Self Assessment

Problem Statement: Student Learning Database – Shop Case Study

A local shop called DailyMart sells a variety of items such as groceries, drinks, toiletries, and stationery. The shop wants to move from manual record-keeping to a digital database system using MySQL. Currently, all sales, stock records, and supplier information are kept in notebooks, making it hard to track inventory, customer purchases, and supplier deliveries.

You are to design and create a relational database for DailyMart that captures all key business activities.

The system should allow the shop to:

1. Record and manage details of all products (name, category, price, quantity in stock, supplier).
2. Keep track of customers and their purchases (customer name, contact, purchased items, quantity, date of purchase).
3. Manage suppliers and the products they supply (supplier name, contact, items supplied, and delivery dates).
4. Record sales transactions, linking customers, products, and payment details.

Your Tasks :

1. Identify and list all entities and their attributes.**(2 marks)**
2. Draw an ER diagram showing the relationships between entities using Lucidchart **(3 marks)**
    - Define relationship types (one-to-many, many-to-many) and their cardinalities.
3. Create the database and tables in MySQL using appropriate data types and constraints (PRIMARY KEY, FOREIGN KEY, etc.).**(3 marks)**
4. Insert sample data and demonstrate basic queries such as:
    - Viewing all sales by a customer.
    - Checking stock levels.
    - Listing suppliers and their supplied products. **(2 marks)**

This project will test your understanding of database design, relationships, and SQL commands.