling & Relationships

This phase is directly represented by the creation of custom objects and defining their fields for the application's core data. This includes the Patient, Doctor, Appointment, and Medical Record objects. The ability to link an appointment record to a patient and a doctor demonstrates the use of relationships (Lookup & Master-Detail) between these custom objects shows us the way the data are accessed and seen by different users and different profile users can access tfrom the data given by patient and doctor.

Phase 4 Workflow

Step 1: Patient Contact → Patient calls the hospital to request an appointment and selects the consultation mode (virtual or in-person).

Step 2: Collect Patient Details → Staff gathers basic information:

- Name
- Phone number
- Email
- Address
- Gender
- Date of birth

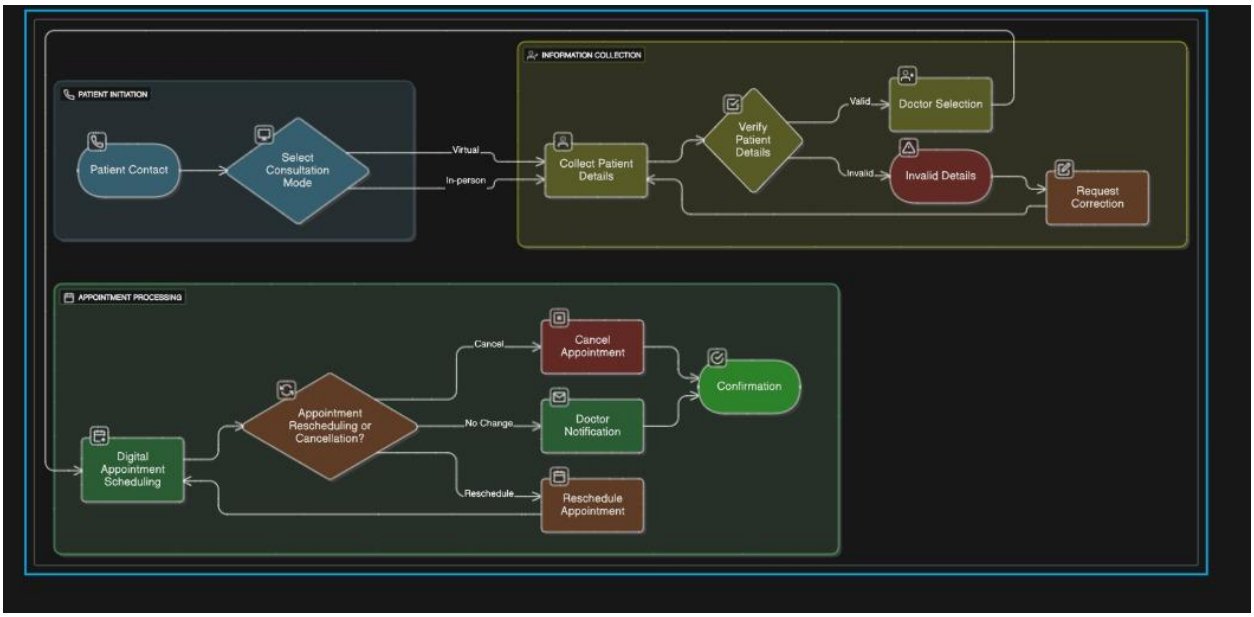
Step 3: Doctor Selection → Patient specifies the doctor they want to consult.

Step 4: Digital Appointment Scheduling → Staff records all details in the app and schedules the appointment.

Step 5: Doctor Notification → The app automatically notifies the doctor with patient details and appointment info.

Step 6: Confirmation → Staff confirms the appointment with the patient, ensuring clarity and preparedness.

Diagram:



Phase 5 User Interface Development

The entire application's visual presentation is built using the Salesforce Lightning App Builder on the Lightning Experience platform. This involves the design of record pages, the use of tabs for different objects (Patients, Doctors), and ensuring a responsive UI for ease of use across different devices.

Phase 6 reports and security overview

This Phase includes:

- Implement field-level security and login restrictions for sensitive data.
- Maintain audit trails to track admin activity.
- Test access for all user roles to ensure proper permission setup.

Phase 7 Data Management

This Phase includes:

- Apply duplicate rules and weekly backups to maintain data integrity.
- Currently the data is backed up in our salesforce cloud to ensure data is protected and can be used in future when unseen issues happen.
- Only users with enough permissions can access data.

Phase 8 Presentation

Problem:

In many clinics, patient information—including appointments, prescriptions, and medical histories—is recorded manually using handwritten notes. This traditional approach is prone to errors, misplacement, and data loss, which can compromise the accuracy of patient records. Consequently, retrieving reliable information for follow-up consultations becomes challenging, potentially affecting the quality of care provided.

Solution:

Our app transforms the way clinics manage their information. Instead of relying on fragile handwritten notes, we provide a secure, digital platform where everything is stored in an organized manner. Patient details, appointment schedules, medical records, and doctor information are all separated into clear, easy-to-navigate sections. This not only prevents data loss and errors but also ensures doctors have accurate information at their fingertips, leading to better diagnoses and treatment. For patients, it means hassle-free appointment management and improved continuity of care. In short, our app brings order, reliability, and efficiency to clinics—replacing outdated paper processes with a smarter, digital solution.

Benefits:

Accurate Record-Keeping: Eliminates errors and data loss associated with handwritten notes, ensuring patient information is always reliable.

Efficient Appointment Management: Streamlines scheduling for both in-person and virtual consultations, reducing waiting times and administrative workload.

Improved Access for Doctors: Doctors can quickly access patient histories, prescriptions, and appointments, supporting faster and better-informed medical decisions.

Organized Data Management: Patient, doctor, and appointment information is clearly separated and easy to navigate, improving overall clinic workflow.

Enhanced Patient Experience: Patients benefit from hassle-free scheduling, timely notifications, and continuity of care.

Scalability & Future Growth: The digital platform can easily accommodate additional features like integrations with external systems, real-time updates, and analytics dashboards.

Demo video link:

https://drive.google.com/file/d/1_R9lOz8Xt294dDAYUXcO5jhBqX9w0FZe/view

Phase 9 Future enhancements

External System Integration:

- Configure **Named Credentials**, **Remote Site Settings**, and **OAuth** to securely connect the app with external systems.
- Integrate with task management tools like **Jira** or **Trello** for seamless syncing of clinic tasks, follow-ups, or staff assignments.

Real-Time Data Updates:

- Utilize **Platform Events** and **Change Data Capture** to ensure that updates—like new appointments or updated patient records—are reflected instantly across all systems.

External Database Connectivity:

- Connect to external databases via **Salesforce Connect** to pull in or push data from other hospital systems, labs, or pharmacies without duplicating records.

Monitoring & Error Handling:

- Monitor API usage to stay within limits and implement robust error handling for failed integrations, ensuring smooth and reliable operation.