

# Retail Delivery Management System

## Introduction:-

The **Retail Delivery Management System** is designed to streamline and automate the tracking, scheduling, and delivery of retail products from warehouses to customers. As online and offline retail operations expand, efficient delivery management has become a core component of customer satisfaction and operational success. This database project focuses on managing orders, deliveries, inventory, delivery personnel, and customers through a centralized SQL database.

## Abstract :-

The aim of this project is to build a robust backend database for a **Retail Delivery Management System** using SQL. The system manages retail orders from placement to delivery, maintaining real-time records of inventory, delivery personnel, customer details, and delivery statuses. The database supports CRUD operations, report generation, and simple business logic through triggers and stored procedures.

Key modules include:-

- Product and Inventory Tracking
- Order Management
- User and Vendor Management
- Inventory Management

## Tools Used :-

- SQL Server
- SQL Server Management Studio
- SQL (DDL & DML)
- DB Diagram
- Stored Procedures & Triggers

## Steps Involved :-

1) Requirement Analysis:-

- Creating Database and Design ER Diagram.
- Defines Module like Users, Vendors, Payments, Feedback, Inventory etc.
- Implementing Normalization Concept
- Implementing PK, FK Concepts to Identifying the Relationships and data Flow.

2) Database Schemas and Tables:-

- Creating Tables as ER Diagram
  - Assign FK and PK
  - Identifying the Relationship to optimizing SQL Queries.
- 3) Data Insertion:-
- Populate Sample data into all tables using Insert Queries.
- 4) Writing SQL Queries :-
- Performed CRUD operations Select, Insert, Update, Delete
  - Business Queries :-
    - Get All Orders by a User (Customer or Vendor)
    - Total Revenue Generated by Each Vendor
    - Top 5 Bestselling Products
    - Average Product Rating
    - Delivery Status of a Particular Order
- 5) Implementing Store Procedures and Trigger:-
- Trigger – Auto Update Inventory Stock after Order
  - Store Procedure – Calculate Delivery Time Estimate
- 6) Report Generation :-
- Generate Summery Reports Using SQL View
    - ◆ Order Summery Report
    - ◆ Product Sales Report

## Conclusion:-

This SQL-based **Retail Delivery Management System** provides an efficient structure for handling retail deliveries, customer orders, and inventory. By organizing data in a relational format, the system improves accuracy, speed, and transparency in delivery operations. It is scalable and can be extended with frontend technologies for complete deployment in real-world scenarios.