

CRM Application For Public Transport Management System

Hardware Required:

- Laptop or Desktop with Internet connection

Software Required:

- Salesforce account or org

The Public Transport (RTC - Regional Transport Corporation) Management System is a comprehensive Salesforce application designed to streamline and manage various operational aspects of public transport. This system enables the Transport department to efficiently maintain details of employees, their roles, bus stations, buses, ticket fares, daily bus trips, passenger counts, and the total ticket fare amount. Leveraging Salesforce's robust platform, the department can improve operational efficiency, data accuracy, and reporting capabilities.

Project Overview

- Consolidate all transport-related data into a single Salesforce application for easy access and management.
- Enable real-time insights and reports on metrics like passenger count and revenue.
- Maintain detailed records of transport employees.
- Define and assign roles and responsibilities.
- Manage shifts for drivers and conductors.
- Maintain information on bus stations and buses.
- Manage schedules and assign buses to routes.
- Define and manage ticket fares.

- Track daily trips and total fare collection.
- Provide dashboards for metrics like passenger count and revenue.

Project Flow (Milestones)

1. Creation of Developer Account
2. Object Creation
3. Tabs Creation
4. Lightning App Development
5. Fields Setup
6. Page Layouts Configuration
7. Validation Rules
8. Flows Implementation
9. Triggers Implementation
10. Reports Generation
11. Dashboards Creation
12. Conclusion

Learning Outcomes

- Real-Time Salesforce Project
- Object Relationships
- Page Layout Configuration
- Validation Rules Creation
- Triggers Development
- Flows Usage
- Reports and Dashboards Creation

Milestone 1: Salesforce Introduction

Salesforce is a cloud-based customer success platform helping organizations manage sales, services, and marketing. To start, create a developer org at:

<https://developer.salesforce.com/signup>

Steps:

- Fill in name, email, role, and company
- Username format: username@organization.com
- Verify via email and set password

Milestone 2: Object Creation

Create custom objects:

- Bus Station
- Bus
- Trip
- Ticket Fare
- Employee

Setup -> Object Manager -> Create -> Custom Object

Milestone 3: Tabs Creation

Create tabs for all objects:

Setup -> Tabs -> New -> Select Object -> Choose Style -> Save

Milestone 4: Lightning App

App Manager -> New Lightning App -> Add Items:

Bus Stations, Buses, Trips, Ticket Fares, Employees, Reports, Dashboards -> Save & Finish

Milestone 5: Fields Creation

Create the following field types across objects:

- Picklists (e.g., Role, Bus Model, Category)
- Dates (e.g., Trip Date)
- Number (e.g., Capacity)
- Lookup (e.g., Employee -> Bus Station)
- Checkbox (e.g., Shelter Available)
- Phone (e.g., Phone No)
- Formulas (e.g., Age, Date of Retirement, Total Amount)
- Global Picklists (Bus Time, Bus Model)

Milestone 6: Page Layouts

Arrange fields in detail/edit view pages:

Object Manager -> Page Layouts -> Arrange fields and make some fields read-only (e.g., Last Updated)

Milestone 7: Validation Rules

Examples:

- Employee Age \geq 21
- Employees must work at Managed Bus Stops
- Phone number format validation
- Departure and Arrival times cannot be same
- Passenger count \leq capacity for select models
- Bus Registration Number format validation

Milestone 8: Flows

Create Record-Triggered Flow to fetch Ticket Fare:

- Triggered on Trip insert/update
- Use "Get Records" for Ticket Fare
- Decision: if found, update Trip
- Else show custom error message

Milestone 9: Triggers

Create Apex Class TripTriggerHandlerClass to:

- Validate Driver Id refers to a Driver
- Validate Conductor Id refers to a Conductor

Trigger TripTrigger on Trip (before insert/update) to invoke handler methods

Milestone 10: Reports

Create summary reports:

1. Employees By Bus Station (Group by Bus Station Name, columns: ID, Name, Role)
2. Drivers and Conductors Info (Filtered by Role)
3. Previous and Current Month Trips (Group by Trip Date and Bus No, columns: Trip No, Route Name, Passenger Count, Total Amount)

Milestone 11: Dashboards

Create dashboard:

- Add widgets for:
 - Previous and Current Month Trip Details Report
 - Drivers and Conductors Information Report
- Use charts or tables

Milestone 12: Conclusion

The Salesforce-based RTC Management System boosts operational efficiency, ensures accurate record keeping, and enhances reporting and decision-making capabilities. It provides a centralized solution for managing transport operations effectively.

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