

# Project Proposal

On  
food Management System

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## **\*\*FOOD MANAGEMENT SYSTEM\*\***

### **1. Title of the Project**

Food Management System

### **2. Introduction**

Food wastage and inefficient distribution remain major issues in households, hostels, restaurants, and community centers. A Food Management System provides an organized way to store data about food items, track food availability, predict shortages, and reduce waste by maintaining proper inventory records.

This system helps institutions manage food resources using a digital platform with automated alerts, reporting, and data-driven planning.

### **3. Objective**

- \* To design a reliable and efficient system for food inventory management.
- \* To minimize food wastage by real-time tracking of food items.
- \* To maintain records of food stock, usage, suppliers, and expiry dates.
- \* To automate the process of generating alerts and reports.
- \* To create an easy-to-use system for staff and administrators

### **4. Project Category**

Database Management System (DBMS) / Application Development

### **5. Analysis**

#### **Modules and Description**

##### **1. User Module**

Manages login, roles, and authenticated access.

##### **2. Inventory Module**

Maintains data of food items, quantities, categories, expiry, usage, etc.

### 3. Supplier Module

Stores supplier information and purchase records.

### 4. Consumption Module

Tracks daily or weekly food usage for planning.

### 5. Alerts & Reports Module

Generates expiry alerts, low-stock alerts, usage reports, and wastage analysis.

## Database Design

The database includes the following tables:

\*Users\*

\*Food\_Items\*

\*Suppliers\*

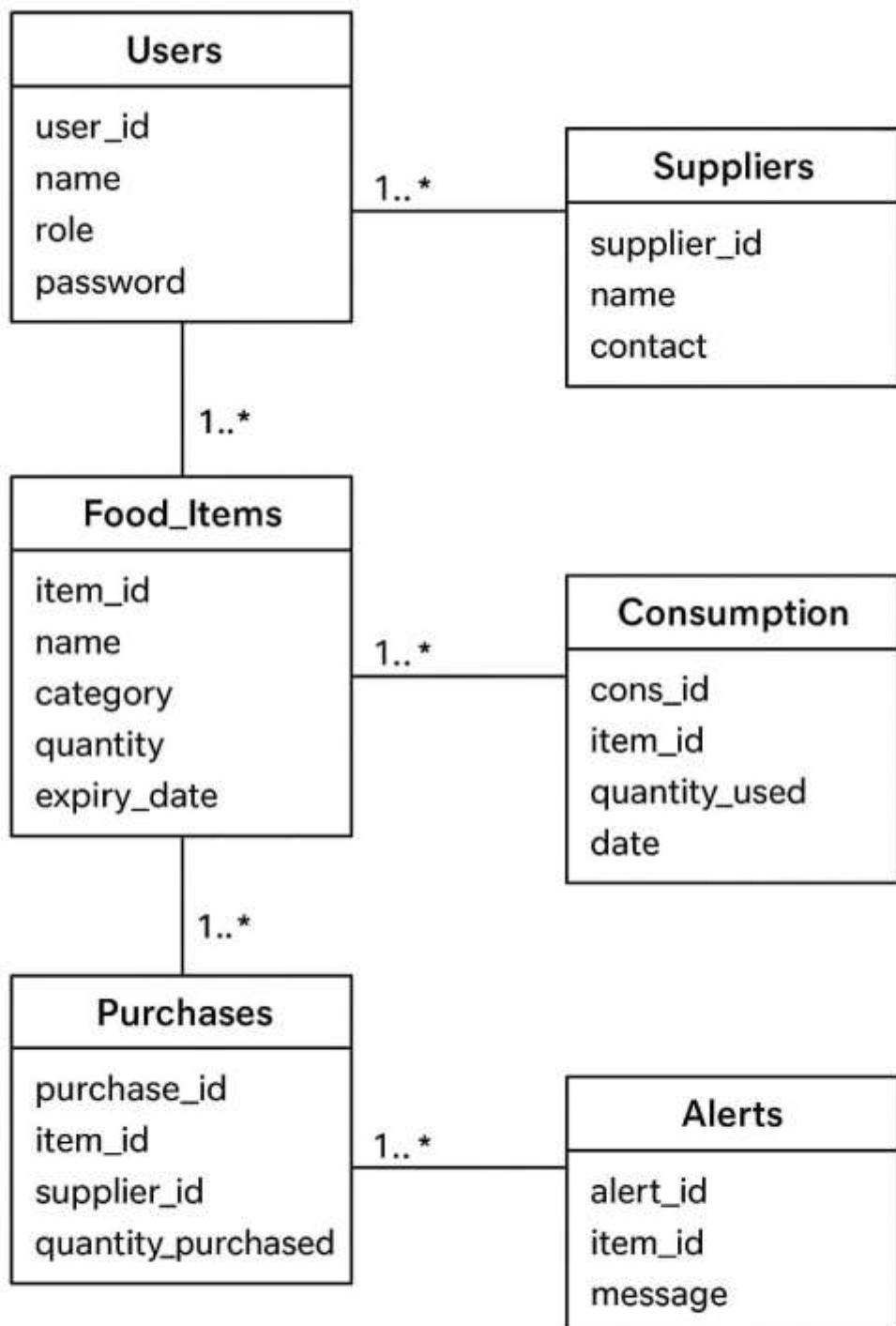
\*Purchases\*

\*Consumption\*

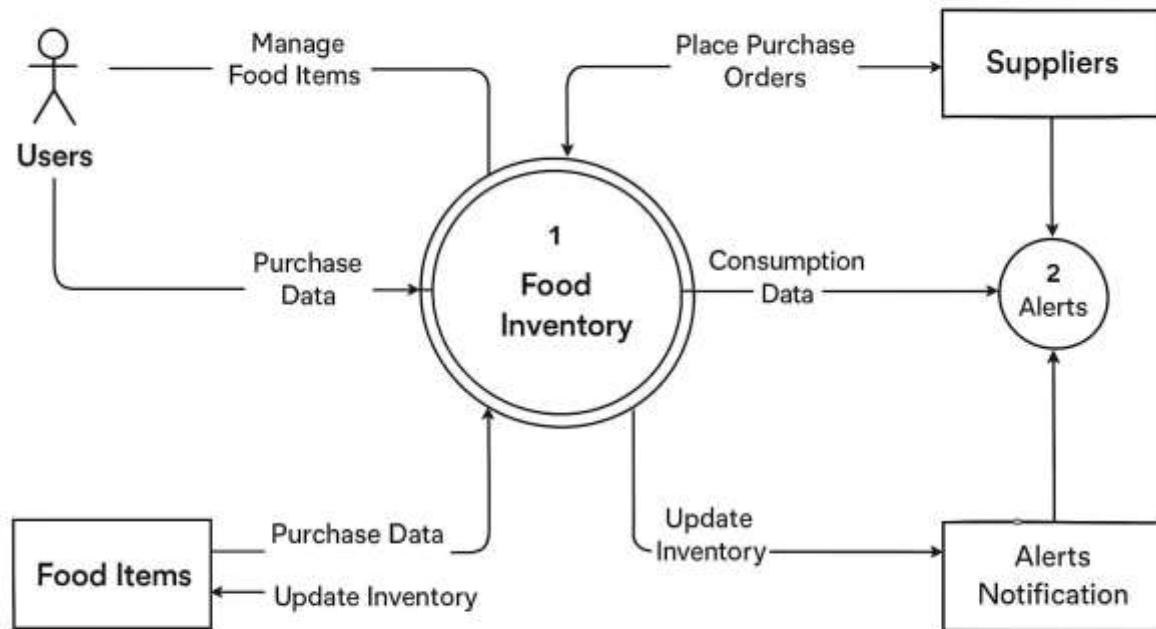
\*Alerts\*

## ER Diagram

Below is a descriptive ER diagram



Data Flow Diagram (Level 0 – Context Diagram)



## 6. Complete Structure

### Process Logical Diagram

**Input:** Food details, user data, supplier data, consumption details

**Process:** Store → Validate → Analyze → Generate Alerts → Produce Reports

**Output:** Stock reports, wastage reports, notifications

## 7. Platform Used

### Hardware Requirements

\* Processor: Minimum i3 or equivalent

\* RAM: 4 GB or higher

\* Storage: 500 MB minimum for application and database

\* Devices: PC, Laptop, or Mobile device

## Software Requirements

- \* Operating System: Windows / Linux / Android
- \* Database: MySQL / PostgreSQL
- \* Backend: Python / Java / PHP / Node.js
- \* Frontend: HTML, CSS, JavaScript
- \* Tools: VS Code / XAMPP / PyCharm

## 8. Future Scope

- \* Integration with AI-based food consumption prediction.
- \* Automatic order generation from suppliers.
- \* Mobile app with push notifications.
- \* Integration with hostel/restaurant billing systems.
- \* Cloud-based multi-location dashboard.

## 9. Bibliography

- \* DBMS concepts – Korth & Silberschatz
- \* MySQL Documentation
- \* Research papers on Food Inventory Management
- \* Online resources related to system design and ER diagrams