

Project Executable Files

This phase outlines the actual Salesforce configurations, data, and outcomes used and generated during the execution of your project: “A CRM Application for Public Transport Management System.” It ensures that all key project elements—objects, data, and output—are traceable and reusable for future reference or assessment. Where practical configurations and working modules of the project are documented for clarity, replication, and validation.



1. *Project Files*

Project Executable Files

The following project files were executed in the Salesforce Developer Org:

Milestone 1: Developer Account Setup

Milestone 2: Object Creation

Milestone 3: Tab Creation

Milestone 4: Lightning App Setup

Milestone 5: Field Creation

Milestone 6: Page Layouts

Milestone 7: Validation Rules

Milestone 8: Flow Setup

Milestone 9: Apex Trigger

Milestone 10: Reports

Milestone 11: Dashboards

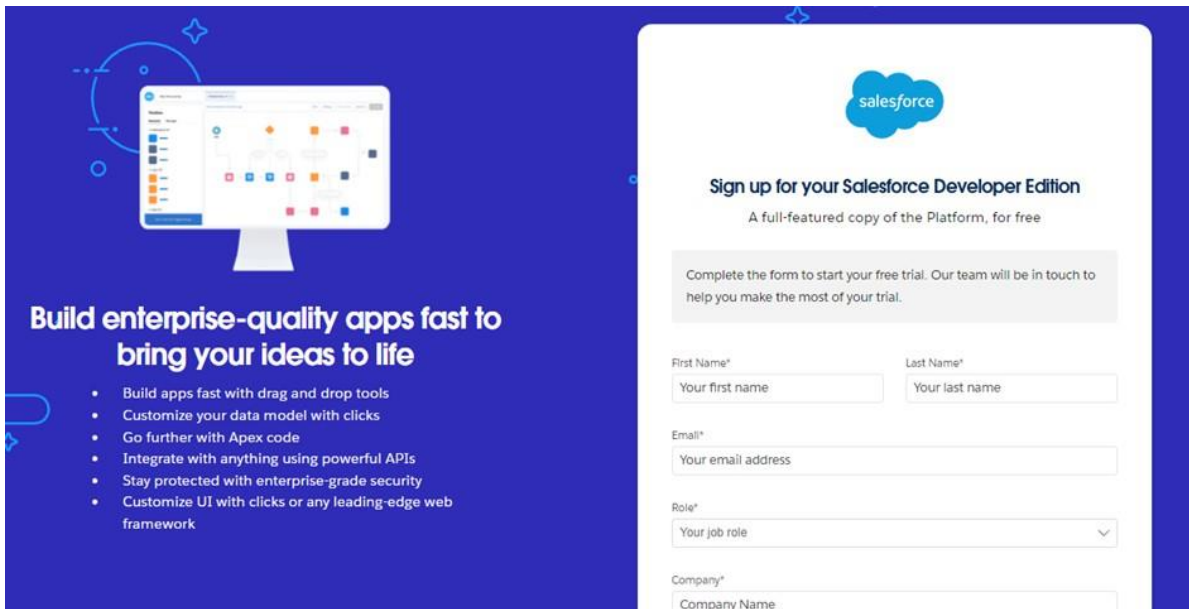
Milestone 12: Final Review

List of Milestone Tasks with Supporting Screenshots and Descriptions

Milestone 1: Developer Account Setup

- Created and activated a Salesforce Developer Org.
 - Setup the base environment for CRM development.
 - Verified access to Object Manager, Flow Builder, and App Builder.
-

OUTPUT SCREENSHOT



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First Name*
Your first name

Last Name*
Your last name

Email*
Your email address

Role*
Your job role

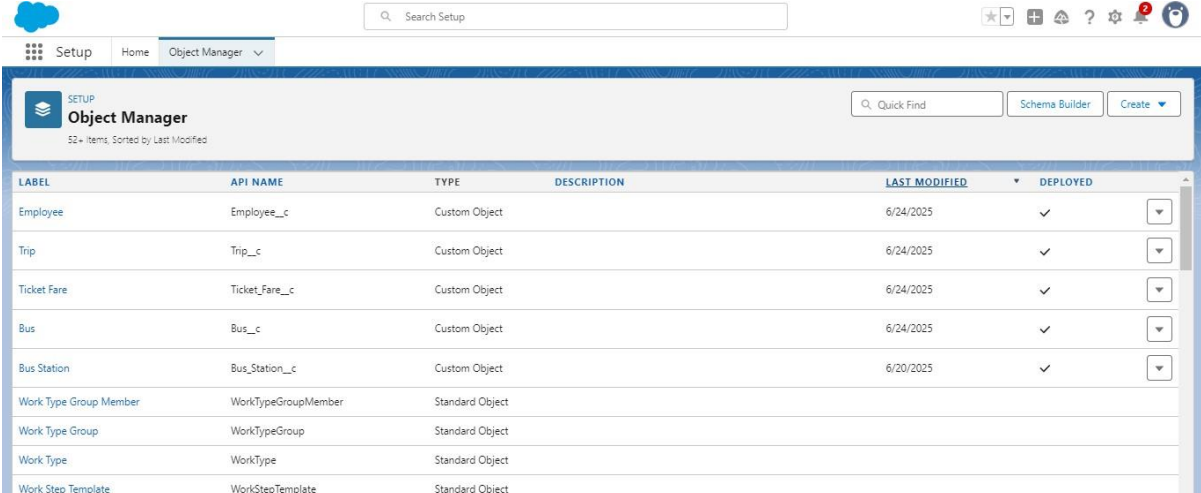
Company*
Company Name



Milestone 2: Object Creation

- Created 5 custom objects:
 - Bus Station, Bus, Employee, Trip, and Ticket Fare.
- Established foundational schema for RTC data tracking.
 - Configured relationships using lookup fields.

OUTPUT SCREENSHOT



The screenshot displays the Salesforce Object Manager interface. At the top, there is a navigation bar with 'Setup', 'Home', and 'Object Manager' (selected). A search bar labeled 'Search Setup' is also present. Below the navigation bar, the 'Object Manager' section is titled 'Object Manager' with a subtitle '52 Items, Sorted by Last Modified'. To the right of the title are buttons for 'Quick Find', 'Schema Builder', and 'Create'. The main content area is a table listing objects.

LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Employee	Employee__c	Custom Object		6/24/2025	✓
Trip	Trip__c	Custom Object		6/24/2025	✓
Ticket Fare	Ticket_Fare__c	Custom Object		6/24/2025	✓
Bus	Bus__c	Custom Object		6/24/2025	✓
Bus Station	Bus_Station__c	Custom Object		6/20/2025	✓
Work Type Group Member	WorkTypeGroupMember	Standard Object			
Work Type Group	WorkTypeGroup	Standard Object			
Work Type	WorkType	Standard Object			
Work Step Template	WorkStepTemplate	Standard Object			



Milestone 3: Tab Creation

- Created tabs for each custom object.
- Enabled easy navigation and object access in the app.
- Ensured users can create/view records from the UI.

OUTPUT SCREENSHOT

The screenshot displays the Salesforce Setup interface for Custom Tabs. The left sidebar shows the navigation menu with 'Setup' selected. The main content area is titled 'Custom Tabs' and includes a description: 'You can create new custom tabs to extend Salesforce functionality or to build new application functionality. Custom Object tabs look and behave like the standard tabs provided with Salesforce. Web tabs allow you to embed external web applications and content within the Salesforce window. Visualforce tabs allow you to embed Visualforce pages. Lightning Component tabs allow you to add Lightning components to the navigation menu in Lightning Experience and the mobile app. Lightning Page tabs allow you to add Lightning Pages to Lightning Experience and the mobile app.'

The 'Custom Object Tabs' section contains a table with the following data:

Action	Label	Tab Style	Description
Edit Del	Buses	Desk	
Edit Del	Bus Stations	Car	
Edit Del	Employees	People	
Edit Del	Ticket Fares	Ticket	
Edit Del	Trips	Map	

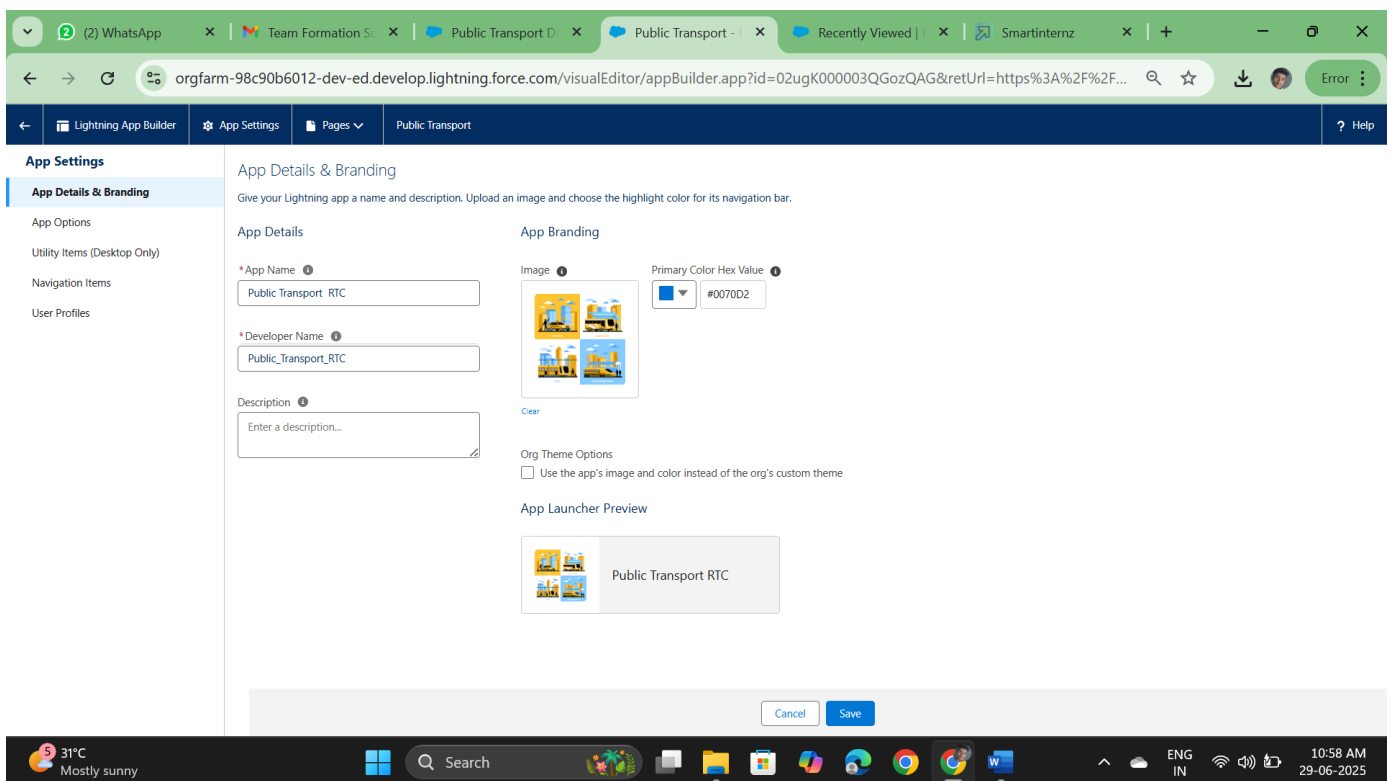
The 'Web Tabs', 'Visualforce Tabs', and 'Lightning Component Tabs' sections each show a 'New' button and a 'What Is This?' link, indicating that no tabs have been defined for these categories.



Milestone 4: Lightning App Setup

- Built a custom Lightning App named "**Public Transport RTC**".
 - Added relevant tabs to centralize operations.
 - Simplified user workflow by grouping features.

OUTPUT SCREENSHOT





Milestone 5: Field Creation

- Added custom and formula fields like:
 - Role (Picklist), Age, Experience, Fare, Passenger Count.
 - Implemented: **Total Fare = Fare × Passenger Count** formula.
- Linked Driver and Conductor to Trip via lookup fields.

Milestone 5- Fields

<u>Object</u>	<u>Field Name</u>	<u>Data Type</u>
<u>Bus Station</u>	<u>Bus Station Name(Standard)</u>	<u>Text</u>
	<u>Bus Stop Category</u>	<u>Picklist(Unmanaged Bus Stop, Managed Bus Stop)</u>
	<u>Last Updated</u>	<u>Formula(Date)</u>
	<u>Amenities</u>	<u>Picklist(Multi-select)</u>
	<u>City</u>	<u>Text(40)</u>
	<u>Street</u>	<u>TextArea</u>
	<u>State/Province</u>	<u>Text(25)</u>
	<u>Zip/PostalCode</u>	<u>Text(10)</u>
	<u>Shelter Available</u>	<u>Checkbox</u>
	<u>Bench</u>	<u>Checkbox</u>

<u>Bus</u>	<u>Bus Registration No</u> <u>(Standard)</u>	<u>Text</u>
	<u>Bus Station Name</u>	<u>Lookup(Bus Station)</u>
	<u>Capacity</u>	<u>Number(4,0)</u>
	<u>Category</u>	<u>Picklist</u>
	<u>Model</u>	<u>Picklist(Dependent on Category)</u>
<u>Trip</u>	<u>Trip No(Standard)</u>	<u>Text</u>
	<u>Trip Date</u>	<u>Date</u>
	<u>Bus No</u>	<u>Lookup(Bus)</u>
	<u>Route Name</u>	<u>Lookup(Ticket Fare)</u>
	<u>Arrival Time</u>	<u>Picklist</u>
	<u>Departure Time</u>	<u>Picklist</u>
	<u>Bus Starting</u> <u>Terminal</u>	<u>Text</u>
	<u>Destination</u> <u>Terminal</u>	<u>Text</u>
	<u>Driver Id</u>	<u>Lookup(Employee)</u>
	<u>Driver</u>	<u>Formula</u>
	<u>Conductor Id</u>	<u>Lookup(Employee)</u>
	<u>Conductor</u>	<u>Formula</u>
	<u>Estimated Travel</u> <u>Time</u>	<u>Number</u>
	<u>Frequency Per Day</u>	<u>Number(2,0)</u>
	<u>No. of Stops</u>	<u>Number(2,0)</u>
	<u>Passenger Count</u>	<u>Number(4,0)</u>

	<u>Ticket Fare</u>	<u>Currency(16,2)</u>
	<u>Total Amount</u>	<u>Formula</u>
<u>Ticket Fare</u>	<u>Route Name(Standard)</u>	<u>Text</u>
	<u>Bus Model</u>	<u>Picklist</u>
	<u>Ticket Fare</u>	<u>Currency(10,2)</u>
<u>Employee</u>	<u>Employee Id(Standard)</u>	<u>Text</u>
	<u>Bus Station Name</u>	<u>Lookup(Bus Station)</u>
	<u>Employee Name</u>	<u>Text</u>
	<u>Role</u>	<u>Picklist</u>
	<u>Date of Birth</u>	<u>Date</u>
	<u>Age</u>	<u>Formula(Number)</u>
	<u>Work Place</u>	<u>Text</u>
	<u>Salary</u>	<u>Currency(18,0)</u>
	<u>Phone</u>	<u>Phone</u>
	<u>Date of Joining</u>	<u>Date</u>
	<u>Date of Retirement</u>	<u>Formula(Date)</u>
	<u>Experience</u>	<u>Formula(Number)</u>
	<u>Street</u>	<u>TextArea</u>
	<u>City</u>	<u>Text</u>
	<u>State/Province</u>	<u>Text</u>
	<u>Country</u>	<u>Text</u>
	<u>Zip/PostalCode</u>	<u>Text</u>

OUTPUT SCREENSHOT

Browser tabs: (2) WhatsApp, Team Formation S..., Public Transport D..., Bus | Salesforce, Recently Viewed |, Smartinternz

URL: orgfarm-98c90b6012-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lgK000000zy5h/FieldsAndRelationships/view

Search Setup

Setup Home Object Manager

SETUP > OBJECT MANAGER

Bus

Details

Fields & Relationships
8 Items. Sorted by Field Label

Q Quick Find New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Bus Registration No	Name	Text(80)		✓
Bus Station Name	Bus_Station_Name__c	Lookup(Bus Station)		✓
Bus Stop Category	Bus_Stop_Category__c	Picklist		
Capacity	Capacity__c	Number(4, 0)		
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Model	Model__c	Picklist	Bus Stop Category	
Owner	OwnerId	Lookup(User,Group)		✓

5 31°C Mostly sunny

Search

ENG IN 11:00 AM 29-06-2025

Browser tabs: (2) WhatsApp, Team Formation S..., Public Transport D..., Bus Station | Salesf..., Recently Viewed |, Smartinternz

URL: orgfarm-98c90b6012-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lgK000000zy45/FieldsAndRelationships/view

Search Setup

Setup Home Object Manager

SETUP > OBJECT MANAGER

Bus Station

Details

Fields & Relationships
13 Items. Sorted by Field Label

Q Quick Find New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amenities	Amenities__c	Picklist (Multi-Select)		
Bench	Bench__c	Checkbox		
Bus Station Name	Name	Text(80)		✓
Bus Stop Category	Bus_Stop_Category__c	Picklist		
City	City__c	Text(40)		
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Last Updated	Last_Updated__c	Formula (Date)		
Owner	OwnerId	Lookup(User,Group)		✓
Shelter available	Shelter_Availability__c	Checkbox		
State/Province	State_Province__c	Text(25)		
Street	Street__c	Text Area(255)		
Zip/Postal Code	Zip_PostalCode__c	Text(10)		

5 31°C Mostly sunny

Search

ENG IN 11:01 AM 29-06-2025

orgfarm-98c90b6012-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lgK000000zyKD/FieldsAndRelationships/view

Setup

Object Manager

Employee

Details

Fields & Relationships

Fields & Relationships

Quick Find

New

Deleted Fields

Field Dependencies

Set History Tracking

	FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Page Layouts	Age	Age_c	Formula (Number)		
Lightning Record Pages	Arrival Date	Arrival_Date__c	Picklist		
Buttons, Links, and Actions	Bus Station Name	Bus_Station_Name__c	Lookup (Bus Station)		
Compact Layouts	City	City__c	Text (16)		
Field Sets	Country	Country__c	Text (16)		
Object Limits	Created By	CreatedBy__c	Lookup (User)		
Record Types	Date of Birth	Date_of_Birth__c	Date		
Related Lookup Filters	Date of Issuing	Date_of_Issuing__c	Date		
Search Layouts	Date of Retirement	Date_of_Retirement__c	Formula (Date)		
List View Button Layout	Employee ID	Employee_ID	Text (16)		
Restriction Rules	Employee Name	Employee_Name__c	Text (16)		
Scoping Rules	Region	Region__c	Formula (Number)		
Object Access	Last Modified By	LastModifiedBy__c	Lookup (User)		
Triggers	Owner	Owner__c	Lookup (User Group)		
Flow Triggers	Phone No	Phone_No__c	Phone		
Validation Rules	Role	Role__c	Picklist		
Conditional Field Formatting	Salary	Salary__c	Currency (16, 0)		
	State/Province	State_Province__c	Text (16)		
	Street	Street__c	Text (40)		
	Work Place	Work_Place__c	Text (25)		
	Zip/Postal Code	Zip_PostalCode__c	Text (16)		

orgfarm-98c90b6012-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lgK000000zyAX/FieldsAndRelationships/view

Setup

Object Manager

Trip

Details

Fields & Relationships

Fields & Relationships

Quick Find

New

Deleted Fields

Field Dependencies

Set History Tracking

	FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Page Layouts	Arrival Time	Arrival_Time__c	Picklist		
Lightning Record Pages	Bus No	Bus_No__c	Lookup (Bus)		
Buttons, Links, and Actions	Bus Starting Terminal	Bus_Starting_Terminal__c	Text (40)		
Compact Layouts	Conductor Id	Conductor_id__c	Lookup (Employee)		
Field Sets	Conductor Name	Conductor_Name__c	Formula (Text)		
Object Limits	Created By	CreatedBy__c	Lookup (User)		
Record Types	Departure Time	Departure_Time__c	Picklist		
Related Lookup Filters	Destination Terminal	Destination_Terminal__c	Text (30)		
Search Layouts	Driver	Driver__c	Formula (Text)		
List View Button Layout	Driver id	Driver_id__c	Lookup (Employee)		
Restriction Rules	Estimated Travel Time	Estimated_Travel_Time__c	Number (18, 0)		
Scoping Rules	Frequency Per Day	Frequency_Per_Day__c	Number (2, 0)		
Object Access	Last Modified By	LastModifiedBy__c	Lookup (User)		
Triggers	No. of Stops	No_of_Stops__c	Number (2, 0)		
Flow Triggers	Owner	Owner__c	Lookup (User Group)		
Validation Rules	Passenger Count	Passenger_Count__c	Number (4, 0)		
Conditional Field Formatting	Route Name	Route_Name__c	Lookup (Ticket Fare)		
	Ticket Fare	Ticket_Fare__c	Currency (16, 2)		

USD/INR

-0.22%

Search

ENG IN

11:05 AM 29-06-2025

orgfarm-98c90b6012-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lgK000000zyFN/FieldsAndRelationships/view

Search Setup

Setup

Home

Object Manager

SETUP > OBJECT MANAGER

Ticket Fare

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

Fields & Relationships

6 Items, Sorted by Field Label

Q Quick Find

New

Deleted Fields

Field Dependencies

Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Bus Model	Bus_Model__c	Picklist		
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Route Name	Name	Text(80)		✓
Ticket Fare	Ticket_Fare__c	Currency(10, 2)		

USD/INR

-0.22%

Search

ENG IN

11:06 AM

29-06-2025



Milestone 6: Page Layouts

- Customized page layouts per object.
- Grouped fields logically for usability.
- Enhanced record readability and data entry experience.

OUTPUT SCREENSHOT

The screenshot displays the Salesforce Page Layouts configuration interface for the 'Bus' object. The left sidebar shows the navigation menu with 'Page Layouts' selected. The main content area shows the layout configuration for the 'Bus' object, including a 'Fields' section with a search bar and a list of fields. The layout is organized into sections: 'Information (Header visible on edit only)', 'System Information (Header visible on edit only)', and 'Custom Links (Header visible on edit only)'. The 'Information' section contains fields for 'Bus Registration No', 'Bus Station Name', 'Bus Stop Category', 'Model', and 'Capacity'. The 'System Information' section contains fields for 'Created By' and 'Last Modified By'. The 'Custom Links' section is currently empty. The 'Mobile Cards (Salesforce mobile only)' section is also visible at the bottom.

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

Save Quick Save Preview As... Cancel Undo Redo Layout Properties

Quick Find Field Name

Section

Blank Space

Bus Stop Category

Capacity

Model

Owner

Bus Registration No

Created By

Bus Station Name

Last Modified By

Edit Delete Clone Change Owner Change record type Printable View Sharing Sharing Hierarchy Edit Labels

Information (Header visible on edit only)

Bus Registration No Sample Text

Owner Sample Text

Bus Station Name Sample Text

Bus Stop Category Sample Text

Model Sample Text

Capacity 7,802

System Information (Header visible on edit only)

Created By Sample Text

Last Modified By Sample Text

Custom Links (Header visible on edit only)

Mobile Cards (Salesforce mobile only)

Drag expanded lookups and mobile-enabled Visualforce pages here to render them as mobile cards.

orgfarm-98c90b6012-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lgK000000zy45/PageLayouts/00hgK000003pMC...

Setup Home Object Manager

Bus Station

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

Save Quick Save Preview As... Cancel Undo Redo Layout Properties

Quick Find Field Name

Section	Bus Station Name	Last Modified By	State/Province
Blank Space	Bus Stop Category	Last Updated	Street
Amenities	City	Owner	Zip/PostalCode
Bench	Created By	Shelter available	

Bus Station Detail

Standard Buttons: Edit Delete Clone Change Owner Change Record Type Printable View Sharing Sharing Hierarchy Edit Labels

Custom Buttons

Information (Header visible on edit only)

- Bus Station Name Sample Text
- Amenities Sample Text
- Bus Stop Category Sample Text
- Last Updated 6/28/2025
- Shelter available ☒
- Bench ☒
- Owner Sample Text

Address Information

- City Sample Text
- Street Sample Text
- State/Province Sample Text
- Zip/PostalCode Sample Text

System Information (Header visible on edit only)

- Created By Sample Text
- Last Modified By Sample Text

Custom Links (Header visible on edit only)

Sports headline Austrian Grand...

Search

ENG IN 11:09 AM 29-06-2025

orgfarm-98c90b6012-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lgK000000zyKD/PageLayouts/00hgK000003pNk...

Setup Home Object Manager

Employee

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

Save Quick Save Preview As... Cancel Undo Redo Layout Properties

Quick Find Field Name

Section	Bus Station Name	Date of Birth	Employee Name	Phone No	Street
Blank Space	City	Date of Joining	Experience	Role	Work Place
Age	Country	Date of Retirement	Last Modified By	Salary	Zip/PostalCode
Arrival Time	Created By	Employee Id	Owner	State/Province	

Employee

Information (Header visible on edit only)

- Employee Id Sample Text
- Employee Name Sample Text
- Bus Station Name Sample Text
- Salary \$123.45
- Experience 977.50
- Work Place Sample Text
- Role Sample Text
- Date of Joining 6/28/2025
- Date of Retirement 6/28/2025
- Owner Sample Text

Personal Details

- Date of Birth 6/28/2025
- Phone No 1-415-555-1212
- Age 814.73

Address

- Street Sample Text
- City Sample Text
- State/Province Sample Text
- Country Sample Text
- Zip/PostalCode Sample Text

System Information (Header visible on edit only)

- Created By Sample Text
- Last Modified By Sample Text

High UV Now

Search

ENG IN 11:10 AM 29-06-2025

2 (2) WhatsApp

Team Formati...

Public Transp...

Trip | Salesfor...

Object Mana...

Recently View...

Smartinternz

orgfarm-98c90b6012-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lgK000000zyAX/PageLayouts/00hgK0000003pNG...

Search Setup

Setup Home Object Manager

SETUP > OBJECT MANAGER

Trip

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

Save Quick Save Preview As... Cancel Undo Redo Layout Properties

Fields

Quick Find

Section

Blank Space

Bus Starting Term...

Conductor Id

Arrival Time

Bus No

Departure Time

Destination Terminal

Driver

Driver Id

Estimated Travel ...

Frequency Per Day

Last Modified By

No. of Stops

Owner

Passenger Count

Route Name

Ticket Fare

Total Amount

Trip Date

Trip No

Edit Delete Clone Change Owner Change Record Type Printable View Sharing Sharing Hierarchy Edit Labels

Information (Header visible on edit only)

Trip Date6/28/2025

Conductor IdSample Text

Bus NoSample Text

Driver IdSample Text

Trip NoSample Text

DriverSample Text

Conductor NameSample Text

OwnerSample Text

Bus Schedule

Route NameSample Text

Bus Starting TerminalSample Text

Departure TimeSample Text

No. of Stops43

Estimated Travel Time49,880

Destination TerminalSample Text

Arrival TimeSample Text

Frequency Per Day86

Passenger Information

Passenger Count8,543

Ticket Fare\$123.45

Total Amount\$123.45

30°C Partly sunny

Search

ENG IN

11:12 AM 29-06-2025

SETUP > OBJECT MANAGER

Ticket Fare

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

Save Quick Save Preview As... Cancel Undo Redo Layout Properties

Fields

Buttons

Quick Actions

Mobile & Lightning Actions

Expanded Lookups

Related Lists

Report Charts

Quick Find	Field Name
Section	Last Modified By
Blank Space	Owner
Bus Model	Route Name
Created By	Ticket Fare

Ticket Fare Detail

Standard Buttons

Edit Delete Clone

Change Owner

Change Record Type

Printable View

Sharing

Sharing Hierarchy

Edit Labels

Custom Buttons

Information (Header visible on edit only)

Route Name Sample Text

Owner Sample Text

Bus Model Sample Text

Ticket Fare \$123.45

System Information (Header visible on edit only)

Created By Sample Text

Last Modified By Sample Text

Custom Links (Header visible on edit only)

Mobile Cards (Salesforce mobile only)

Drag expanded lookups and mobile-enabled Visualforce pages here to display them as mobile cards.



Milestone 7: Validation Rules

Enforced data quality with validations like:

- Age \geq 21, correct phone number format, required fields.
- Prevented invalid inputs and ensured system reliability.

OUTPUT SCREENSHOT

The screenshot shows the Salesforce Setup interface for the 'Trip' object. The left sidebar lists various setup options, and the main content area displays the 'Validation Rules' section. Two validation rules are listed, both active and created by 'Mahammad Tahir T'.

RULE NAME	ERROR LOCATION	ERROR MESSAGE	ACTIVE	MODIFIED BY
Departure_and_Arrival_Time_Checking	Top of Page	The Departure Time and Arrival Time Should not be the same	✓	Mahammad Tahir T, 6/20/2025, 11:09 AM
Passenger_Count_Checking_for_Few_Buses	Passenger Count	For Super Deluxe, Semi Sleeper and Sleeper Buses ,the Passenger Count must be less than or equal to the Capacity of the Bus	✓	Mahammad Tahir T, 6/23/2025, 2:53 AM

orgfarm-98c90b6012-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lgK000000zyKD/ValidationRules/view

Setup Home Object Manager

SETUP > OBJECT MANAGER

Employee

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

Validation Rules

3 Items, Sorted by Rule Name

RULE NAME	ERROR LOCATION	ERROR MESSAGE	ACTIVE	MODIFIED BY
Employee_Age_Checking	Top of Page	Employee Age Must be Greater than or equal to 21	✓	Mahammad Tahir T, 6/20/2025, 11:14 AM
Employees_only_for_Managed_Bus_stops	Bus Station Name	he Employees must work for Managed Bus stops	✓	Mahammad Tahir T, 6/20/2025, 11:14 AM
Phone_Number_Validation	Top of Page	Phone no must be 10 digits and starts with 6 or 7 or 8 or 9	✓	Mahammad Tahir T, 6/27/2025, 11:05 AM

https://orgfarm-98c90b6012-dev-ed.develop.lightning.force.com/one/app...

30°C Partly sunny

Search

ENG IN

11:16 AM 29-06-2025

orgfarm-98c90b6012-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lgK000000zy5h/ValidationRules/view

Setup Home Object Manager

SETUP > OBJECT MANAGER

Bus

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

Validation Rules

1 Items, Sorted by Rule Name

RULE NAME	ERROR LOCATION	ERROR MESSAGE	ACTIVE	MODIFIED BY
Bus_Registration_Number_Validation	Top of Page	The bus Registration Number must be in the format of 2 Capital Letters(State Code), space, 2 Numbers (District Code), space 1 or 2 Capital Letters(Series), space and 4 Numbers (Number).	✓	Mahammad Tahir T, 6/23/2025, 11:50 PM

30°C Partly sunny

Search

ENG IN

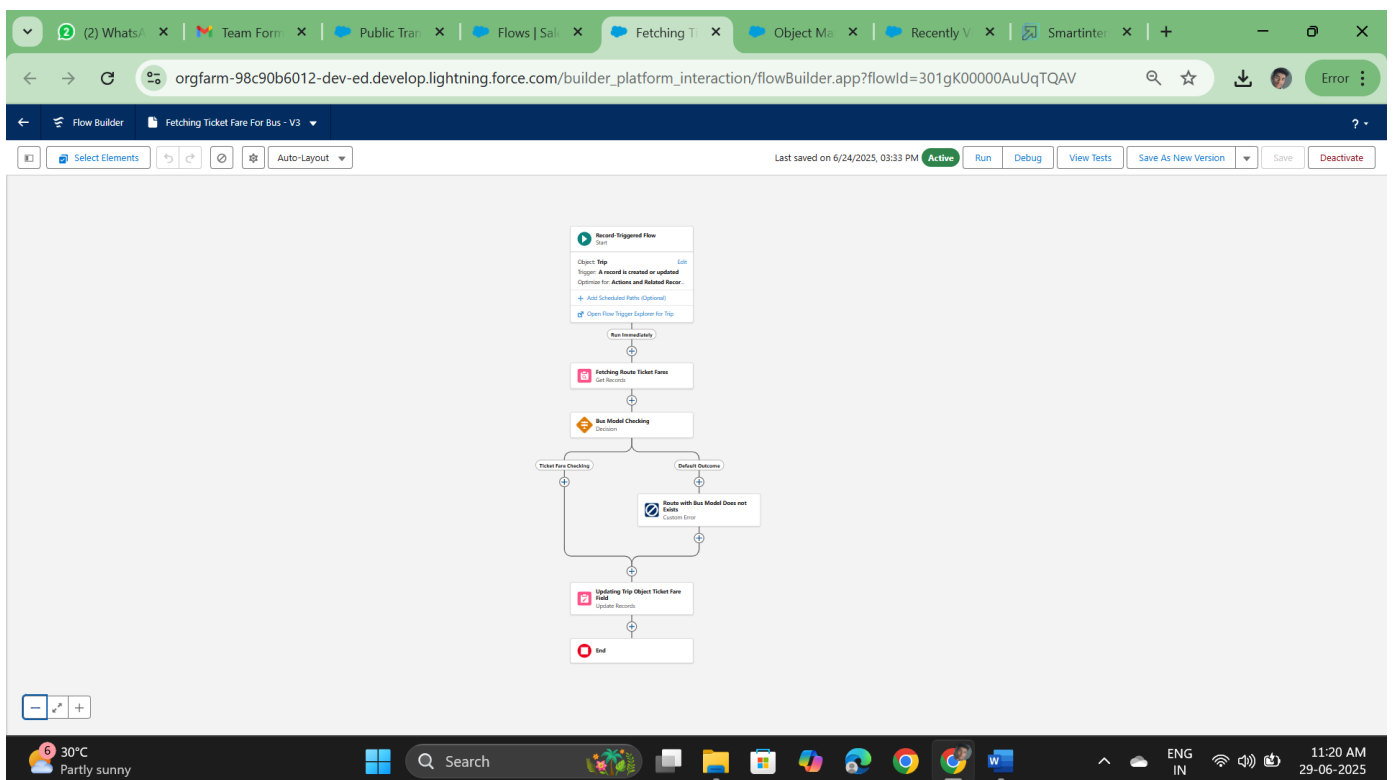
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Milestone 8: Flow Setup

- Designed a **record-triggered flow**:
 - Automatically fetches fare based on route + model.
- Improved automation and reduced manual input errors.

OUTPUT SCREENSHOT





Milestone 9: Apex Trigger

- Developed a trigger to validate:
 - Only users with role “Driver” can be added as Driver.
 - Only “Conductor” can be added as Conductor.
- Ensured business logic is enforced at data level.

OUTPUT SCREENSHOT

The screenshot displays the Salesforce Apex Debugger interface. The browser address bar shows the URL: `orgfarm-ed7725a0e4-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage`. The code editor shows the following Apex code:

```
1 Public class TripTriggerHandlerClass {
2
3     // Checking whether the entered Driver Id belongs to a Driver or not
4
5     public static void driverValidation(List<Trip__c> tripList){
6
7         List<Employee__c> driverList = [SELECT Id, Name FROM Employee__c WHERE Role__c = 'Driver' ];
8
9         If(driverList != null){
10
11             Map<Id, String> driverMap = new Map<Id, String>();
12
13             for(Employee__c emp : driverList ){
14
15                 driverMap.put(emp.Id, emp.Name);
16
17             }
18
19             for(Trip__c trip : tripList ){
20
21                 If(trip.Driver_Id__c != null){
22
23                     Boolean hasDriverId = driverMap.containsKey(trip.Driver_Id__c); // hasDriverId will be true
24
25                     If(hasDriverId == false){
26
27                         trip.addError('The assigned person is not a Driver.');
```

The interface includes a sidebar on the left with tabs for Logs, Tests, Checkpoints, Query Editor, View State, Progress, and Problems. At the bottom, there is a table with columns: User, Application, Operation, Time, Status, Read, and Edit.

```
orgfarm-ed7725a0e4-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIFPage

TripTriggerHandlerClass.apex
TripTrigger.apex

Code Coverage: None | API Version: 64

38
39 // Checking whether the entered conductor Id belongs to a Conductor or not
40
41 public static void conductorValidation(List<Trip__c> tripList){
42     List<Employee__c> conductorList = [SELECT Id, Name FROM Employee__c WHERE Role__c = 'Conductor' ];
43
44
45
46
47     Map<Id, String> conductorMap = new Map<Id, String>();
48
49     for(Employee__c emp : conductorList ){
50
51         conductorMap.put(emp.Id, emp.Name);
52
53     }
54
55     for(Trip__c trip : tripList){
56
57         If(trip.Conductor_Id__c!=null){
58
59             Boolean hasConductorId = conductorMap.containsKey(trip.Conductor_Id__c); // hasConductorId will be true
60
61             If(hasConductorId == false){
62
63                 trip.addError('The assigned person is not a Conductor.');
```

```
orgfarm-ed7725a0e4-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIFPage

TripTriggerHandlerClass.apex
TripTrigger.apex

Code Coverage: None | API Version: 64

1 trigger TripTrigger on Trip__c (before insert, before update) {
2
3
4
5     if(trigger.isBefore){
6
7         if(trigger.isInsert || trigger.isUpdate){
8
9             // Validating the Conductor Id in Trip is really a Conductor or not
10
11             TripTriggerHandlerClass.driverValidation(trigger.new);
12
13
14             // Validating the Conductor Id in Trip is really a Conductor or not
15
16             TripTriggerHandlerClass.conductorValidation(trigger.new);
17
18         }
19     }
20
21 }
22
23 }
```



Milestone 10: Reports

- Created reports for:
 - Employees per station, monthly revenue, trip counts.
- Used grouping, filters, and field summaries.
- Enabled data-driven decision-making.

OUTPUT SCREENSHOT

Report: Trips
Previous And Current Month Trips Details

Total Passenger Count: 153
Total Total Amount: \$405,840.00

Trip Date	Bus No	Trip: Trip No	Route Name	Passenger Count	Total Amount
6/29/2025	AP 02 AB 7856	2	hyd to pmd	80	\$400,000.00
	Subtotal			80	\$400,000.00
	AP 02 AB 8700	1	PMD to GAO	23	\$1,840.00
	Subtotal			23	\$1,840.00
	Subtotal			103	\$401,840.00
7/21/2025	AP 02 AB 7856	3	PMD to GAO	50	\$4,000.00
	Subtotal			50	\$4,000.00
	Subtotal			50	\$4,000.00
Total				153	\$405,840.00

Row Counts: ☐ Detail Rows: ☒ Subtotals: ☒ Grand Total: ☒

WhatsApp

Team Formation Success!

Employees By Bus Station

Home | Salesforce

Smartinternz

orgfarm-98c90b6012-dev-ed.develop.lightning.force.com/lightning/r/Report/00OgK00000314r3UAA/view?queryScope=userFolders

Public Transport

Buses

Bus Stations

Trips

Ticket Fares

Employees

Reports

Dashboards

Report: Employees

Employees By Bus Station

Enable Field Editing

Add Chart

Edit

Total Records
4

<input type="checkbox"/> Bus Station Name	<input type="checkbox"/> Employee: ID	<input type="checkbox"/> Employee Name	<input type="checkbox"/> Role
<input type="checkbox"/> - (2)	a04gK000000VYqD	T Mahammad Tahir	Conductor
	a04gK000000VkrZ	akash	Driver
Subtotal			
<input type="checkbox"/> ATS Travels (1)	a04gK000000XGAr	ANJII	Driver
Subtotal			
<input type="checkbox"/> JSR travels (1)	a04gK000000XGCT	NOOR	Conductor
Subtotal			
Total (4)			

Row Counts

Detail Rows

Subtotals

Grand Total

30°C

Partly sunny

Search

ENG IN

11:26 AM

29-06-2025

WhatsApp

Team Formation Success!

Drivers And Conductors

Home | Salesforce

Smartinternz

orgfarm-98c90b6012-dev-ed.develop.lightning.force.com/lightning/r/Report/00OgK00000315YcUAI/view?queryScope=userFolders

Public Transport

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Employees

Reports

Dashboards

Report: Employees

Drivers And Conductors Information

Enable Field Editing

Add Chart

Edit

Total Records
4

<input type="checkbox"/> Bus Station Name	<input type="checkbox"/> Role	<input type="checkbox"/> Employee Name	<input type="checkbox"/> Employee: ID
<input type="checkbox"/> JSR travels (1)	Conductor	NOOR	a04gK000000XGCT
Subtotal			
<input type="checkbox"/> ATS Travels (1)	Driver	ANJII	a04gK000000XGAr
Subtotal			
<input type="checkbox"/> - (2)	Conductor	T Mahammad Tahir	a04gK000000VYqD
	Driver	akash	a04gK000000VkrZ
Subtotal			
Total (4)			

Row Counts

Detail Rows

Subtotals

Grand Total

30°C

Partly sunny

Search

ENG IN

11:26 AM

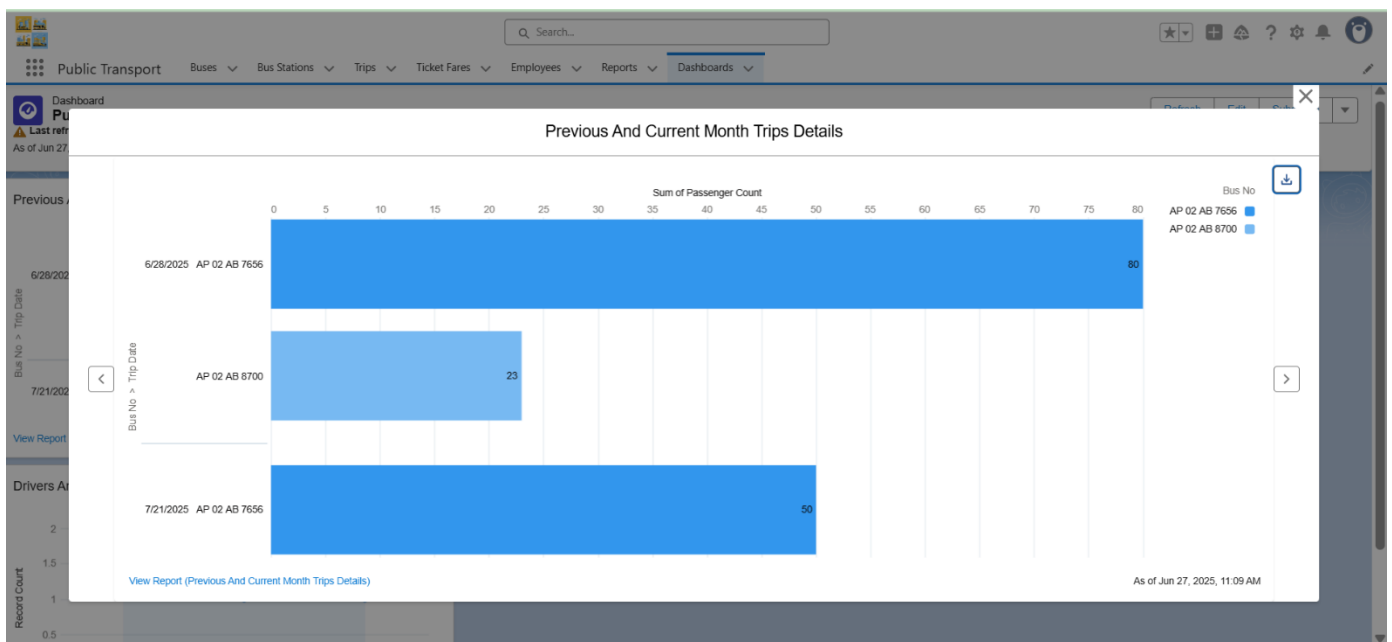
29-06-2025

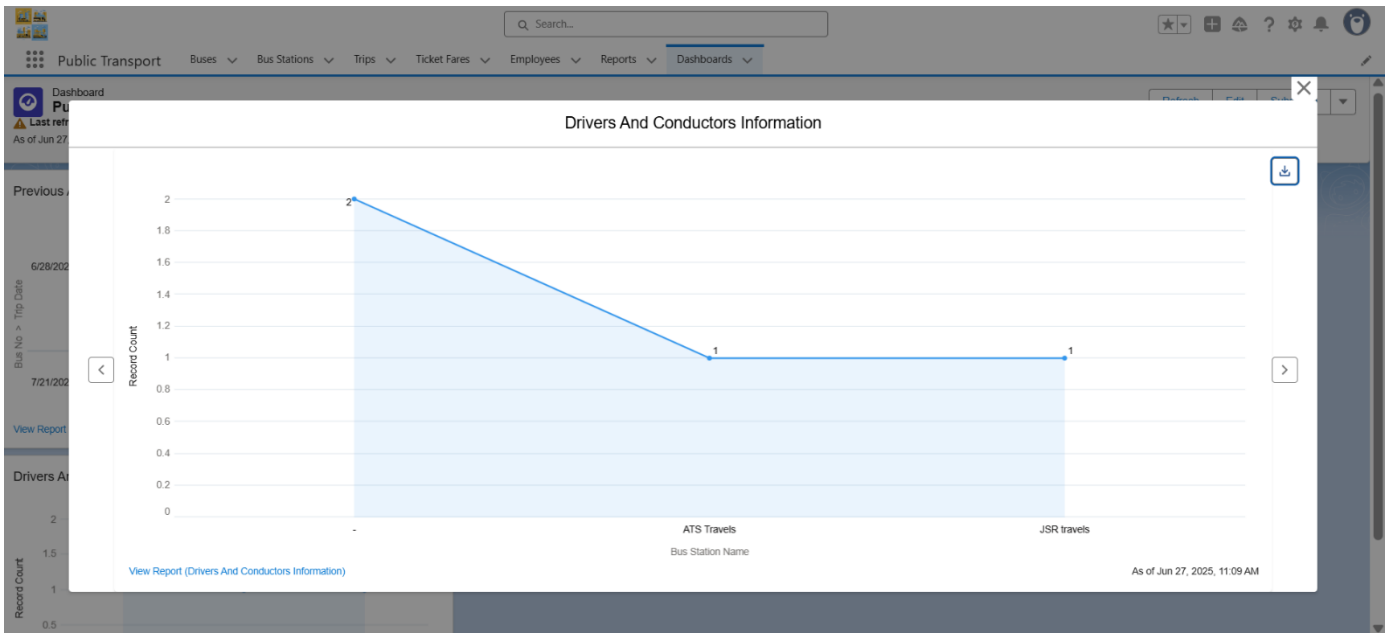


Milestone 11: Dashboards

- Designed dashboards showing:
 - Revenue trends, trip performance, and role summary.
- Used bar, pie, and summary widgets for visualization.

OUTPUT SCREENSHOT







Milestone 12: Final Review


- Conducted full system testing.
- Checked all object links, flows, triggers, reports.
- Confirmed the CRM is fully functional and stable.



2. Dataset

The system was tested with the following types of data:(Sample Records and Input Values Used During Testing)

Object	Sample Fields Used
Bus Station	Name: Visakhapatnam Central, Category: Managed
Bus	Model: Super Deluxe, Capacity: 45, Station: Visakhapatnam
Employee	Name: Rakesh, Role: Driver, Phone: 9876543210, DOB: 1980-06-14
Ticket Fare	Route: Hyderabad-Warangal (Express), Fare: ₹220
Trip	Route: Hyderabad-Warangal, Passengers: 34, Estimated Time: 4 hrs

 Note: All test records were created using Salesforce's UI and validated via flows and formula fields