GROCERY MANAGEMENT SYSTEM
PROJECT REPORT

1. INTRODUCTION

This project is a full-stack Grocery Management System featuring customer-side shopping, dynamic product display, cart management, admin inventory control, discount handling, and a polished user interface inspired by modern grocery applications.

2. OBJECTIVES

• Develop an interactive grocery shopping platform.
• Implement category-wise product presentation with images.
• Provide real-time stock and discount updates.
• Allow administrative control through secure login.
• Manage inventory efficiently using SQLite database.

3. TECHNOLOGIES USED

• Frontend: HTML, CSS, JavaScript, Bootstrap
• Backend: Python (Flask Framework)
• Database: SQLite
• Tools: VS Code, ReportLab, Browser Developer Tools

4. SYSTEM FEATURES

• Category-based product browsing
• Product details popup with description and nutrition
• Add to cart with quantity control
• Search bar with auto-suggestions
• Live discount calculation
• Admin login and dashboard
• Admin-controlled stock updates
• Smooth, modern UI with banners and icons

5. DATABASE DESIGN

Items Table: id, name, category, price, quantity, discount_percent
Cart Table: id, product_name, price, quantity

6. SYSTEM FLOW

1. User opens home page and browses categories.
2. User selects a product and views details in popup.
3. User adds items to cart and updates quantity.
4. Discounts applied dynamically.
5. Admin updates stock, price, and offers from dashboard.
6. All changes reflect instantly on user side.

7. FUTURE ENHANCEMENTS

• Online payments and order system
• Delivery tracking module
• User accounts, wishlist, and order history
• Review and rating system
• Automated inventory prediction using ML
• Barcode scanning for admin inventory updates

8. CONCLUSION

The Grocery Management System is a robust and scalable project that replicates the core features of modern grocery applications. It integrates real-time inventory updates, interactive UI components, and a strong backend structure, making it suitable for real-world deployment.

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