

# 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 optimizes 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, minimizing 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 utilized

This Salesforce CRM project utilizes 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, customizing 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 logics 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 under the 'Tabs' section. The left sidebar has a search bar and sections for 'User Interface' (Rename Tabs and Labels, Tabs), 'Custom Tabs', and 'Custom Object Tabs'. The main area displays 'Custom Tabs' with a table showing four tabs: 'Billing Process' (Credit card style), 'consumer' (People style), 'Laptop Bookings' (Form style), and 'Total Laptops' (Laptop style). Below this are sections for 'Web Tabs' and 'Visualforce Tabs', both currently empty.

Custom Tabs

You can create new custom tabs to extend Salesforce functionality or to build new application functionality.

Custom Object Tabs

Action	Label	Tab Style	Description
Edit   Del	Billing Process	Credit card	
Edit   Del	consumer	People	
Edit   Del	Laptop Bookings	Form	
Edit   Del	Total Laptops	Laptop	

Web Tabs

No Web Tabs have been defined.

Visualforce Tabs

No Visualforce Tabs have been defined.

<https://mvarcollegeofengineering15-dev-ed.develop.lightning.force.com/lightning/setup/CustomTabs/home>

## 2. Creating A Lightning App

The screenshot shows the Lightning App Builder interface. The left sidebar lists 'App Settings' (App Details & Branding, App Options, Utility Items (Desktop Only), Navigation Items, User Profiles) and 'Pages' (LAPTOP RENTALS). The main area is titled 'App Details & Branding' and contains sections for 'App Details' and 'App Branding'. In 'App Details', fields include 'App Name' (LAPTOP RENTALS), 'Developer Name' (LAPTOP\_RENTALS), and 'Description' (Enter a description...). In 'App Branding', there is an 'Image' preview (a laptop on a desk), a color picker ('Primary Color Hex Value #0070D2'), and an 'Org Theme Options' checkbox ('Use the app's image and color instead of the org's custom theme'). An 'App Launcher Preview' section shows a thumbnail of the app icon and the label 'LAPTOP RENTALS'.

Lightning App Builder

App Settings

App Details & Branding

Give your Lightning app a name and description. Upload an image and choose the highlight color for its navigation bar.

App Details

\* App Name

\* Developer Name

Description

App Branding

Image

Primary Color Hex Value

Org Theme Options

Use the app's image and color instead of the org's custom theme

App Launcher Preview

LAPTOP RENTALS

### 3. Creating The Field In Consumer Object

Setup > OBJECT MANAGER  
consumer

Fields & Relationships		8 Items, Sorted by Field Label	Quick Find	New	Deleted Fields	Field Dependencies	Set History Tracking
	FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED		
Page Layouts	Address	Address__c	Text Area(255)				
Lightning Record Pages	consumer Status	consumer_Status__c	Picklist				
Buttons, Links, and Actions	consumer_name	Name	Text(80)		✓		
Compact Layouts	Created By	CreatedBy	Lookup(User)				
Field Sets	Email	Email__c	Email				
Object Limits	Last Modified By	LastModifiedBy	Lookup(User)				
Record Types	Owner	OwnerId	Lookup(User,Group)		✓		
Related Lookup Filters	Phone number	Phone_number__c	Phone				
Search Layouts							
List View Button Layout							
Restriction Rules							

### 4. Creating The Field In Laptops Bookings Object

Setup > OBJECT MANAGER  
Laptop Bookings

Fields & Relationships		12 Items, Sorted by Field Label	Quick Find	New	Deleted Fields	Field Dependencies	Set History Tracking
	FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED		
Page Layouts	Amount	Amount__c	Currency(18, 0)				
Lightning Record Pages	Consumer	Consumer__c	Master-Detail(consumer)		✓		
Buttons, Links, and Actions	Core Type	Core_Type__c	Picklist	Laptop Names			
Compact Layouts	Created By	CreatedBy	Lookup(User)				
Field Sets	Email	Email__c	Email				
Object Limits	how many months	how_many_months__c	Picklist				
Record Types	Laptop Bookings	Name	Text(80)		✓		
Related Lookup Filters	Laptop Names	Laptop_Names__c	Picklist				
Search Layouts	Laptops Available	Laptops_Available__c	Formula (Number)				
List View Button Layout							
Restriction Rules							

## 5. Creation Of Fields & Relationship For Billing Process Object

Setup > OBJECT MANAGER  
**Billing Process**

Fields & Relationships		7 Items, Sorted by Field Label	Quick Find	New	Deleted Fields	Field Dependencies	Set History Tracking
	FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED		
Page Layouts	Amount	Amount__c	Formula (Currency)				
Lightning Record Pages	Billing ProcessName	Name	Text(80)		✓		
Buttons, Links, and Actions	Created By	CreatedBy	Lookup(User)				
Compact Layouts	Laptop Booking	Laptop_Booking__c	Lookup(Laptop Bookings)		✓		
Field Sets	Last Modified By	LastModifiedBy	Lookup(User)				
Object Limits	Name	Name__c	Master-Detail(consumer)		✓		
Record Types	Payment Mode	Payment_Mode__c	Picklist				
Related Lookup Filters							
Search Layouts							
List View Button Layout							
Restriction Rules							

## 6. Creating The Field In Total Laptops Object

Setup > OBJECT MANAGER  
**Total Laptops**

Fields & Relationships		6 Items, Sorted by Field Label	Quick Find	New	Deleted Fields	Field Dependencies	Set History Tracking
	FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED		
Page Layouts	Created By	CreatedBy	Lookup(User)				
Lightning Record Pages	Laptops Available	Laptops_Available__c	Formula (Number)				
Buttons, Links, and Actions	Laptops delivered	Laptops_delivered__c	Roll-Up Summary (COUNT Laptop Bookings)				
Compact Layouts	Last Modified By	LastModifiedBy	Lookup(User)				
Field Sets	Owner	OwnerId	Lookup(User,Group)		✓		
Object Limits	Total Laptops	Name	Text(80)		✓		
Record Types							
Related Lookup Filters							
Search Layouts							
List View Button Layout							
Restriction Rules							

<https://mvarcollegeofengineering15-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lM000004QKMF/FieldsAndRelationships/00NdM00000FCivn/view>

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

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

- Header:** Search Setup, Setup, Home, Object Manager.
- Breadcrumbs:** SETUP > OBJECT MANAGER consumer
- Left 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.
- Table:** Validation Rules (1 items, Sorted by Rule Name)

RULE NAME	ERROR LOCATION	ERROR MESSAGE	ACTIVE	MODIFIED BY
Phonenumberoremailblankrule	Top of Page	Please fill the phone number and email id	✓	Prasanth Kumar, 26/02/2025, 5:57 pm

## 8. Owner Profile

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

- Header:** Search Setup, Setup, Home, Object Manager.
- Sidebar:** profiles, Users, Profiles (selected).
- Profile Detail:** Profile owner, User License: Salesforce, Description: owner, Created By: Prasanth Kumar, 26/02/2025, 5:59 pm, Modified By: Prasanth Kumar, 26/02/2025, 6:02 pm.
- Page Layouts:** Standard Object Layouts

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

## 9. Agent Profile

The screenshot shows the Salesforce Setup interface with the 'Profiles' page selected. The left sidebar has a search bar and navigation links for 'Users' and 'Profiles'. The main content area displays the 'Agent' profile details. It includes a 'Profile Detail' section with fields like Name (Agent), User License (Salesforce Platform), Description, Created By (Prasanth Kumar, 26/02/2025, 6:03 pm), and Modified By (Prasanth Kumar, 26/02/2025, 6:03 pm). Below this is a 'Page Layouts' section showing standard object layouts for various objects like Global, Email Application, Home Page Layout, Account, and Alternative Payment Method.

## 10. Creating Owner Role

The screenshot shows the Salesforce Setup interface with the 'Roles' page selected. The left sidebar has a search bar and navigation links for 'Users' and 'Feature Settings'. Under 'Feature Settings', 'Sales' is expanded, showing 'Contact Roles on Contracts', 'Contact Roles on Opportunities', and 'Case Team Roles'. The main content area displays the 'Creating the Role Hierarchy' section. It shows a tree view of roles under 'Your Organization's Role Hierarchy'. The hierarchy includes 'MVGR College of Engineering' with roles like 'CEO', 'CFO', 'COO', 'owner', 'Agent', 'SVP\_Customer Service & Support', 'Customer Support, International', 'Customer Support, North America', 'Installation & Repair Services', and 'SVP\_Human Resources'. There are also 'Add Role' buttons for each node.

## 11. Create User

The screenshot shows the Salesforce Setup interface under the 'Users' section. On the left, there's a sidebar with links like 'Permission Set Groups', 'Permission Sets', 'Profiles', 'Public Groups', 'Queues', 'Roles', 'User Management Settings', and 'Users'. The 'Users' link is highlighted. The main content area is titled 'All Users' and contains a table of user records. The columns are 'Action', 'Full Name', 'Alias', 'Username', 'Role', 'Active', and 'Profile'. The table lists six users:

Action	Full Name	Alias	Username	Role	Active	Profile
<a href="#">Edit</a>	Chatter Expert	Chatter	chatty.00ddm00000kgtewuaj.b8bwlyz2rgEr@chatter.salesforce.com		✓	Chatter Free User
<a href="#">Edit</a>	Kumar, Prasanth	PKuma	prasanth629@mvrce.com		✓	System Administrator
<a href="#">Edit</a>	ram, ram	ram	vroy4224@2956@gmail.com	Agent	✓	Agent
<a href="#">Edit</a>	User_Integration	integ	integration@00ddm00000kgtewuaj.com		✓	Analytics Cloud Integration User
<a href="#">Edit</a>	User_Security	sec	insightssecurity@00ddm00000kgtewuaj.com		✓	Analytics Cloud Security User
<a href="#">Edit</a>	y_vicky	vroy	vroy4224@5629@gmail.com	owner	✓	owner

At the bottom of the page, there are buttons for 'New User', 'Reset Password(s)', and 'Add Multiple Users'. Below the table, there are links for 'A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | All'.

## 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', the flow name, and tabs for 'Free-Form' and 'Manager'. It also has buttons for 'Run', 'Debug', 'View Tests', 'Save As New Version', 'Save', and 'Deactivate'. The status bar indicates the flow was last saved on 26/2/2025, 10:31 pm.

The left sidebar is the 'Toolbox' with sections for 'Interaction (3)', 'Logic (6)', and 'Data (4)'. Under 'Interaction', there are icons for Action, Subflow, and Custom Error. Under 'Logic', there are Assignment, Decision, Loop, Transform, Collection Sort, and Collection Filter. Under 'Data', there are Create Records, Update Records, Get Records, and Delete Records. At the bottom of the toolbox is a link 'Get more on the AppExchange'.

The main workspace displays a complex flow diagram with many nodes and connecting arrows. The nodes include various logic and data manipulation components, such as loops and record creation/deletion steps. The flow is highly branched, indicating a complex distribution logic.

## 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 content area displays the 'Apex Class Detail' for 'LaptopBookingHandler'. The class is defined as follows:

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

The status is Active, and the last modified by user was Prasanth.Kumar on 26/02/2025, 10:39 pm.

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

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

The sObject Type is Laptop Bookings, Status is Active, and the last modified by user was Prasanth.Kumar on 26/02/2025, 11:45 pm.

## 14. Create Report

The screenshot shows a Salesforce report titled "Report: consumer with Laptop Bookings and Total Laptops". The report has a header with search and navigation buttons. Below the header, there are summary statistics: "Total Records 7", "Total Amount ₹31,100", and "Total Laptops Available 345". The main content is a table with columns: "types of version", "consumer: consumer\_name", "Laptop Bookings: Laptop Bookings", "Total Laptops: Total Laptops", "Amount", "Laptops Available", and "Total No Of Laptops". The table data is as follows:

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	50
intermediate (4)	Alex Brown Jane Smith Chris White John Doe	Elite Laptop Rentals Prime Laptops SmartTech Laptops UrbanTech	2 2 1 1	₹4,000 ₹3,500 ₹3,600 ₹2,000	49 49 49 49	10 10 30 30
Subtotal				₹13,100	196	
high (2)	Alex Brown Jane Smith	Tech Haven Laptop Rentals Prime Laptops	10 1	₹8,500 ₹8,500	49 50	30 50
Subtotal				₹17,000	99	
Total (7)				₹31,100	345	

At the bottom, there are checkboxes for "Row Counts", "Detail Rows", "Subtotals", and "Grand Total".

## 15. Create Dashboard

The screenshot shows a Salesforce dashboard titled "data analytics of laptops". The dashboard has a header with search and navigation buttons. The main content area features a chart titled "Laptop Analytics" showing the "Sum of Amount" in a donut chart. The chart has three segments: "basic" (blue), "high" (purple), and "intermediate" (light blue). The values are ₹17k, ₹13k, and ₹31k respectively. Below the chart is a link "View Report (Laptop Analytics)".

## 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.