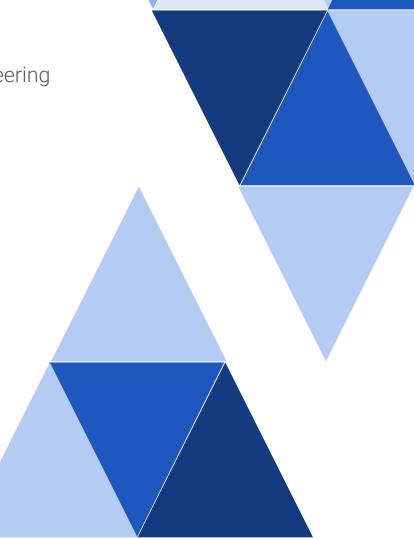


A CRM Application for Laptop Rentals

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1.Project Overview

This project focuses on developing a CRM application for managing laptop rentals. The objective is to streamline the rental process, enhance user experience, and improve operational efficiency by leveraging Salesforce's features. The project aims to facilitate seamless booking, billing, and tracking of laptops while supporting efficient customer management. The CRM system will include features like inventory management, customer information handling, and comprehensive reporting tools.

2. Objectives

Business Goals:

- Streamline laptop rental operations by integrating a centralized CRM system.
- Provide a user-friendly interface for customers and administrators.
- Automate billing and booking processes to minimize manual effort and errors.

Specific Outcomes:

- Creation of custom objects for managing laptops, consumers, bookings, and billing.
- Implementation of validation rules and field dependencies for error-free operations.
- Generation of reports and dashboards for actionable insights and trend analysis.

3. Salesforce Key Features and Concepts Utilized

- **Custom Objects:** Defined as Total Laptops, Consumers, Laptop Bookings, Billing Process to manage distinct aspects of operations.
- **Custom Tabs:** Created for each object to simplify navigation and enhance user accessibility.
- **Lightning App:** Designed for a seamless user experience by unifying operations under one interface.
- **Validation Rules:** Ensure data accuracy, such as enforcing mandatory fields like phone number and email.
- **Profiles and Roles:** Enable secure access control tailored to specific roles like Owners and Agents.
- **Reports and Dashboards:** Provide visual insights into rental trends, inventory status, and revenue.
- **Apex Triggers and Handler Classes:** Enable custom logic for processes like notifications and dependency checks.

4. Detailed steps to Solution Design

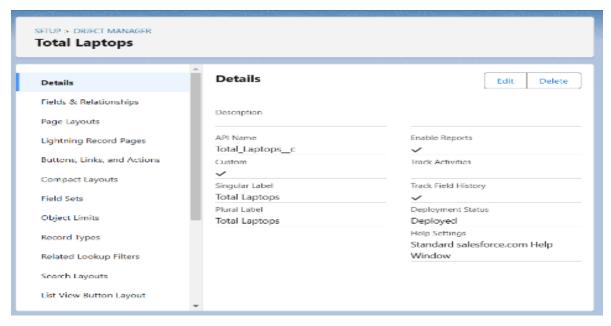
4.1. Object Creation

Click on the gear icon and select **Setup**.

- From the Setup page, go to the Object Manager, then click Create and choose Custom Object. On the custom object page, enter a label name, plural label name, and select options like **Allow Reports** and **Allow Search**.
- 2. Click Save.

1.1. Create Total Laptops Object

From the setup page >> Click on Object Manager >> Click on Create >> Click on Custom Object.



- 1) Enter the label name>> Total Laptops
- 2) Plural label name>> Total Laptops

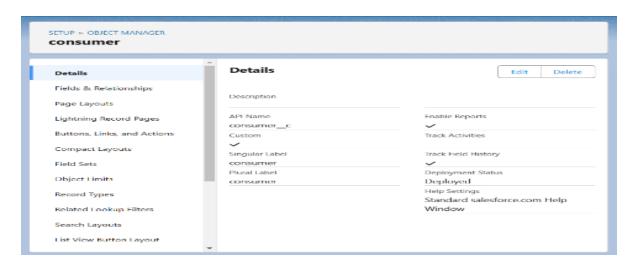
Three) Enter Record Name Label, and Format

Record Name >>Total Laptops

Data Type >> Text

- 1. Click on Allow reports, Allow search, and Track Field History,
- 2. Allow search >> Save.

1.2. Create consumer Object



From the setup page >> Click on Object Manager >> Click on Create >> Click on Custom Object.

- 1) Enter the label name >> consumer
- 2) Plural label name >> consumer
- 3) Enter Record Name Label, and Format

Record Name >> consumer_name

Data Type >> Name

Click on Allow reports, Allow search, and Track Field History,

Allow search >> Save.

1.3 Create Laptop Bookings Object

From the setup page >> Click on Object Manager >> Click on Create >> Click on Custom Object.

- 1) Enter the label name >> Laptop Bookings
- 2) Plural label name >> Laptop Bookings
- 3) Enter Record Name Label, and Format

Record Name >> Laptop Bookings

Data Type >> Name

Click on Allow reports, Allow search, and Track Field History,

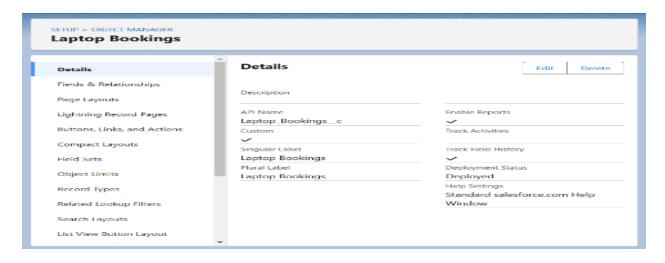
Allow search >> Save.



1.4 Create Billing Process Object

From the setup page >> Click on Object Manager >> Click on Create >> Click on Custom Object.

- 1) Enter the label name >> Billing Process
- 2) Plural label name >> Billing Process



3) Enter Record Name Label, and Format

Record Name >> Billing ProcessName

Data Type >> Name

- 1. Click on Allow reports, Allow search, and Track Field History,
- 2. Allow search >> Save.

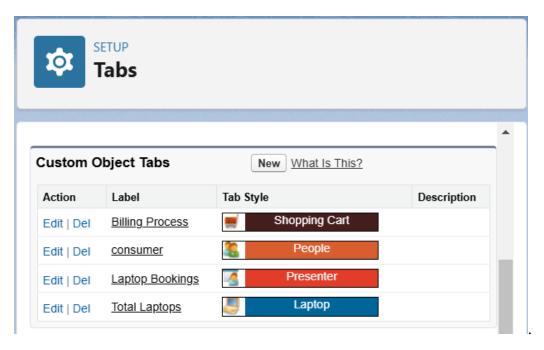
4.2. Creating a Custom Tab

To create a Tab: ()

- 1. Go to the setup page >> Type Tabs in the Quick Find bar >> click on tabs >> New (under the custom object tab)
- 1. Select Object(Total Laptops) >> Select the tab style >> Next (Add to profiles page) keep it as default >> Next (Add to Custom App) uncheck the include tab .
- 2. Click save.

Activity 2: Creating Remaining Tabs

1. Now create the Tabs for the remaining Objects; they are "consumer, Laptop Booking, Billingprocess".



4.3. Create a Lightning App

To create a lightning app page:

- 1. Go to the setup page >> search "app manager" in quick find >> select "app manager" >> click on New lightning App.
- 1. Fill the app name in app details as LAPTOP RENTALS >>Next >> (App option page) keep it as default >> Next >> (Utility Items) keep it as default >> Next.

2. To Add Navigation Items:

Select the items (Total Laptops, consumer, Laptop Booking, Billing Process) from the search bar and move them using the arrow button >> Next.

3. To Add User Profiles:

Search profiles (System administrator) in the search bar >> click on the arrow button >> save & finish.

4.4. Fields

4.4.1 Create fields in the Consumer object

- 1. Navigate to the Consumer Object:
 - o. Go to Setup.
 - o. Click on Object Manager.

o. Search for the Consumer object and select it.

2. Create the Phone Field:

- o. Click on Fields & Relationships >> New.
- o. Select Data Type as Phone >> Next.
- o. Set the Field Label as Phone number (Field Name will auto-generate).
- o. Mark the field as Required.
- Click Next >> Save & New.

3. Create the Email Field:

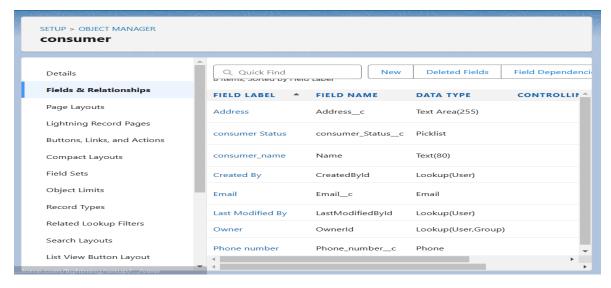
- Select Data Type as Email >> Next.
- o. Set the Field Label as Email (Field Name will auto-generate).
- Click Next >> Save & New.

4. Create the Address Field:

- Select Data Type as Text Area >> Next.
- o. Set the Field Label as Address (Field Name will auto-generate).
- o. Mark the field as Required.
- o. Click Next >> Save & New.

5. Create the Consumer Status Field:

- o. Select Data Type as Picklist >> Next.
- o. Set the Field Label as Consumer Status (Field Name will auto-generate).
- o. Enter Picklist Values:
 - Student
 - o. Employee
 - Others
- o. Mark the field as Required.
- Click Next >> Save.



4.4.2 Creating the field in Laptops Bookings object

1. Open the Laptop Booking Object:

o. Go to **Setup** > **Object Manager**, search for **Laptop Booking**, and select it.

2. Create the Laptop Names Field:

- o. Go to Fields & Relationships > New.
- o. Choose Picklist as the data type.
- o. Set the Field Label to Laptop Names and enter these values: Dell, Acer, HP, Mac.
- o. Mark the field as Required and click Next > Save & New.

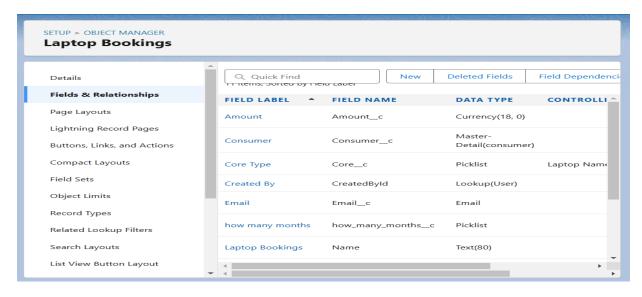
3. Create the Core Type Field:

- o. Go to Fields & Relationships > New.
- o. Choose Picklist as the data type.
- o. Set the Field Label to Core Type and enter these values: Core i3, Core i5, Core i7, Bionic Chip.
- o. Mark the field as Required and click Next > Save & New.

4. Set Up Field Dependency:

- o. Go to Field Dependencies > New.
- •. Choose Laptop Names as the Controlling Field and Core Type as the Dependent Field.
- o. Map values:

- o. Dell, Acer, HP: Allow Core i3, Core i5, Core i7.
- o. Mac: Allow Bionic Chip.
- Click Save.



4.4.3 Creation of Fields & Relationship for Billing Process Object

Creation of Fields & Relationships for Billing Process Object

1. Master-Detail Relationship for the Billing Process:

Go to Setup >> Object Manager >> Search for Billing Process >> Fields & Relationships >> New >> Select Master-Detail Relationship >> Next >> Choose Consumer from the related objects dropdown >> Set Field Label to Name >> Next >> Save & New.

2. Lookup Relationship for Laptop Booking:

Go to Setup >> Object Manager >> Search for Billing Process >> Fields & Relationships >> New >> Select Lookup Relationship >> Next >> Choose Laptop Booking from the related objects dropdown >> Set Field Label to Laptop Booking >> Next >> Save & New.

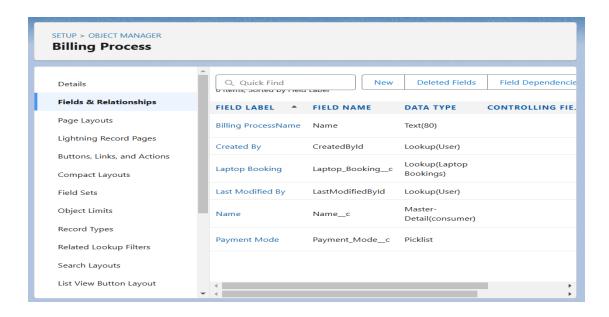
3. Picklist Field for Payment Mode:

Go to Setup >> Object Manager >> Search for Billing Process >> Fields & Relationships >> New >> Select Picklist >> Set Field Label to Payment Mode and enter values (Cash, Check, Credit Card, Debit Card, UPI, PhonePe, GPay, Payment) >> Mark as Required >> Next >> Save & New.

4. Cross-Object Formula Field:

Go to Setup >> Object Manager >> Search for Billing Process >> Fields &

Relationships >> New >> Select Formula >> Next >> Set Field Label to Amount (Formula Return Type: Currency) >> Click Insert Field >> Select Laptop Booking Amount field (Laptop_Booking__r.Amount__c) >> Check Syntax >> Next >> Save & New.



4.4.4 Creating the Field in Total Laptops Object

1. Formula Field for Laptops Available:

Go to Setup >> Object Manager >> Search for Total Laptops >> Fields & Relationships >> New >> Select Formula >> Next

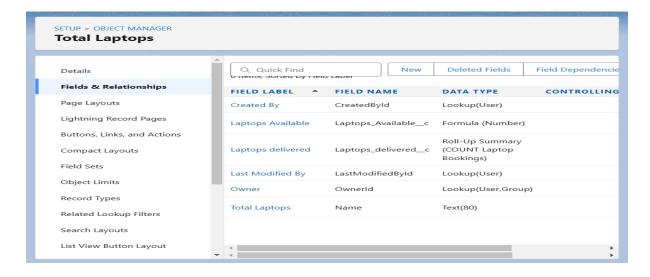
o. Set Field Label: Laptops Available

o. Field Name: Auto-generated

o. Select Formula Return Type: Number

o. Set Decimal Places: 0

o. Click Next



1. Formula for Laptops Available:

In the Advanced Formula section, enter the formula:

- 2. 50 Laptops_delivered__c
 - o. Check Syntax to ensure there are no errors.

2. Finalize:

Click Next >> Next >> Save & New.

4.5. Validation Rules:

Creating the Validation Rule for the Phone Number Field in Consumer Object

Go to Setup >> Object Manager >> Select Consumer object and click Edit. Under the Validation Rules section, click New.

Enter the following:

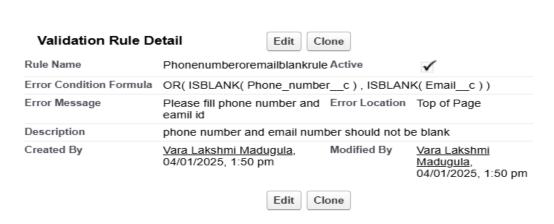
- o. Rule Name: Phonenumberoremailblankrule
- o. Description: Phone number and email number should not be blank.
- Formula: OR(ISBLANK(phone_number__c), ISBLANK(email__c))

Check Syntax to ensure there are no errors.

consumer Validation Rule



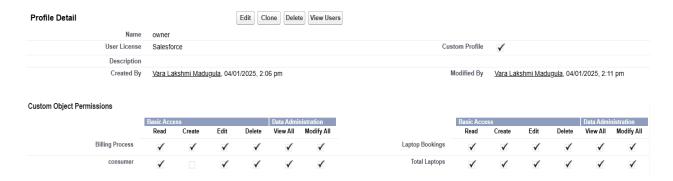
Back to consumer



4.6.Profiles

4.6.1 owner Profile

- 1.Go to setup >> type profiles in the quick find box >> click on profiles >> clone the desired profile (Standard User) >> enter profile name (owner) >> Save.
- 2. Scroll down to Custom Object Permissions and Give access permissions for Total Laptops, consumers, Laptop Booking and Billing Process objects as mentioned in the below diagram.
- 3. Give Access and Save it.



4.6.2 Agent Profile

1. Go to setup >> type profiles in the quick find box >> click on profiles >> clone the desired profile (Standard Platform User) >> enter profile name

(Agent) >> Save.

- 2. While still on the profile page, then click Edit.
- 3. Scroll down to Custom Object Permissions and Give access permissions for Total Laptops, consumer, Laptop Bookings, and Billing Process objects as mentioned in the below diagram.



4.7. Roles and Hierarchy

Creating Owner Role:

- 1. Go to Quick Find >> Search for Roles >> Click on Set Up Roles.
- 2. Click on Expand All, then click Add Role under "Whom this role works".
- 3. Set the Label as "Owner" (Role name auto-populates).
- 4. Click Save.

Creating Agent Roles:

Go to Quick Find >> Search for Roles >> Click on Set Up Roles.Under CEO Role, click Add Role under Owner.Set the Label as "Agent" (Role name auto-populates).



Creating the Role Hierarchy

You can build on the existing role hierarchy shown on this page. To insert a new role, click Add Role.

Your Organization's Role Hierarchy

```
Collapse All Expand All
- Lakireddy Bali Reddy College of Engineering
     .... Add Role
    Edit | Del | Assign
        Add Role
       CFO Edit | Del | Assign
            Add Role
       COO Edit | Del | Assign
             Add Role
       • owner Edit | Del | Assign
             Add Role
       SVP, Customer Service & Support Edit | Del | Assign
             Add Role
       SVP, Human Resources Edit | Del | Assign
            Add Role
       SVP, Sales & Marketing Edit | Del | Assign
             Add Role
```

4.8. Users

Create User

- 1. Go to setup type users in the quick find box select users -click New user.
- 2. Fill in the fields
- 3. First Name: Vicky
- 4. Alias : Give a Alias Name
- 5. Email id : Give your Personal Email id
- 6. Username : Username should be in this form: text@text.text
- 7. Nick Name: Give a Nickname
- 8. Role : owner
- 9. User license: Salesforce
- 10. Profiles: owner.

Save it.

Activity 2: creating another user

1. Go to setup -type users in the quick find box - select users -click New user.

2. Fill in the fields

3. First Name: ram

4. Last Name: ram

5. Alias : Give a Alias Name

6. Email id: Give your Personal Email id

7. Username: Username should be in this form: text@text.text

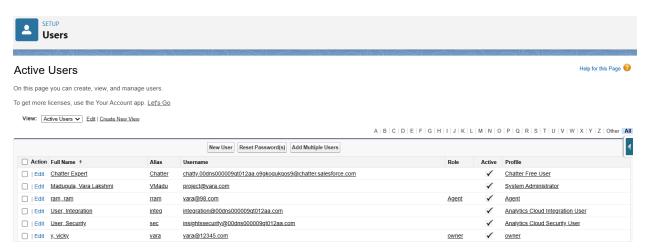
8. Nick Name: Give a Nickname

9. Role: Agent

10. User license; Salesforce platform

11. Profiles: Agent.

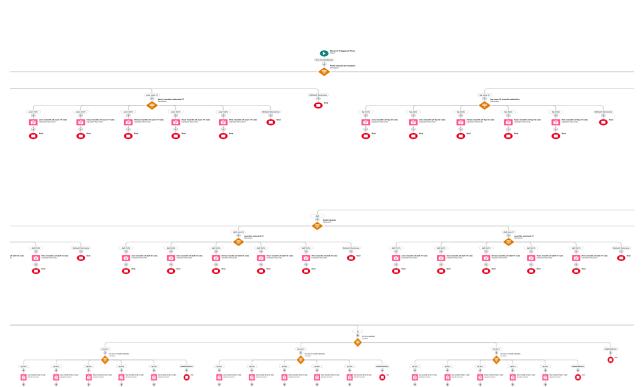
12. Save it.

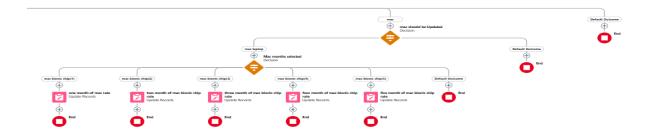


4.9.Flow

https://lakireddybalireddycolleg-d8-dev-ed.develop.lightning.force.com/builder_platform_interaction/flowBuilder.app?flowId=301NS00000sXW_6rYAG







5. Testing and Validation

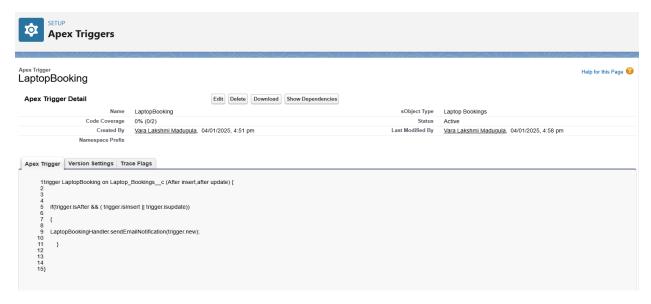
Unit Testing:

- Ensure Apex triggers and classes function as intended.
- Validate dependencies and rules to verify logical accuracy.

To create an Apex Trigger and Handler Class:

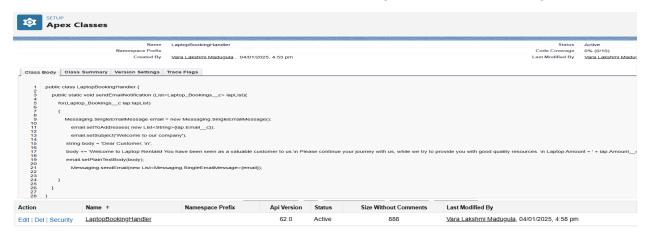
- 1. Create the Trigger:
 - o. Go to Developer Console in Salesforce.
 - o. Click File > New > Trigger.
 - o. trigger name
 - o. Define the events (e.g., After Insert, After Update).





2. Create the Handler Class:

- o. Go to Developer Console.
- o. Click File > New > Apex Class.
- o. Define the handler class, which contains the logic for actions (like sending emails).



User Interface Testing:

Confirm that navigation is intuitive and workflows align with user needs. Test dashboards and reports for accurate data representation.

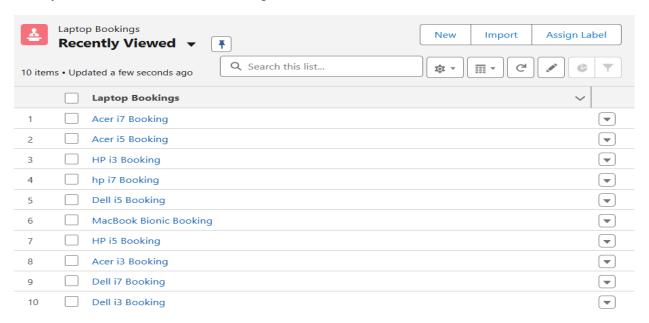
1. Report

To create a report in Salesforce, first, make sure you have 10-12 records in the Laptop Bookings object, including at least two records for each of these types: Dell (i3), Dell (i7), Acer (i3), HP (i5), and Mac (Bionic Chip). Then, go to the Reports tab in your app and click New Report. Select the report type Consumer with Laptop Bookings and Total Laptops, and click Start

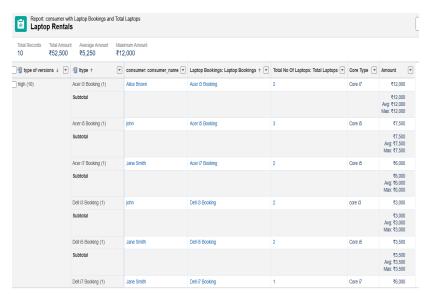
Report.

Next, choose a Tabular Report layout and add fields from the left pane, making sure to include the Amount field. Click the drop-down next to the Amount column and choose Bucket List, then apply the changes. To create a summary report, select Types of Version to group by rows.

Finally, click Save and then Run the report to view the results.

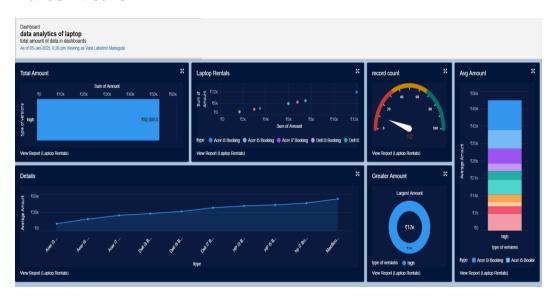


Sharing report to owner





2 .Dash Board



6. Key Scenarios Addressed by Salesforce in the Implementation Project

- Real-time inventory tracking to monitor laptop availability and usage.
- Automated billing processes reduce manual errors and improve efficiency.
- Role-based access ensures secure operations and protects sensitive information.
- Data visualization tools provide insights to support decision-making and identify trends.

7. Conclusion

Summary of Achievements:

Successfully developed a CRM application for managing the end-to-end laptop rental process.

Automated booking, billing, and reporting, reducing operational complexity.

Enhanced customer and administrator experience through streamlined workflows and secure access management.

Provided valuable insights through custom dashboards and reports, enabling data-driven decisions.