Inventory & Warehouse Management System

Introduction
This project implements an SQL-based Inventory & Warehouse Management System to track products, suppliers, warehouses, and stock levels. It helps manage stock availability, generate low-stock alerts, and supports stock transfer between warehouses using stored procedures.

Abstract
The project provides a backend SQL schema for managing warehouse inventory. It includes normalized tables for Suppliers, Warehouses, Products, and Stock. We created **views** for stock levels and reorder suggestions, **triggers** for low-stock notifications, and a **stored procedure** for stock transfer. The design ensures data consistency and enables efficient inventory tracking.

Tools Used
- MySQL 8.0
- DBeaver / MySQL Workbench
- Git & GitHub for version control

Steps Involved in Building the Project
1. Designed schema and created tables (Suppliers, Warehouses, Products, Stock, Movements, Notifications).
2. Inserted sample data for suppliers, warehouses, products, and stock.
3. Created views for warehouse stock levels and reorder suggestions.
4. Implemented triggers for low-stock notifications.
5. Developed a stored procedure to transfer stock safely between warehouses.
6. Performed testing with different stock transfer and low-stock scenarios.

Conclusion
The Inventory & Warehouse Management System successfully demonstrates SQL concepts like schema design, views, triggers, and stored procedures. It ensures that stock transfers are handled transactionally and low-stock notifications are generated automatically. Future enhancements could include purchase/sales order modules, role-based access, and integration with analytics dashboards.