Mess Management System

Feature-wise Webpage Description

Department: DBMS

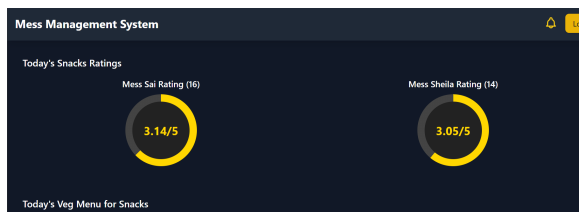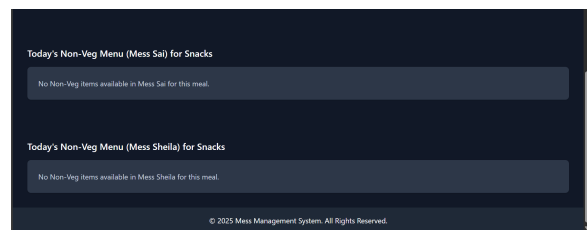**Date:** April 16, 2025

Contents

1. Home Page

The Home Page is the primary point of interaction for students. It offers real-time and dynamic information based on the current meal and mess schedule.

- **Live Food Ratings:** Displays current ratings for Breakfast, Lunch, Snacks, and Dinner, refreshed according to the time of day. Ratings are shown separately for both Sai and Sheila messes.

- **Today's Menu Display:** Displays only the meals relevant to the current time.

- **Special Meals (Veg/Non-Veg):** Highlights today's special food items, separated by veg and non-veg options.

- **Dynamic Non-Veg Menu:** Non-veg items are displayed by floor and vary by meal and mess.

- **Notifications Panel:** Shows the latest announcements from the mess admin (e.g., schedule changes).

- **Login Button:** Provides login access for students, mess officials, and admins.
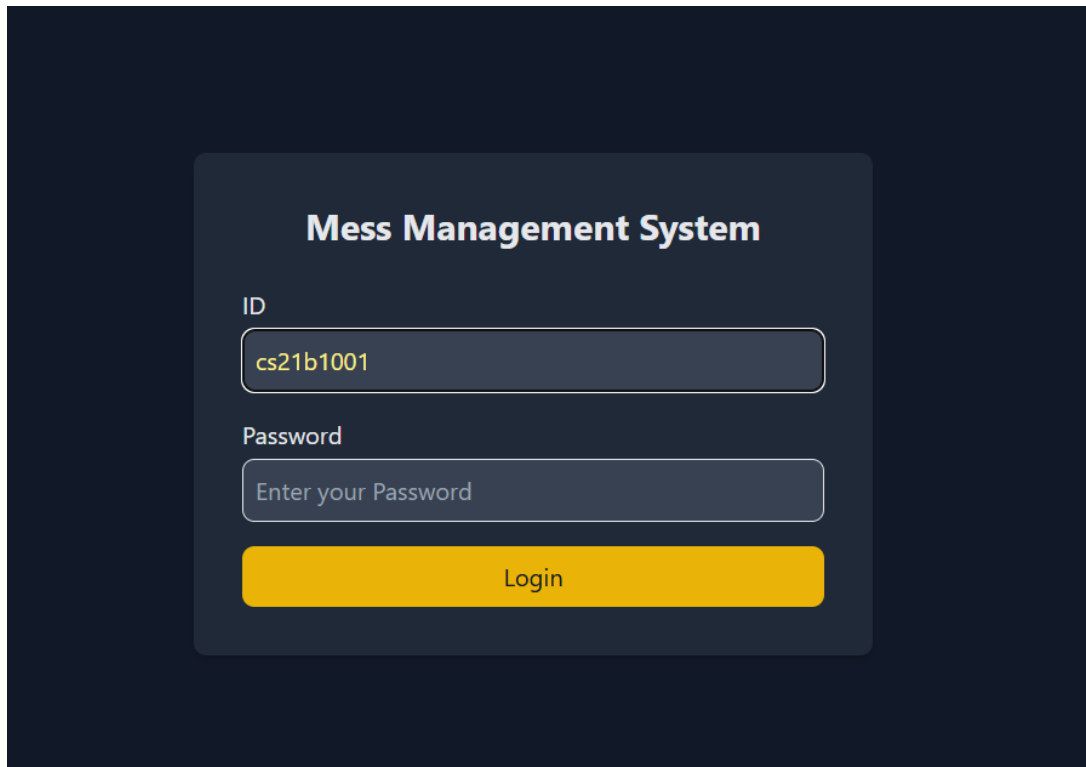

(a) Live Ratings Overview

(b) Today's Special Meals

Figure 1: Home Page Screens

2. Login and Authentication

- **Session-Based Login:** Utilizes Flask sessions to manage user authentication.

- **Role-Based Access:** Redirects users based on their role—Student, Mess Official, or Admin.

- **Secure Routing:** Ensures only authorized users can access protected routes.

Figure 2: Login Interface

3. Admin Dashboard

The Admin Dashboard offers comprehensive control and analytics for mess operations.

- **Update Menu:** Modify the base veg menu for future days. Changes reflect globally unless overridden by mess officials.

- **Send Notifications:** Broadcast alerts such as meal timing updates, special events, or announcements.

- **View Feedback:** Display student feedback categorized by week, day, meal, and food item.

- **View Waste Data:** Access aggregated data from mess officials to analyze food wastage.

- **Review Payment Details:** View payment records, both online and manually entered.

- **Select Mess Dropdown:** Toggle between messes to view or manage individual operations.

- **Mess Switching Control:** Enable or disable student mess switching (typically at the start of the month).

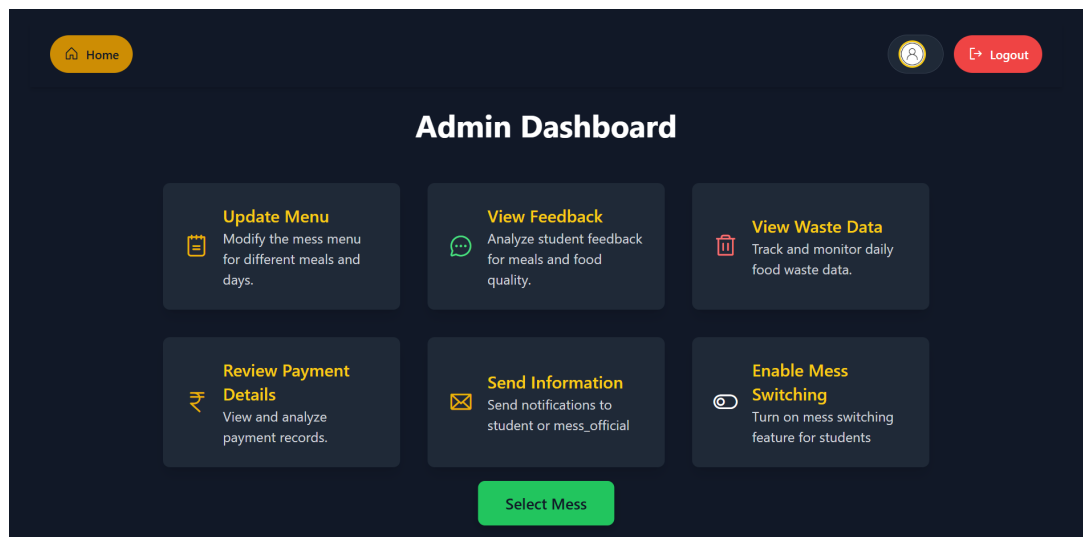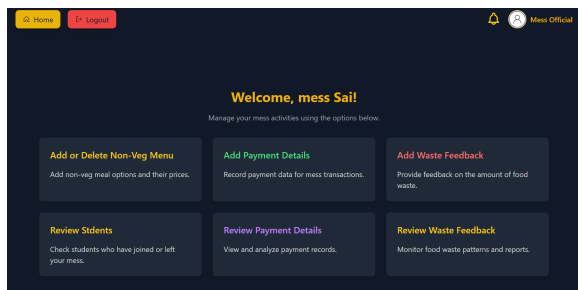- **Profile Button:** Access admin credentials and change password options.

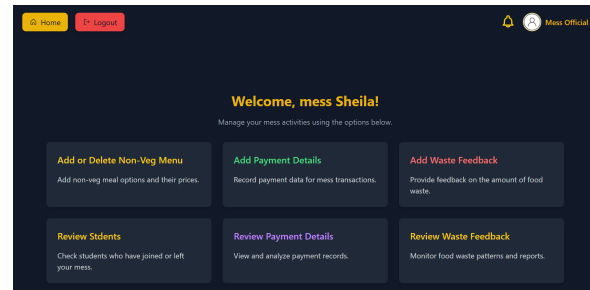

Figure 3: Admin Dashboard Interface

4. Mess-Specific Dashboard (Sai/Sheila)

Accessible to mess officials of Sai or Sheila mess for localized operations.

- **Manage Non-Veg Menu:** Update non-veg options based on floor and meal.

- **Add Payment Details:** Manually log student payments made via cash/UPI.

- **Submit Waste Feedback:** Enter data for food prepared, consumed, and wasted.

- **Review Students:** View enrolled students and their mess-switching status.

- **Analyze Payments:** Track non-veg purchases by meal and day.

- **Analyze Waste Data:** Visualize waste trends; future improvements may include AI-based recommendations.
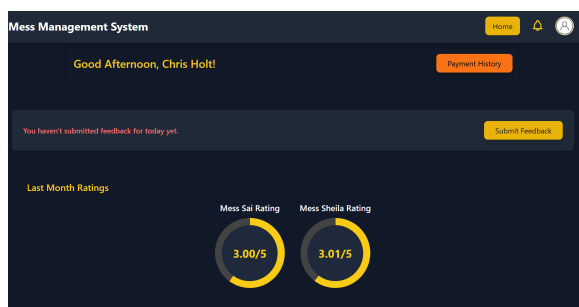
(a) Manage Non-Veg Menu

(b) Feedback Overview

Figure 4: Mess Dashboard Screens

5. Student Dashboard

Enables students to actively interact with the mess system and manage their own data.

- **Payment History:** Displays non-veg food purchases and corresponding amounts.

- **Submit Feedback:** Allows students to rate food and submit comments per meal (scale of 1–5).

- **Previous Month's Ratings:** View past ratings to help decide mess choice for the upcoming month.

- **Top Food Ratings Today:** Lists today's top-rated dishes across both messes.

(a) Feedback Submission

(b) Top Rated Items

Figure 5: Student Dashboard Screens

6. Advanced Functionalities

- **Mess Switching:** Students can switch messes based on capacity and availability (first-come, first-serve).

- **Alternate Week Logic:** Alternates between Odd and Even weeks for feedback and planning.

- **Temporary Veg Menu Override:** Admins can override the default veg menu for one day only—it resets the next day.

7. Technologies Used

- **Frontend:** HTML5, CSS, TailwindCSS, JavaScript

- **Backend:** Flask

- **Database:** MySQL

- **Authentication:** Session-based

- **Hosting:** *Render* (Frontend + Backend), *freesqldatabase* (Database)
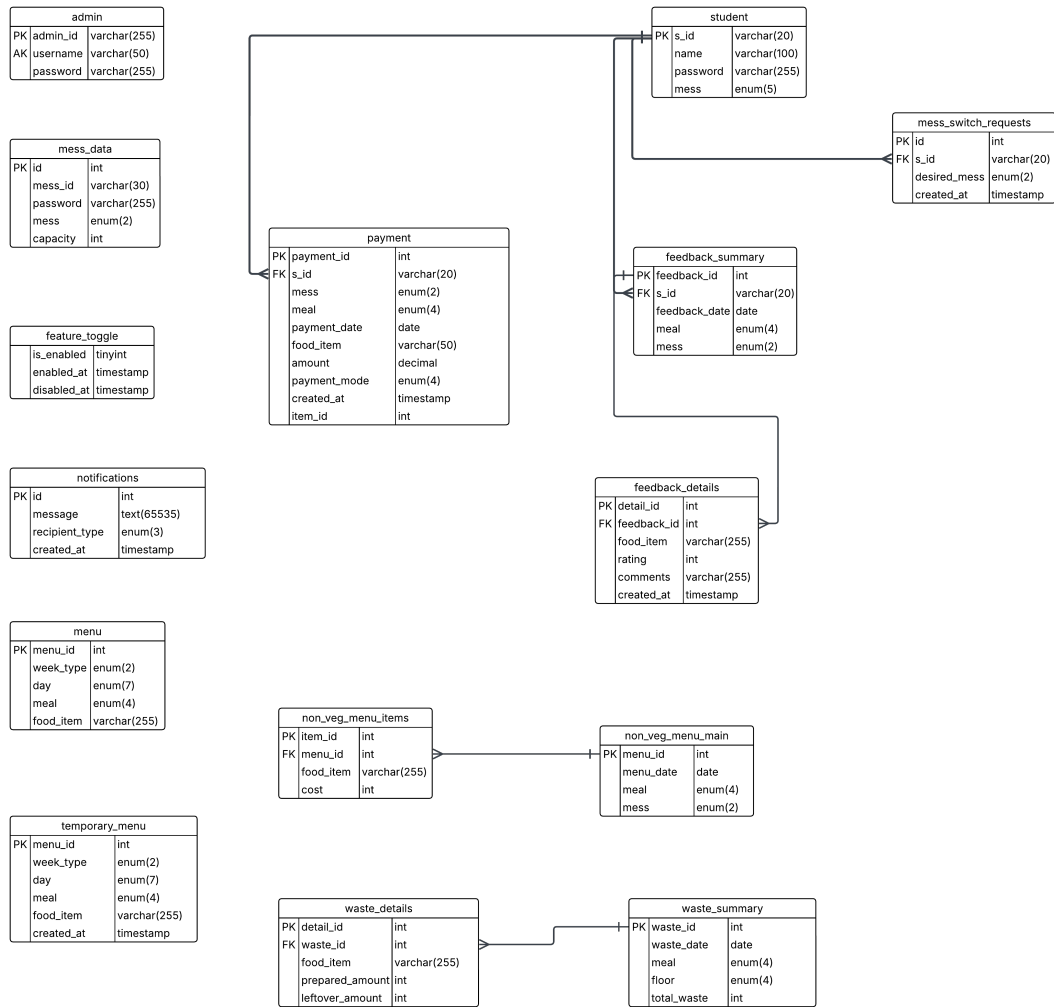
- **Version Control:** Git, GitHub

8. Database Schema

Figure 6: Database Schema Design

9. Conclusion

The Mess Management System delivers a streamlined, transparent, and modern solution for handling student mess operations. It fosters efficient communication, reduces food waste, and enhances decision-making with real-time data. With features like role-based access, feedback analytics, and smart mess switching, the system establishes a complete digital ecosystem for mess administration.

For a live demo and more information, visit: `https://manageit-mxt6.onrender.com` In case it don't work visit: `https://manageit-ca07.onrender.com`

- **Admin Login Credentials:**
  ID: `user@123`
  Password: `dontseeit`

- **Mess Sai Login Credentials:**
  ID: `hello`
  Password: `hi@123`

- **Mess Sheila Login Credentials:**
  ID: `check@123`
  Password: `see@12345`

- **Student Login Credentials:**
  ID: `cs21b1001`
  Password: `cs21b1001`