



ADVENTIST UNIVERSITY OF CENTRAL AFRICA

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PL/SQL PROJECT: Smart Construction Material Inventory and Sales Management System

1. Project Description

The **Smart Construction Material Inventory and Sales Management System** is a PL/SQL-based project designed to support construction material businesses in tracking stock levels, sales activities, and supplier deliveries. Construction materials such as cement, iron bars, tiles, and roofing sheets require accurate monitoring to avoid shortages or overstocking.

This project aims to automate the key operations of a construction materials shop by using PL/SQL triggers, procedures, and functions. The system helps reduce manual errors, improves daily record-keeping, and supports faster decision-making. It also enhances the accuracy of stock updates and revenue calculations.

2. Who Uses the System?

- 1. Construction Material Business Owners** – to monitor stock, sales, and profitability.
- 2. Store Managers / Shop Attendants** – to record daily sales, update deliveries, and check stock availability.
- 3. Suppliers** – their deliveries are recorded and tracked for accountability.
- 4. Accountants / Cashiers** – to calculate total sales and revenue.
- 5. Customers (Indirectly)** – benefit from improved service and material availability.

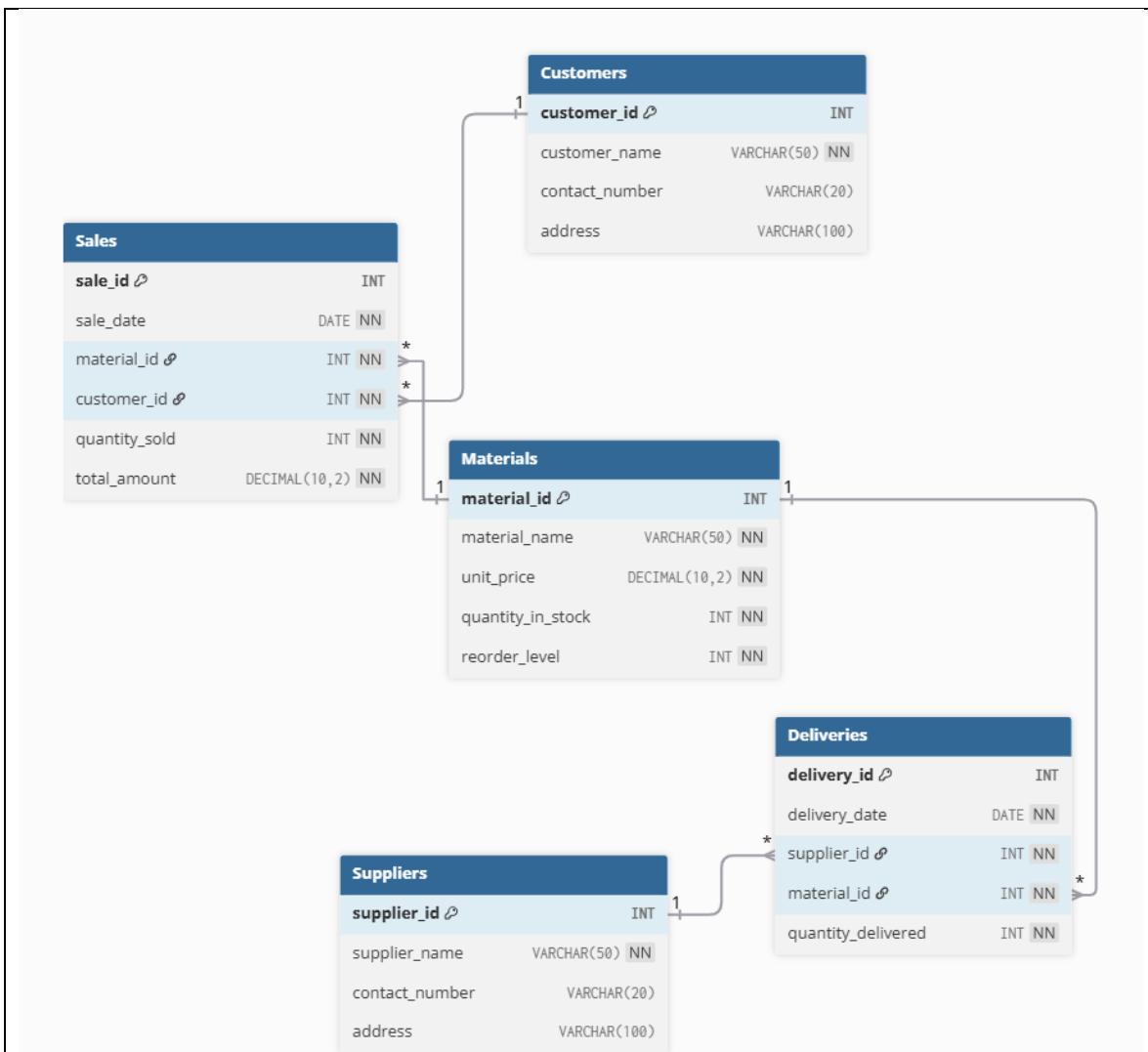
3. PL/SQL Functionalities and Innovations

1. Trigger to automatically update stock after each sale.
2. Trigger to generate a low-stock alert when materials reach the reorder level.
3. Stored procedure for sales entry, validating stock and calculating the total amount.
4. Function to calculate daily or monthly revenue.
5. Cursor to track and analyze supplier delivery performance.

4. Innovation and Improvement

This project automates construction material inventory management using PL/SQL. It reduces human error, improves accuracy, provides real-time updates, and supports better business decisions. Automation ensures efficient operations compared to manual record-keeping.

DATABASE SCHEMA



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