

Title: A CRM APPLICATION FOR LAPTOP RENTALS

This **CRM application** is designed to streamline and enhance the process of **renting laptops** for short-term use. The main objective is to utilize Salesforce's **Customer Relationship Management** (CRM) capabilities to foster stronger customer relationships, ultimately leading to an improved customer experience. By managing **customer data, rental transactions, and inventory on a unified platform**, this project optimizes store operations, reduces manual effort, and boosts overall efficiency. Additionally, the CRM enables seamless communication with customers through automated email notifications, keeping them updated on bookings, billing, and other important information. The outcome is a comprehensive solution that supports efficient rental management, enhances customer satisfaction, and promotes operational excellence for the business.

Salesforce:

What Is Salesforce?

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.

Major 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 for Salesforce and Concepts Used

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

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features:

- **Custom Objects:** Defined unique custom objects such as **Consumer**, **Laptop Bookings**, **Total Laptops**, and **Billing Process** to handle specific requirements for managing customer data, rental transactions, and inventory. These custom objects allowed for precise data handling and organization beyond the standard Salesforce objects.
- **Custom Tabs:** Created custom tabs for each custom object to provide easy access to **Consumer**, **Laptop Bookings**, **Billing Process**, and **Total Laptops** information. This allowed 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, a customer must specify their contact information (either 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 Flow** for laptop models to automate the model selection, processor type selection, number of months to rent the laptop, and the charges based on the chosen inputs.
- **Apex Programming:** Developed **Apex classes** and **triggers** to execute complex business logic and trigger email notifications after booking a laptop for rent.
- **Reports and Report Sharing:** Created a custom report to provide insights into rental activity, filtering data according to version types and sharing the report with the **Owner**.
- **Dashboard Folder and Dashboard Creation:** Created a **Dashboard** to represent the created report in the form of a donut chart, enabling analysis of the rental amounts for each version. This is the final step in Application creation.

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1. Objects Creation

Create Total Laptops Object

Fill in the Required Fields:

- Enter the following details:
 - **Label Name:** Total Laptop
 - **Plural Label Name:** Total Laptops
- Configure the **Record Name** field:
 - **Record Name Label:** Total Laptops
 - **Data Type:** Text

The screenshot shows the Salesforce Setup interface. The left sidebar contains navigation links: Setup, Home, and Object Manager. The main content area is titled 'Total Laptops' and shows the 'Custom Object Definition Edit' form. The form includes fields for Label, Plural Label, and Object Name, all of which are filled with 'Total Laptops'. There are also checkboxes for 'Starts with vowel sound' and 'The Object Name is used when referencing the object via the API'. The form is divided into sections: 'Custom Object Information' and 'Custom Object Definition Edit'. The 'Custom Object Information' section contains a warning about changing labels and a 'Required Information' indicator. The 'Custom Object Definition Edit' section contains the input fields and checkboxes. The top of the page has a search bar and various utility icons.

Create consumer Object

Consumer Object: Simplifying Customer Interactions

The **Consumer** object enables the Laptop Rentals team to deliver exceptional service by keeping all customer information readily accessible. This allows team members to focus on solving customer needs quickly and effectively.

Why It Matters:

- **Phone_number__c:** Ensures quick customer contact for rental updates or queries.
- **Email__c:** Keeps customers informed through timely reminders, confirmations, and follow-ups.
- **Address__c:** Helps ensure prompt and accurate deliveries, avoiding delays.
- **Consumer_Status__c:** Helps identify customer segments (e.g., students, employees) to provide personalized service.

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SETUP > OBJECT MANAGER

consumer

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

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Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Fields & Relationships

8 Items. Sorted by Field Label

Q Quick Find

NewDeleted FieldsField DependenciesSet History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Address	Address__c	Text Area(255)		
consumer Name	Name	Text(80)		✓
consumer Status	consumer_Status__c	Picklist		
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		

Create Laptop Bookings Object

Laptop Bookings Object Design:

The **Laptop Bookings** custom object is engineered to integrate seamlessly with the CRM system, enabling data consistency and supporting scalability for future needs.

Field Details:

- **Name**: A mandatory text field used as the primary identifier for booking records.
- **Laptop_names__c**: A picklist field to standardize the selection of available laptop models.
- **Core_type__c**: Another picklist field to specify processor types, ensuring easy filtering and reporting.
- **Amount__c**: A currency field for storing the rental payment amount, supporting accurate financial tracking.
- **Email__c**: An email field to ensure consistent formatting and enable email-based notifications.
- **Name__c**: A lookup field to the **Consumer** object, linking bookings with customer records for relational data.
- **Total_No_Of_Laptops__c**: A lookup field to the **Total Laptops** object to manage inventory counts and availability.

Laptop Booking

- Details
- Fields & Relationships**

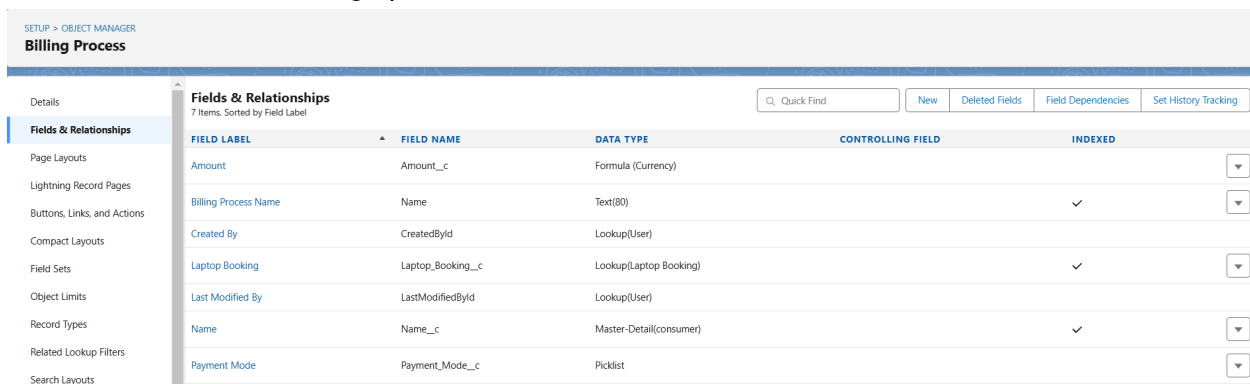
Quick Find
 New Deleted Fields Field Dependencies Set History Tracking

12 Items. Sorted by Field Label			
Amount	Amount__c	Currency(18, 0)	
consumer	consumer__c	Master-Detail(consumer)	✓
Core Type	Core_Type__c	Picklist Laptop Names	
Core Type	Core__c	Picklist	
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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Create Billing Process Object

- **Amount__c**: A formula field (Number) that automatically calculates the total amount for the billing process based on predefined criteria, ensuring accurate and consistent billing.
- **Name**: The standard text field used as the unique identifier for each billing record, which may be labeled as "Billing Process Name" to distinguish it from other records.
- **Laptop_Booking__c**: A lookup field that links each billing record to a specific laptop booking within the **Laptop_Bookings__c** object, providing context for the rental transaction.
- **Name__c**: A master-detail relationship to the **Consumer** object, ensuring each billing record is directly associated with a specific consumer for clear customer tracking.
- **Payment_Mode__c**: A picklist field that specifies the payment method used for the transaction, offering options such as "Credit Card," "Bank Transfer," or "Cash."



The screenshot shows the Salesforce Object Manager interface for the 'Billing Process' object. The 'Fields & Relationships' tab is selected, displaying a table of 7 fields. The table has columns for Field Label, Field Name, Data Type, Controlling Field, and Indexed. The fields listed are: Amount (Formula (Currency)), Billing Process Name (Text(80)), Created By (Lookup(User)), Laptop Booking (Lookup(Laptop Booking)), Last Modified By (Lookup(User)), Name (Master-Detail(consumer)), and Payment Mode (Picklist).

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 Booking)		✓
Last Modified By	LastModifiedById	Lookup(User)		
Name	Name__c	Master-Detail(consumer)		✓
Payment Mode	Payment_Mode__c	Picklist		

2. Tabs

What is Tab : A tab is a user interface element used in Salesforce to organize and display records for various objects. It allows users to create, view, and manage records efficiently within the platform.

Types of Tabs:

- **Custom Tabs:**
 - Custom object tabs serve as the user interface for custom applications you build in Salesforce. They resemble standard Salesforce tabs like Accounts, Contacts, and Opportunities but are tailored for custom objects.
- **Web Tabs:**
 - Web tabs are designed to display web content or applications directly within the

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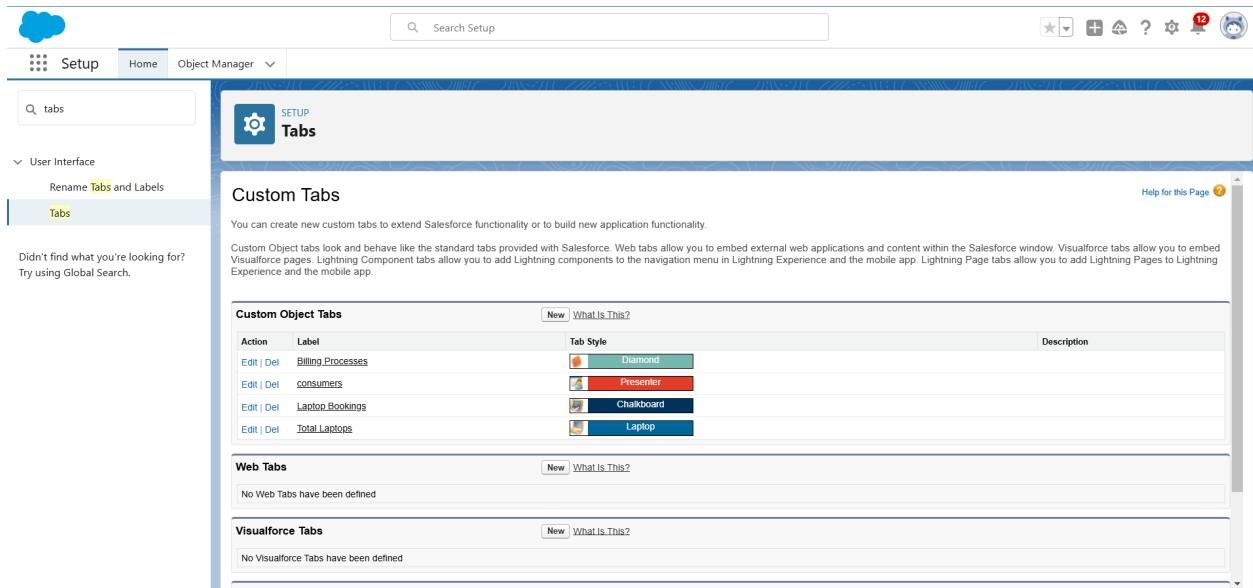
Salesforce interface. They allow users to access frequently used external content or applications without leaving Salesforce.

- **Visualforce Tabs:**
 - Visualforce tabs display Visualforce pages within Salesforce. They behave like standard tabs and can be customized to present data or functionality unique to your business needs.
- **Lightning Component Tabs:**
 - Lightning Component tabs enable the integration of Lightning components into the navigation menu in Lightning Experience and the Salesforce mobile app. These tabs offer a dynamic way to enhance user workflows.
- **Lightning Page Tabs:**
 - Lightning Page tabs allow Lightning Pages to be included in the navigation menu for the Salesforce mobile app. However, unlike other custom tabs, Lightning Page tabs:
 - Do not appear on the "All Tabs" page (accessible via the Plus icon).
 - Are not listed under "Available Tabs" when customizing app tabs.

Creating a Custom Tab

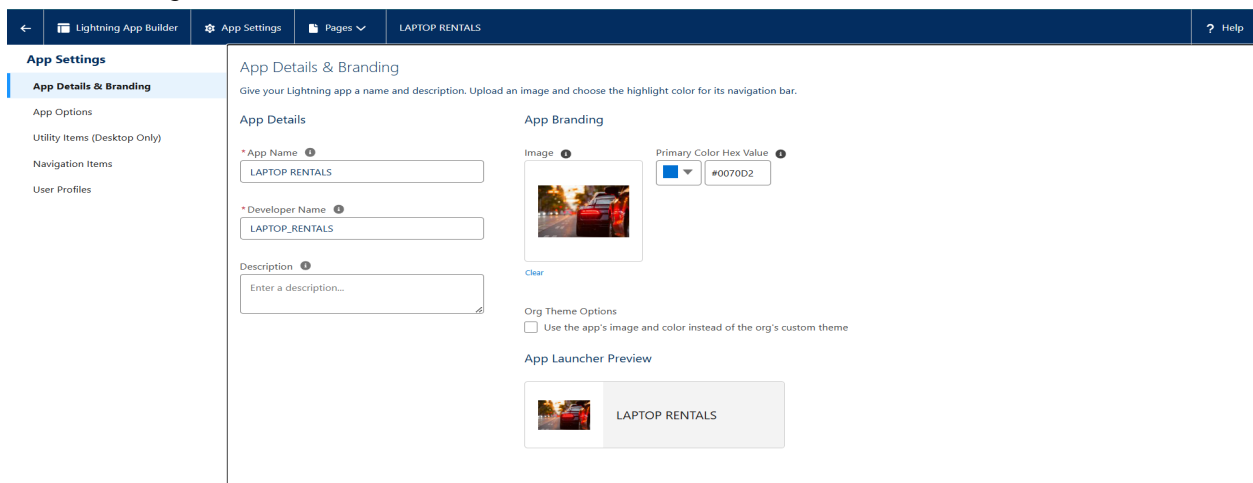
- **Total Laptops Tab:**
 - Provides users with centralized access to the **Total Laptops** object.
 - Facilitates efficient inventory management by consolidating data on laptops available for rental.
- **Consumer Tab:**
 - Enables streamlined management of customer details.
 - Supports effective customer relationship management for better service delivery.
- **Laptop Booking Tab:**
 - Allows users to manage laptop rental transactions.
 - Links bookings to specific customers and inventory for accurate tracking.
- **Billing Process Tab:**
 - Handles billing and payment details seamlessly.
 - Tracks financial transactions related to laptop rentals for transparency and accuracy.

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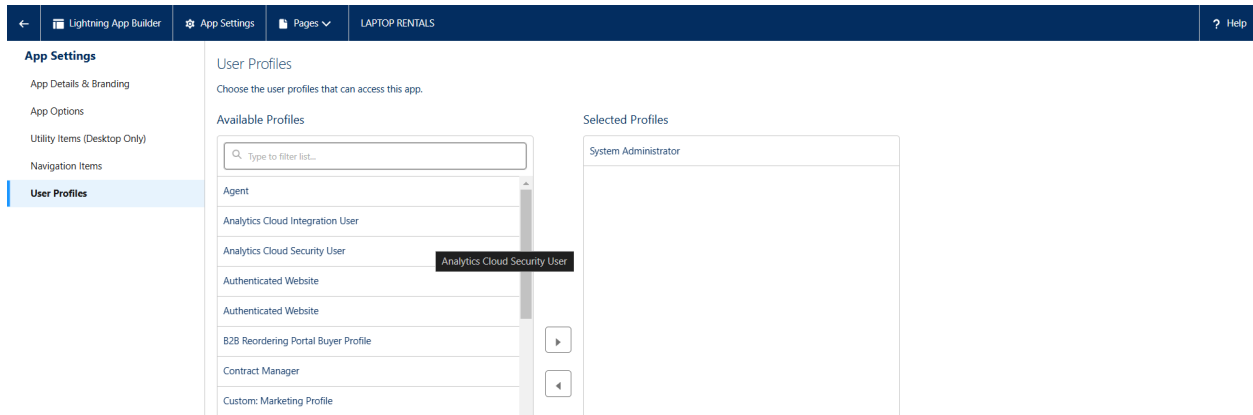
3. The Lightning App

A **Lightning App** is a collection of tools and features that work together to serve a specific purpose, providing users with access to objects, tabs, and other resources in a single, streamlined navigation bar in **Lightning Experience**. These apps allow for customization with custom colors, logos, utility bars, and Lightning page tabs, enabling organizations to brand their apps while enhancing functionality. By grouping related tools and resources, Lightning Apps improve efficiency, allowing users to switch between apps seamlessly and work more productively. They offer a centralized and flexible solution to optimize workflows and navigation within the organization.



To add user permmissions:

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Fields in Salesforce

In Salesforce, fields represent the data stored in the columns of a relational database. They hold valuable information specific to an object, making the searching, editing, and deletion of records simpler and more efficient.

Types of Fields

1. Standard Fields

Standard fields are predefined fields in Salesforce that perform essential functions. These fields cannot be deleted unless they are non-required standard fields. Some standard fields are common across all Salesforce applications, including:

- **Created By:** Tracks the user who created the record.
- **Owner:** Identifies the user or group that owns the record.
- **Last Modified:** Indicates the last user to modify the record and the modification date.
- **Fields Created During Object Creation:** Fields automatically added when an object is created.

2. Custom Fields

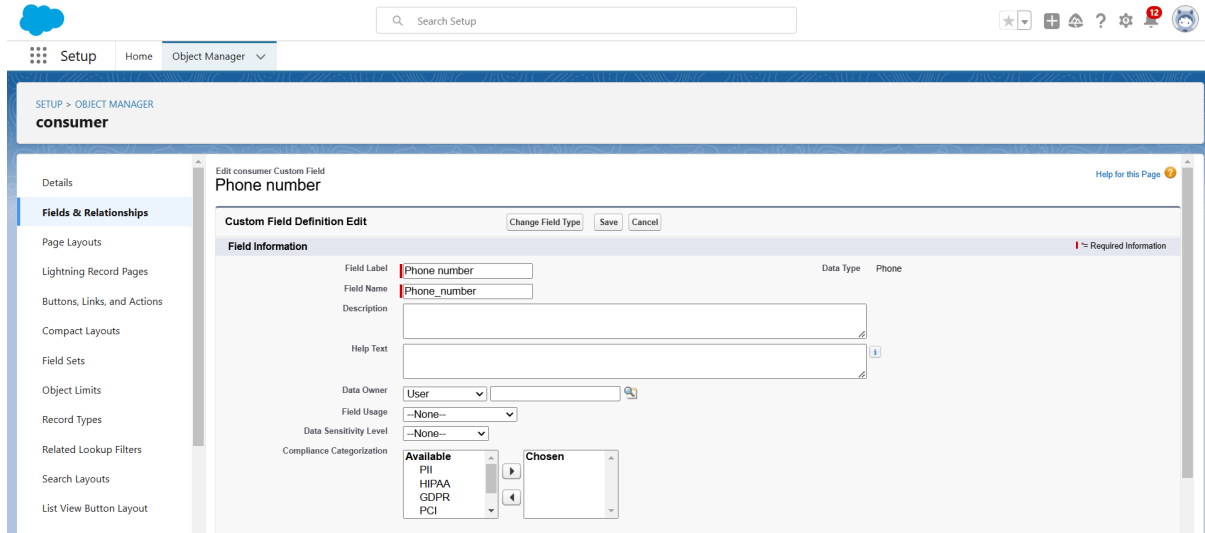
Custom fields are user-defined and highly flexible. They can be tailored to meet specific organizational needs. Unlike standard fields, custom fields are optional and can be added or removed as required. Users have complete control over custom fields, making them ideal for adapting Salesforce to unique business processes.

Create Fields in Consumer Object

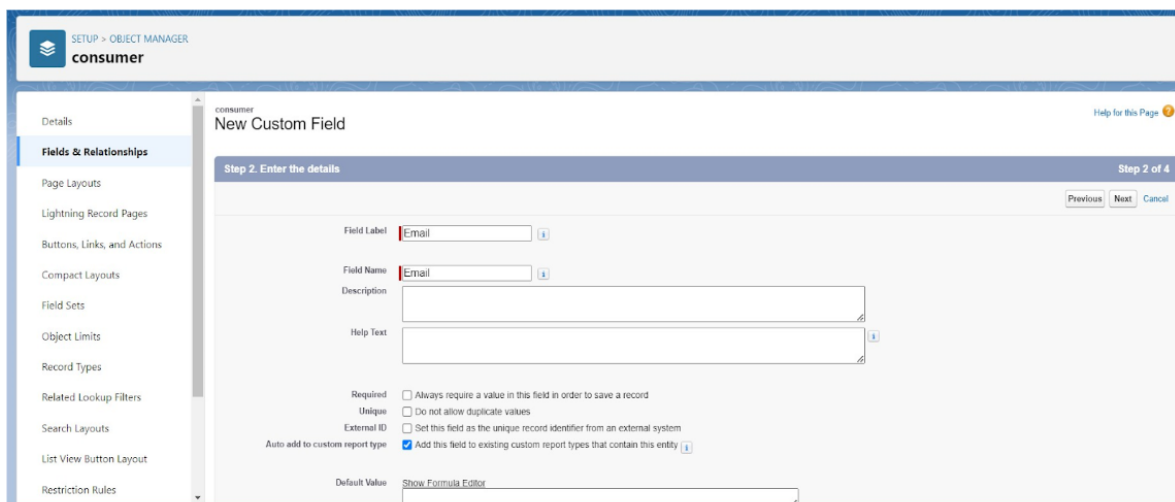
- **Fields**
 - Phone number
 - Email

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- Address
- Consumer Status
- etc



The screenshot shows the Salesforce Setup interface for editing a custom field. The breadcrumb trail is "SETUP > OBJECT MANAGER consumer". The left sidebar lists various setup options, with "Fields & Relationships" selected. The main content area is titled "Edit consumer Custom Field Phone number". Below this is the "Custom Field Definition Edit" section, which includes a "Field Information" tab. The "Field Information" section contains the following fields: "Field Label" (Phone number), "Field Name" (Phone_number), "Description" (empty), "Help Text" (empty), "Data Owner" (User), "Field Usage" (None), "Data Sensitivity Level" (None), and "Compliance Categorization" (Available). The "Available" list includes PII, HIPAA, GDPR, and PCI. The "Chosen" list is empty. There are "Change Field Type", "Save", and "Cancel" buttons at the top right of the "Field Information" section.



The screenshot shows the Salesforce Setup interface for creating a new custom field. The breadcrumb trail is "SETUP > OBJECT MANAGER consumer". The left sidebar lists various setup options, with "Fields & Relationships" selected. The main content area is titled "New Custom Field". Below this is the "Step 2. Enter the details" section, which includes the following fields: "Field Label" (Email), "Field Name" (Email), "Description" (empty), and "Help Text" (empty). There are checkboxes for "Required" (Always require a value in this field in order to save a record), "Unique" (Do not allow duplicate values), "External ID" (Set this field as the unique record identifier from an external system), and "Auto add to custom report type" (Add this field to existing custom report types that contain this entity). The "Default Value" field is empty, and there is a "Show Formula Editor" link. There are "Previous", "Next", and "Cancel" buttons at the top right of the "Step 2. Enter the details" section.

Creating the Field in Laptops Booking Object

- **Create Laptop Names:**
- **Field Label:** Laptop Names.
- **Picklist Values:**
 - Dell
 - Acer
 - HP

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- Mac

SETUP > OBJECT MANAGER
Laptop Bookings

Details

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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

Field Label: Laptop names

Values

☐ Use global picklist value set

☒ Enter values, with each value separated by a new line

Dell
Acer
Hp
Mac

☐ Display values alphabetically, not in the order entered

☐ Use first value as default value

☒ Restrict picklist to the values defined in the value set

Field Name: Laptop_type

Description

Help Text

2. Create Core Type:

This Core Type field Is used for version splitting

- **Field Label:** Core Type.
- **Picklist Values:**
 - Core i3
 - Core i5
 - Core i7
 - Bionic Chip

SETUP > OBJECT MANAGER
Laptop Bookings

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List View Button Layout

Restriction Rules

Field Label: core type

Values

☐ Use global picklist value set

☒ Enter values, with each value separated by a new line

core i3
core i5
core i7
Bionic chip

☐ Display values alphabetically, not in the order entered

☐ Use first value as default value

☒ Restrict picklist to the values defined in the value set

Field Name: core

Description

Help Text

Required ☒ Always require a value in this field in order to save a record

Auto add to custom report type ☒ Add this field to existing custom report types that contain this entity

Note: By using field dependencies, you can streamline data entry and ensure that users are only presented with relevant options based on their previous selections.

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Creating a Field Dependency in the Laptop Booking Object

To create a field dependency for an object:

- **Navigate to the Object:**
 - Setup >> Object Manager >> object name (**Laptop Booking**)
- **Access Field Dependency:**
 - **Field Dependencies >> Next.**
- **Select Controlling and Dependent Fields:**
 - **Controlling Field as Laptop Names >> Dependent Field as Core Type.**
- **Define the Dependency Values:**
 - Dell, values: Core i3, Core i5, Core i7.
 - Acer, values: Core i3, Core i5, Core i7.
 - HP, values: Core i3, Core i5, Core i7.
 - Mac, value: Bionic Chip.
- **5. Save it.**

SETUP > OBJECT MANAGER
Laptop Bookings

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Buttons, Links, and Actions
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Search Layouts
List View Button Layout
Restriction Rules

Save Cancel Preview

Controlling Field Laptop names
Dependent Field core type

▼ Instructions

- Double click on a cell to toggle its visibility for the Controlling Field value shown in the column heading.
- To change multiple cells at once, select multiple cells and then click the Include Values or Exclude Values button to change the visibility of all selected cells at once.
- Use SHIFT + click to select a range of adjacent cells. Use CTRL + click to select multiple cells that are not adjacent.
- Use the Preview button to test the results.

Click button to include or exclude selected values from the dependent picklist.

Include Values Exclude Values

Legend
Excluded Value
Included Value

Laptop names:	Dell	Acer	HP	Mac
core i3				
core i5				
core i7				
Bionic chip				

Showing Columns: 1 - 4 (of 4) < Previous | Next > View All Go to

Click button to include or exclude selected values from the dependent picklist.

Include Values Exclude Values

To Create a Rollup Summary Field in “Total Laptops Object”:

- After creating the Master-Detail Relationship, you can create a Roll-Up Summary field.
- Fill in the details as follows:
 - i. **Field Label:** Laptops Delivered
 - ii. **Field Name:** Auto-generated based on the field label

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The screenshot shows the 'New Custom Field' page for the 'Total laptops' object. The left sidebar contains a navigation menu with options: Details, Fields & Relationships (selected), 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, and Restriction Rules. The main content area is titled 'New Custom Field' and 'Step 2. Enter the details'. It includes a 'Field Label' field with the value 'Laptops delivered', a 'Field Name' field with the value 'laptops_delivered', and empty 'Description' and 'Help Text' fields. There is a checkbox 'Auto add to custom report type' which is checked, and a link 'Add this field to existing custom report types that contain this entity'. Navigation buttons 'Previous', 'Next', and 'Cancel' are at the bottom right.

- **Next.**
- In the **Summarized Object**, select **Laptop Bookings**.
- Select the **Count** radio button in the **Roll-Up Type** section.

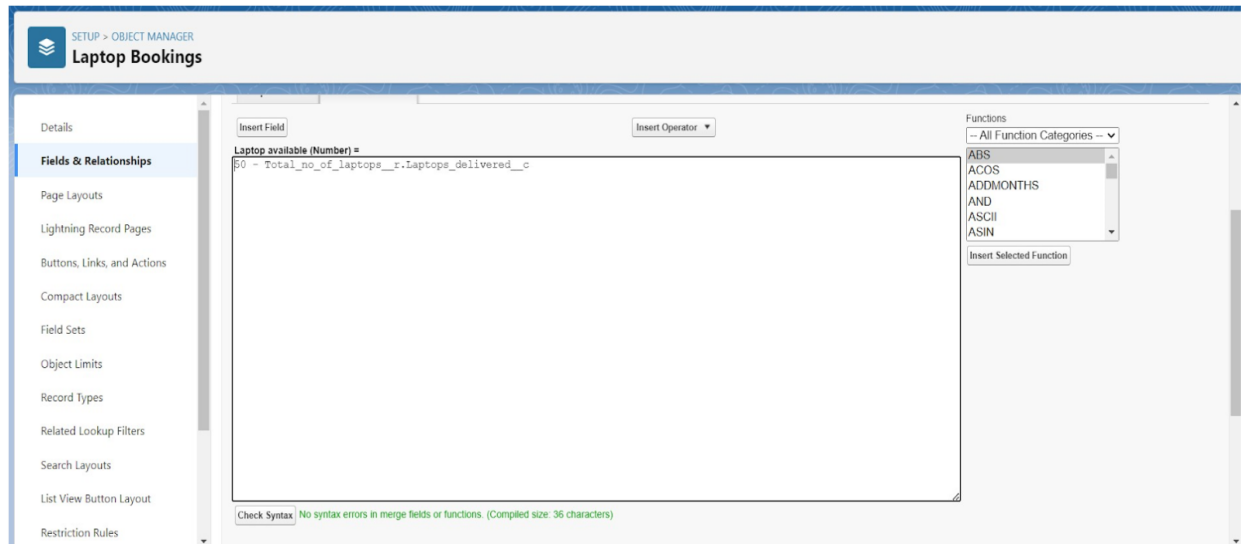
The screenshot shows the 'New Custom Field' page for the 'Total laptops' object, specifically 'Step 3. Define the summary calculation'. The left sidebar is the same as in the previous screenshot. The main content area is titled 'New Custom Field' and 'Step 3 of 6'. It includes a 'Select Object to Summarize' section with a dropdown menu showing 'Laptop Bookings' selected. Below this is a 'Select Roll-Up Type' section with radio buttons for 'COUNT' (selected), 'SUM', 'MIN', and 'MAX'. There is a 'Field to Aggregate' dropdown menu showing 'None'. At the bottom is a 'Filter Criteria' section with two radio buttons: 'All records should be included in the calculation' (selected) and 'Only records meeting certain criteria should be included in the calculation'. Navigation buttons 'Previous', 'Next', and 'Cancel' are at the bottom right.

To create fields Laptops Available:

- Fill in the details as follows:
 - **Field Label:** Laptops Available
- **Formula Return Type** as **Number** >> Set **Decimal Places** to **0**
- **Advanced Formula** section

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- **Insert Field**, and a popup window will appear. Under **Laptop Booking**, select **Total No Of Laptops** in the second column and **Laptops Delivered** in the third column.
- **Insert** to add:
`50 - Total_no_of_laptops__r.Laptops_delivered__c`



2. Then What are the steps done in Consumer, Laptop Booking object we can do the same as to the remaining objects as well(Billing process, Total laptops).

4. Creating the validation rule for phone number field in consumer object

To create a validation rule for the phone number field in the Consumer object:

A validation rule, **PhoneNumberOrEmailBlankRule**, was implemented in the **Consumer** object to ensure data completeness and reliability. This rule enforces that at least one of the fields, **Phone Number** or **Email**, must be populated in each consumer record. By preventing both fields from being left blank, this rule ensures accurate and essential contact information is always captured for every consumer.

1. **Rule Name:** Phonenumeroemailblankrule.
2. **Description:** Phone number and email number should not be blank.
3. **Formula:** `OR(ISBLANK(phone_number__c), ISBLANK(email__c))`

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List View Button Layout

Restriction Rules

Display an error if Discount is more than 30%
If this formula expression is **true**, display the text defined in the Error Message area

Insert Field Insert Operator

OR(ISBLANK(phone_number__c), ISBLANK(email__c))

Check Syntax No errors found

Functions

-- All Function Categories --

ABS
ACOS
ADDMONTHS
AND
ASCII
ASIN

Insert Selected Function

ABS(number)
Returns the absolute value of a number; a number without its sign

Help on this function

Error Message

Example: Discount percent cannot exceed 30%

This message will appear when Error Condition formula is **true**

Error Message: Please fill the phone number and email id

This error message can either appear at the top of the page or below a specific field on the page

Error Location ☒ Top of Page ☐ Field

5. Profiles

A **profile** in Salesforce is a collection of settings and permissions that define what a user can do. It controls object permissions, field permissions, user permissions, tab settings, app settings, Apex class access, Visualforce page access, page layouts, record types, and login hours/IP ranges. Profiles are defined based on the user's job function, such as **System Administrator**, **Developer**, or **Sales Representative**.

owner Profile:

By cloning the **Standard User** Profile we can create this **Owner Profile**. And also giving the Custom Object Permission this profile also.

To create a new profile:

- Profile Name: **Owner**

SETUP
Profiles

Profile
owner

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.

Login IP Ranges [0] | Enabled Apex Class Access [0] | Enabled Visualforce Page Access [0] | Enabled External Data Source Access [0] | Enabled Named Credential Access [0] | Enabled External Credential Principal Access [0] | Enabled Custom Metadata Type Access [0] | Enabled Custom Setting Definitions Access [0] | Enabled Flow Access [0] | Enabled Service Presence Status Access [0] | Enabled Custom Permissions [0]

Profile Detail

Edit Clone Delete View Users

Name	owner	Custom Profile	<input checked="" type="checkbox"/>
User License	Salesforce		
Description			
Created By	Akash Pitani	Modified By	Akash Pitani
	05/01/2025, 6:38 pm		07/01/2025, 10:26 pm

Page Layouts

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

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The screenshot shows the 'Profiles' page in the Salesforce Setup menu. It displays a table of permissions for a custom profile. The table is divided into two main sections: 'Custom Object Permissions' and 'Session Settings'. The 'Custom Object Permissions' section includes a table with columns for 'Basic Access' (Read, Create, Edit, Delete) and 'Data Administration' (View All, Modify All). The 'Session Settings' section includes a dropdown for 'Session Times Out After' (set to '2 hours of inactivity') and a dropdown for 'Session Security Level Required at Login' (set to '--None--').

Object	Read	Create	Edit	Delete	View All	Modify All
Individuals	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Invoices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leads	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Billing Process	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
consumers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Laptop Bookings	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Total Laptops	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

- Give the appropriate access

Agent Profile:

By cloning the **Standard Platform User** Profile we can create this **Agent Profile**. And also giving the Custom Object Permission this profile also.

The screenshot shows the 'Agent' profile details in the Salesforce Setup menu. It includes a 'Profile Detail' section with a table showing the profile's name, user license, description, and creation/modification details. The 'Agent' profile is a custom profile with a 'Salesforce Platform' user license. The 'Created By' field shows 'Akash Pithani' on '05/01/2025, 6:43 pm'. The 'Modified By' field shows 'Akash Pithani' on '07/01/2025, 10:26 pm'.

Field	Value
Name	Agent
User License	Salesforce Platform
Description	
Created By	Akash Pithani 05/01/2025, 6:43 pm
Modified By	Akash Pithani 07/01/2025, 10:26 pm

6. Roles and Hierarchy.

A **role** in Salesforce defines a user's visibility and access at the record level. Roles are used to specify the types of access users can have to data within the Salesforce organization. In simple terms, a role determines what records a user can view or access based on their position in the Salesforce hierarchy.

The created **Owner Role** and the **Agent Role** are included in the Role hierarchy. OwnerRole is placed under the **CEO Role** and **Agent Role** under the **Owner Role**.

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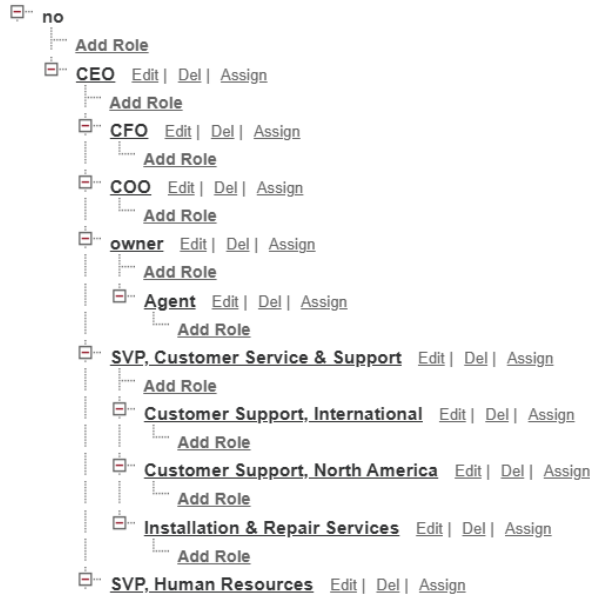


Creating the Role Hierarchy

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](#)



7. Users

A user is anyone who logs into Salesforce. Users are typically employees of your company—such as sales representatives, managers, or IT specialists—who require access to company records. Each user in Salesforce has a unique user account. This account identifies the user and includes settings that define the features and records they can access.

Create User:

Create Two User called **Vicky** and **Ram Ramesh** along with related details.

Purpose of users:

1. Vicky y - Owner profile

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The screenshot shows the 'User Detail' page for a user named 'vicky y'. The page has a header with 'SETUP Users' and a navigation bar with various links. The user's details are displayed in a table format.

User Detail	
Name	vicky y
Alias	yvick
Email	pithaniakash788@gmail.com [Verify]
Username	pithaniakash788@247gmail.com
Nickname	vicky
Title	
Company	
Role	owner
User License	Salesforce
Profile	owner
Active	<input checked="" type="checkbox"/>
Marketing User	<input type="checkbox"/>
Offline User	<input type="checkbox"/>
Knowledge User	<input type="checkbox"/>

2. Ram Ramesh - Agent profile

The screenshot shows the 'User Detail' page for a user named 'ram ramesh'. The page has a header with 'SETUP Users' and a navigation bar with various links. The user's details are displayed in a table format.

User Detail	
Name	ram ramesh
Alias	rame
Email	pithaniakash@gmail.com [Verify]
Username	pithaniakash@00gmail.com
Nickname	rame
Title	
Company	
Role	Agent
User License	Salesforce Platform
Profile	Agent
Active	<input checked="" type="checkbox"/>
Marketing User	<input type="checkbox"/>
Offline User	<input type="checkbox"/>
Knowledge User	<input type="checkbox"/>

8. Flows

In Salesforce, a flow is a versatile tool that helps automate business processes, gather and update data, and guide users through a series of steps or screens. Flows are created using a visual interface, making it easy to build them without any coding knowledge.


Created a Record-triggered flow to automate the laptop booking process that is initiated by the consumer. This flow automates what to do after booking the laptop like triggering email notifications.

Create a Flow on dell laptop, Acer, Hp, Mac:

Activity:

- Each and every laptop type are having three Core Types.
- Every Core Type also having Five different months with separated amounts.

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 Decision

* Label

Field should be Update

* API Name

Field_should_be_Update

Description

Outcomes For each path the flow can take, create an outcome. For each outcome, specify the conditions that must be met for the flow to take that path.

OUTCOME ORDER

+

dell

acer

hp

mac

False

OUTCOME DETAILS

Delete Outcome

* Label

dell

* Outcome API Name

dell

Condition Requirements to Execute Outcome

All Conditions Are Met (AND)

Resource

...Bookings_c > Laptop Names

Operator

Equals


Value

Dell

+ Add Condition

When to Execute Outcome

☒ If the condition requirements are met

 Decision

* Label

field updated

* API Name

field_updated

Description

Outcomes For each path the flow can take, create an outcome. For each outcome, specify the conditions that must be met for the flow to take that path.

OUTCOME ORDER

+

dell core i3

dell core i5

dell core i7

Default Outcome

OUTCOME DETAILS

Delete Outcome

* Label

dell core i3

* Outcome API Name

dell_core_i3

Condition Requirements to Execute Outcome

All Conditions Are Met (AND)

Resource

...top_Bookings_c > Core Type

Operator

Equals


Value

Core i3

+ Add Condition

When to Execute Outcome

☒ If the condition requirements are met

 Decision

* Label

months selected

* API Name

months_selected

Description

Outcomes For each path the flow can take, create an outcome. For each outcome, specify the conditions that must be met for the flow to take that path.

OUTCOME ORDER

+

dell 1(i3)

dell 2(i3)

dell 3(i3)

dell 4(i3)

dell 5(i3)

Default Outcome

OUTCOME DETAILS

Delete Outcome

* Label

dell 1(i3)

* Outcome API Name

dell_1_i3

Condition Requirements to Execute Outcome

All Conditions Are Met (AND)

Resource

...kings_c > how many months

Operator

Equals

Value

1

+ Add Condition

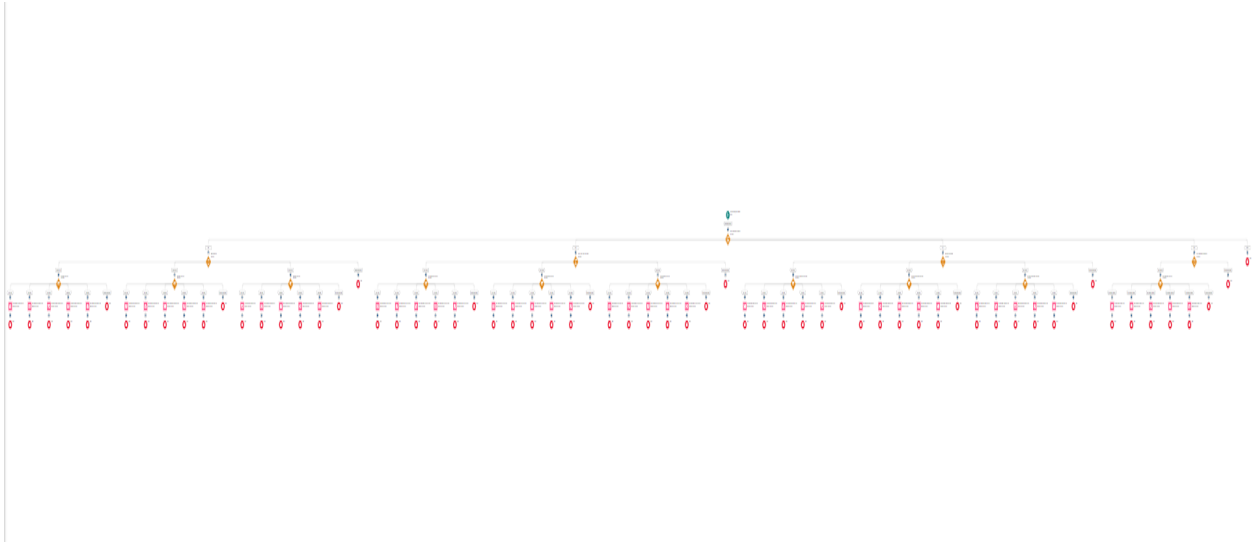
When to Execute Outcome

☒ If the condition requirements are met

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Final Outcome :

- All the four types:
 - Dell
 - Acer
 - HP
 - Mac



9: Apex Programming

Apex is a strongly typed, object-oriented programming language designed for the **Lightning Platform**, enabling developers to execute flow and transaction control statements directly on the platform server. It integrates seamlessly with calls to the Lightning Platform API. With a syntax similar to Java and functionality akin to database stored procedures, Apex allows developers to implement business logic in various contexts, such as button clicks, related record updates, and Visualforce pages.

Apex supports **Object-Oriented Programming (OOP)** concepts like classes, objects, and methods, making it intuitive for developers familiar with Java. Apex code can be triggered by web service requests or events like changes in database records, ensuring dynamic and responsive application behavior.

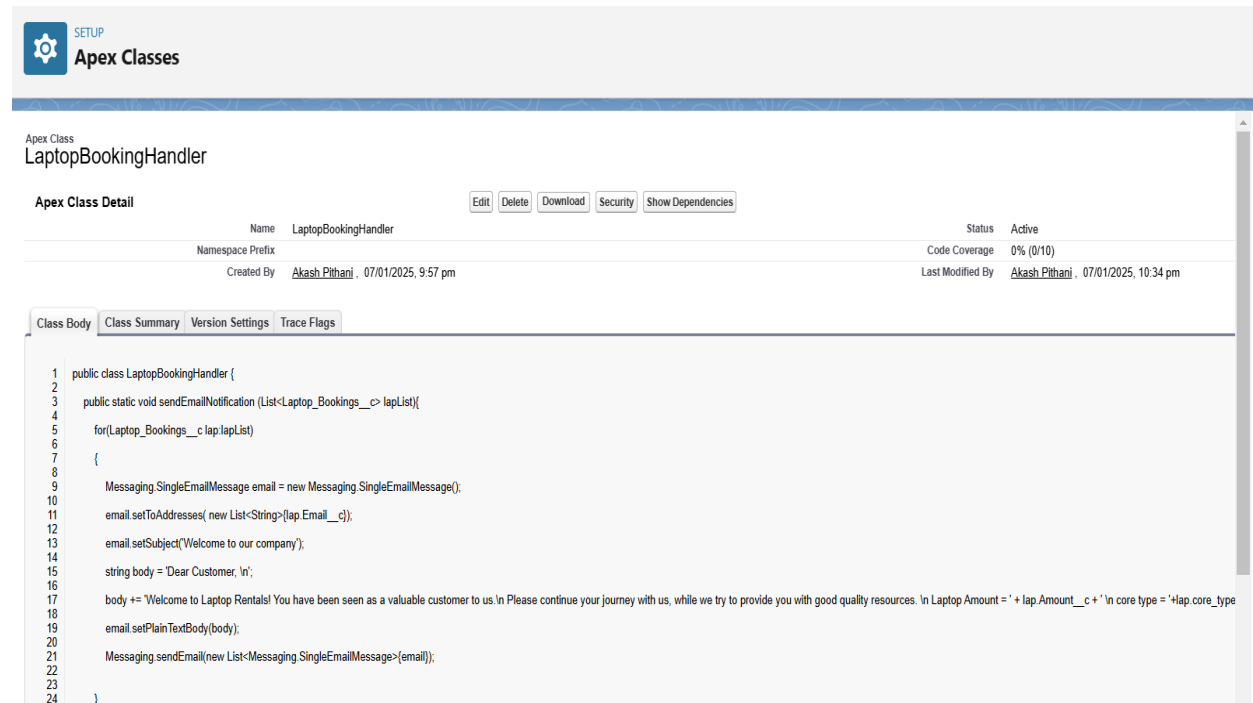
Apex Classes:

Apex Classes are modeled after their Java counterparts, providing developers with a

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familiar and robust framework for building applications. In Apex, you can define, instantiate, and extend classes, as well as implement interfaces. The language supports features like Apex class versions, properties, and other key concepts that align closely with object-oriented programming principles, offering flexibility and scalability for application development.

Apex Class Name : LaptopBookingHandler



The screenshot displays the Salesforce Apex Class Editor interface for the **LaptopBookingHandler** class. The top navigation bar includes a "SETUP" icon and the text "Apex Classes". Below this, the class name "LaptopBookingHandler" is shown. A table provides details about the class:

Apex Class Detail		Status	
Name	LaptopBookingHandler	Active	
Namespace Prefix		Code Coverage	0% (0/10)
Created By	Akash Pithani, 07/01/2025, 9:57 pm	Last Modified By	Akash Pithani, 07/01/2025, 10:34 pm

Below the table, there are tabs for "Class Body", "Class Summary", "Version Settings", and "Trace Flags". The "Class Body" tab is selected, showing the following Apex code:

```
1 public class LaptopBookingHandler {
2
3     public static void sendEmailNotification (List<Laptop_Bookings__c> lapList){
4         for(Laptop_Bookings__c lap:lapList)
5         {
6
7             Messaging.SingleEmailMessage email = new Messaging.SingleEmailMessage();
8
9             email.setToAddresses( new List<String>({lap.Email__c});
10
11             email.setSubject("Welcome to our company");
12
13             string body = 'Dear Customer, \n';
14
15             body += 'Welcome to Laptop Rentals! You have been seen as a valuable customer to us. \n Please continue your journey with us, while we try to provide you with good quality resources. \n Laptop Amount = ' + lap.Amount__c + ' \n core type = ' + lap.core_type
16
17             email.setPlainTextBody(body);
18
19             Messaging.sendEmail(new List<Messaging.SingleEmailMessage>({email});
20
21
22         }
23     }
24 }
```

Apex Trigger:

A **trigger** is a set of Apex code that executes automatically before or after **DML (Data Manipulation Language)** events, such as insert, update, or delete operations. Triggers allow developers to automate complex tasks that are challenging or impossible to perform through the Salesforce user interface alone. By creating custom scripts, developers can tailor automation to meet specific requirements, with the only constraint being their coding expertise. Triggers are powerful tools for enhancing business processes and ensuring data consistency within Salesforce.

Apex Trigger Name: LaptopBooking

LaptopBooking trigger will Automatically calls when(After Insert, After Update)

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SETUP

Apex Triggers

Apex Trigger

LaptopBooking

Help for this Page

Apex Trigger Detail

EditDeleteDownloadShow Dependencies

Name

LaptopBooking

sObject Type

Laptop Booking

Code Coverage

0% (0/2)

Status

Active

Created By

Akash Pithani

07/01/2025, 9:55 pm

Last Modified By

Akash Pithani

11/01/2025, 9:57 am

Namespace Prefix

Apex Trigger

Version Settings

Trace Flags

1

trigger LaptopBooking on Laptop_Bookings__c (After insert,After update) {

2

3

4

if(trigger.isAfter && (trigger.isInsert || trigger.isUpdate))

5

6

{

7

8

LaptopBookingHandler.sendEmailNotification(trigger.new);

9

10

}

11

12

}

13

14

}

15

}

10. Reports

Reports provide access to your Salesforce data, allowing you to analyze it in virtually limitless combinations. They enable you to display data in clear, easy-to-understand formats and share valuable insights with others.

I was created a **report** using the **Laptop Bookings** object to categorize rental data into buckets based on the **Amount__c** field. Bookings are grouped into **Basic**, **Intermediate**, **High**, and **Very High** tiers, offering a clear and concise summary of booking distributions across different price ranges.

Report Name: **consumer with Laptop Bookings and total**

Report: consumers with Laptop Bookings and Total Laptops

consumer with Laptop Bookings and total

Total Records

12

Total Laptops Available

560

Total Amount

₹36,200

<input type="checkbox"/> Types of version	consumer: consumer Name	Laptop Booking: Laptop Bookings Name	Laptops Available	Total No Of Laptops: Total Laptops Name	Amount
<input type="checkbox"/> basic (1)	Nitin	Acer	46	Acer	₹900
Subtotal			46		₹900
<input type="checkbox"/> intermediate (1)	Sai	Amazon	46	Dell	₹1,000
Subtotal			46		₹1,000
<input type="checkbox"/> high (10)	Naveen	Flipkart	46	Acer	₹1,800
	Murty	Moglix	48	hp	₹3,200
	Priya	Reliance	48	Mac	₹5,100
	Rama Krishna	Croma	46	Dell	₹2,000
	Akash	SnapDeal	46	Acer	₹3,000
	Madhu	HP	48	hp	₹5,300
	Jaswanth	Gadgets360	48	Mac	₹3,400
	Akash	LaptopMag	46	Acer	₹3,000
	Murty	PcMag	46	Dell	₹4,000
	Rama Krishna	Dell	46	Dell	₹3,500
Subtotal			468		₹34,300
Total (12)			560		₹36,200

Row Counts

Detail Rows

Subtotals

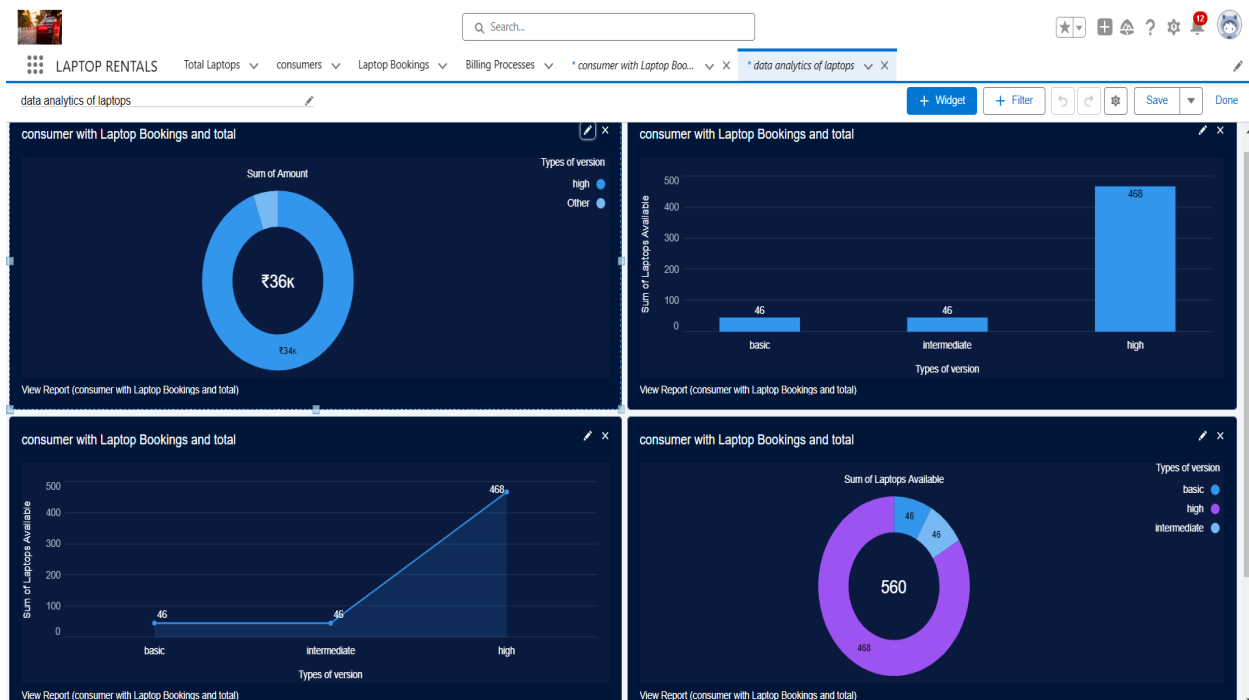
Grand Total

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11. Dashboards

Dashboards provide a visual representation of real-time business data, helping you monitor changing conditions and make informed decisions. Powered by reports, dashboards enable users to identify trends, analyze quantities, and assess the impact of their activities. Before creating, interpreting, and sharing dashboards, it's important to review the basics to maximize their effectiveness and usability.

In this Dash Board we can see **A donut chart** and some more charts were added to the dashboard to visually represent the **Laptop Bookings report**, segmented by the **pricing buckets—Basic, Intermediate, High, and Very High**.



The Above DashBoard Displays the Overall Information about the Laptop Bookings.

12. Testing

This Laptop rental Application was tested by various ways and provides accurate results.

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Testing By Apex codes: All Apex classes and triggers were tested using **unit tests**, which were designed to check if each part of the code works correctly. This testing achieved 100% code coverage, ensuring that every piece of the code was tested and works as intended.

User Interface Testing: The user interface, including how the laptop booking process flows, how users move between different tabs, and how forms handle input validations, was thoroughly tested both by hand and using test scripts to ensure everything works smoothly and without errors.

Thorough testing ensures the reliability and usability of the application, creating a seamless experience for users. By achieving 100% code coverage in **unit testing**, developers can confidently deploy the application, knowing that every part of the code has been checked for errors. Similarly, detailed **user interface testing** helps identify and fix issues related to navigation, form validations, and overall workflow, ensuring that users can complete tasks without confusion or interruption. This comprehensive approach to testing not only improves the application's quality but also builds user trust and satisfaction.

13. Key Use cases Addressed in the Implementation Project by Salesforce

- **Improved Customer Engagement:**
Personalized and automated email notifications keep customers informed throughout their rental journey, including booking confirmations, reminders, and follow-ups.
- **Streamlined Customer Data Management**
Salesforce efficiently captures and organizes customer data, enabling easy access to detailed information such as booking history, contact details and preferences for effective customer management.

14. Conclusion

In conclusion, the implementation of the Laptop Rentals CRM represents a modern solution for managing customer relationships, blending automation, tailored communication, and powerful data analytics. This approach not only streamlines operations but also significantly enhances the overall customer experience, helping the business remain competitive and positioned for continued growth and long-term success in the rental market.

Pithani Akash

Vishnu Institute of Technology

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