Project Proposal:
Food Management System

Guided By: Anuj Kumar

Created By:

- Ritika Tyagi – AF04991780
- Ritika Parjapati – AF04971882

Batch Code: D2406

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1. Project Overview

The Food Management System is designed to manage food items, suppliers, purchases, and consumption more efficiently. It helps reduce wastage, monitor inventory, automate tracking, and ensure timely alerts.

2. Core Objectives

- Automate food stock tracking
- Manage suppliers and purchase records
- Maintain consumption logs
- Generate alerts for low stock
- Prevent wastage and ensure transparency

3. System Analysis

Modules:

1. User Management
2. Food Items Management
3. Supplier Management
4. Purchase Tracking
5. Consumption Tracking
6. Alert System

4. Database Design

Users Table

• user_id (INT) – Primary Key
• name (VARCHAR) – User Name

Food_Items Table

• item_id (INT) – Primary Key
• item_name (VARCHAR) – Name of Food
• quantity (INT) – Available Quantity

Suppliers Table

• supplier_id (INT) – Primary Key
• supplier_name (VARCHAR)
• contact (VARCHAR)

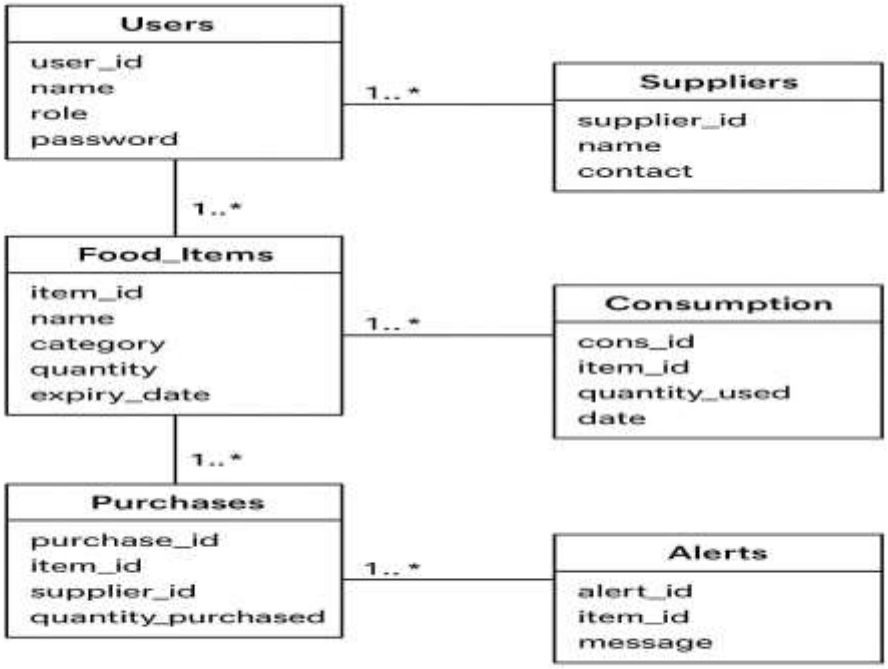
Purchases Table

• purchase_id (INT) – Primary Key
• item_id (INT) – Foreign Key
• quantity (INT)
• date (DATE)

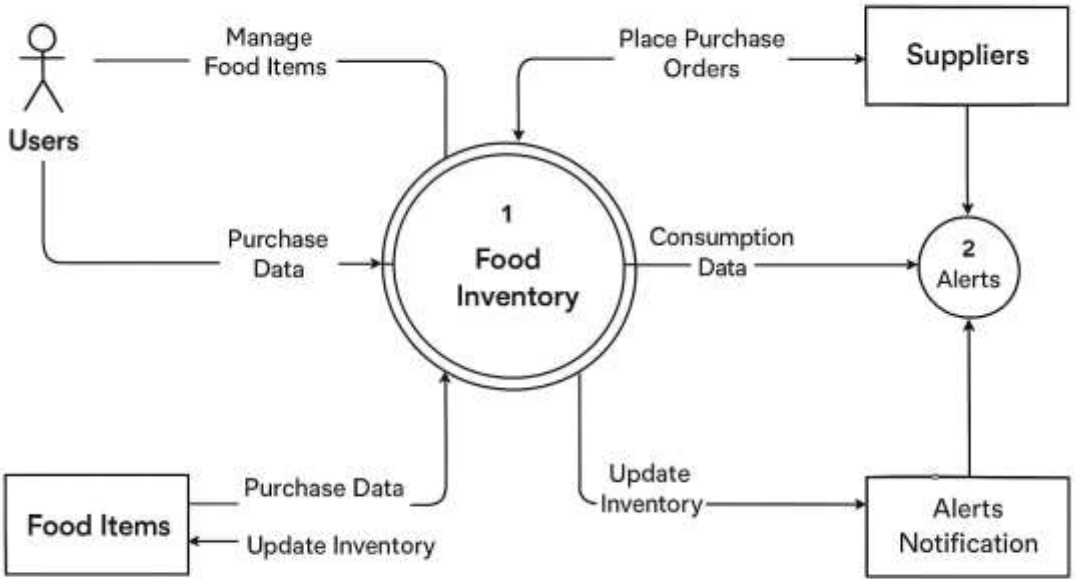
Consumption Table

• log_id (INT) – Primary Key
• item_id (INT) – Foreign Key
• used_quantity (INT)
• date (DATE)

5. Entity Relationship Diagram (ERD)



6. Data Flow Diagram (DFD)



7. Technical Specifications

Hardware Requirements

• 4GB RAM
• 250GB HDD/SSD
• Basic Input/Output Devices

Software Requirements

• OS: Windows
• Frontend: Java (JDK 25)
• Database: MySQL (MySQL Workbench)
• IDE: Eclipse (Maven)

8.Future Enhancements

- Mobile App for food tracking
- AI-based consumption prediction
- Smart IoT sensor integration
- Cloud-based inventory dashboard