Project Proposal

On

food Management System

Create by

Ritika parjapati

Ritika Tyagi

AF id:

AF0497188

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AF0499178

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Guided By:

Mr. Anuj Kumar

Table Of Contents

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

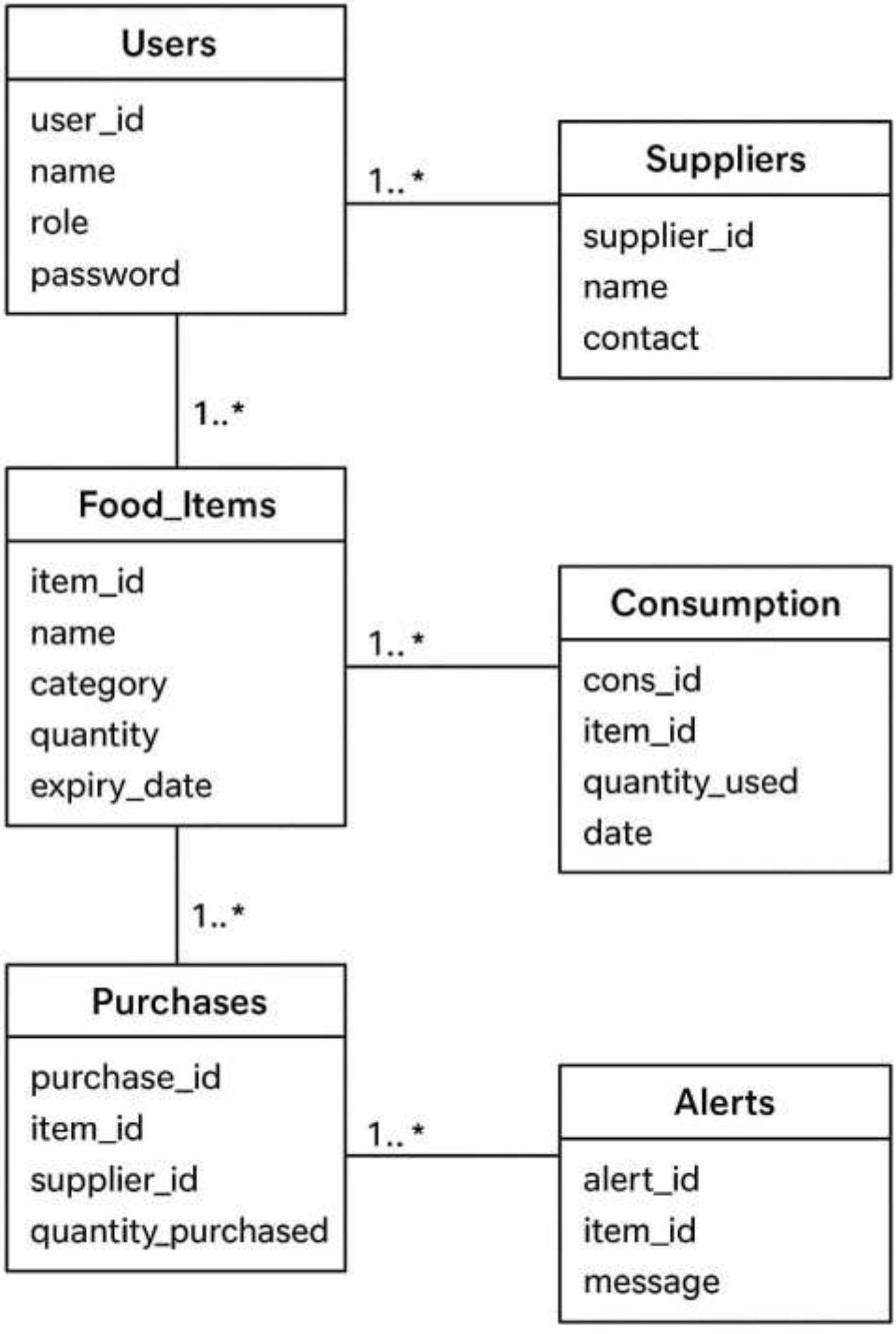
Purchases

Consumption

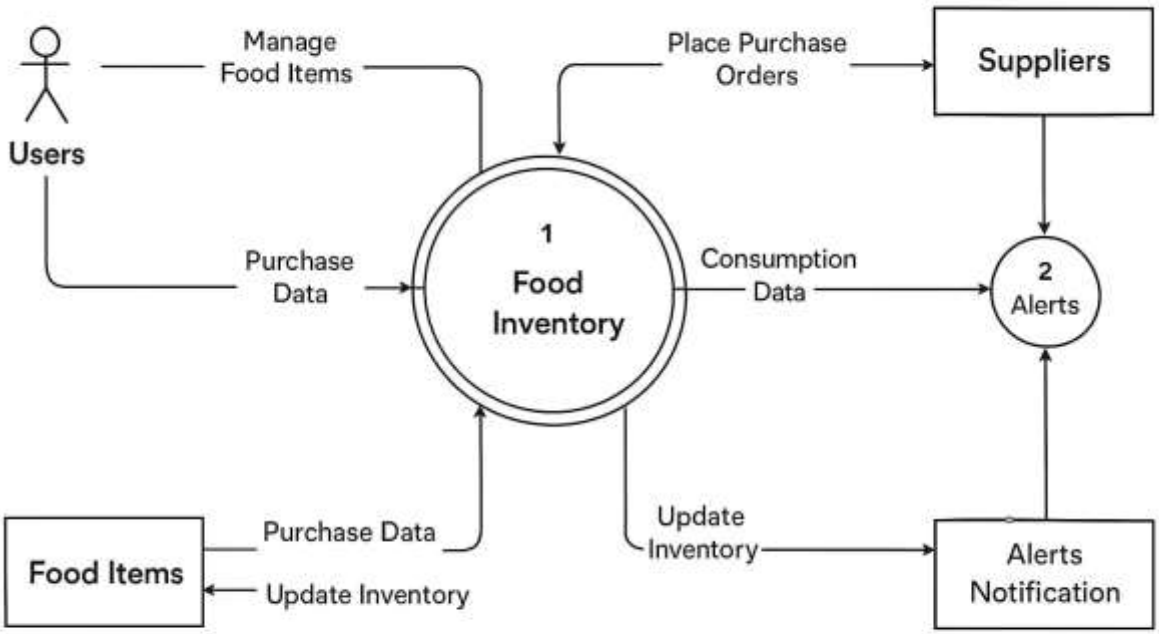
Alerts

ER Diagram

Below is a descriptive ER diagram


Users
user_id
name
role
password
1..*
Suppliers
supplier_id
name
contact
1..*
Food_Items
item_id
name
category
quantity
expiry_date
1..*
Consumption
cons_id
item_id
quantity_used
date
1..*
Purchases
purchase_id
item_id
supplier_id
quantity_purchased
1..*
Alerts
alert_id
item_id
message

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