

A CRM Application for Laptop Rentals

By-

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Project Overview

This CRM application is designed to streamline and enhance the process of renting laptops for short-term use. The primary objective is to leverage Salesforce's Customer Relationship Management capabilities to foster better customer relationships, resulting in an elevated customer experience. By managing customer data, rental transactions, and inventory through a unified platform, this project optimises store operations, reducing manual effort and improving overall efficiency. Additionally, the CRM facilitates seamless communication with customers via automated email notifications, keeping them informed about bookings, billing, and other important updates. The result is a comprehensive solution that supports efficient rental management, improved customer satisfaction, and operational excellence for the business.

Goals:

- Enhance customer satisfaction through personalized service.
- Streamline and automate rental booking and inventory management.
- Improve team productivity and reduce manual tasks.
- Provide data-driven insights for informed decision-making.
- Ensure secure and efficient data management across users and roles.

Benefits:

- Centralizes customer data for personalized service and relationship management.
- Automates repetitive tasks to boost productivity and efficiency.
- Provides real-time insights with customizable reports and dashboards.
- Integrates easily with other tools, enhancing data flow and reducing silos.
- Offers mobile accessibility, enabling flexibility and responsiveness on the go.

Objectives

- **Streamline Sales Processes:** Use Salesforce solutions to automate and enhance sales workflows, minimising manual tasks and boosting lead management efficiency.
- **Improve Customer Engagement:** Take advantage of Salesforce tools to deliver a tailored experience for customers, enhancing communication and overall satisfaction.
- **Insights from Data:** Utilize Salesforce analytics to collect actionable insights and effectively monitor performance metrics.

Key features and concepts utilised:

This Salesforce CRM project utilize the following concepts and incorporates a variety of features

- **Custom Objects:** Defined unique custom objects such as Consumer, Laptop Bookings, Total Laptops, Billing Process to handle specific requirements for managing customer data, rental transactions, and inventory. These custom objects allowed precise data handling and organization beyond standard Salesforce objects.
- **Custom Tabs:** Created custom tabs for each custom object to provide easy access to the Consumer, Laptop Bookings, Billing Process and Total Laptops information, enabling the team to navigate and manage data directly from the Salesforce app interface.
- **Creating Lightning Apps:** Built custom Lightning apps for the Laptop Rentals CRM to provide a tailored user interface, streamline workflows, and improve user experience by organizing all necessary tabs, reports, and dashboards under one cohesive application.
- **Validation Rules:** Implemented validation rules to maintain data integrity and enforce business requirements. For example, the customer should specify his/her contact information either the email or phone number.
- **Profile Cloning and Custom Permissions:** Cloned the standard User profile to create Owner and Agent profiles, customising permissions to restrict or allow access to specific objects and data fields based on user roles. This ensured proper access control and safeguarded sensitive information.
- **Role Hierarchy and Role Creation:** Established a role hierarchy by creating an Owner role under the CEO and an Agent role under the Owner.
- **User Creation:** Created two user accounts: Owner and Agent. The Owner has elevated permissions for full control, while the Agent can handle customer interactions and manage bookings within the limits set by their profile.
- **Flows for Laptop Models:** Created a Record Triggered for Laptop Models and for automating the model selection, processor type selection, selecting the number of months to rent the laptop and the charges based on the chosen inputs.
- **Apex Programming:** Created Apex classes and triggers to carry out complex business logic and trigger the email notifications after booking a laptop for rent.
- **Reports and Report Sharing:** Created a custom report to provide insights into rental activity, and filtered the data according to the types of versions shared this report to the Owner.
- **Dashboard Folder and Dashboard Creation:** Created a Dashboard to represent the created report in the form of a donut chart that enables to analyse the rental amounts for each version.

Screenshots of the Project

1. Creating A Custom Tab

The screenshot shows the Salesforce Setup interface with the 'Tabs' tab selected under 'User Interface'. The main content area displays the 'Custom Tabs' section, which includes sections for 'Custom Object Tabs', 'Web Tabs', and 'Visualforce Tabs'. Under 'Custom Object Tabs', there is a table listing four tabs: 'Billing Process' (Credit card style), 'consumer' (People style), 'Laptop Bookings' (Form style), and 'Total Laptops' (Laptop style). The URL in the browser bar is <https://myvarcollegeofengineering15-dev-ed.lightning.force.com/lightning/setup/CustomTabs/home>.

2. Creating A Lightning App

The screenshot shows the Lightning App Builder interface with the 'App Settings' tab selected. On the left, a sidebar lists 'App Details & Branding', 'App Options', 'Utility Items (Desktop Only)', 'Navigation Items', and 'User Profiles'. The main content area shows the 'App Details & Branding' section, which includes fields for 'App Name' (LAPTOP RENTALS), 'Developer Name' (LAPTOP_RENTALS), and 'Description' (Enter a description...). It also features an 'Image' field with a preview of a laptop and a color picker for 'Primary Color Hex Value' (#0070D2). Below this is an 'Org Theme Options' section with a checkbox for 'Use the app's image and color instead of the org's custom theme'. At the bottom is an 'App Launcher Preview' section showing a preview of the app icon and name.

3. Creating The Field In Consumer Object

The screenshot shows the Salesforce Setup interface with the 'Object Manager' tab selected. Under the 'consumer' object, the 'Fields & Relationships' section is displayed. It lists 8 items, sorted by Field Label. The table includes columns for Field Label, Field Name, Data Type, Controlling Field, and Indexed status. The indexed status for the 'consumer_name' field is checked.

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		

4. Creating The Field In Laptops Bookings Object

The screenshot shows the Salesforce Setup interface with the 'Object Manager' tab selected. Under the 'Laptop Bookings' object, the 'Fields & Relationships' section is displayed. It lists 12 items, sorted by Field Label. The table includes columns for Field Label, Field Name, Data Type, Controlling Field, and Indexed status. The indexed status for the 'Core Type' field is checked.

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	Text(80)		
Laptop Names	Laptop_Names__c	Picklist		
Laptops Available	Laptops_Available__c	Formula (Number)		

5. Creation Of Fields & Relationship For Billing Process Object

Fields & Relationships
7 Items, Sorted by Field Label

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

6. Creating The Field In Total Laptops Object

Fields & Relationships
6 Items, Sorted by Field Label

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

<https://myorg-olivedengineering15-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/0IdM000004OKMf/FieldsAndRelationships/00NdM00000FC1vn/view>

7. Creating The Validation Rule For Phone Number Field In Consumer Object

The screenshot shows the Salesforce Setup interface with the following details:

- Setup** button is selected.
- Object Manager** is open.
- consumer** object is selected.
- Validation Rules** section is displayed, showing 1 item sorted by Rule Name.
- Phonenumberoremailblankrule** is listed with the following details:
 - RULE NAME:** Phonenumberoremailblankrule
 - ERROR LOCATION:** Top of Page
 - ERROR MESSAGE:** Please fill the phone number and email id
 - ACTIVE:** ✓
 - MODIFIED BY:** Prasanth Kumar, 26/02/2025, 5:57 pm
- New** button is located in the top right corner of the Validation Rules table.

8. Owner Profile

The screenshot shows the Salesforce Setup interface with the following details:

- Setup** button is selected.
- Object Manager** is open.
- Profiles** is selected under the **Users** category.
- Owner** profile is selected.
- Profile Detail** section:
 - Name:** owner
 - User License:** Salesforce
 - Description:** (empty)
 - Created By:** Prasanth Kumar, 26/02/2025, 5:59 pm
 - Modified By:** Prasanth Kumar, 26/02/2025, 6:02 pm
 - Custom Profile:** ✓
- Page Layouts** section:

Standard Object Layouts	Global	Invoice	Invoice Line
Email Application	Global Layout [View Assignment]	Not Assigned [View Assignment]	Invoice Layout [View Assignment]
Home Page Layout	DE Default [View Assignment]	Lead [View Assignment]	Invoice Line Layout [View Assignment]
Account	Account Layout [View Assignment]	Legal Entity [View Assignment]	Lead Layout [View Assignment]
Alternative Payment Method	Alternative Payment Method Layout [View Assignment]	Location [View Assignment]	Legal Entity Layout [View Assignment]

9. Agent Profile

The screenshot shows the Salesforce Setup interface under the 'Profiles' section. The 'Agent' profile is selected. The page displays the profile's details, including its name ('Agent'), user license ('Salesforce Platform'), and creation information ('Created By: Prasanth Kumar, 26/02/2025, 6:03 pm'). It also lists various page layouts assigned to different objects like Global, Email Application, Home Page Layout, Account, and Alternative Payment Method. A note at the top states: "Users with this profile have the permissions and page layouts listed below. Administrators can change a user's profile by editing that user's personal information. If your organization uses Record Types, use the Edit links in the Record Type Settings section below to make one or more record types available to users with this profile." A help link 'Help for this Page' is located in the top right corner.

10. Creating Owner Role

The screenshot shows the Salesforce Setup interface under the 'Roles' section. The 'Creating the Role Hierarchy' section allows users to build a role hierarchy. The 'Your Organization's Role Hierarchy' tree view shows the following structure:

- MVGR College of Engineering
 - CEO
 - CFO
 - COO
 - owner
 - Agent

A note at the bottom left says: "Didn't find what you're looking for? Try using Global Search." A help link 'Help for this Page' is located in the top right corner.

11. Create User

The screenshot shows the Salesforce Setup - Users page. The left sidebar has a 'Users' section selected. The main area displays a table of users with columns: Action, Full Name, Alias, Username, Role, Active, and Profile. The table lists six users:

Action	Full Name	Alias	Username	Role	Active	Profile
<input type="checkbox"/> Edit	Chatter Expert	Chatter	chatty.00ddm00000kgtewuaj.b8bwlyz2rg6r@chatter.salesforce.com		<input checked="" type="checkbox"/>	Chatter Free User
<input type="checkbox"/> Edit	Kumar_Prasanth	PKuma	prasanth5629@mvrce.com		<input checked="" type="checkbox"/>	System Administrator
<input type="checkbox"/> Edit	ram.ram	rram	vroy4224@2956@gmail.com	Agent	<input checked="" type="checkbox"/>	Agent
<input type="checkbox"/> Edit	User_Integration	integ	integration@00ddm00000kgtewuaj.com		<input checked="" type="checkbox"/>	Analytics Cloud Integration User
<input type="checkbox"/> Edit	User_Security	sec	insightssecurity@00ddm00000kgtewuaj.com		<input checked="" type="checkbox"/>	Analytics Cloud Security User
<input type="checkbox"/> Edit	y_vicky	vroy	vroy4224@5629@gmail.com	owner	<input checked="" type="checkbox"/>	owner

At the bottom of the page, there are links for New User, Reset Password(s), and Add Multiple Users.

12. Creating A Flow On Dell, Acer, HP, Mac Laptop

The screenshot shows the Flow Builder interface for a flow named 'Laptop distributions - V1'. The top navigation bar includes 'Flow Builder', 'Laptop distributions - V1', and a help icon. The main area features a 'Toolbox' on the left with categories: Interaction (3), Logic (6), and Data (4). The logic category is currently selected, showing icons for Action, Subflow, Custom Error, Assignment, Decision, Loop, Transform, Collection Sort, Collection Filter, Create Records, Update Records, Get Records, and Delete Records. The right side of the screen displays a complex flow diagram with many nodes and connecting arrows, representing a sophisticated business process.

13. Apex Trigger And Handler Class

The screenshot shows the Salesforce Setup interface under the Apex Classes section. The search bar at the top contains 'apex'. The main area displays the 'Apex Class Detail' for 'LaptopBookingHandler'. The class is defined in the 'Class Body' tab:

```
1 public class LaptopBookingHandler {
2     public static void sendEmailNotification(List<Laptop_Bookings__c> lapList) {
3         List<Messaging.SingleEmailMessage> emails = new List<Messaging.SingleEmailMessage>();
4
5         for (Laptop_Bookings__c lap : lapList) {
6             if (lap.Email__c != null) { // Ensure email exists
7                 Messaging.SingleEmailMessage email = new Messaging.SingleEmailMessage();
8                 email.setToAddresses(new List<String>{lap.Email__c});
9                 email.setSubject("Welcome to our Laptop Rental Service");
10
11                String body = "Dear Customer:\n";
12                body += "Welcome to Laptop Rentals! We value your support.\n";
13                body += "Your Booking Details:\n";
14                body += "Booking ID: " + lap.Id + "\n";
15                body += "Core Type: " + lap.Core_Type__c + "\n";
16                body += "Laptop Model: " + lap.Laptop_Names__c + "\n";
17                body += "Thank you for choosing us!";
18
19                email.setPlainTextBody(body);
20                emails.add(email);
21            }
22        }
23
24        // Send all emails in one request
25        if (!emails.isEmpty()) {
26            Messaging.sendEmail(emails);
27        }
28    }
29}
```

Below the code, there are tabs for 'Class Summary', 'Version Settings', and 'Trace Flags'. The status is listed as 'Status Active' and 'Code Coverage 0% (0/18)'.

The screenshot shows the Salesforce Setup interface under the Apex Triggers section. The search bar at the top contains 'apex'. The main area displays the 'Apex Trigger Detail' for 'LaptopBooking'. The trigger is defined in the 'Apex Trigger' tab:

```
1 trigger LaptopBooking on Laptop_Bookings__c (After insert, After update) {
2     if (Trigger.isAfter && (Trigger.isInsert || Trigger.isUpdate)) {
3         LaptopBookingHandler.sendEmailNotification(Trigger.new);
4     }
5}
```

Below the trigger, there are tabs for 'Version Settings' and 'Trace Flags'. The object type is listed as 'Laptop Bookings' and the status is 'Active'.

14. Create Report

Report: consumer with Laptop Bookings and Total Laptops

Laptop Analytics

Total Records	Total Amount	Total Laptops Available				
7	₹31,100	345				
types of version	consumer: consumer_name	Laptop Bookings: Laptop Bookings	Total Laptops: Total Laptops	Amount	Laptops Available	Total No Of Laptops
basic (1)	Priya Sharma	FastRent Laptops	30	₹1,000	50	50
Subtotal				₹1,000	50	
intermediate (4)	Alex Brown	Elite Laptop Rentals	2	₹4,000	49	10
	Jane Smith	Prime Laptops	2	₹3,500	49	10
	Chris White	SmartTech Laptops	1	₹3,600	49	30
	John Doe	UrbanTech	1	₹2,000	49	30
Subtotal				₹13,100	196	
high (2)	Alex Brown	Tech Haven Laptop Rentals	10	₹8,500	49	30
	Jane Smith	Prime Laptops	1	₹8,500	50	50
Subtotal				₹17,000	99	
Total (7)				₹31,100	345	

Row Counts Detail Rows Subtotals Grand Total

15. Create Dashboard

Dashboard

data analytics of laptops

total amount of data in dashboards

As of 27-Feb-2025, 11:52 am-Viewing as Prasanth Kumar

Laptop Analytics

Sum of Amount

types of version

basic
high
intermediate

₹31k

₹17k

₹13k

View Report (Laptop Analytics)

Refresh Edit Subscribe

Conclusion

This CRM application will be a comprehensive solution to effectively manage laptop rental operations, improve customer satisfaction, streamlining internal processes, and drive revenue growth. By leveraging Salesforce's robust capabilities, the application will provide a flexible, customizable, and scalable platform for managing the end-to-end lifecycle of laptop rentals.