

TERRASTAY

Project Documentation: CRM Application for Terrastay

Category: Salesforce

Skills Required: Salesforce Developer

Project Overview

The **CRM Application for Room Booking** (named **Terrastay**) is designed to streamline the process of booking rooms for customers. The application leverages Salesforce's robust CRM capabilities to enhance customer interactions, optimize room management operations, and improve overall efficiency.

Key features of the application include:

- **Room Availability Management:** Automates room allocation and updates available rooms in real time.
- **Integration with Email Communication:** Enables seamless engagement with potential and existing customers via automated email workflows.
- **Custom Reports and Dashboards:** Provides insights into room occupancy, availability, and customer bookings.
- **User Profiles and Permissions:** Tailors user roles and permissions, such as the Booking Manager profile, for managing bookings effectively.
- **Room Available Trigger,** to keep room data accurate and up to date.
- **Billing Process:** Automates billing and payment processes for rentals.

- **User Roles and Profiles:** Defines different levels of access and roles, such as Owner and Agent, within the application.
- **Validation Rules:** Ensures the accuracy and completeness of critical data fields such as phone number and email.
- **Reports and Dashboards:** Provides actionable insights through reports and visual data dashboards

Detailed Setup Instructions

1. Creating Custom Objects

1. Navigate to Setup:

- Go to the Setup page in Salesforce and click on Object Manager

2. Create Custom Object:

Total Laptops

- Click on Create > Custom Object.
- Fill in the following details:
 - Label Name: Total Rooms
 - Plural Label Name: Total Rooms
 - Record Name Label: Total Rooms
 - Data Type: Text
- Enable the following options:
 - Allow Reports
 - Allow Search
 - Track Field History
- Click Save.

3. Repeat the process for the following custom objects:

- Consumer
- Room Booking
- Billing Process

Total Rooms Object:

Setup Home Object Manager

Q Search Setup

SETUP > OBJECT MANAGER

Total Rooms

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Scoping Rules

Object Access

Triggers

Flow Triggers

Validation Rules

Details

Description

API Name
Total_Rooms__c

Custom

✓

Singular Label
Total Rooms

Plural Label
Total Rooms

Enable Reports

✓

Track Activities

Track Field History

✓

Deployment Status
Deployed

Help Settings
Standard salesforce.com Help Window

EditDelete

Consumer Object:

Setup Home Object Manager

SETUP > OBJECT MANAGER

consumer

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Scoping Rules

Object Access

Triggers

Flow Triggers

Validation Rules

Details

Description

API Name
consumer__c

Custom

✓

Singular Label
consumer

Plural Label
consumer

Enable Reports

✓

Track Activities

Track Field History

✓

Deployment Status
Deployed

Help Settings
Standard salesforce.com Help Window

EditDelete

Room bookings Object:

SETUP > OBJECT MANAGER

Room Bookings

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

Details

EditDelete

Description

API Name
Room_Bookings__c

Custom

✓

Singular Label
Room Bookings

Plural Label
Room Bookings

Enable Reports
✓

Track Activities

Track Field History
✓

Deployment Status
Deployed

Help Settings
Standard salesforce.com Help Window

Billing process Object:

Setup Home Object Manager

SETUP > OBJECT MANAGER

Billing Process

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

Details

EditDelete

Description

API Name
Billing_Process__c

Custom

✓

Singular Label
Billing Process

Plural Label
Billing Process

Enable Reports
✓

Track Activities

Track Field History
✓

Deployment Status
Deployed

Help Settings
Standard salesforce.com Help Window

2. Creating Tabs

1. Navigate to Setup:

- Type "Tabs" in the Quick Find bar and select Tabs.

2. Create a New Tab:

- Click on New under Custom Object Tabs.
- Select the custom object Total Rooms and choose a Tab Style.

- Keep default settings and uncheck Include Tab in Custom App.
- Click Save.

3. Repeat for the following objects:

- Consumer
- Room Bookings
- Billing Process

Tabs:

The screenshot shows the Salesforce Setup page for Custom Tabs. The left sidebar contains the Setup menu and a search bar. The main content area is titled 'Custom Tabs' and includes a 'New' button and a 'What is This?' link. Below this is a table of Custom Object Tabs with the following data:

Action	Label	Tab Style	Description
Edit Del	Billing Process	Computer	
Edit Del	consumer	People	
Edit Del	Room Bookings	Cards	
Edit Del	Total Rooms	Building Block	

Below the table are sections for Web Tabs, Visualforce Tabs, Lightning Component Tabs, and Lightning Page Tabs, all of which are currently empty.

3. Creating a Lightning App Page:

1. Navigate to App Manager:

- Search for App Manager in the Quick Find bar.

2. Create a New Lightning App:

- Click New Lightning App and name it Terrastay.
- Add relevant Navigation Items such as Total Rooms, Consumer, Room Bookings, and Billing Process.
- Add System Administrator to the User Profiles section.
- Click Save & Finish.

Lightning App Builder

App Settings

Pages

TERRASTAY

?

Help

App Settings

App Details & Branding

App Options

Utility Items (Desktop Only)

Navigation Items

User Profiles

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 ⓘ
TERRASTAY

* Developer Name ⓘ
TERRASTAY


Description ⓘ
Enter a description...

App Branding

Image ⓘ

Clear

Primary Color Hex Value ⓘ
 #007002

Org Theme Options
☐ Use the app's image and color instead of the org's custom theme

App Launcher Preview
 TERRASTAY

App Navigation:

Lightning App Builder

App Settings

Pages

TERRASTAY

?

Help

App Settings

App Details & Branding

App Options

Utility Items (Desktop Only)

Navigation Items

User Profiles

Navigation Items

Choose the items to include in the app, and arrange the order in which they appear. Users can personalize the navigation to add or move items, but users can't remove or rename the items that you add. Some navigation items are available only for phone or only for desktop. These items are dropped from the navigation bar when the app is viewed in a format that the item doesn't support.

Available Items

Create

Type to filter list...

Accounts

All Sites

Alternative Payment Methods

Analytics

App Launcher

Appointment Categories

Appointment Invitations

Approval Requests

Asset Action Sources

Asset Actions

Asset State Periods

Assets

Async Operation Logs

Authorization Form

Authorization Form Consent

Authorization Form Data Use

Authorization Form Text

Awards

Background Operations

Selected Items

Home

Total Rooms

Customers

Room Bookings

Billing Process

Reports

Dashboards

App user profiles:

Lightning App Builder

App Settings

Pages

TERRASTAY

App Settings

App Details & Branding

App Options

Utility Items (Desktop Only)

Navigation Items

User Profiles

User Profiles

Choose the user profiles that can access this app.

Available Profiles

Selected Profiles

Search: Type to filter list...

Agent

Analytics Cloud Integration User

Analytics Cloud Security User

Authenticated Website

Authenticated Website

B2B Reordering Portal Buyer Profile

Contract Manager

Custom: Marketing Profile

Custom: Sales Profile

Custom: Support Profile

Customer Community Login User

Customer Community Plus Login User

Customer Community Plus User

Customer Community User

Customer Portal Manager Custom

System Administrator

4. Adding Fields to the Objects

Follow standard Salesforce procedures to add required fields to the following **objects**:

1. Total Rooms

Setup

Home

Object Manager

SETUP > OBJECT MANAGER

Total Rooms

Details

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
Created By	CreatedById	Lookup(User)		
Date	Date_c	Date		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User Group)		✓
Room Allotted	Room_Allotted__c	Roll-Up Summary (COUNT Room Bookings)		
Room Available	Room_Available__c	Formula (Number)		
Total Rooms	Name	Text(30)		✓

2. Consumer

Setup

Home

Object Manager

SETUP > OBJECT MANAGER

consumer

Details

Fields & Relationships

8 Items, Sorted by Field Label

New

Deleted Fields

Field Dependencies

Set 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		

<https://raorao2-dev-ed.develop.lightning.force.com/one/one.app#/setup/ObjectManager/01...>

3.Room Bookings

Setup

Home

Object Manager

SETUP > OBJECT MANAGER

Room Bookings

Details

Fields & Relationships

11 Items, Sorted by Field Label

New

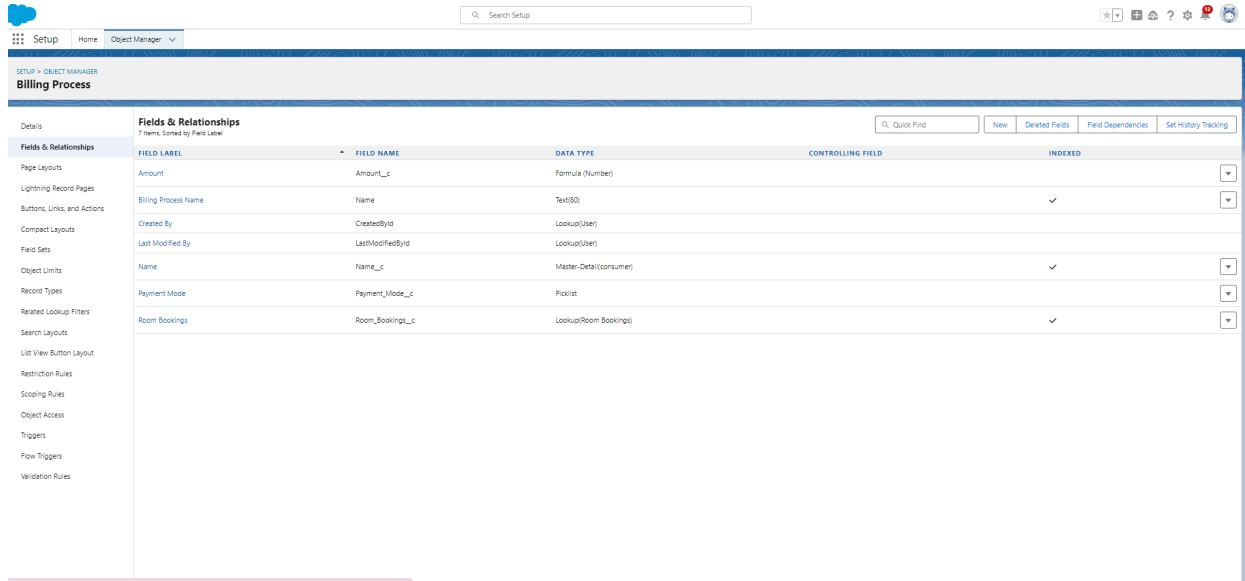
Deleted Fields

Field Dependencies

Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount	Amount__c	Currency(16, 0)		
Booking Purpose	Booking_Purpose__c	Picklist	Room Type	
Created By	CreatedById	Lookup(User)		
Email	Email__c	Email		
how_many_days	how_many_days__c	Picklist		
Last Modified By	LastModifiedById	Lookup(User)		
Name	Name__c	Master-Detail(consumer)		✓
Room Available	Room_Available__c	Formula (Number)		
Room Bookings Name	Name	Text(80)		✓
Room Type	Room_Type__c	Picklist		
Total No Of Rooms	Total_No_Of_Rooms__c	Master-Detail(Total Rooms)		✓

4. Billing Process



SETUP > OBJECT MANAGER					
Billing Process					
Details					
Fields & Relationships					
7 items, Sorted by Field Label					
<input type="text" value="Quick Find"/> <input type="button" value="New"/> <input type="button" value="Deleted Fields"/> <input type="button" value="Field Dependencies"/> <input type="button" value="Set History Tracking"/>					
FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED	
Amount	Amount__c	Formula (Number)			<input type="button" value="v"/>
Billing Process Name	Name	Text(80)		<input checked="" type="checkbox"/>	<input type="button" value="v"/>
Created By	CreatedById	Lookup(User)			
Last Modified By	LastModifiedById	Lookup(User)			
Name	Name__c	Master-Detail (consumer)		<input checked="" type="checkbox"/>	<input type="button" value="v"/>
Payment Mode	Payment_Mode__c	Picklist			<input type="button" value="v"/>
Room Bookings	Room_Bookings__c	Lookup(Room Bookings)		<input checked="" type="checkbox"/>	<input type="button" value="v"/>

5. Creating a Validation Rule

1. Navigate to Object Manager:

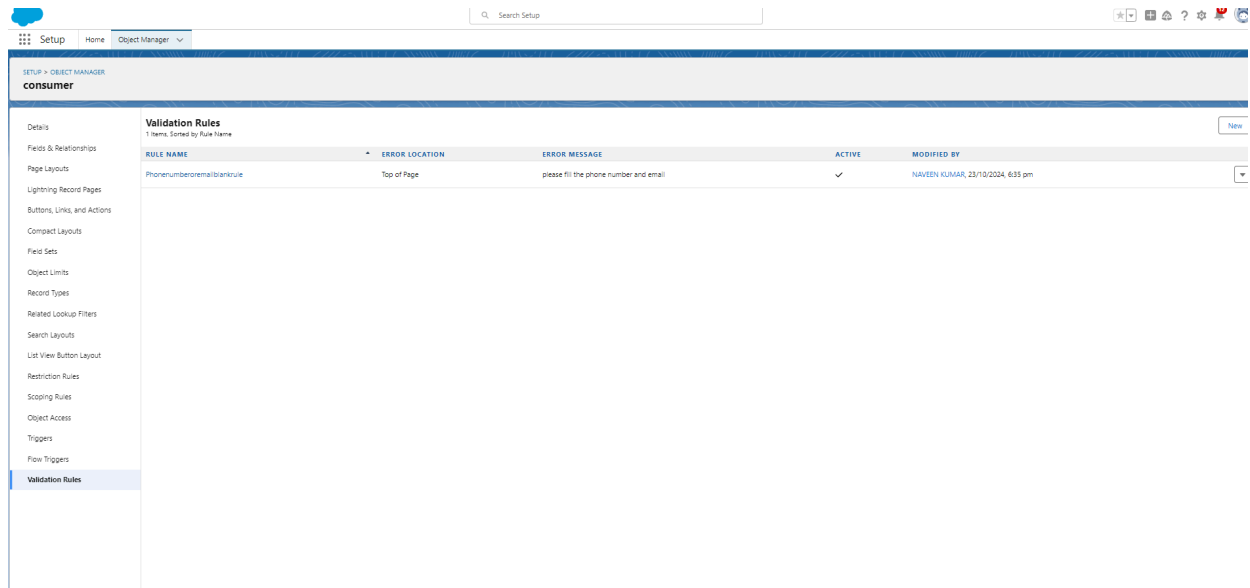
- Go to the Setup page and select Object Manager.

2. Edit Consumer Object:

- Choose the Consumer object and click Edit.

3. Create a Validation Rule:

- Click on Validation Rules > New.
- Enter the following details:
 - Rule Name: Phonenumeroemailblankrule
 - Description: Ensure that both phone number and email are not blank.
 - Formula: `OR(ISBLANK(phone_number__c), ISBLANK(email__c))`
- Click Save.



6. Creating Users Follow these steps to create users in Salesforce for the Room Rentals CRM:

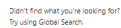
1. Navigate to Users:

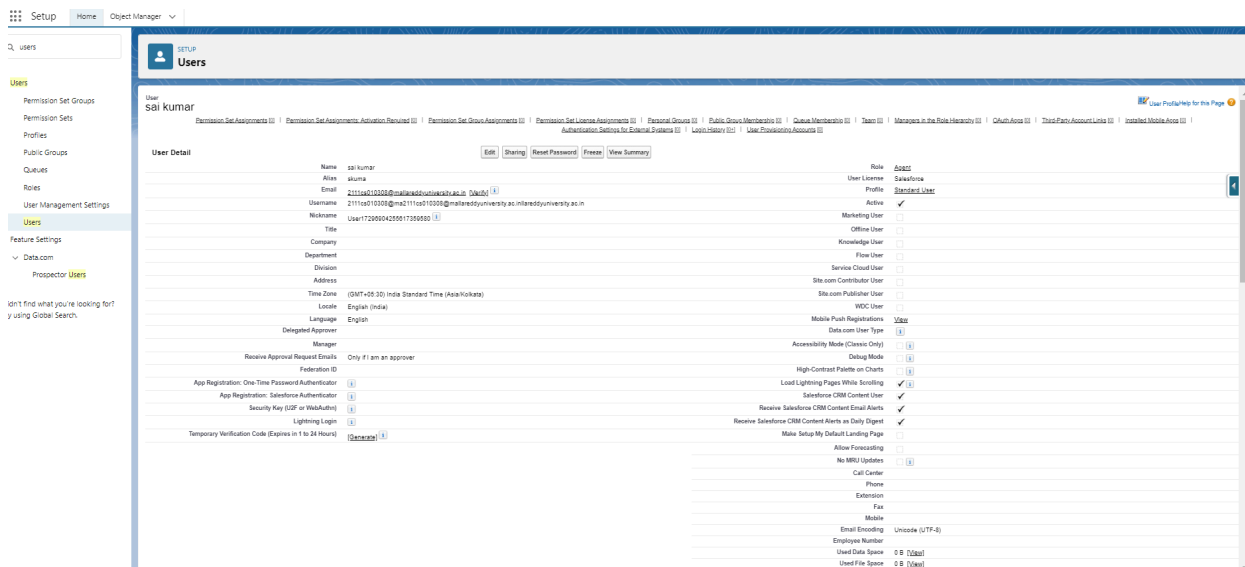
- Go to Setup in Salesforce.
- In the Quick Find box, type Users and select the Users option.

2. Create New User (Owner):

- Click on **New User**.
- Fill in the following details:
 - **First Name:** Naveen
 - **Last Name:** Kumar
 - **Alias:** [Alias Name]
 - **Email:** [Your Personal Email]
 - **Username:** text@text.text
 - **Nickname:** [Nickname]
 - **Role:** Owner
 - **User License:** Salesforce
 - **Profiles:** Owner
- Click **Save**.

- Click on New User again.
- Fill in the following details:
 - **First Name:** sai
 - **Last Name:** Kumar
 - **Alias:** [Alias Name]
 - **Email:** [Your Personal Email]
 - **Username:** text@text.text
 - **Nickname:** [Nickname]
 - **Role:** Agent
 - **User License:** Salesforce Platform
 - **Profiles:** Standard Platform User
- Click Save.





7. Creating a Flow for Room Distribution

To automate the laptop distribution process, follow these steps to create a Salesforce Flow that assigns Rooms to customers based on availability and booking details.

Steps to Create a Salesforce Flow for Room Distribution:

1. Navigate to Setup:

- In Salesforce, go to Setup and type Flows in the Quick Find bar.
- Select Flows from the dropdown menu.

2. Create a New Flow:

- Click on New Flow and choose Record-Triggered Flow as the type of flow.
- This type of flow will trigger automatically when a Room booking is created or updated.

3. Select the Trigger Object:

- In the next step, choose the Room Bookings object as the trigger for the flow.
- Set the trigger to fire when a record is created or updated.

4. Define Criteria:

- Add a condition to check the availability of Room in the Total Rooms object.
- The flow should only proceed if there are available Room that match the booking details, such as Room type and configuration.

5. Assignment Element:

- Add an Assignment element to assign Room to customers.
- The flow should retrieve available Room from the Total Rooms object and assign the first available one to the booking.

6. Update Records:

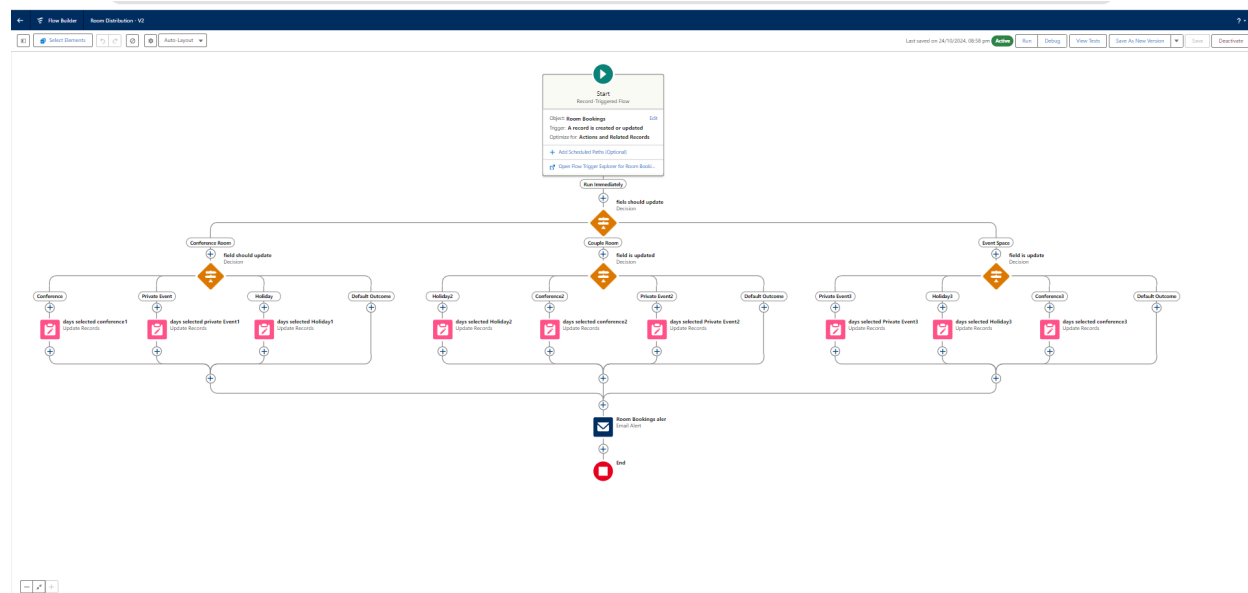
- Add an Update Records element to update the booking with the assigned Rooms details.
- Update the Room Booking record with the assigned Room ID, status (Booked), and any additional details.

7. Send Confirmation:

- Optionally, add an email notification to confirm the booking and notify the customer. Use Email Alert or Apex Action to send emails.

8. Test the Flow:

- Save and activate the flow.
- Run tests to ensure that it correctly assigns Rooms based on availability and updates the booking records.



Apex Class:RoomBookingHandler

The RoomBookingHandler class contains the business logic for handling the key processes, including sending email notifications when a Room is booked.

The screenshot shows the Salesforce Setup interface. On the left, a navigation menu includes 'Email', 'Custom Code', 'Apex Classes', 'Apex Settings', 'Apex Test Execution', 'Apex Test History', 'Apex Triggers', 'Environments', and 'Jobs'. The 'Apex Classes' section is selected. The main content area displays the 'Apex Class Detail' for 'RoomBookingsHandler'. The class is active, created by NAVEEN KUMAR on 24/10/2024 at 11:48 am, and has 0% code coverage. The 'Class Body' tab is selected, showing the following Apex code:

```
1 public class RoomBookingsHandler {
2     public static void sendEmailNotification(List<Room_Bookings__c> roomList) {
3         for (Room_Bookings__c room : roomList) {
4             // Check if email is provided to avoid sending to null
5             if (room.Email__c != null) {
6                 Messaging.SingleEmailMessage email = new Messaging.SingleEmailMessage();
7                 email.setToAddresses(new List<String>(room.Email__c));
8                 email.setSubject('Room Booking Confirmation');
9                 // Build the email body
10                String body = 'Dear ' + room.Name__c + ', ' + '\n'; // Use the Name field or any relevant field
11                body += 'Thank you for booking with us! Here are your booking details:\n';
12                body += 'Total Amount = ' + room.Amount__c + '\n';
13                body += 'Room Type = ' + room.Room_Type__c + '\n';
14                body += 'Number of Days = ' + room.how_many_days__c + '\n'; // Adjust according to your field names
15                body += 'Booking Purpose = ' + room.Booking_Purpose__c + '\n'; // Adjust according to your field names
16                email.setPlainTextBody(body);
17                // Send the email
18                Messaging.sendEmail(new List<Messaging.SingleEmailMessage>(email));
19            }
20        }
21    }
22 }
23
24
25
26 }
```

The screenshot shows the Salesforce Setup interface. On the left, a navigation menu includes 'Email', 'Custom Code', 'Apex Classes', 'Apex Settings', 'Apex Test Execution', 'Apex Test History', 'Apex Triggers', 'Environments', and 'Jobs'. The 'Apex Classes' section is selected. The main content area displays the 'Apex Class Detail' for 'RoomBookingsHandlerTest'. The class is active, created by NAVEEN KUMAR on 24/10/2024 at 11:56 am, and has 0% code coverage. The 'Class Body' tab is selected, showing the following Apex code:

```
1 @isTest
2 public class RoomBookingsHandlerTest {
3     @isTest
4     static void testSendEmailNotification() {
5         // Create test data
6         Room_Bookings__c testBooking = new Room_Bookings__c(
7             Name__c = 'Test Booking',
8             Email__c = 'test@example.com',
9             Amount__c = 150.00,
10            Room_Type__c = 'Deluxe',
11            how_many_days__c = 2,
12            Booking_Purpose__c = 'Business'
13        );
14        insert testBooking;
15        // Call the method to test email sending
16        Test.startTest();
17        RoomBookingsHandler.sendEmailNotification(new List<Room_Bookings__c>(testBooking));
18        Test.stopTest();
19        // Here you can assert that the email was sent (mocking may be needed for real tests)
20    }
21 }
22
23
24 }
```

The screenshot shows the Salesforce Setup interface for managing Apex Triggers. On the left sidebar, the navigation menu includes sections like "Email", "Custom Code", "Apex Classes", "Apex Settings", "Apex Test Execution", "Apex Test History", "Apex Triggers" (which is highlighted), "Environments", "Jobs", "Flex Queue", and "Jobs". The main content area is titled "Apex Trigger" and displays details for a trigger named "RoomBookingsTrigger".

Apex Trigger Detail		Edit	Delete	Download	Show Dependencies
Name	RoomBookingsTrigger				
sObject Type	Room Bookings				
Code Coverage	0% (0/2)				
Status	Active				
Created By	NAVEEN KUMAR				
Last Modified By	NAVEEN KUMAR				
Created Date	24/10/2024, 11:54 am				
Last Modified Date	24/10/2024, 11:54 am				
Namespace Prefix					

Below the details table, there are tabs for "Apex Trigger", "Version Settings", and "Trace Flags". The "Apex Trigger" tab is selected, showing the following trigger definition:

```

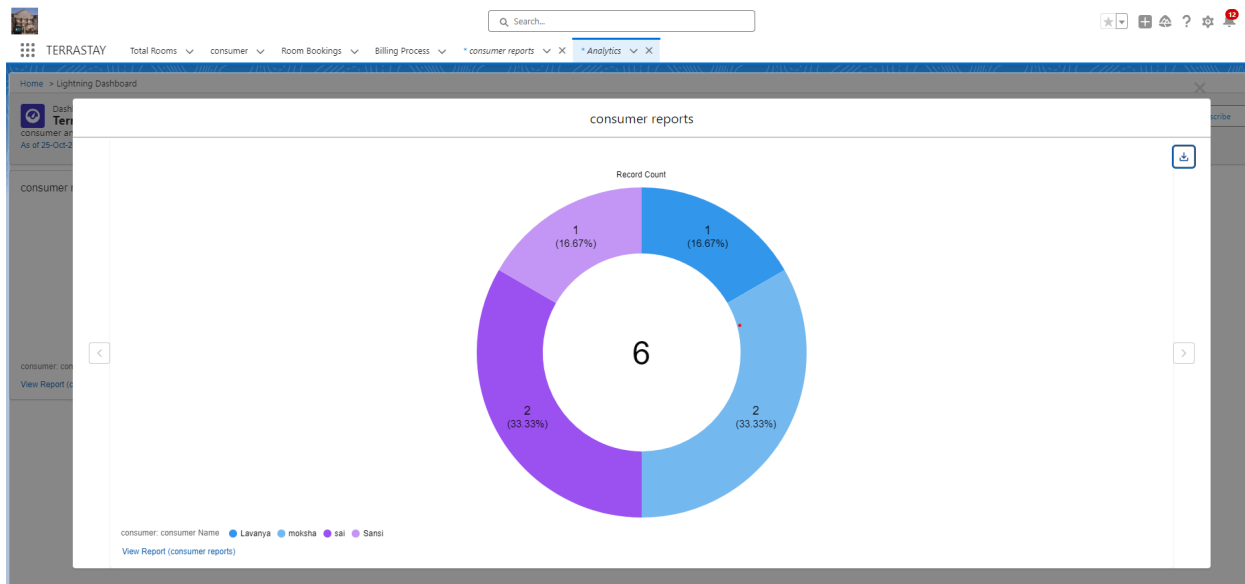
1 trigger RoomBookingsTrigger on Room_Bookings__c (after insert, after update) {
2   if (Trigger.isAfter && (Trigger.isInsert || Trigger.isUpdate)) {
3     RoomBookingHandler.sendEmailNotification(Trigger.new);
4   }
5 }
    
```

At the bottom of the trigger definition, there are buttons for "Edit", "Delete", "Download", and "Show Dependencies".

Reports:

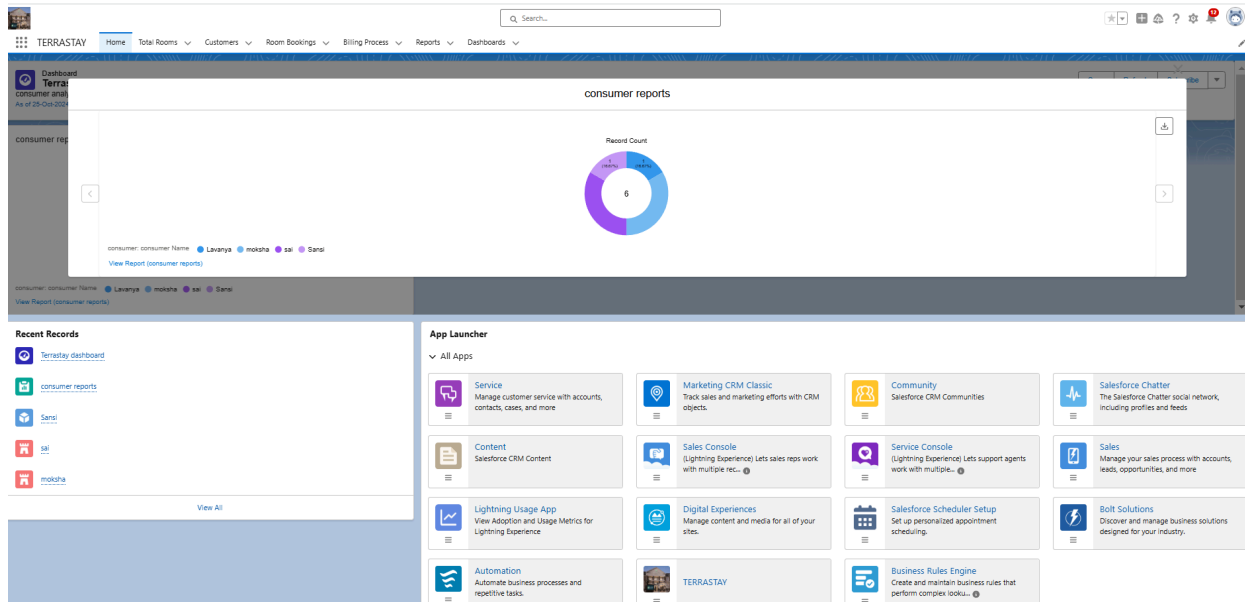
Report: consumer with Room Bookings and Total Rooms				
consumer reports				
consumer: consumer Name Lavanya moksha sai Sansi				
consumer: consumer Name	consumer: Owner Name	Room Type	Room Bookings: Room Bookings Name	Total No Of Rooms: Total Rooms
Lavanya (1)	NAVEEN KUMAR (1)	Conference Room, (1)	Lavanya	3
		Subtotal		
	Subtotal			
Subtotal				
moksha (2)	NAVEEN KUMAR (2)	Conference Room, (1)	moksha	2
		Subtotal		
		Event Space (1)	moksha	11
		Subtotal		
	Subtotal			
Subtotal				
sai (2)	NAVEEN KUMAR (2)	Couple Room, (2)	sai	2
		Subtotal	sai	8
	Subtotal			
Subtotal				
Sansi (1)	NAVEEN KUMAR (1)	Couple Room, (1)	Sansi	15
		Subtotal		
	Subtotal			
Subtotal				
Total (6)				

Dashboards:



Conclusion:

An Overview Total (TERRASTAY CRM PROJECT)



The Terrastay CRM Application for room booking uses the potential of Salesforce in managing a successful CRM wherein all the processes pertaining to room booking, customer interaction, and billing can be maintained on one central platform. Indeed its features such as real-time management of room availability, automated email communications, and user roles and permissions validate room management, enhance customer satisfaction, and optimize bookings.