A Crm Application for :
Service Management for Health Clinics

A project Report Submitted to

SKILL WALLET(SmartBridge)

In fulfillment of the requirements for the
Salesforce Developer Virtual InternShip
By

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1. Project Overview:

This project is focused on **developing a CRM-based Service Management System for Health Clinics**, designed to address the critical need for streamlined patient management, appointment scheduling, and integrated care coordination. The goal is to deliver a comprehensive solution by leveraging Salesforce's CRM capabilities, automation flows, and customized objects for healthcare workflows. Through this project, we aim to enhance operational efficiency, improve patient and doctor communication, and ensure data accuracy and security for medical records and insurance processing. Ultimately, this project will support the long-term goals of providing superior patient care, efficient resource utilization, and scalable healthcare service management for the clinic.

2. Objectives

Here are the specific, measurable goals for the **Service Management System for Health Clinics**:

1. **Enhanced Patient Appointment Management**:
   - Develop and implement a streamlined appointment scheduling system with automated reminders to reduce no-show rates by 25%.
   - Enable patients to view, reschedule, or cancel appointments through the CRM interface.

2. **Comprehensive Patient Medical Record Storage**:
   - Create a unified patient record system to store and manage patient information, treatment history, and visit details, with 100% data accuracy and compliance with healthcare standards.

3. **Efficient Insurance Processing**:
   - Implement an insurance management module to track insurance validity, alert for renewals, and reduce claim processing times by 30%.

4. **Automated Follow-Up and Reminders**:
   - Set up automated flows to notify patients and staff of follow-up visits, surgeries, and checkups, enhancing communication and ensuring continuity of care.

5. **Detailed Reporting and Analytics**:
   - Provide real-time reporting on patient visits, surgery schedules, insurance expirations, and doctor availability, increasing transparency and enabling data-driven decision-making.

6. **User-Friendly Patient Intake Process**:
   - Design a digital intake system to reduce intake time by 40%, allowing clinic staff to efficiently capture patient information and book appointments.
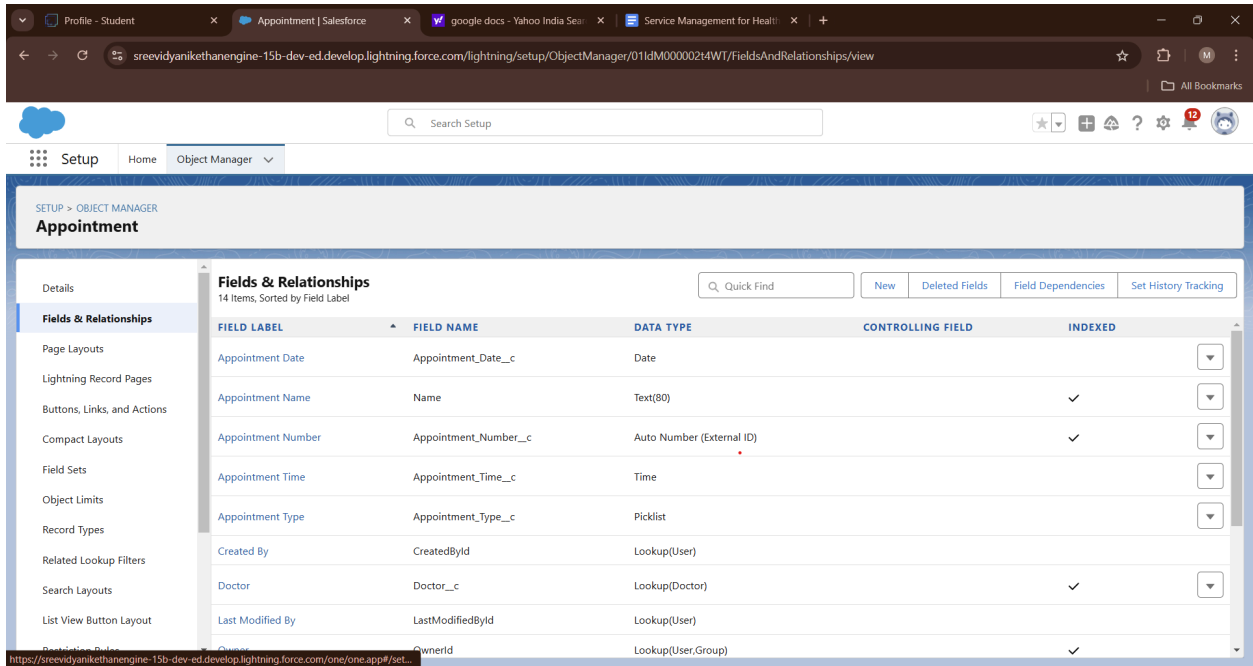
Custom Object Structure:

Object Name	Fields Added
Surgery:	Surgery Type, Surgery Doctor, Surgery Date, Surgery Time, Surgery Duration, Operation Room, Status
Doctor Surgery Schedule	Doctor, Surgery Type, Available Time Slots, Days Available, Max Surgeries Per Day, Surgery Room
Appointment	Appointment Type, Appointment Time, Doctor, Room
Patient	Revisit Days, Surgery History
Doctor	Specialty, Surgery Expertise
Medical Record	Visited Doctor, Treatment Type

1.Object:surgery

2. Object:appointment

3. Object:Doctor

3. Salesforce Key Features and Concepts Utilized

3.1Tabs:

 A tab is like a user interface that is used to build records for objects and to view the records in the objects.

Types of Tabs:

Custom Tabs
Custom object tabs are the user interface for custom applications that you build in salesforce.com. They look and behave like standard salesforce.com tabs such as accounts, contacts, and opportunities.

Web Tabs
Web Tabs are custom tabs that display web content or applications embedded in the salesforce.com window. Web tabs make it easier for your users to quickly access content and applications they frequently use without leaving the salesforce.com application.

Visualforce Tabs
Visualforce Tabs are custom tabs that display a Visualforce page. Visualforce tabs look and behave like standard salesforce.com tabs such as accounts, contacts, and opportunities.

Lightning Component Tabs
Lightning Component tabs allow you to add Lightning components to the navigation menu in Lightning Experience and the mobile app.

Lightning Page Tabs
Lightning Page Tabs let you add Lightning Pages to the mobile app navigation menu. Lightning Page tabs don't work like other custom tabs. Once created, they don't show up on the All Tabs page when you click the Plus icon that appears to the right of your current tabs. Lightning Page tabs also don't show up in the Available Tabs list when you customize the tabs for your apps.

The Service Management System for Health Clinics includes essential tabs for streamlined clinic operations. **Patient Records** stores patient demographics and medical histories, centralizing information for easy reference. **Appointments** manages scheduling, cancellations, and reminders, enhancing clinic workflow and reducing

no-shows. **Insurance** tracks patient insurance details, validity periods, and payment approvals, ensuring smooth billing.

Final Tab List:

Object Name	Tab Required?
Patient	Yes
Appointment	Yes
Doctor/Healthcare Provider	Yes
Surgery	Yes
Doctor Surgery Schedule	Yes
Medical Record	Yes
Prescription	Yes
Invoice	Yes
Service	Yes
Room/Facility Management	Yes
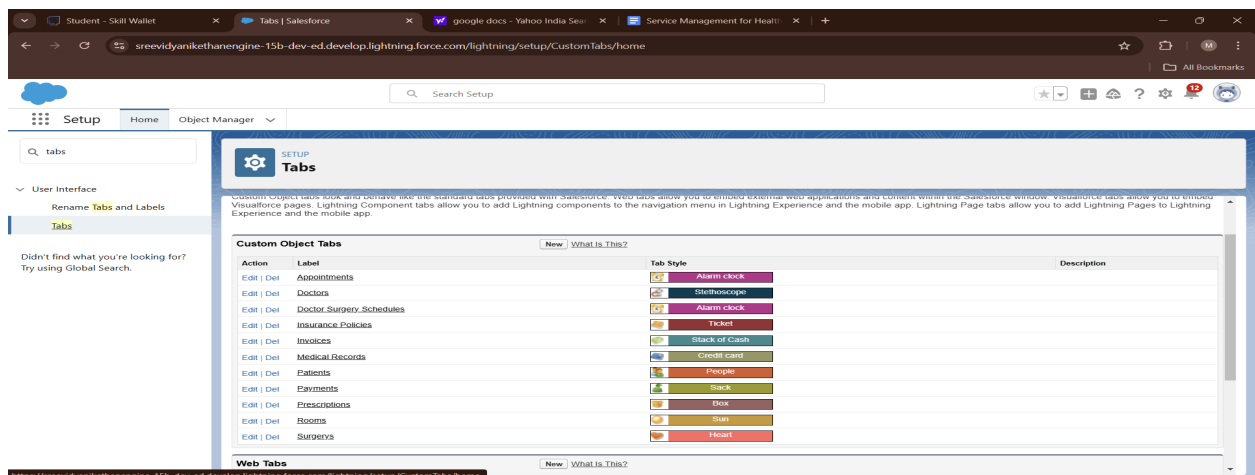
3.2 The Lightning App

An app is a collection of items that work together to serve a particular function. In Lightning Experience, Lightning apps give your users access to sets of objects, tabs, and other items all in one convenient bundle in the navigation bar.

Lightning apps let you brand your apps with a custom color and logo. You can even include a utility bar and Lightning page tabs in your Lightning app. Members of your org can work more efficiently by easily switching between apps.
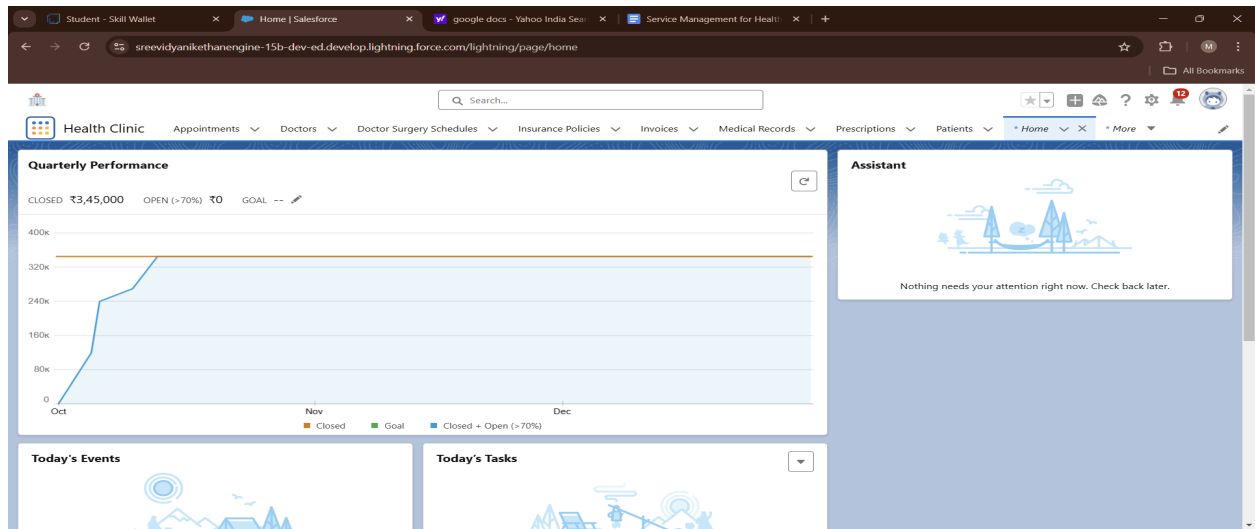
3.3 Page Layouts

Page Layout in Salesforce allows us to customize the design and organize detail and edit pages of records in Salesforce. Page layouts can be used to control the appearance of fields, related lists, and custom links on standard and custom objects' detail and edit pages.

3.3-1pagelayout:surgery
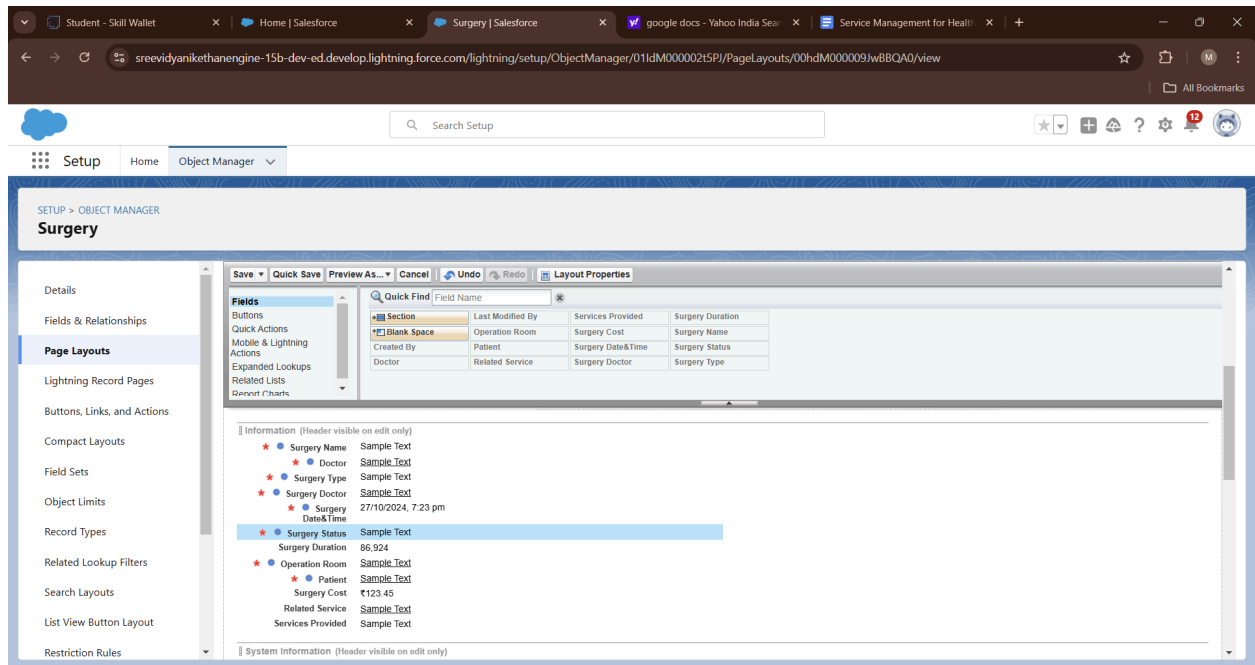
3.4 Profiles

A profile is a group/collection of settings and permissions that define what a user can do in salesforce. Profile controls "Object permissions, Field permissions, User permissions, Tab settings, App settings, Apex class access, Visualforce page access, Page layouts, Record Types, Login hours & Login IP ranges. You can define profiles by the user's job function. For example System Administrator, Developer, Sales Representative.

Types of profiles in salesforce

1. Standard profiles:

By default salesforce provides below standard profiles.
- · Contract Manager
- · Read Only
- · Marketing User
- · Solutions Manager
- · Standard User
- · System Administrator.

We cannot deleted standard ones

Each of these standard ones includes a default set of permissions for all of the standard objects available on the platform.
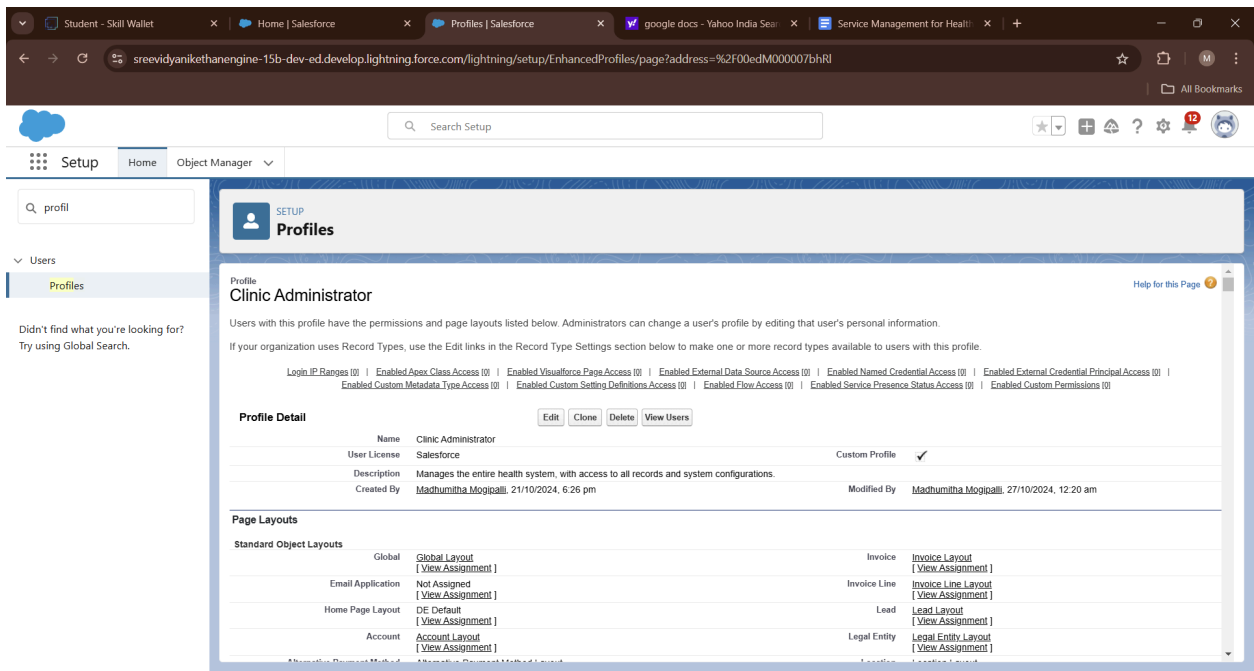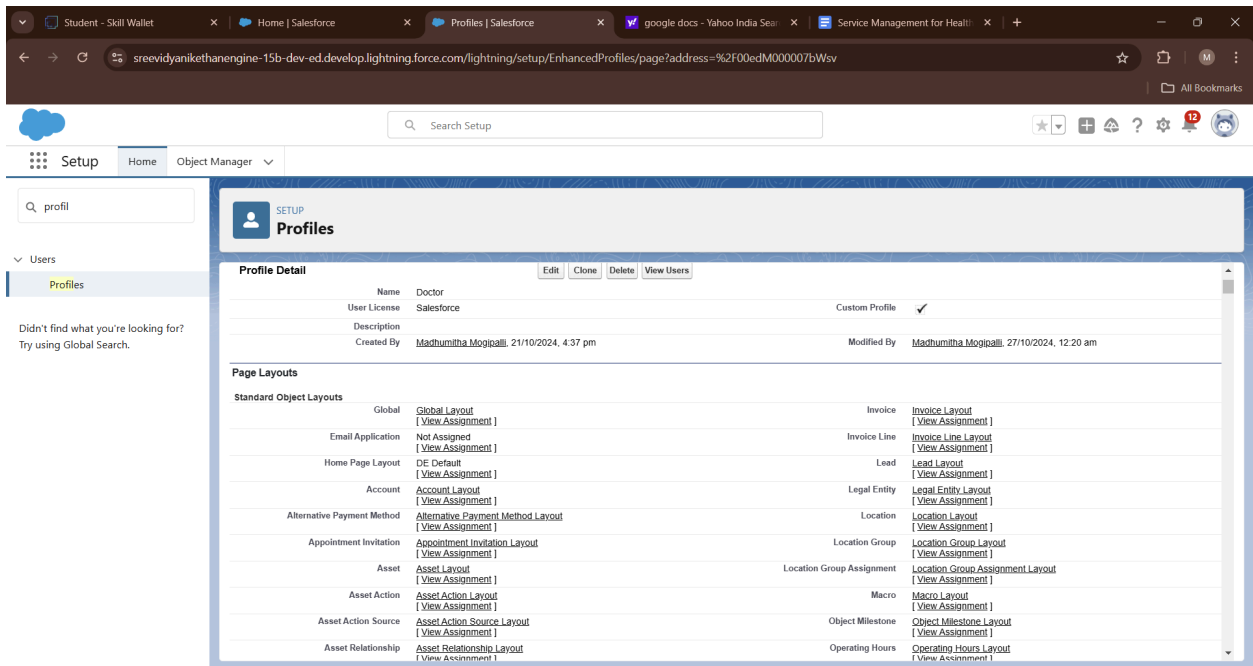

3.4-1:profile-clinic Administrator

Profiles Summary for Each Role

Profile	Objects Accessible	Permissions	Special Notes
Admin	All objects (Appointments, Patients, Invoices, etc.)	Full access (CRUD)	Access to all settings
Doctor	Appointments, Patients, Surgeries	Read, Edit (no delete)	No access to insurance/invoice data

Nurse	Patients, Surgeries	Read, Edit (limited)	Limited access to surgeries
Receptionist	Appointments, Patients, Insurance	Read, Create, Edit (no delete)	No access to medical notes
Insurance Manager	Insurance, Patients, Invoices	Read, Create, Edit	No access to medical data
Billing Manager	Invoices, Payments	Read, Create, Edit	No access to health data

3.4:profile-Doctor

3.4:profile-surgery

3.5 Roles and Role Hierarchy

A role in Salesforce defines a user's visibility access at the record level. Roles may be used to specify the types of access that people in your Salesforce organization can have to data. Simply put, it describes what a user could see within the Salesforce organization

4. Detailed Steps to Solution Design
4.1 Users

A user is anyone who logs in to Salesforce. Users are employees at your company, such as sales reps, managers, and IT specialists, who need access to the company's records. Every user in Salesforce has a user account. The user account identifies the user, and the user account settings determine what features and records the user can access.
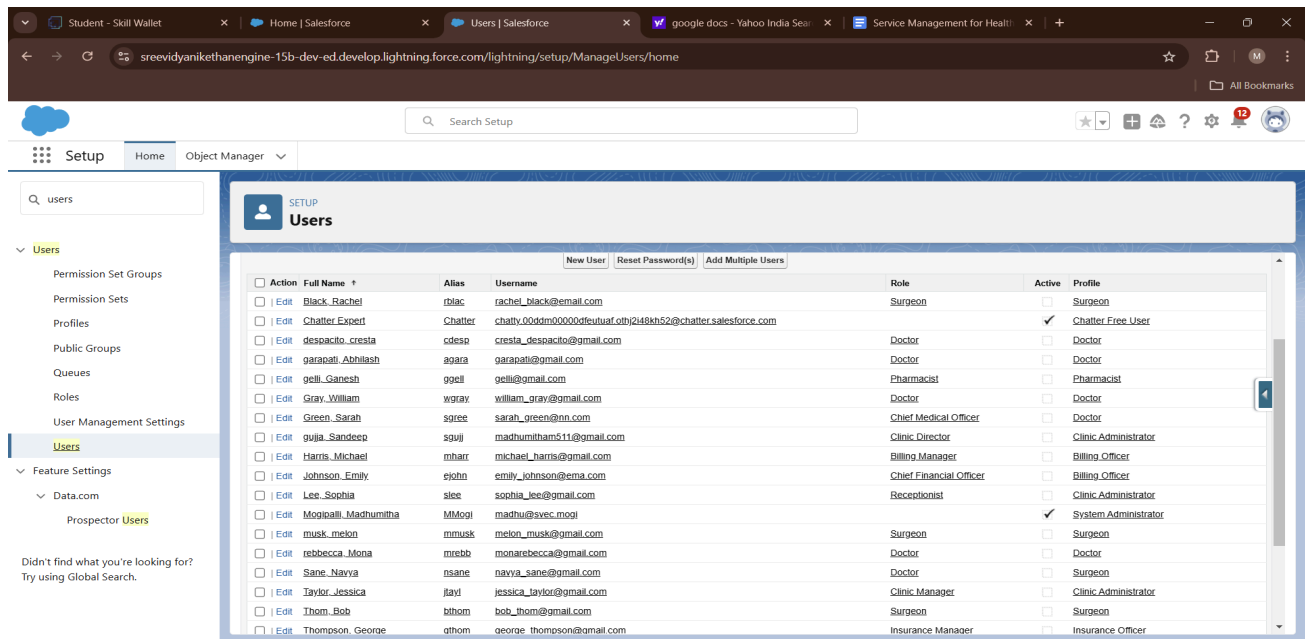
Users for Health Clinic CRM Application

User Name	Role	Profile	Responsibilities
John Doe	CEO / Clinic Director	Admin Profile	Oversees the entire clinic's operations and all data.
Dr. Sarah Green	Chief Medical Officer (CMO)	Doctor Profile	Manages doctors and oversees medical operations.
Emily Johnson	Chief Financial Officer (CFO)	Billing Manager Profile	Manages all financial aspects, including billing and insurance.
Dr. James White	Doctor	Doctor Profile	Provides medical care, manages patient records and surgeries.

Dr. Rachel Black	Surgeon	Surgeon Profile	Specializes in surgeries, manages surgical schedules and records.
Nina Adams	Nurse	Nurse Profile	Supports doctors in patient care and updates medical notes.
Anna Brown	Receptionist	Receptionist Profile	Manages patient check-ins, appointments, and insurance info.
George Thompson	Insurance Manager	Insurance Manager Profile	Manages insurance claims and patient coverage details.
Michael Harris	Billing Manager	Billing Manager Profile	Manages patient payments, invoices, and financial data.
Dr. William Gray	Doctor	Doctor Profile	Provides patient care and manages medical notes and treatments.
Jessica Taylor	Clinic Manager	Head of Operations Profile	Oversees administrative and non-medical operations.
Sophia Lee	Receptionist	Receptionist Profile	Schedules appointments and updates non-medical recor

4.2 Reports

Reports give you access to your Salesforce data. You can examine your Salesforce data in almost infinite combinations, display it in easy-to-understand formats, and share the resulting insights with others. Before building, reading, and sharing reports, review these reporting basics.

In Salesforce.com we can easily generate reports in different styles. And can create reports in a very short time and also schedule the reports. Salesforce provides a powerful suit of analytic tools to help you organize, view and analyze your data.

Types of Reports in Salesforce

1. **Tabula Reports**: Simple listing of data without any subtotals. This type of reports provide you most basically to look at your data. Use tabular reports when you want a simple list or a list of items with a grand total.

2. **Summary Reports**: This type of reports provide a listing of data with groupings and sub totals. Use summary reports when you want subtotals based on the value of a particular field or when you want to create a hierarchically grouped report, such as sales organized by year and then by quarter.

Example: All opportunities for your team sub totaled by Sales Stage and Owner.

3. **Matrix Reports**: This type of reports allow you to group records both by row and by column. A comparison of related totals, with totals by both row and column. Use matrix reports when you want to see data by two different dimensions that aren't related, such as date and product.

4. **Joined Reports**: Blocks of related information in a single report. This type of reports enable you to adopt five different blocks to display different types of related data. Each block can own unique columns, summary fields, formulas, filters and sort order. Use joined reports to group and show data from multiple report types in different views.


4.2 Patients report

4.2 Appointment Report


4.2 Invoice Report

5. Testing and Validation

5.1 Dashboards

Dashboards help you visually understand changing business conditions so you can make decisions based on the real-time data you've gathered with reports. Use dashboards to help users identify trends, sort out quantities, and measure the impact of their activities. Before building, reading, and sharing dashboards, review these dashboard basics.
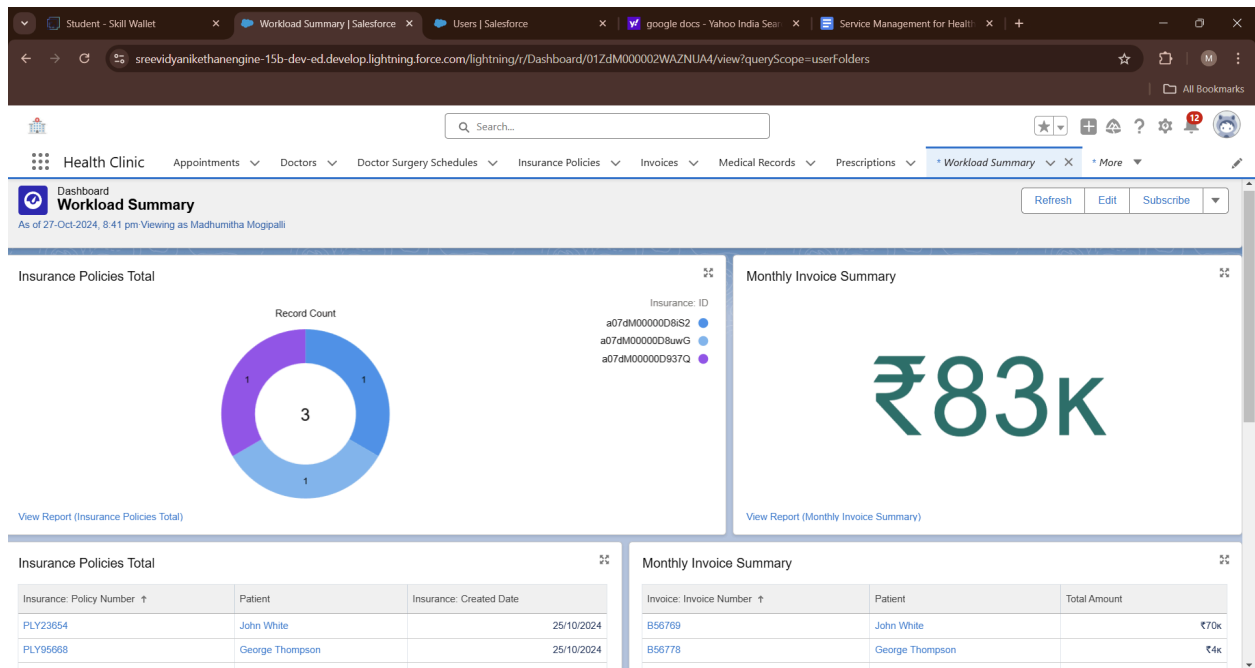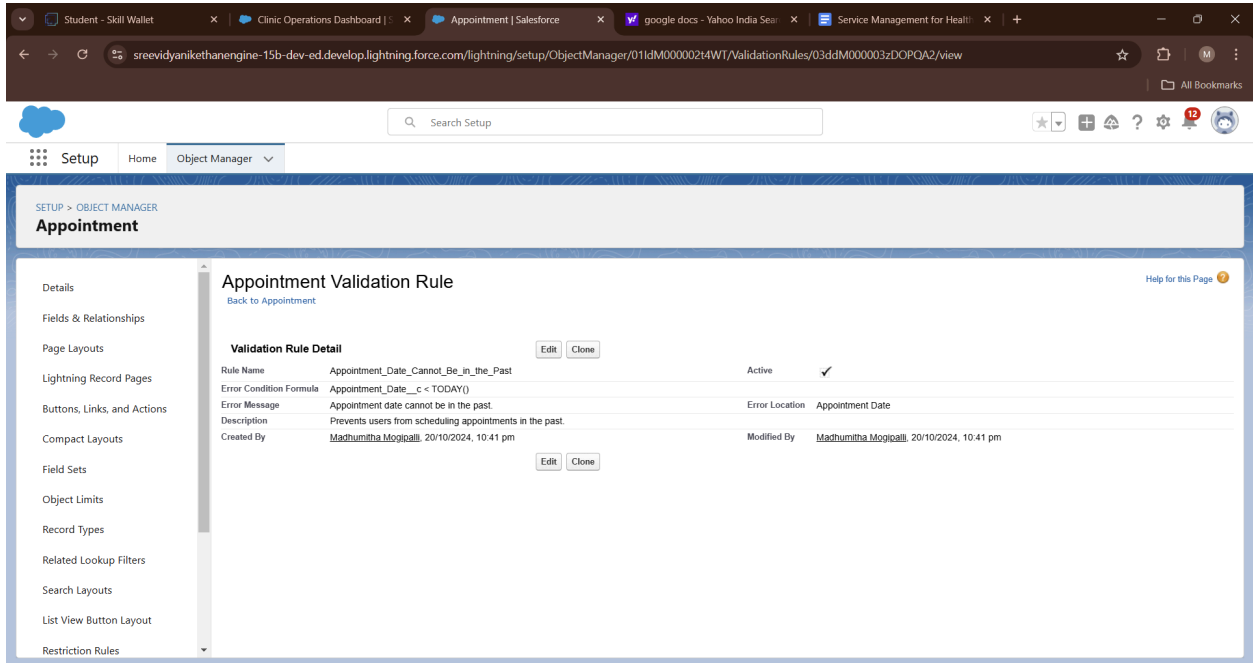

5.1 Workload Dashboard
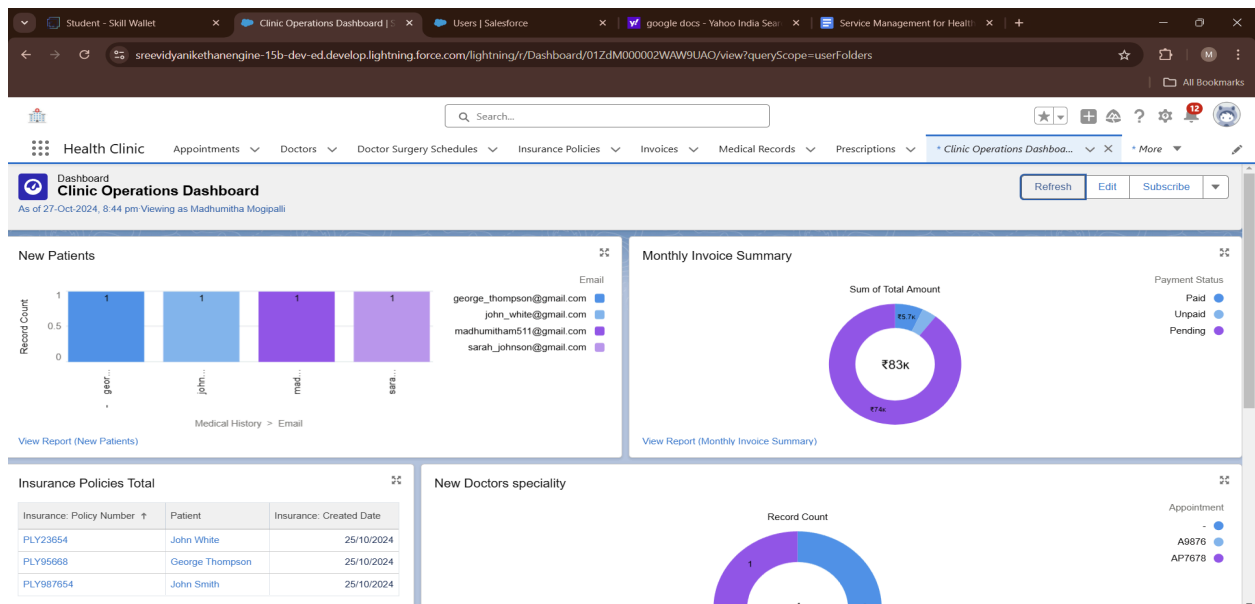
5.1 clinic operations
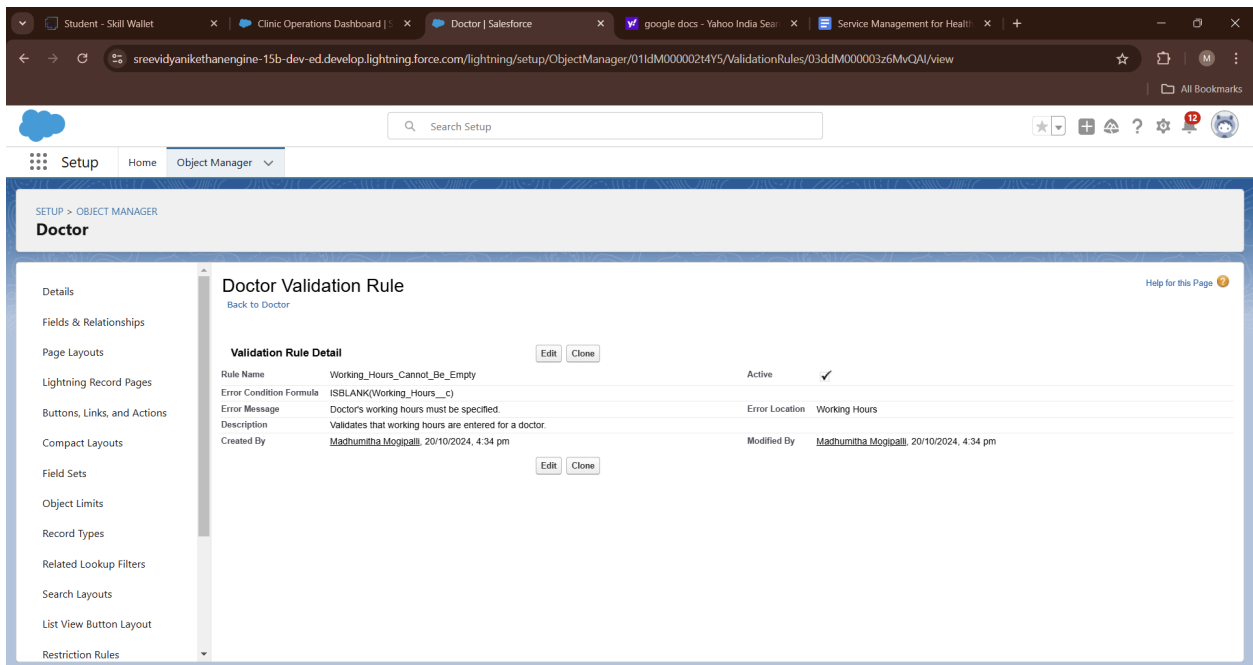
5.2Validation rule

Validation rules are applied when a user tries to save a record and are used to check if the data meets specified criteria. If the criteria are not met, the validation rule triggers an error message and prevents the user from saving the record until the issues are resolved.

5.2 Appointment Validation

5.3Flows

In Salesforce, a flow is a powerful tool that allows you to automate business processes, collect and update data, and guide users through a series of screens or steps. Flows are built using a visual interface and can be created without any coding knowledge.
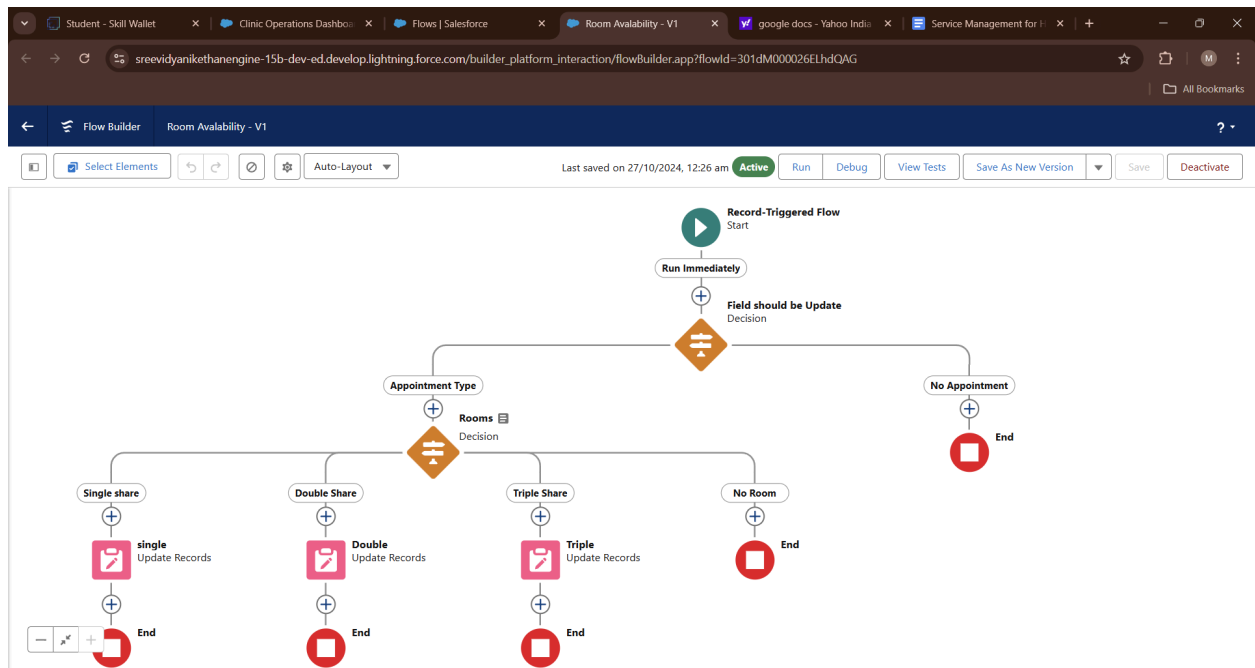
5.3Room Availability
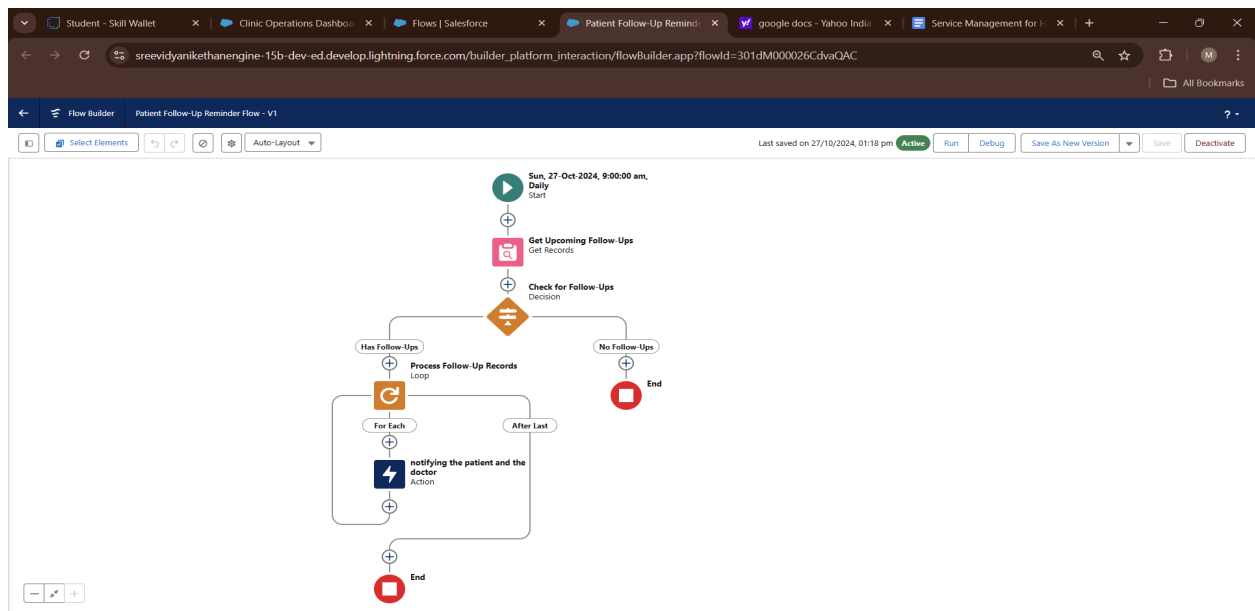
5.3 Patient Follow up

6. Key Scenarios Addressed by Salesforce in the Implementation Project

In the implementation of the Health Clinic Service Management app, Salesforce addresses key scenarios critical to efficient clinic operations, patient care, and staff coordination:

1. **Automated Appointment Managemen**t: Salesforce's scheduling and automation tools streamline appointment booking, sending reminders, and notifying doctors of schedule changes, reducing missed appointments and improving patient flow.

2. **Patient Information Centralization**: Salesforce provides a centralized system for tracking patient records, treatment history, and notes from doctors, making information accessible and organized across all clinic departments.

3. **Insurance Verification and Validity Alerts**: Salesforce can monitor insurance details, notify staff and patients of upcoming expirations, and ensure insurance data accuracy to facilitate smooth billing processes.

4. **Billing and Cost Calculation**: Salesforce calculates service and treatment costs based on appointments, surgeries, and other procedures, generating detailed invoices that patients can access.

5. **Follow-up and Patient Engagement**: Salesforce automatically schedules follow-up reminders and updates patient records post-treatment, enabling proactive care and ongoing patient engagement.
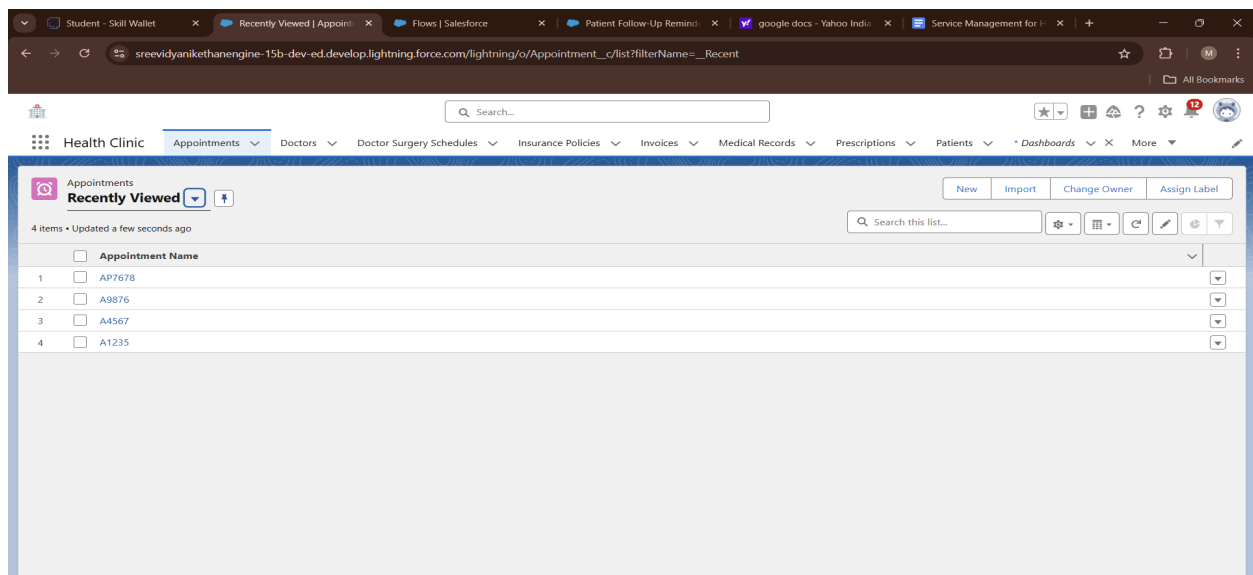
7. Conclusion

Summary of Achievements

1. **Improved Patient Management and Scheduling**
   - Centralized patient data records and history in Salesforce, enhancing accessibility and organization.
   - Automated appointment scheduling, reminders, and rescheduling, reducing no-shows and ensuring efficient patient flow.

2. **Streamlined Insurance and Billing Processes**
   - Implemented automated insurance validation and expiration alerts, allowing timely renewals and preventing coverage issues.
   - Enabled accurate billing with automated calculations for treatment and service costs, resulting in detailed and reliable patient invoices.

3. **Enhanced Surgery Coordination and Preparation**
   - Automated task assignments for surgery preparation teams, ensuring equipment and personnel readiness.
   - Improved tracking of surgery schedules and related activities, minimizing delays and optimizing resource allocation.

4. **Proactive Follow-Up and Patient Engagement**
   - Integrated follow-up reminders post-treatment to improve patient engagement and ongoing care.
   - Created a framework for continuous patient interaction, enhancing long-term patient satisfaction and clinic reputation.

5. **Increased Operational Efficiency and Workflow Automation**
   - Established workflows and triggers to reduce manual tasks, increasing productivity and focus on patient care.
   - Achieved streamlined processes across departments, aligning clinic operations with overall efficiency goals.