Sales Force Virtual Internship

Smart InternZ

A CRM APPLICATION FOR LAPTOP RENTALS

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Project Overview

The CRM Application for Laptop Rentals redefines the rental business landscape by leveraging Salesforce's powerful tools to create a seamless, customer-centric, and highly efficient platform. It caters specifically to the needs of the laptop rental industry, offering unparalleled operational control and customer engagement. The application's primary focus areas include:

- **Enhanced Customer Engagement:** It ensures smooth communication at every interaction point, making the rental experience more transparent and user-friendly.
- **Operational Excellence:** The platform tracks inventory and rental activities comprehensively, reducing manual intervention and errors.
- **Strategic Insights:** Advanced analytics empowers businesses with actionable data for smarter decision-making and strategic growth.

By integrating automated workflows, robust marketing tools, and data intelligence, this Salesforce-powered solution provides a unified and scalable platform that transcends traditional rental services.

Objectives

The project aims to achieve the following objectives:

1. **Deliver Superior Experiences:** Enhance customer satisfaction with transparent, efficient, and streamlined rental processes.
2. **Optimize Inventory Utilization:** Ensure optimal availability and utilization of laptops using intelligent inventory management.
3. **Boost Revenue Streams:** Implement targeted marketing campaigns to convert potential leads into loyal, repeat customers.
4. **Seamlessly Manage Relationships:** Centralize customer data to foster long-term and meaningful relationships.
5. **Achieve Operational Agility:** Enable the system to adapt swiftly to

changing market needs and customer demands through technological integration.

Business Goals:

● To optimize laptop rental operations by streamlining the entire rental process from booking to return.

● To increase revenue and protability through effective inventory management. ● To build customer relationships by collecting valuable customer data and providing personalized service. Specific Outcomes:

● Real-Time Tracking: Implement a dashboard to monitor laptop availability, rental bookings, customer interactions, and revenue generation.

● Automation of Processes: Streamline rental bookings and inventory management using Salesforce Flows and Triggers.

● User-Friendly Interface: Develop tabs for easy customer onboarding, rental requests, and staff access to relevant information

Key Features and Concepts Utilized

1. **Sales Cloud:**
   - **Customer Profiling:** Maintain detailed records of customers and their rental histories.
   - **Opportunity Tracking:** Monitor and manage potential leads to drive conversions effectively.
2. **Marketing Cloud:**
   - **Personalized Campaigns:** Deliver dynamic, customer-specific email campaigns to enhance engagement.
   - **Automated Drip Campaigns:** Create workflows to nurture leads and encourage repeat business through consistent communication.
3. **Service Cloud:**
   - **Integrated Case Management:** Provide real-time solutions to customer issues for improved satisfaction.
   - **Chatbots:** Deploy Einstein AI-powered chatbots for 24/7

customer support.

4. **Custom Features:**
   - **Rental Management Dashboard:** A centralized view of active and past rentals.
   - **Inventory Analytics:** Predict laptop demand trends using historical rental data.
   - **Automated Notifications:** Real-time alerts for overdue returns, promotions, or system updates.

Detailed Steps to the Solution

Summary:-

1. **Requirement Analysis:**
   - Gather and understand customer needs and the requirements of the laptop rental business.
   - Define functionalities such as inventory tracking, customer communication, and reporting mechanisms.

2. **Salesforce Setup:**
   - Configure Salesforce's Sales and Marketing Cloud environments.
   - Create custom objects for managing inventory (laptops), rentals, and customer data.

3. **Application Development:**
   - Develop user-friendly interfaces for both administrators and customers.
   - Set up workflows to handle rental requests, approvals, and returns.
   - Design and implement email templates for notifications and marketing.

4. **Integration:**
   - Connect Salesforce Marketing Cloud with external email services.

- Integrate payment processing and delivery tracking systems for a seamless experience.
5. **Testing and Validation:**
   - Conduct rigorous testing to ensure each module performs as intended.
   - Validate the accuracy of data, focusing on rentals, inventory, and customer records.
6. **Deployment:**
   - Launch the application in a live production environment.
   - Train store personnel and administrators on using the CRM platform effectively.

Detailed Explanation:-

1. Custom Objects Creation

Navigate to Object Manager:

1. **Total Laptops Object**:
   - Label: `Total Laptops`, Plural: `Total Laptops`
   - Record Name: `Total Laptops`, Data Type: `Text`
   - Enable: Allow Reports, Allow Search, Track Field History
   - Save.

Details

Edit | Delete

Description

API Name
Total_Laptops__c

Enable Reports
✓

Custom
✓

Track Activities

Singular Label
Total Laptops

Track Field History

Plural Label
Total Laptops

Deployment Status
Deployed

Help Settings
Standard salesforce.com Help Window

Details
Fields & Relationships
Page Layouts
Lightning Record Pages
Buttons, Links, and Actions
Compact Layouts
Field Sets
Object Limits
Record Types
Related Lookup Filters
Search Layouts
List View Button Layout
Restriction Rules

2. **Consumer Object**:
   - **Label:** `Consumer`, **Plural:** `Consumers`
   - **Record Name:** `Consumer Name`, **Data Type:** `Name`
   - **Enable:** Allow Reports, Allow Search, Track Field History
   - Save.

Details

Edit | Delete

Description

API Name
consumer__c

Enable Reports
✓

Custom
✓

Track Activities

Singular Label
consumer

Track Field History
✓

Plural Label
consumer

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3. **Laptop Bookings Object**:
   - **Label:** `Laptop Bookings`, **Plural:** `Laptop Bookings`

- Record Name: `Laptop Bookings`, **Data Type:** `Name`
- Enable: Allow Reports, Allow Search, Track Field History
- Save.

4. **Billing Process Object**:
   - **Label:** `Billing Process`, **Plural:** `Billing Processes`
   - Record Name: `Billing Process Name`, **Data Type:** `Name`
   - Enable: Allow Reports, Allow Search, Track Field History
   - Save.
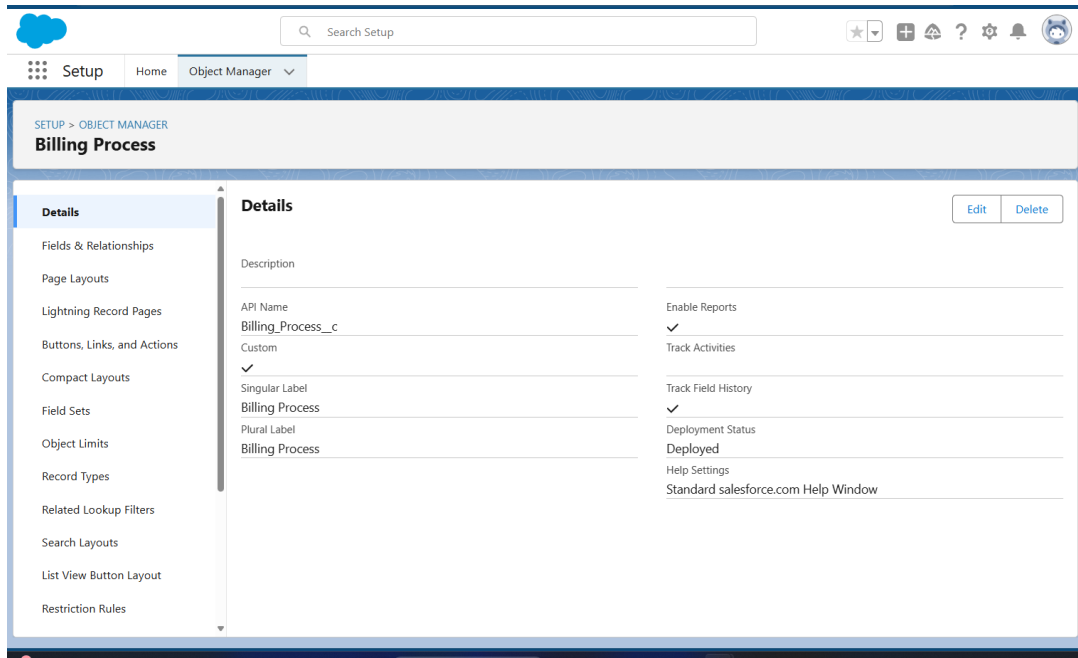
2. Create Custom Tabs & Lightning Apps

1. **Creating Custom Tabs**:
   - Navigate to **Setup → Tabs → New**.
   - Select the object (e.g., Total Laptops, Laptop Bookings) and create tabs for them.
   - Assign tabs to desired apps and profiles.
2. **Create a Lightning App**:
   - Navigate to **Setup → App Manager → New Lightning App**.
   - Add relevant tabs and objects to the app for streamlined navigation.

3. Creating Fields for Objects

Create Fields in Objects:

Navigate to **Object Manager** → **Select Object** → **Fields & Relationships** → **New Field** and configure the fields as needed.

1. **Laptop Bookings Object**:

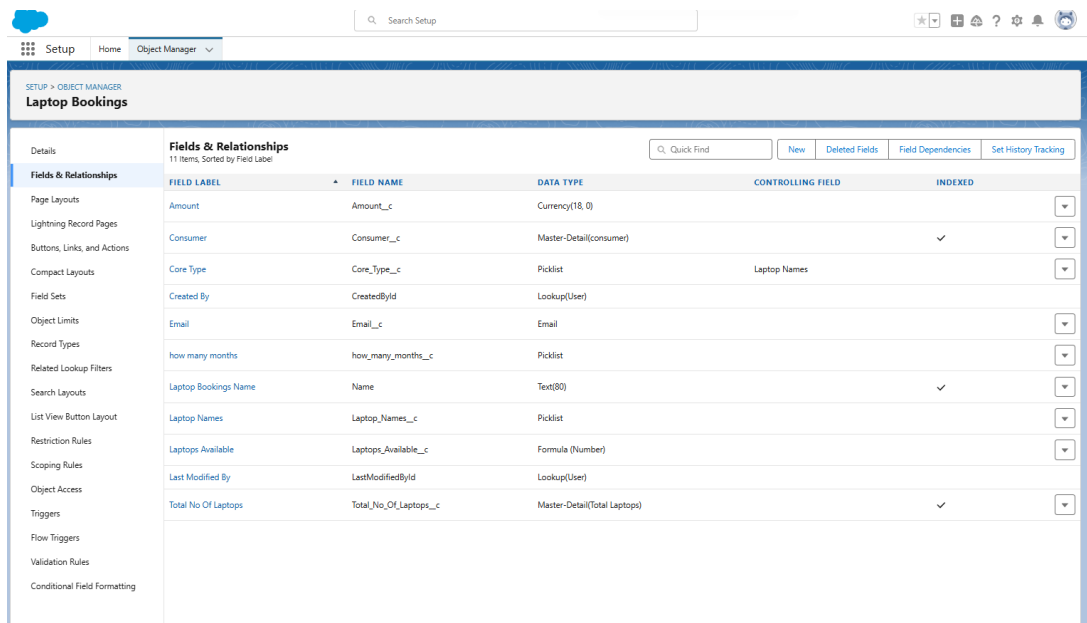- Create fields like `Laptop Type`, `Booking Duration`, and `Rate`.

2. **Total Laptops Object**:
    - Create fields like `Brand`, `Core Type`, and `Quantity Available`.

3. **Billing Process Object**:
    - Create fields like `Total Amount`, `Payment Status`, and `Invoice Number`.

4. **Consumers Object**:
    - Create fields like `Phone Number`, `Email`, and `Address`

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED	
Amount	Amount__c	Currency(18, 0)			▾
Consumer	Consumer__c	Master-Detail(consumer)		✓	▾
Core Type	Core_Type__c	Picklist	Laptop Names		▾
Created By	CreatedById	Lookup(User)			▾
Email	Email__c	Email			▾
how many months	how_many_months__c	Picklist			▾
Laptop Bookings Name	Name	Text(80)		✓	▾
Laptop Names	Laptop_Names__c	Picklist			▾
Laptops Available	Laptops_Available__c	Formula (Number)			▾
Last Modified By	LastModifiedById	Lookup(User)			▾
Total No Of Laptops	Total_No_Of_Laptops__c	Master-Detail(Total Laptops)		✓	▾

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Total Laptops

Fields & Relationships
6 Items, Sorted by Field Label

Details				Quick Find	New	Deleted Fields	Field Dependencies	Set History Tracking

FIELD LABEL ▲	**FIELD NAME**	**DATA TYPE**	**CONTROLLING FIELD**	**INDEXED**	
Created By	CreatedById	Lookup(User)			
Laptops Available	Laptops_Available__c	Formula (Number)			▼
Laptops delivered	Laptops_delivered__c	Roll-Up Summary (COUNT Laptop Bookings)			▼
Last Modified By	LastModifiedById	Lookup(User)			
Owner	OwnerId	Lookup(User,Group)		✓	
Total Laptops Name	Name	Text(80)		✓	▼

Sidebar: Details | **Fields & Relationships** | Page Layouts | Lightning Record Pages | Buttons, Links, and Actions | Compact Layouts | Field Sets | Object Limits | Record Types | Related Lookup Filters | Search Layouts | List View Button Layout | Restriction Rules | Scoping Rules | Object Access | Triggers

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Billing Process

Fields & Relationships
7 Items, Sorted by Field Label

Details				Quick Find	New	Deleted Fields	Field Dependencies	Set History Tracking

FIELD LABEL ▲	**FIELD NAME**	**DATA TYPE**	**CONTROLLING FIELD**	**INDEXED**	
Amount	Amount__c	Formula (Currency)			▼
Billing Process Name	Name	Text(80)		✓	▼
Created By	CreatedById	Lookup(User)			
Laptop Booking	Laptop_Booking__c	Lookup(Laptop Bookings)		✓	▼
Last Modified By	LastModifiedById	Lookup(User)			
Name	Name__c	Master-Detail(consumer)		✓	▼
Payment Mode	Payment_Mode__c	Picklist			▼

Sidebar: Details | **Fields & Relationships** | Page Layouts | Lightning Record Pages | Buttons, Links, and Actions | Compact Layouts | Field Sets | Object Limits | Record Types | Related Lookup Filters | Search Layouts | List View Button Layout | Restriction Rules | Scoping Rules

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consumer

Fields & Relationships
8 Items, Sorted by Field Label

Details				Quick Find	New	Deleted Fields	Field Dependencies	Set History Tracking

FIELD LABEL ▲	**FIELD NAME**	**DATA TYPE**	**CONTROLLING FIELD**	**INDEXED**	
Address	Address__c	Text Area(255)			▼
consumer Status	consumer_Status__c	Picklist			▼
consumer_name	Name	Text(80)		✓	▼
Created By	CreatedById	Lookup(User)			
Email	Email__c	Email			▼
Last Modified By	LastModifiedById	Lookup(User)			
Owner	OwnerId	Lookup(User,Group)		✓	
Phone number	Phone_number__c	Phone			▼

Sidebar: Details | **Fields & Relationships** | Page Layouts | Lightning Record Pages | Buttons, Links, and Actions | Compact Layouts | Field Sets | Object Limits | Record Types | Related Lookup Filters | Search Layouts | List View Button Layout | Restriction Rules | Scoping Rules | Object Access

4. Validation Rule

1. **Navigate to Consumer Object → Validation Rules → New**.
2. **Rule Details**:
   - Name: `Phonenumberoremailblankrule`
   - Description: Phone number and email must not be blank.
   - Formula:
   - `plaintext`
   - Copy code
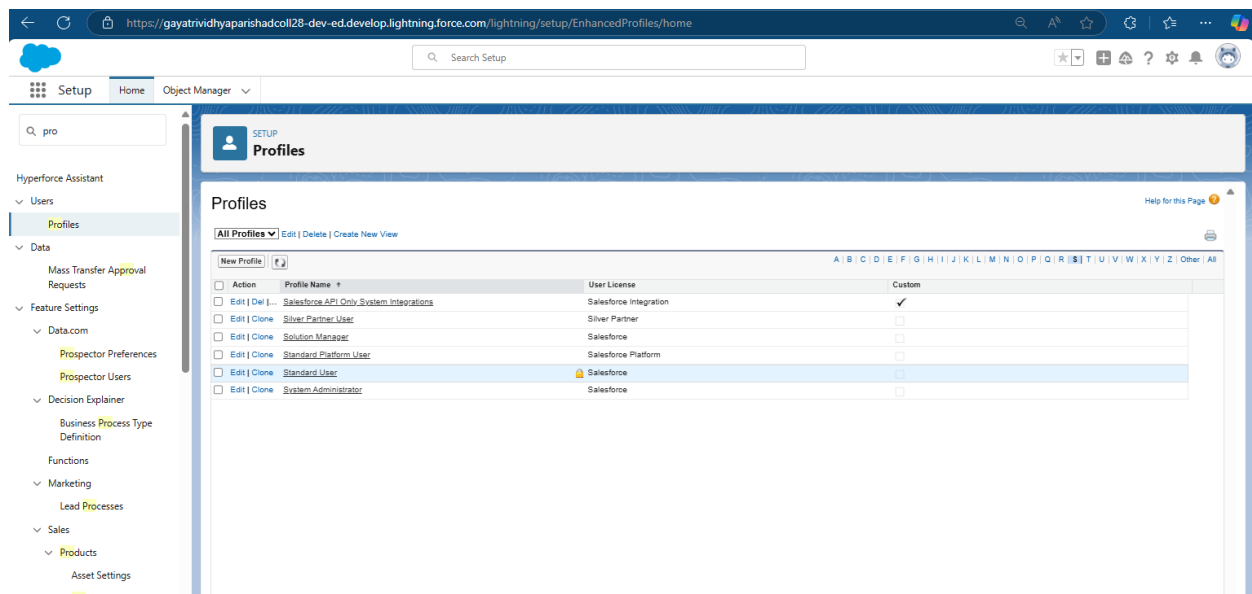   - `OR(ISBLANK(phone_number__c), ISBLANK(email__c))`
   - Save.

5. Profiles and Roles

1. **Profiles**:
   - Clone Standard Profiles (e.g., `Standard User`) to create `Owner` and `Agent` profiles.
   - Assign permissions for `Total Laptops`, `Laptop Bookings`, `Consumers`, and `Billing Process`.
2. **Roles**:
   - Create `Owner` and `Agent` roles with appropriate hierarchies.
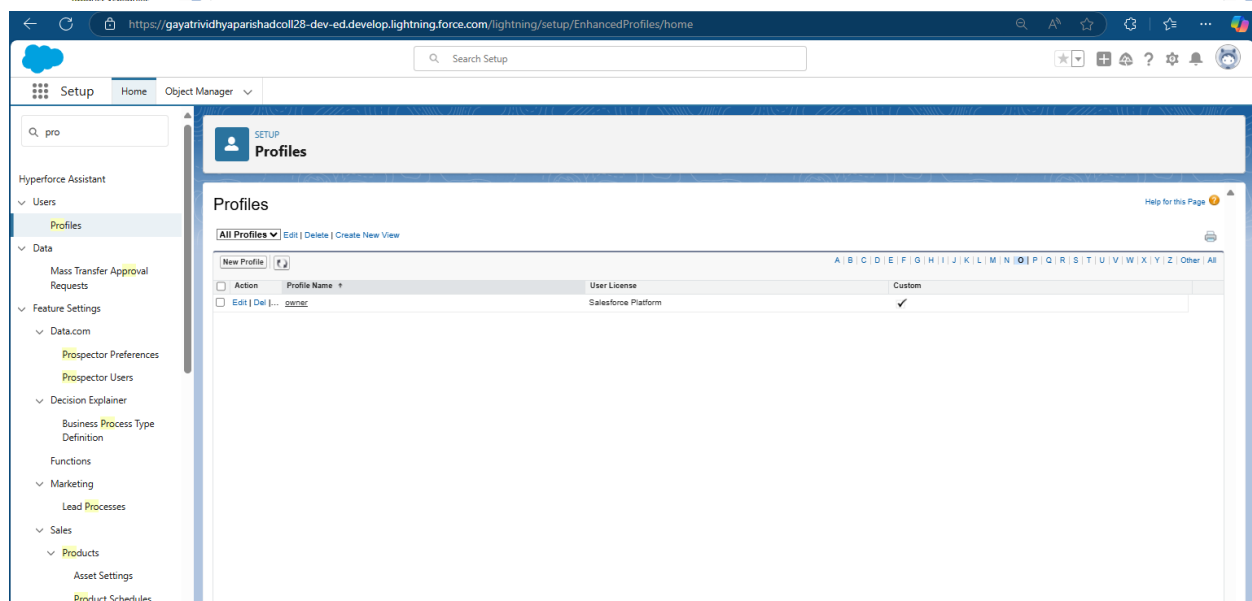
6. Users

1. Create users under respective profiles and roles:
   - **Owner**: Vicky Y, Role: Owner, Profile: Owner.
   - **Agent**: Ram Ram, Role: Agent, Profile: Agent.

7. Flow Creation

Create a flow named **Laptop Distributions**:

- Use decision elements to allocate rates based on `Laptop Type` and `Booking Duration`.
- Update records with calculated values.
- Save and activate the flow.
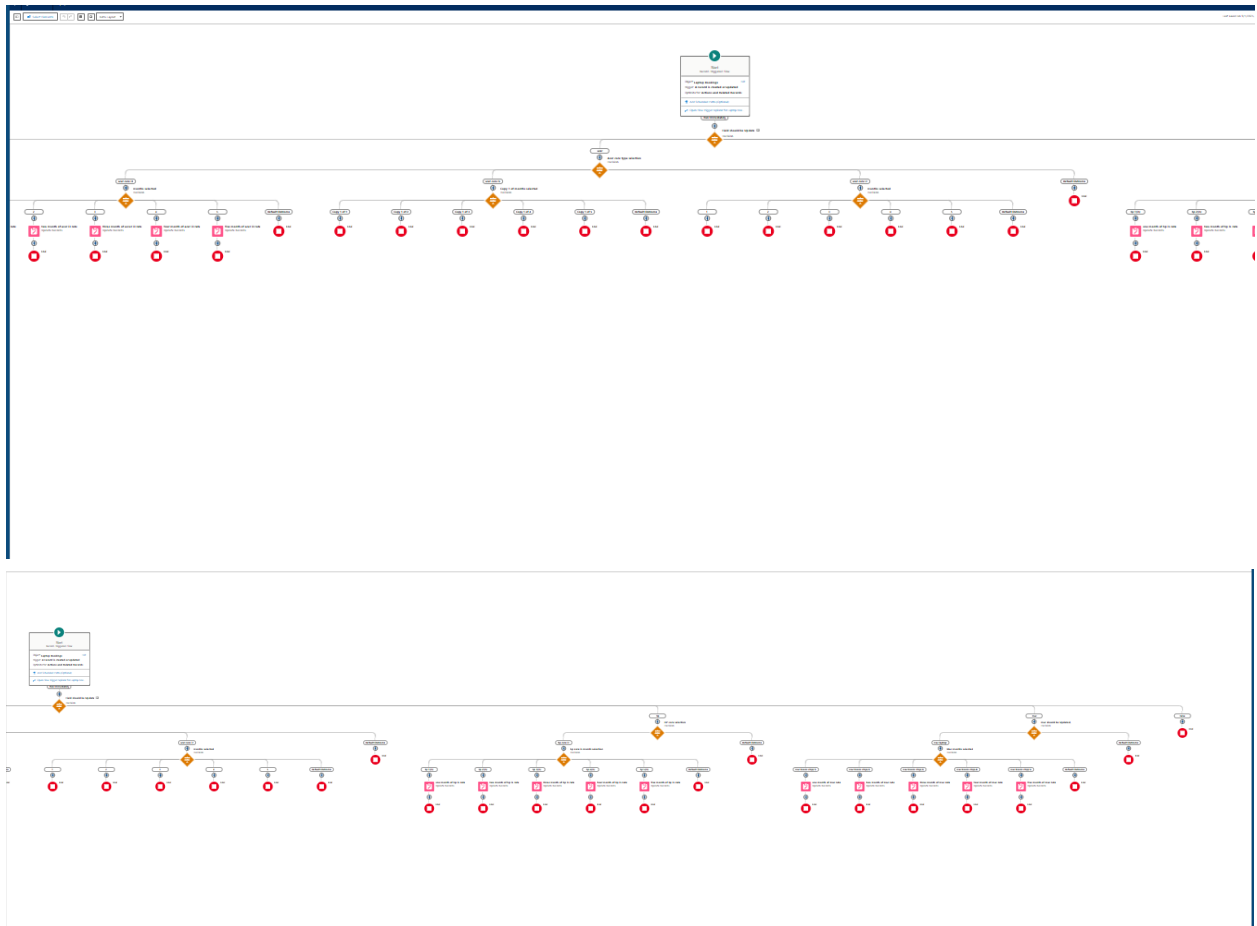
8. Triggers

Create a trigger for email notifications when a laptop booking is created or updated:

1. **Trigger**:

java

```
trigger LaptopBooking on Laptop_Bookings__c (after
insert, after update) {
    if (Trigger.isAfter && (Trigger.isInsert ||
Trigger.isUpdate)) {

LaptopBookingHandler.sendEmailNotification(Trigger.new);
    }
}
```

2. **Handler Class**:

```java
public class LaptopBookingHandler {
    public static void
sendEmailNotification(List<Laptop_Bookings__c> lapList)
{
        for (Laptop_Bookings__c lap : lapList) {
            Messaging.SingleEmailMessage email = new
Messaging.SingleEmailMessage();
            email.setToAddresses(new
List<String>{lap.Email__c});
            email.setSubject('Welcome to our company');
            String body = 'Dear Customer,\nWelcome to
Laptop Rentals! ...';
            email.setPlainTextBody(body);
            Messaging.sendEmail(new
List<Messaging.SingleEmailMessage>{email});
        }
    }
}
```

9. Reporting

1. **Create a Report**:
   - Report Type: `Consumer with Laptop Bookings and Total Laptops.`
   - Add fields (e.g., Amount) and group rows for summaries.
   - Save and run.

2. **Email Notifications**:
   - Subscribe to the report for daily updates.
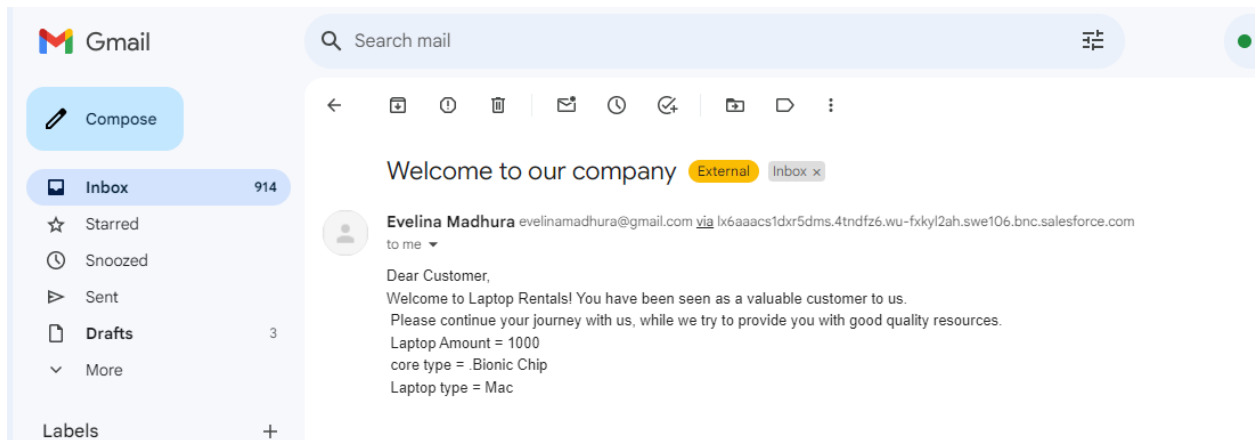
Final Notes

- Populate test data for all objects (10–12 records).
- Ensure API names match your org's configuration.
- Customize reports for meaningful insights.
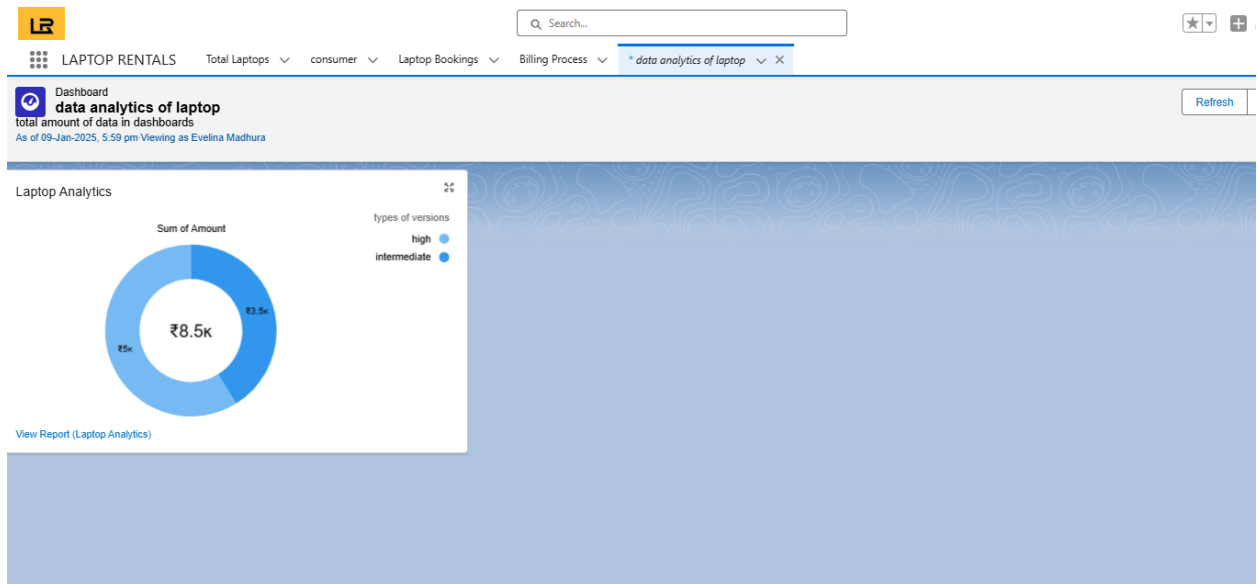
Testing and Validation

1. Unit Testing

- **Validation Rules**:

- Tested the `Phonenumberoremailblankrule` to ensure it correctly prevents record creation when the `Phone Number` or `Email` fields are blank.
- Verified that proper error messages are displayed for users when validation fails.

- **Triggers**:
  - Tested the `LaptopBooking` trigger to ensure email notifications are sent upon the creation or update of `Laptop Bookings` records.
  - Checked edge cases like missing email addresses or invalid email formats.

- **Flows**:
  - Tested the `Laptop Distributions` flow for correct allocation of rates based on laptop type and booking duration.
  - Validated each decision element and ensured records are updated correctly.

2. Integration Testing

- **Profiles and Roles**:
  - Verified that `Owner` and `Agent` profiles and roles have the appropriate permissions for objects and fields.
 - Tested user access control by logging in as both `Owner` and `Agent` users.
- **Custom Tabs and Lightning App**:
  - Tested navigation and functionality of custom tabs for `Total Laptops`, `Laptop Bookings`, and `Consumers` within the Lightning App.
  - Ensured seamless integration between objects and tabs.
- **Email Notifications**:
  - Validated integration with Salesforce's email system.
  - Checked for successful email delivery to customers after

booking creation or updates.

3. Functional Testing

- **Object Relationships**:
  - Tested relationships between objects (e.g., `Consumer`, `Laptop Bookings`, and `Total Laptops`) to ensure correct data linking.
  - Verified lookups and master-detail fields.
- **Reports**:
  - Created test reports to ensure accurate aggregation and grouping of data.
  - Tested scheduled report emails to validate correct formatting and timely delivery.

4. Regression Testing

- **System Updates**:
  - Re-tested all functionalities after making changes to validation rules, triggers, or field configurations to ensure no new bugs were introduced.
  - Validated backward compatibility with existing data.

5. Data Validation

- **Test Data Creation**:
  - Inserted 10–12 test records for `Total Laptops`, `Consumers`, `Laptop Bookings`, and `Billing Process` objects to simulate real-world scenarios.
  - Checked that all fields, including calculated fields (e.g., `Total Amount`), are populated correctly.
- **Duplicate Prevention**:
  - Ensured the system prevents duplicate records by testing unique constraints on fields like `Email` or `Invoice Number`.

6. User Acceptance Testing (UAT)

- **Test with End Users**:
  - Collaborated with the intended users (`Owner` and `Agent` profiles) to test the system's usability and effectiveness.
  - Collected feedback and made minor adjustments to improve user experience.
- **Scenario-Based Testing**:
  - Simulated real-world scenarios like bulk laptop bookings, cancellations, and generating invoices.
  - Verified the system's behavior under various conditions.

7. Performance Testing

- **Data Load Testing**:
  - Tested system performance with a larger dataset to ensure it handles high volumes of records without lag.
  - Checked flow execution time for multiple records.
- **Email Sending Speed**:
  - Measured the time taken to send bulk email notifications to ensure timely delivery.

8. Error Handling Validation

- **Validation Errors**:
  - Verified that users receive meaningful error messages when entering invalid data or violating rules.
  - Ensured the system gracefully handles trigger or flow failures.
- **Debug Logs**:
  - Used Salesforce debug logs to identify and resolve issues during trigger and flow execution.

Key Scenarios Addressed

1. **Customer Communication:**
   - Send personalized emails for promotions, rental confirmations, and overdue reminders.
2. **Inventory Management:**
   - Track available laptops and rentals in progress in real time.
3. **Rental Lifecycle Management:**
   - Automate the workflow from rental request to return, ensuring timely delivery and pickup.
4. **Customer Data Analysis:**
   - Utilize Salesforce analytics to analyze customer preferences and refine services for better engagement.

Project Conclusion

The CRM Application for Laptop Rentals effectively demonstrates the power of Salesforce in addressing industry-specific challenges. By integrating Sales Cloud, Marketing Cloud, and Service Cloud, the solution provides a comprehensive platform to:

- Enhance customer relationships through personalized communication.
- Streamline rental processes for operational efficiency.
- Deliver actionable insights for informed decision-making.