

# Requirement Analysis

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The Requirement Analysis Phase focuses on collecting, organizing, and validating everything your system needs to accomplish. It ensures that the solution you're building is not only technically sound but also directly aligned with what your stakeholders (RTC departments, drivers, managers) truly need. In our project, "A CRM Application for Public Transport Management System," this phase helped bridge the gap between problem understanding and system design, using real user journeys, data flows, and solution requirements. Where user-centric planning meets technical clarity to transform a problem into a buildable solution.

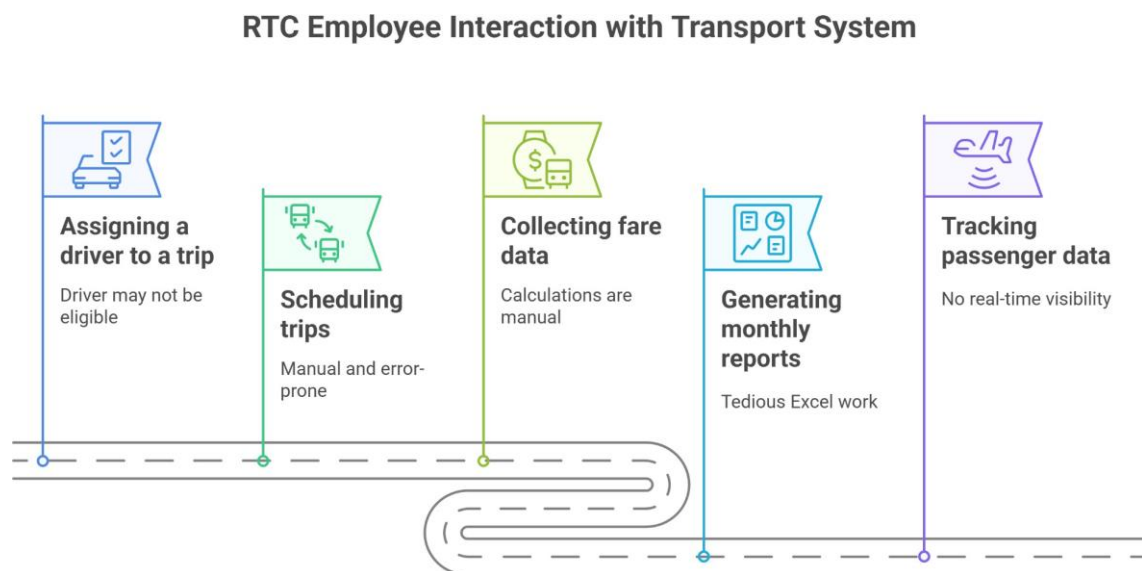
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- ◆ Customer Journey Map-Understanding User Experience Flow
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**Purpose:** The **Customer Journey** Map visualises how RTC employees (e.g., Bus Station Managers, Admins, Drivers, Conductors) interact with the transport system daily. It highlights key actions, pain points, and opportunities for improvement, guiding CRM design from a real-world usage perspective.

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## Journey Steps (For an RTC Admin):



This journey helped prioritize features like formula fields, validation rules, and real-time dashboards in our object and flow design.

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## ◆ Data Flow Diagram

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### **Purpose:** Mapping Information Flow Between Objects

The Data Flow Diagram (DFD) models how information moves between Salesforce objects and components in the CRM. It helped us structure relationships between:

- Bus Station, Bus, Trip, Employee, and Ticket Fare

### **Level 1 DFD Overview:**

#### **1. Admin Inputs:**

- Adds bus, station, trip details
- Assigns drivers and conductors (from Employee object)

#### **2. System Logic:**

- Validates employee role (Driver or Conductor)
- Fetches fare via flow based on route + model
- Calculates total fare using formula (Passenger Count × Fare)

#### **3. Outputs:**

- Performance insights via reports and Real-time dashboards for admin
- Error messages for invalid role assignments

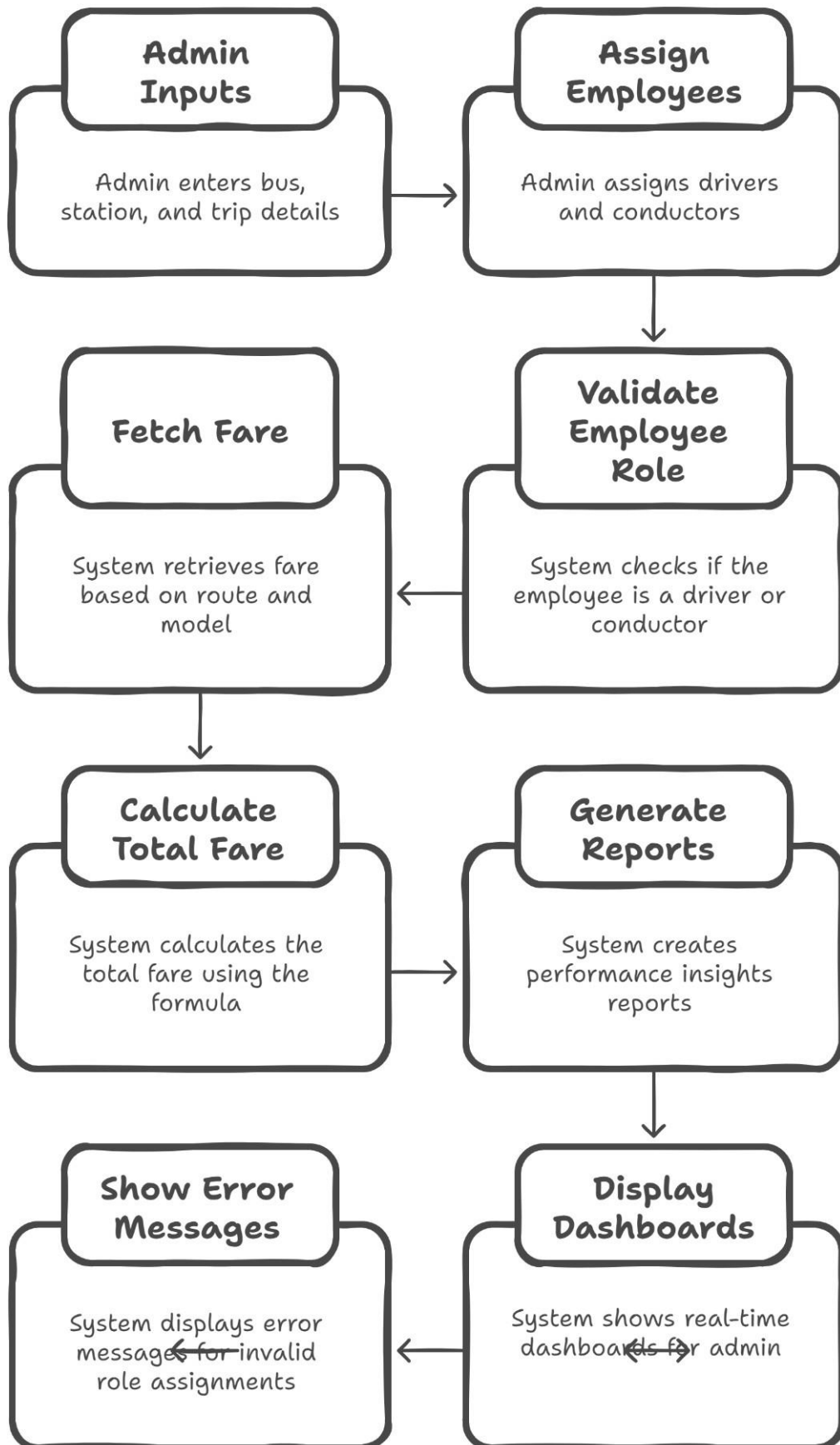
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## **Objects Involved in Bus Transportation Process**

Bus Station → Bus → Employee → Trip → Ticket Fare

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## Level 1 DFD Overview



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## ◆ Solution Requirements

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What the CRM System Must Do

### Functional Requirements:

- Create custom objects for: **Bus Station, Bus, Trip, Employee, Ticket Fare**
- Establish relationships using lookup and formula fields
- Validate employee roles using Apex Triggers
- Automate fare fetching via Flows
- Support performance dashboards & summary reports

Non-Functional Requirements:

- User-friendly Lightning App Interface
- Real-time field-level validation
- Centralized database with accurate relationships

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## ◆ Technology Stack

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### Tools & Platforms Used for CRM Implementation

Category	Technology Used	Description
Platform	Salesforce Lightning	Used to build custom CRM using standard & custom objects
Automation	Flows & Validation Rules	Automate fare fetching and restrict invalid data
Custom Logic	Apex Triggers & Classes	Used to validate Driver/Conductor ID
Reports & Dashboards	Salesforce Reports	To analyze employee data, trips, revenue, etc.
UI/UX	Lightning App Builder	For creating a unified app view for Public Transport CRM

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### Summary

This Requirement Analysis Phase helped ensure that all CRM features were grounded in user pain points, supported by data structures, and enabled by the right technologies. It directly shaped how we approached object modeling, data automation, UI design, and performance reporting in Salesforce.

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