

DATABASE ASSIGNMENT

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PROJECT TITLES

1. **Inventory management system**
2. **Customer order and billing system**
3. **Supplier and procurement management**



CURRENT BUSINESS PROCESS

1.Inventory Management System

- Stocking of goods
- Tracking of product quantities
- Product expiration monitoring

2.Customer Order and Billing System

- Customer purchases at checkout
- Billing and receipt generation
- Discount and loyalty point management

3.Supplier and Procurement Management

- Managing supplier information
- Placing orders to suppliers
- Tracking deliveries and payments



PROBLEM STATEMENTS

Inventory Management System:

- Currently, the supermarket relies on manual stock tracking, leading to frequent overstocking or stockouts.

Customer Order and Billing Management:

- The billing process is semi-manual, which results in delays at checkout and errors in receipts or loyalty point tracking.

Supplier and Procurement Management:

- Procurement activities are uncoordinated and lack real-time tracking of deliveries and payments, leading to poor supplier relationships and late restocking.



PROPOSED BUSINESS PROCESS

1. **Inventory Management System:**
 - Automatically update stock levels upon sales and deliveries.
 - Generate low-stock alerts.
 - Track expiration dates and remove expired items.
2. **Customer Order and Billing Management:**
 - Real-time scanning and billing at POS.
 - Integrate loyalty program tracking.
 - Generate daily transaction reports.
3. **Supplier and Procurement Management:**
 - Create and send purchase orders automatically.
 - Monitor supplier delivery status.
 - Maintain records of past procurement transactions.



ENTITIES AND ATTRIBUTES

Product

- ProductID
- Name
- Category
- Price
- QuantityInStock
- ExpiryDate

Customer

- CustomerID
- Name
- Phone
- Email
- LoyaltyPoints

Order

- OrderID
- CustomerID
- Date
- TotalAmount



ENTITIES AND ATTRIBUTES

OrderDetail

- OrderDetailID
- OrderID
- ProductID
- Quantity
- Price

Supplier

- SupplierID
- Name
- Contact
- Email

Procurement

- ProcurementID
- SupplierID
- ProductID
- Quantity
- OrderDate
- DeliveryDate



THE ENTITY RELATIONSHIP DIAGRAM

