

# **Project Proposal: Food Management System**

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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)

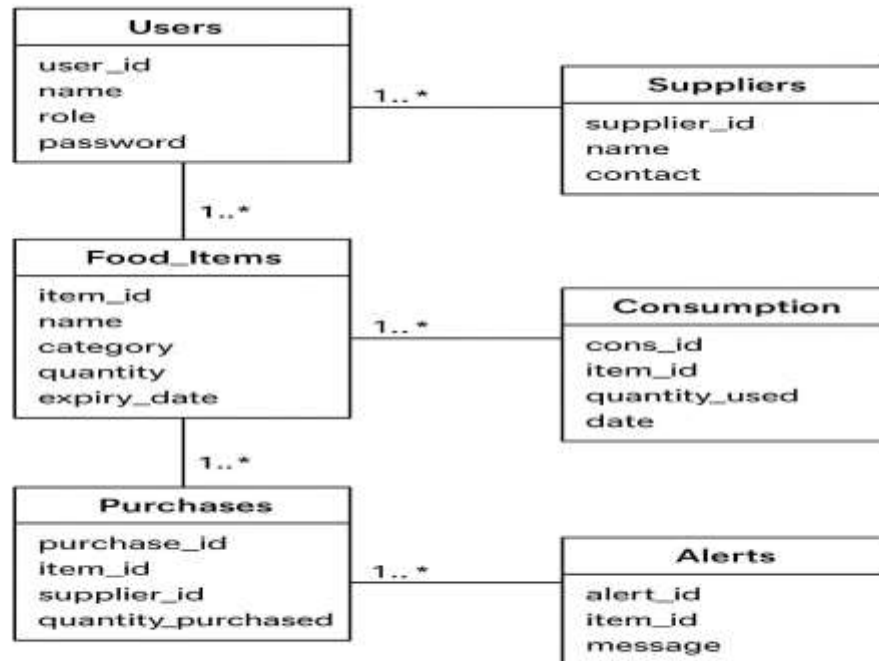
### **Purchases Table**

- purchase\_id (INT) – Primary Key
- item\_id (INT) – Foreign Key
- quantity (INT)
- date (DATE)

## **Consumption Table**

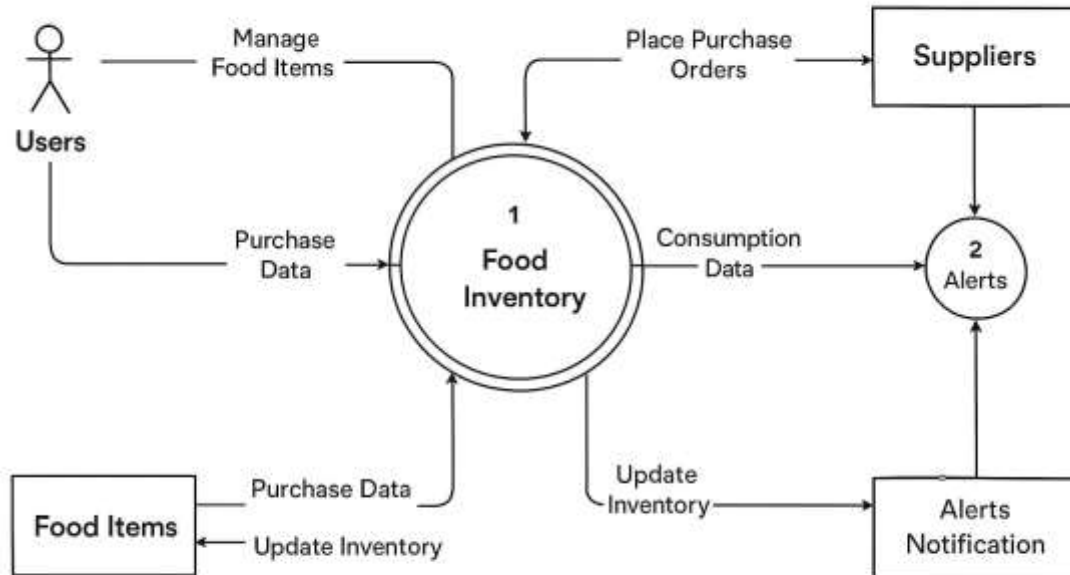
- log\_id (INT) – Primary Key
- item\_id (INT) – Foreign Key
- used\_quantity (INT)
- date (DATE)

## 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