# A CRM APPLICATION FOR LAPTOP RENTALS

## 1. Overview of the Project

This project, titled **A CRM Application for Laptop Rentals**, focuses on leveraging Salesforce's robust Customer Relationship Management (CRM) capabilities to streamline and enhance the laptop rental process. The primary objective is to deliver an efficient and user-friendly application that manages customer relationships, optimizes operations, and improves overall service efficiency. By utilizing Salesforce's features and functionalities, the project aims to enhance customer experience, enable effective communication via email with potential customers, and support long-term operational goals for the laptop rental business.

## 2. Objectives

**Business Goals**

- Improve customer satisfaction by providing seamless rental and return processes.
- Streamline operations to reduce manual tasks and errors.
- Increase sales through better customer engagement and targeted communication.
- Enhance data security and reliability with Salesforce's cloud-based platform.

**Specific Outcomes**

- Automated processes for managing customer bookings, billing, and inventory.
- Customizable dashboards and reports for real-time performance tracking.
- Integrated email communication system for engaging potential and existing customers.
- Implementation of validation rules to ensure data accuracy.

## 3. Salesforce Key Features and Concepts Utilized

The project incorporates several Salesforce features and concepts, including:

1. **Objects and Fields**:
    - **Standard Objects**: Accounts, Contacts, Opportunities.

- **Custom Objects**: Total Laptops, Consumer, Laptop Booking, Billing Process.
- **Custom Fields**: Fields specific to tracking rental durations, customer preferences, billing details, etc.

2. **Custom Tabs and Lightning Apps**:
   - Created custom tabs for each object to streamline navigation and usability.
   - Developed a Lightning app for a more interactive user experience.
3. **Validation Rules**:
   - Ensured data consistency and prevented invalid data entries.
4. **Profiles, Roles, and Hierarchy**:
   - Defined roles and permissions for users based on their responsibilities.
   - Established a clear hierarchy to manage data access and user interactions.
5. **Flows and Automation**:
   - Designed automated workflows for booking approvals, payment confirmations, and customer notifications.
6. **Reports and Dashboards**:
   - Built detailed reports for tracking bookings, revenue, and customer satisfaction metrics.
   - Designed dashboards for management to monitor key performance indicators (KPIs) in real-time.
7. **Apex Development**:
   - Developed Apex classes and triggers for advanced customizations and functionalities.

# 4. Detailed Steps to Solution Design

### 1. Creating Custom Objects

Go to the **Object Manager** in Setup to create new custom objects:

- **Total Laptop**: Used to store details about laptops available for rent.
- **Consumer**: Designed to manage customer information and interactions.
- **Laptop Booking**: Tracks rental transactions and booking details.
- **Billing Process**: Handles all billing information related to laptop rentals.

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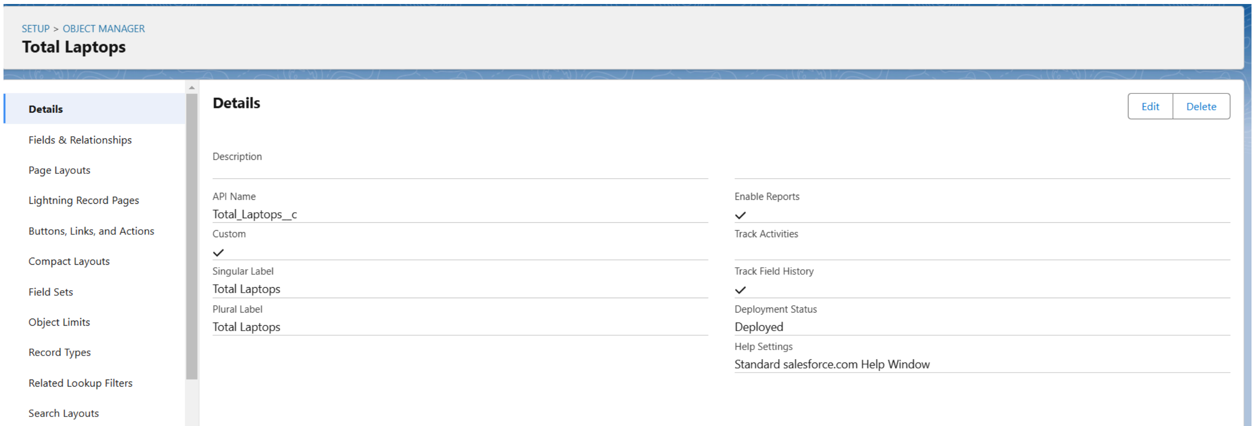
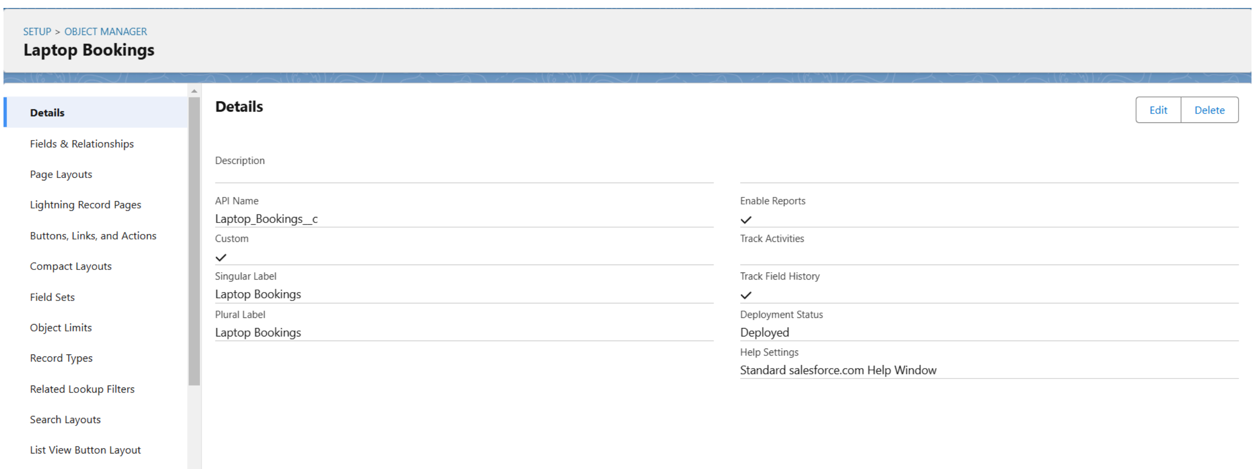
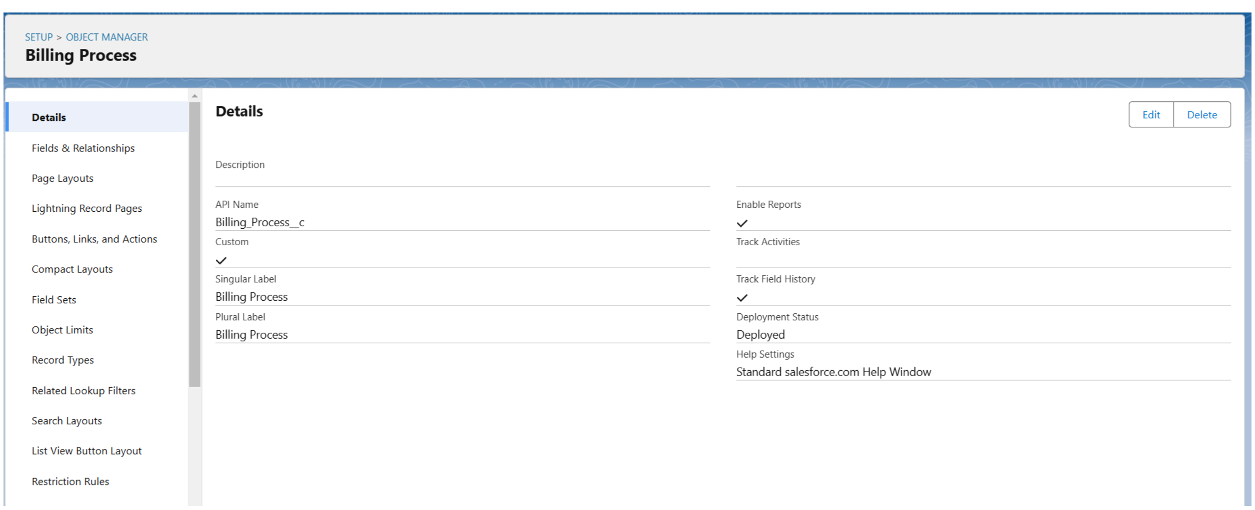
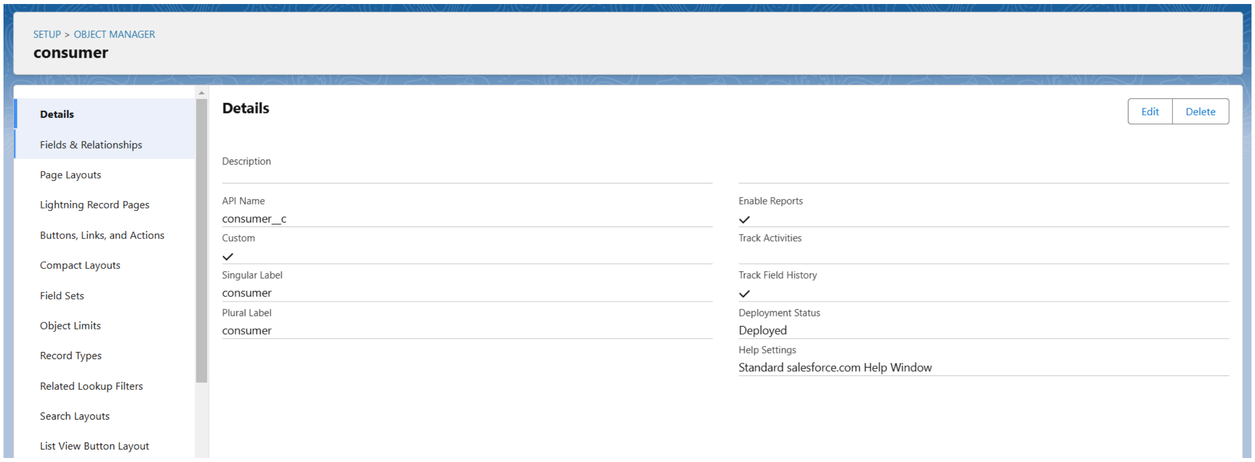


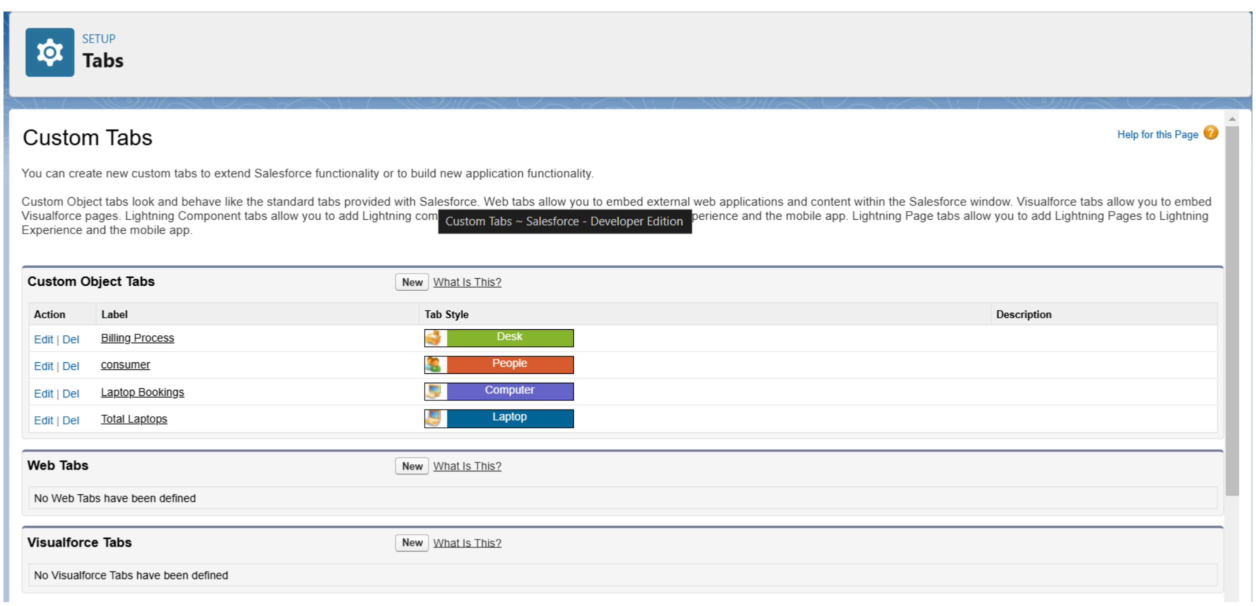





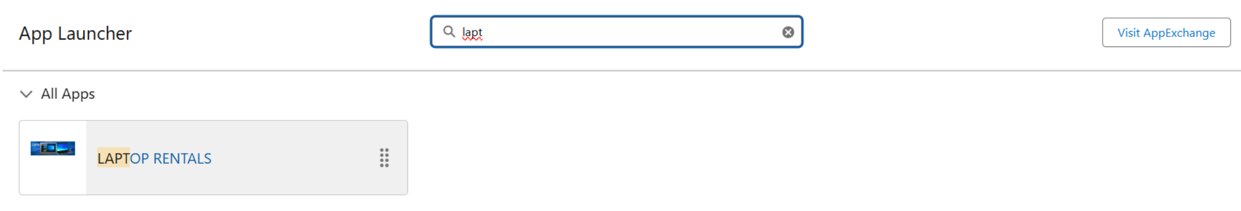

## 2. Creating Tabs

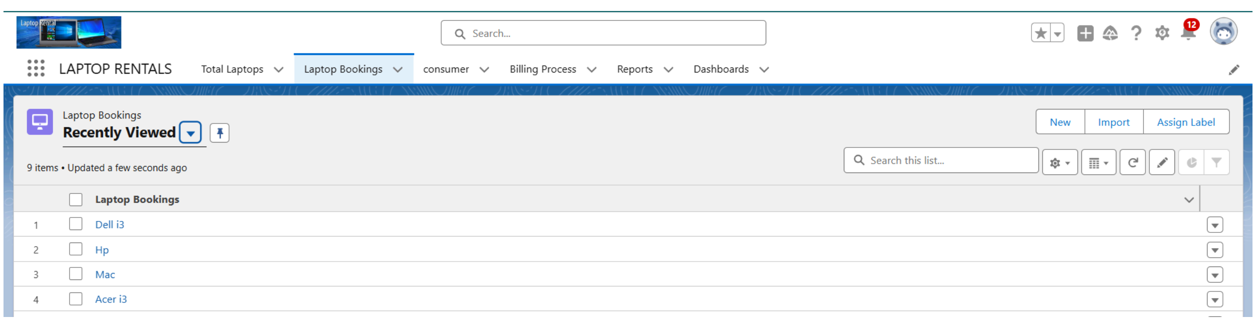
- In **Setup**, navigate to **Tabs** and click **"New"** to create custom tabs for your objects.
- Add tabs for the following objects: **Total Laptop**, **Customer**, **Laptop Booking**, and **Billing Process** to enable easy access and navigation.
- Choose **tab styles** and **labels** that are intuitive and align with user needs for a seamless experience.



## 3. Lightning App Creation

- Go to **App Manager** in **Setup** and click **“New Lightning App”**.
- Enter the app name (e.g., **"Laptop Rentals"**) and configure app settings, such as navigation options.
- Add the relevant tabs: **Total Laptop**, **Customer**, **Laptop Booking**, and **Billing Process** to the app for easy access.
- Save the app configuration and ensure it is assigned to the appropriate **user profiles** for accessibility.



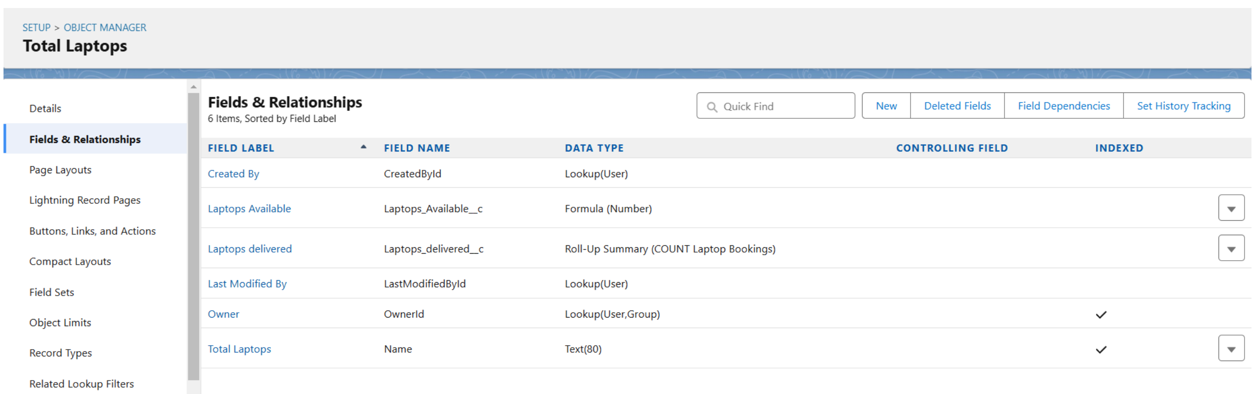



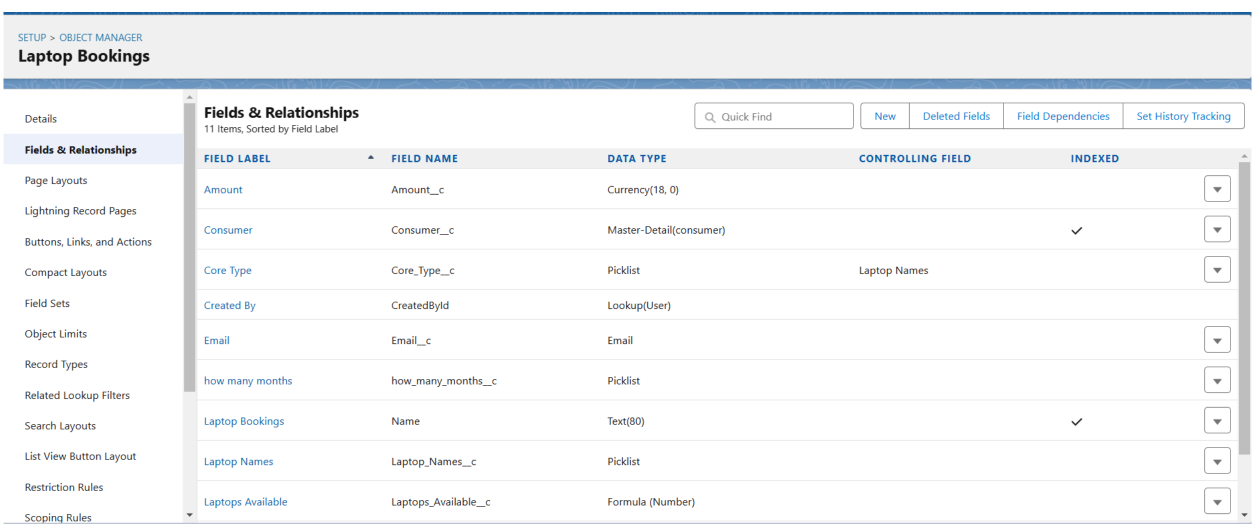

## 4. Creating Fields

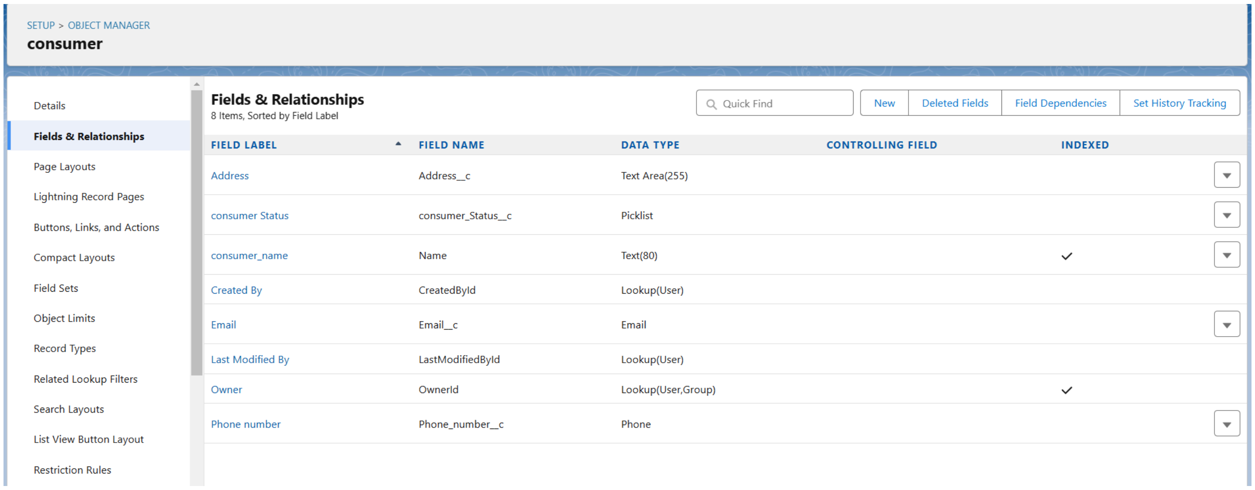
- For each object (**Customer**, **Laptop Booking**, **Billing Process**), go to the **Object Manager** and access the **Fields & Relationships** section.
- Add the required fields:
  - **Customer Object**: Add fields like **Phone Number**, **Email**, or **Address**.
  - **Laptop Booking Object**: Add fields like **Rental Start Date**, **Rental End Date**, or **Booking Status**.

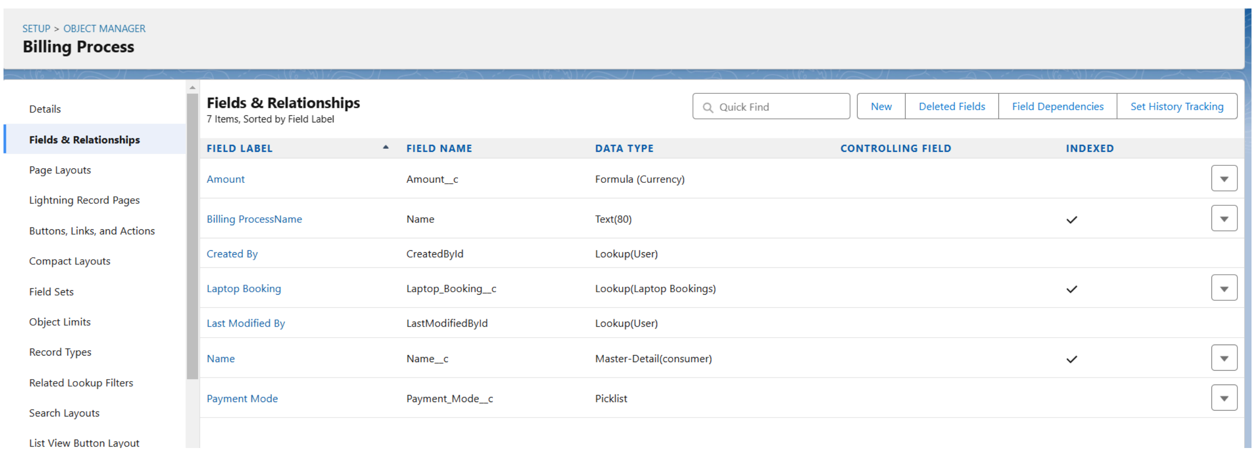
- **Billing Process Object**: Include fields such as **Billing Amount**, **Payment Status**, or **Invoice Number**.

- Establish relationships between objects where necessary, such as linking **Laptop Booking** with **Total Laptop** using a **Lookup Relationship**.
- Document the field details, including their **data types** (e.g., Text, Date, Number) and **validation rules** (e.g., required fields, format constraints) to maintain clarity and consistency.






## 5. Validation Rule Creation

- In **Object Manager**, select the **Consumer** object and navigate to the **Validation Rules** section.
- Click **"New"** to create a validation rule that ensures users provide either a **Phone Number** or **Email** before saving records.
- Use the formula: OR(ISBLANK(phone_number__c), ISBLANK(email__c)) for validation logic.
- Add an error message such as:
  **"Please fill the phone number and email id"**

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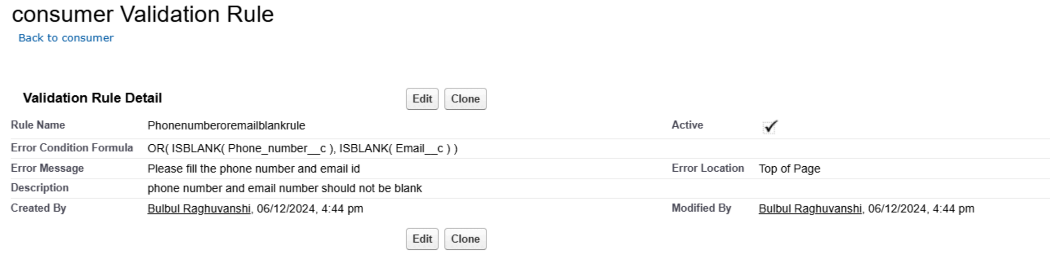
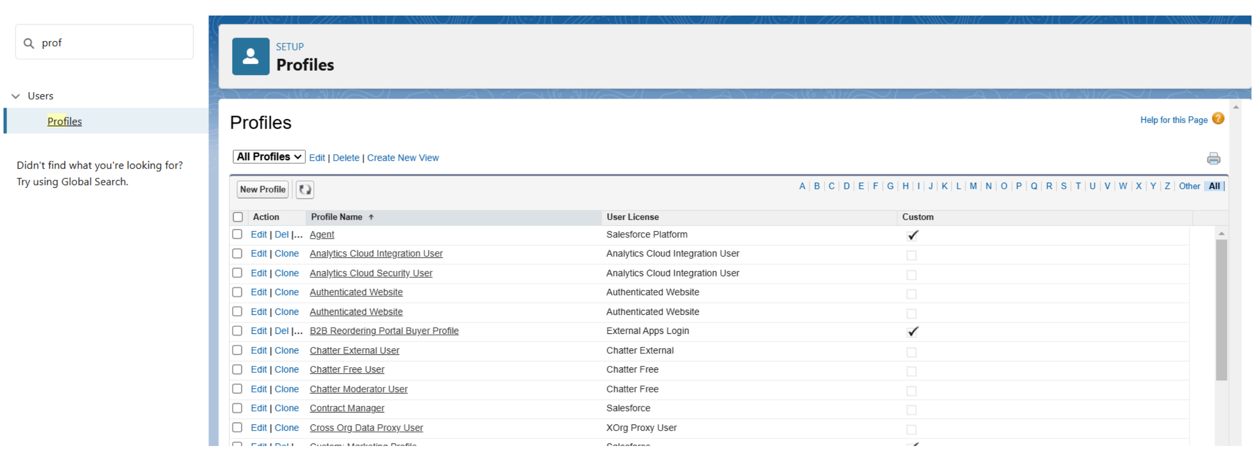


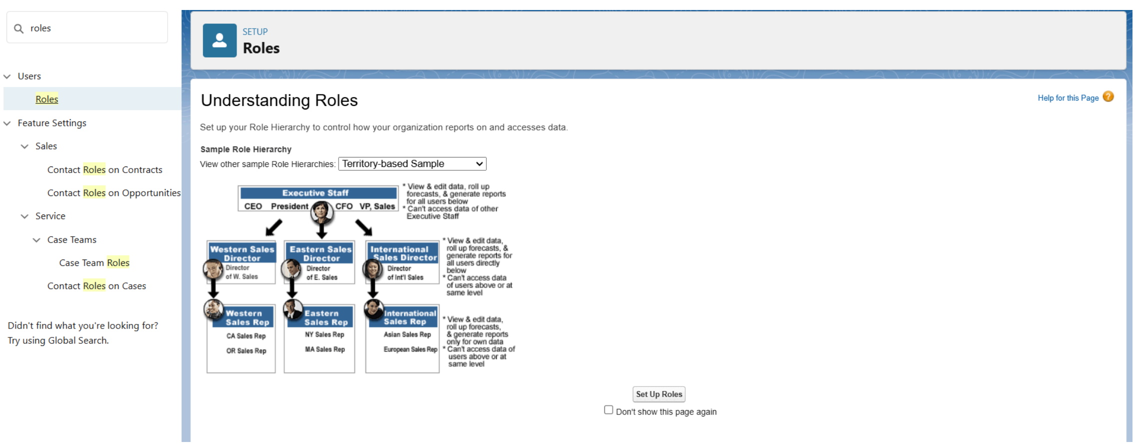

## 6. Profile Creation

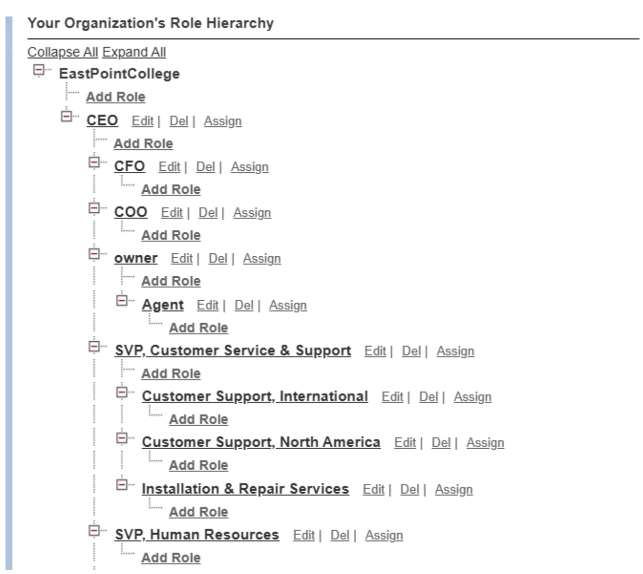
- In **Setup**, navigate to **Profiles** and create new profiles, such as **Owner Profile** and **Agent Profile**, tailored to user roles.
- Define permissions for each profile:
  - **Object Access**: Specify which objects (e.g., **Customer**, **Laptop Booking**) each profile can view, edit, or delete.
  - **Field Visibility**: Control which fields are visible or editable for each profile based on their role.
  - **Record Types**: Restrict access to certain record types if applicable.
- Assign users to these profiles based on their job functions within the organization (e.g., Owners get full permissions, Agents have restricted access).
- Save the profile settings.



## 7. Role Hierarchy Creation

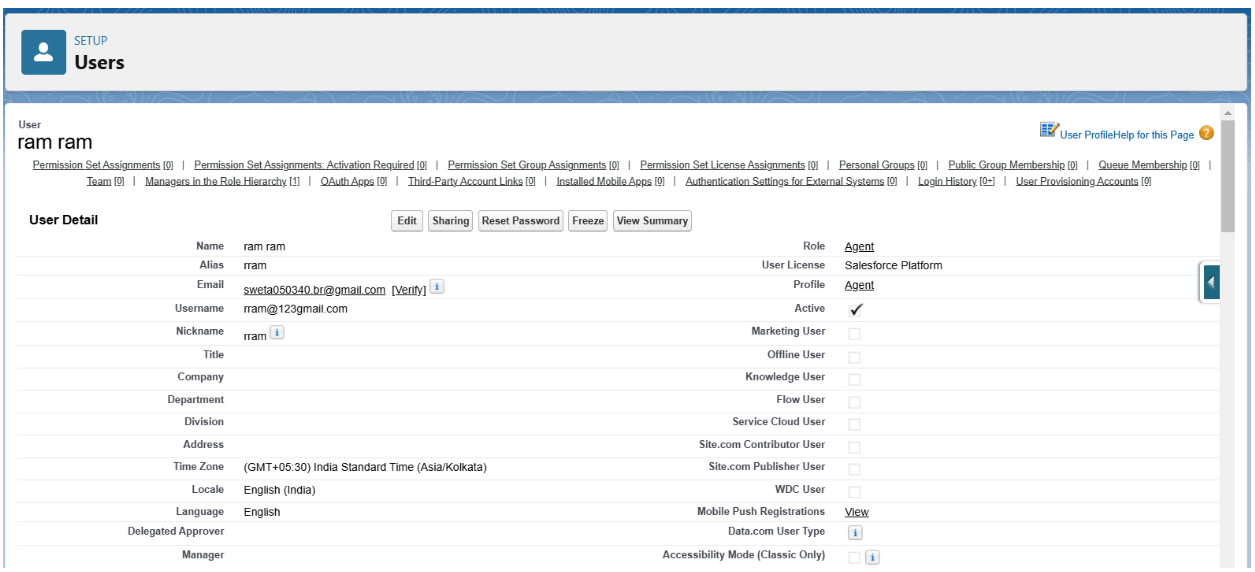
- Navigate to Roles in Setup and click on "SetUp Roles".
- Create an Owner role that defines the visibility access for users managinglaptop rentals.
- Establish hierarchy levels as necessary (e.g., CEO > owner > Agent).
- Ensure that roles are assigned correctly so that data visibility aligns with organizational structure.

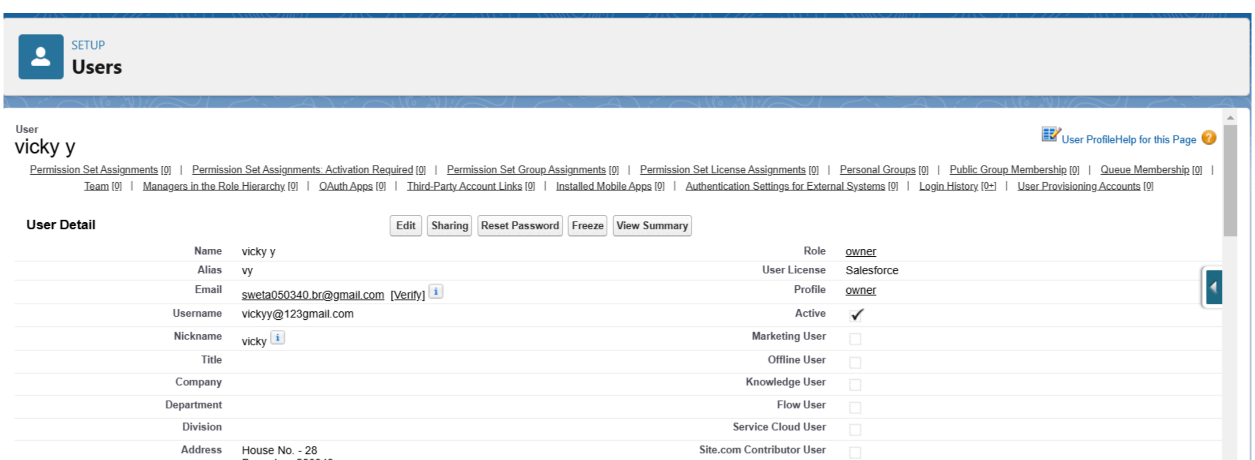


## 8. User Creation

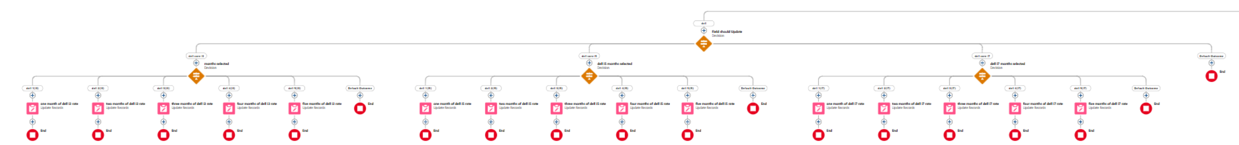
- In **Setup**, navigate to **Users** and click on **"New User"** to create user accounts for your team members..
- Fill out user details such as name, email address,role assignment, and profile selection.
- Set **Usernames** and **Passwords** according to your organization's security standards.
- Save the user accounts and **notify** the users with their login credentials so they can access the system.

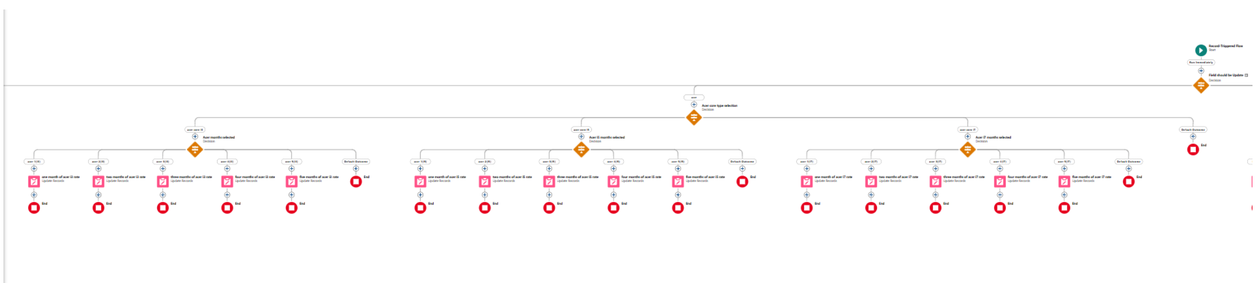


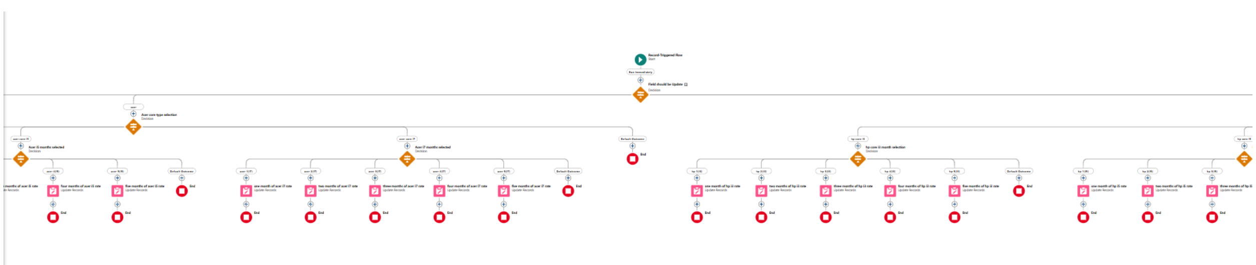



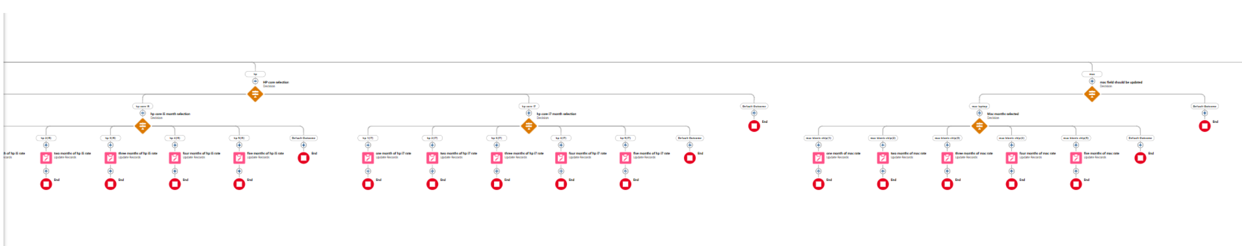
**9. Flow Creation**

- In **Setup**, navigate to **Flows** and click on **"New Flow"** to begin creating automated processes related to laptop rentals.
- Create specific flows for different laptop brands (e.g., **Dell**, **Acer**, **HP**, **Mac**) to automate tasks such as data entry or updates based on user selections.
- Define flow elements.
- Test each flow thoroughly to ensure the processes are functioning as expected before deployment. Ensure proper handling of edge cases and validate data accuracy.



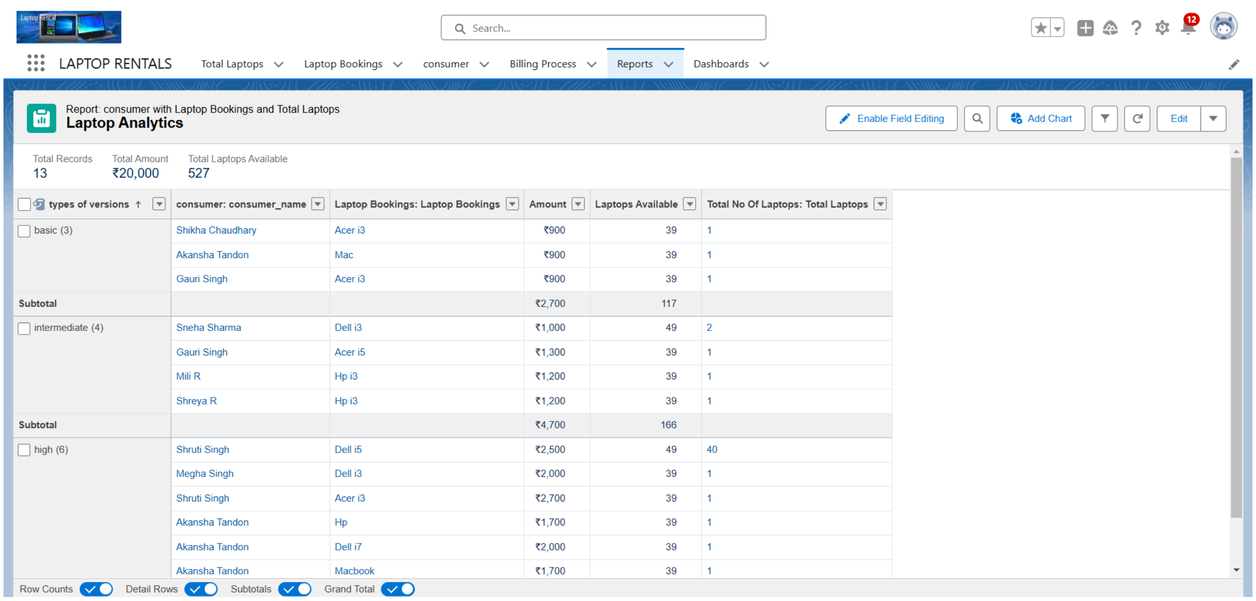






## 10. Report Creation

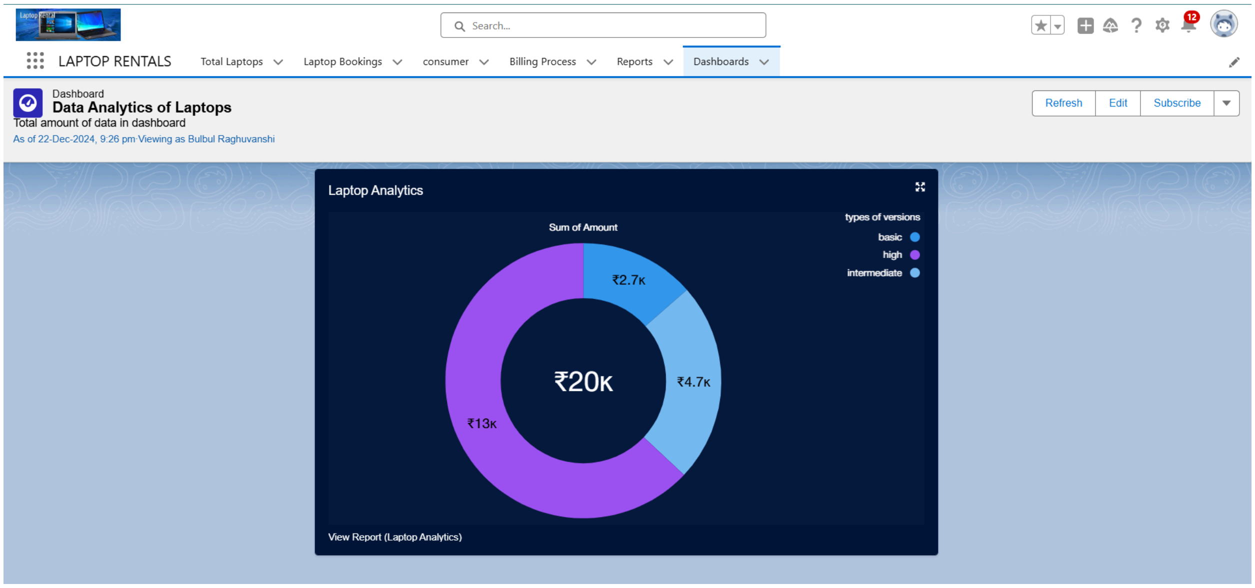
- Go to the **Reports** tab and click **"New Report"** to create reports based on the relevant objects (e.g., **Total Laptop**, **Customer**, **Laptop Booking**, **Billing Process**).
- Use **filters** and **groupings** to organize and summarize data effectively.
- Save the reports with **meaningful names** and **descriptions** to ensure they are easily identifiable by users.
- **Share** the reports with stakeholders by configuring the appropriate **sharing settings**, such as defining who can view, edit, or manage the reports based on their role.




| types of versions | consumer: consumer_name | Laptop Bookings: Laptop Bookings | Amount | Laptops Available | Total No Of Laptops: Total Laptops |
|---|---|---|---|---|---|
| basic (3) | Shikha Chaudhary | Acer i3 | ₹900 | 39 | 1 |
| | Akansha Tandon | Mac | ₹900 | 39 | 1 |
| | Gauri Singh | Acer i3 | ₹900 | 39 | 1 |
| **Subtotal** | | | ₹2,700 | 117 | |
| intermediate (4) | Sneha Sharma | Dell i3 | ₹1,000 | 49 | 2 |
| | Gauri Singh | Acer i5 | ₹1,300 | 39 | 1 |
| | Mili R | Hp i3 | ₹1,200 | 39 | 1 |
| | Shreya R | Hp i3 | ₹1,200 | 39 | 1 |
| **Subtotal** | | | ₹4,700 | 166 | |
| high (6) | Shruti Singh | Dell i5 | ₹2,500 | 49 | 40 |
| | Megha Singh | Dell i3 | ₹2,000 | 39 | 1 |
| | Shruti Singh | Acer i3 | ₹2,700 | 39 | 1 |
| | Akansha Tandon | Hp | ₹1,700 | 39 | 1 |
| | Akansha Tandon | Dell i7 | ₹2,000 | 39 | 1 |
| | Akansha Tandon | Macbook | ₹1,700 | 39 | 1 |

## 11. Dashboard Creation

- Navigate to the **Dashboards** tab in **Salesforce** and click **"New Dashboard"** to create a visual representation of key metrics.
- Add components like **charts** sourced from the reports you've previously created.
- Organize the components logically within the dashboard layout to ensure clarity and easy interpretation of the data.
- Save the dashboard in appropriate **folders** that are accessible by relevant user profiles, ensuring that it can be used for ongoing monitoring of performance metrics.




# 5. Testing and Validation

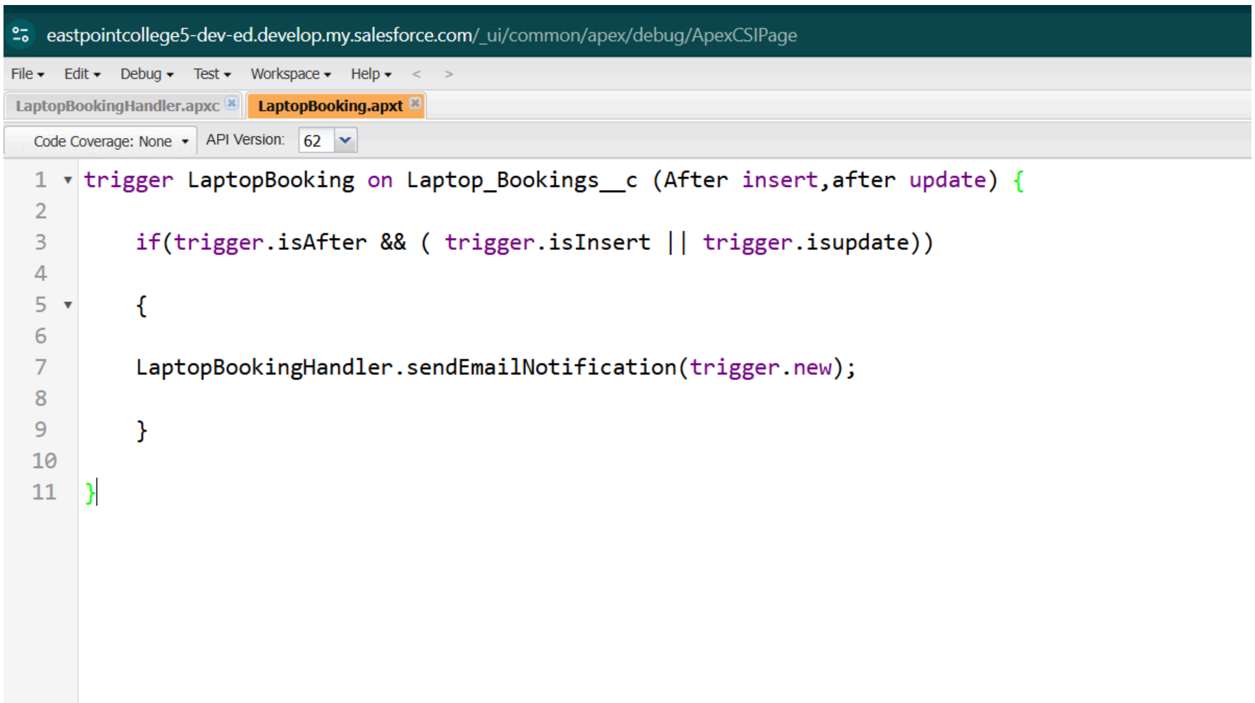
- **Unit Testing**:
  - Conducted thorough testing of Apex classes and triggers to ensure functional correctness.

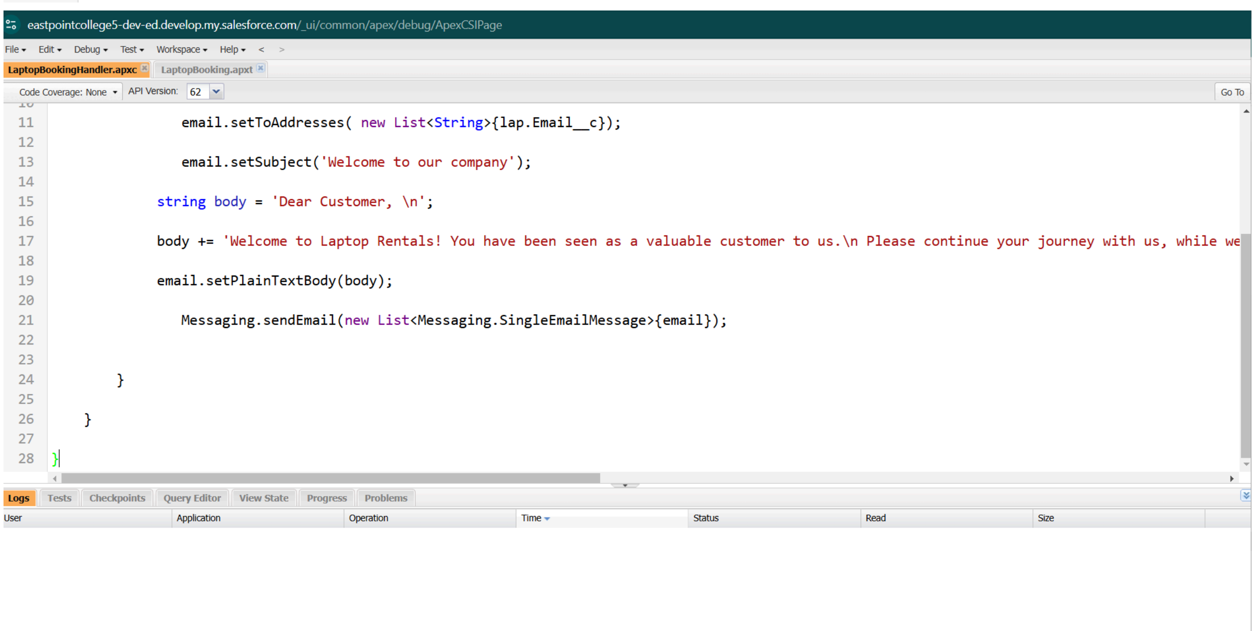
- **User Interface Testing**:
  - Validated the user experience by testing all Lightning components and custom tabs.
  - Ensured cross-browser compatibility and responsiveness.

### Apex Class and Trigger Creation

- In Setup, navigate to Apex Classesand create an Apex trigger that responds to DML events on relevant objects (e.g., Laptop Booking).
- Write trigger logic that handles actions such as sending notifications.

- Implement handler classes if necessary for better organization of code logic.
- Test triggers using unit tests within Salesforce's testing framework.



## 6. Key Scenarios Addressed by Salesforce in the Implementation Project

1. **Customer Management**:
   - Centralized database for storing and managing customer information.
   - Real-time tracking of customer interactions and communication.
2. **Inventory Tracking**:
   - Automated updates to inventory levels based on bookings and returns.
   - Visibility into available laptops for rental at any given time.
3. **Booking and Billing**:
   - Streamlined booking process with automated billing generation.
   - Validation rules to prevent double bookings or incomplete records.
4. **Email Communication**:
   - Automated email notifications for booking confirmations and reminders.
   - Targeted email campaigns for potential customers identified through Salesforce.
5. **Performance Monitoring**:
   - Dashboards and reports for monitoring operational efficiency and customer satisfaction.
   - Real-time insights into revenue trends and booking patterns.

## 7. Conclusion

As a part of this virtual internship program, I successfully developed a comprehensive CRM system tailored to the laptop rental business. Streamlined operations through automation and validation rules. Enhanced customer engagement with integrated email communication and user-friendly interfaces.Provided actionable insights through customized reports and dashboards. Ensured data security and reliability by leveraging Salesforce's robust cloud platform.

By combining Salesforce's advanced features with tailored business logic, this project has laid a strong foundation for scaling the laptop rental business while delivering exceptional customer experiences.