

SHYAMOLI ENGINEERING COLLEGE

(A CONSTITUENT COLLEGE OF UNIVERSITY OF DHAKA)
DHAKA, BANGLADESH



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Course Name: Software Engineering
Course Code: CSE-2216

Submitted By
Group:

Submitted To:
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//Project Name

Mess Management System Online

Group Members:

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Respected teachers:

Dept. Head

Supervisor

Course Teacher

1. Explanation of Existing Systems

- **Google Sheets**

Google Sheets is a versatile, cloud-based tool often used for mess management in student dormitories, shared apartments, and households. It allows users to maintain expense records, calculate meal rates, and share real-time updates with members. While flexible, it requires manual setup of formulas and lacks built-in features for automated role management, member control, or secure authentication.

- **Microsoft Excel**

Microsoft Excel is another widely used solution for managing hostel or mess systems. Users can track expenses, meal counts, and balances through spreadsheets. However, it is not collaborative in real time (unless integrated with cloud services), and manual intervention is needed for updates, making it less efficient.

2. Scope of Our Work

The proposed **Mess Management Online System** is a web-based application designed to overcome the limitations of spreadsheet-based systems. It provides:

- **Expense Tracking** – Record and manage all mess-related expenses with transparency.
- **Daily Meal Tracking** – Update and monitor meals consumed by each member.
- **Meal Rate Calculation** – Automatically compute the meal rate based on total meals and expenses.
- **Individual Cost & Balance** – Track each member's contribution, cost, balance.
- **Role Management** – Assign or change manager roles, add/remove members.
- **Messaging Feature** – Built-in chat/messaging option for real-time mess updates.
- **User-Friendly Interface** – Simple, hassle-free, and easily accessible from any device.

This system ensures accuracy, transparency, and efficiency in mess operations, reducing dependency on manual calculations while fostering collaboration among members.

3. Requirements of your proposed models for the development:

- i. **Software:**
 - Visual Studio Code
- ii. **Programming Language:**
 - Python
- iii. **Database:**
 - Firebase

4. Methodology:

1. Log-in / Register

- New users register by providing their details (name, email, password, etc.).
- Registered users can log in with their credentials.
- Authentication ensures data privacy and personalized access to the mess system.

2. Join or Create a Mess

- **Create a mess** and automatically become the *Manager*.
- **Join an existing mess** by entering a valid Mess ID, becoming a *Member*.

3. Add Members

- When a mess is created, other users can join using the Mess ID.
- The Manager has control over accepting new members and assigning them roles.
- Each member receives a unique serial number for identification.

4. Add Meals

- The Manager or authorized members can set up a daily meals menu through message.
- Members can update their meal counts. This ensures accurate tracking of individual and collective meal consumption.

5. Cash In Menu

- Members can record the amount of money they contribute to the mess fund.

6. Expense Menu

- Daily expenses (e.g., groceries, utilities, supplies) are added here.

7. Remove a Member

- Managers can remove inactive or leaving members from the mess.
- Once removed, the member's access and recalculations are updated accordingly.

8. Change Manager Role

- The current Manager can transfer managerial rights to another member.

9. Home Dashboard & Update History

- This dashboard displays all calculated data including the update history.

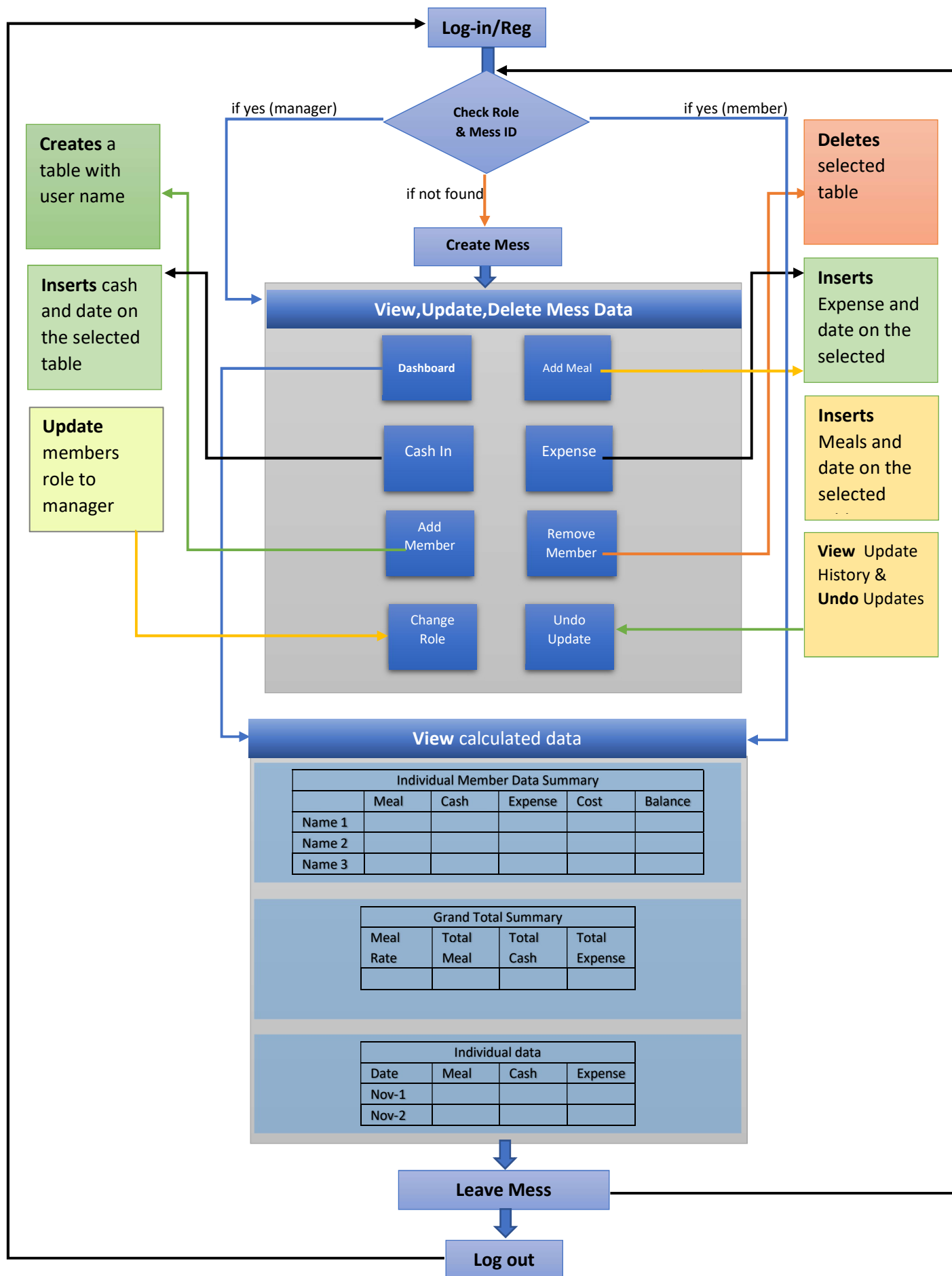
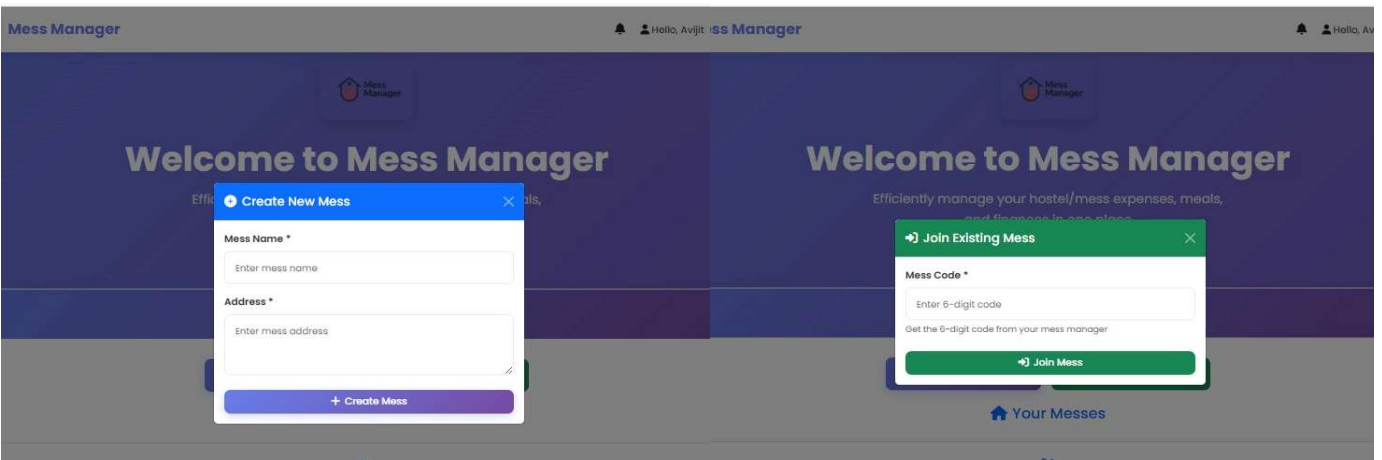
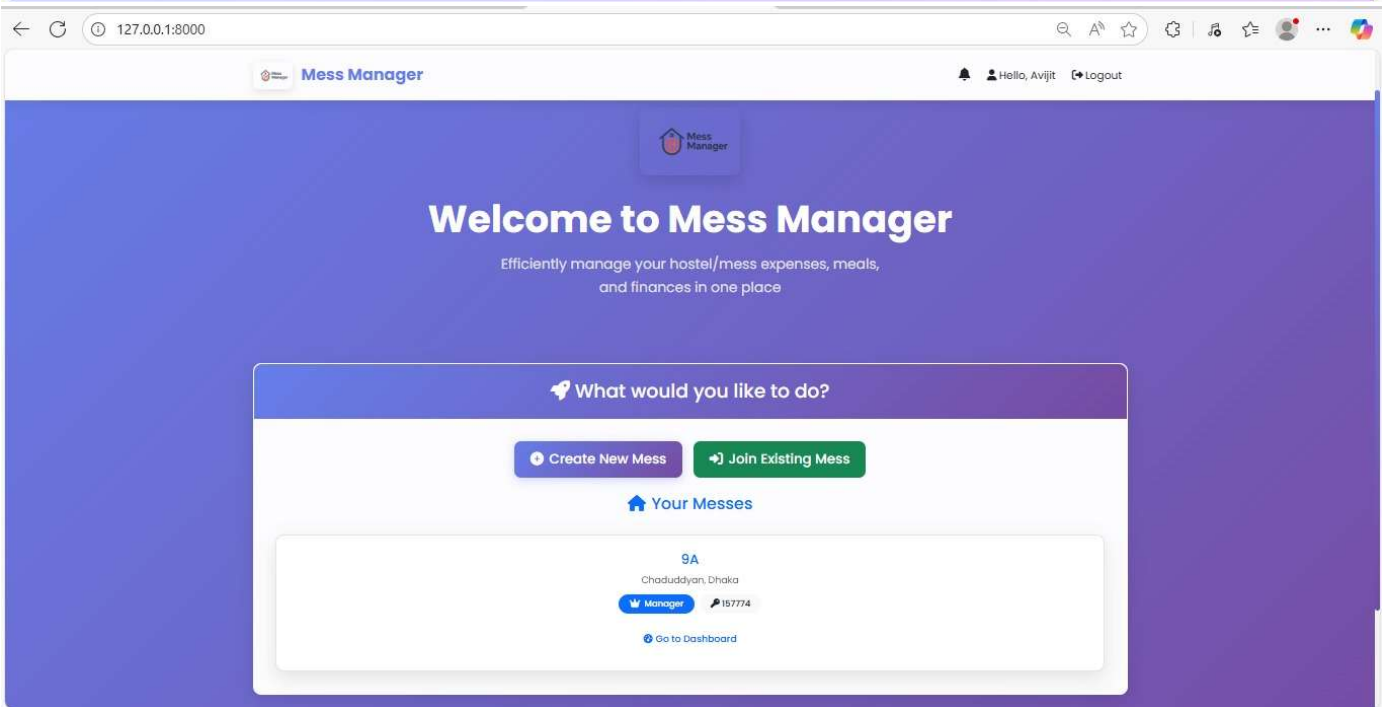
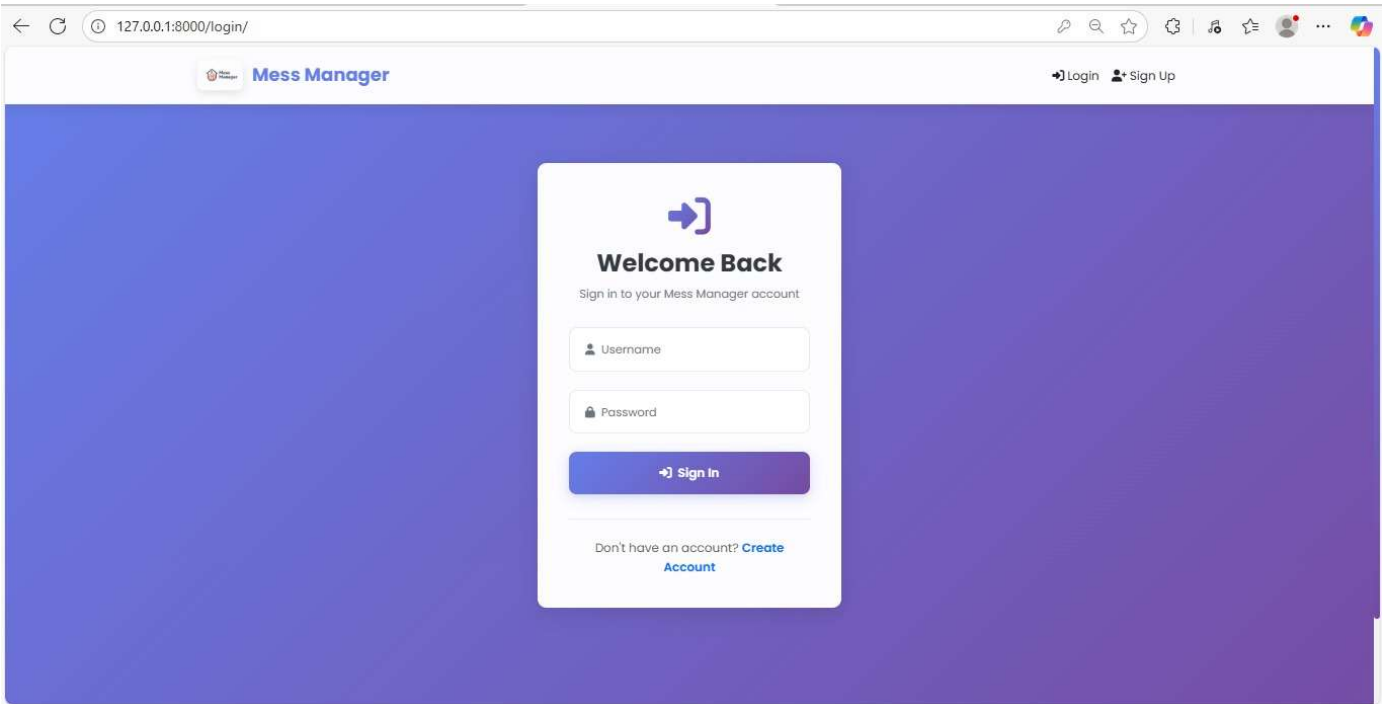
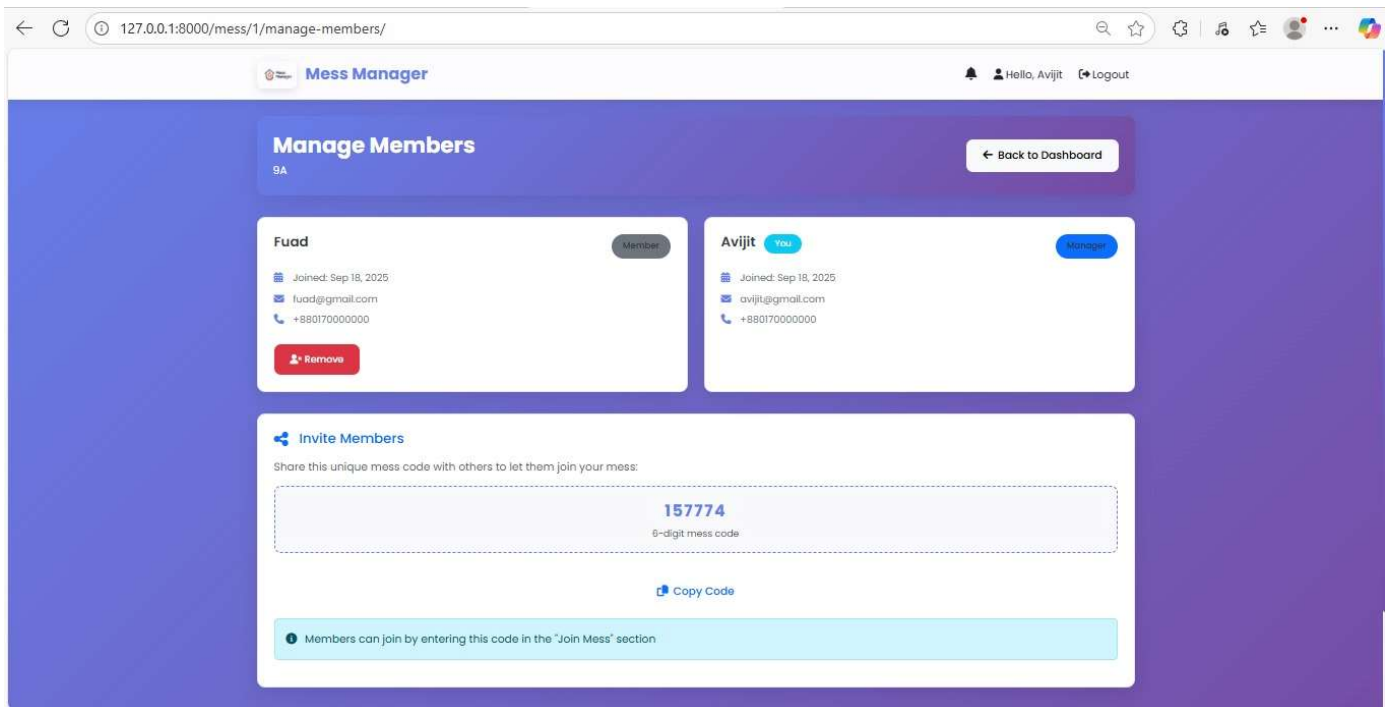
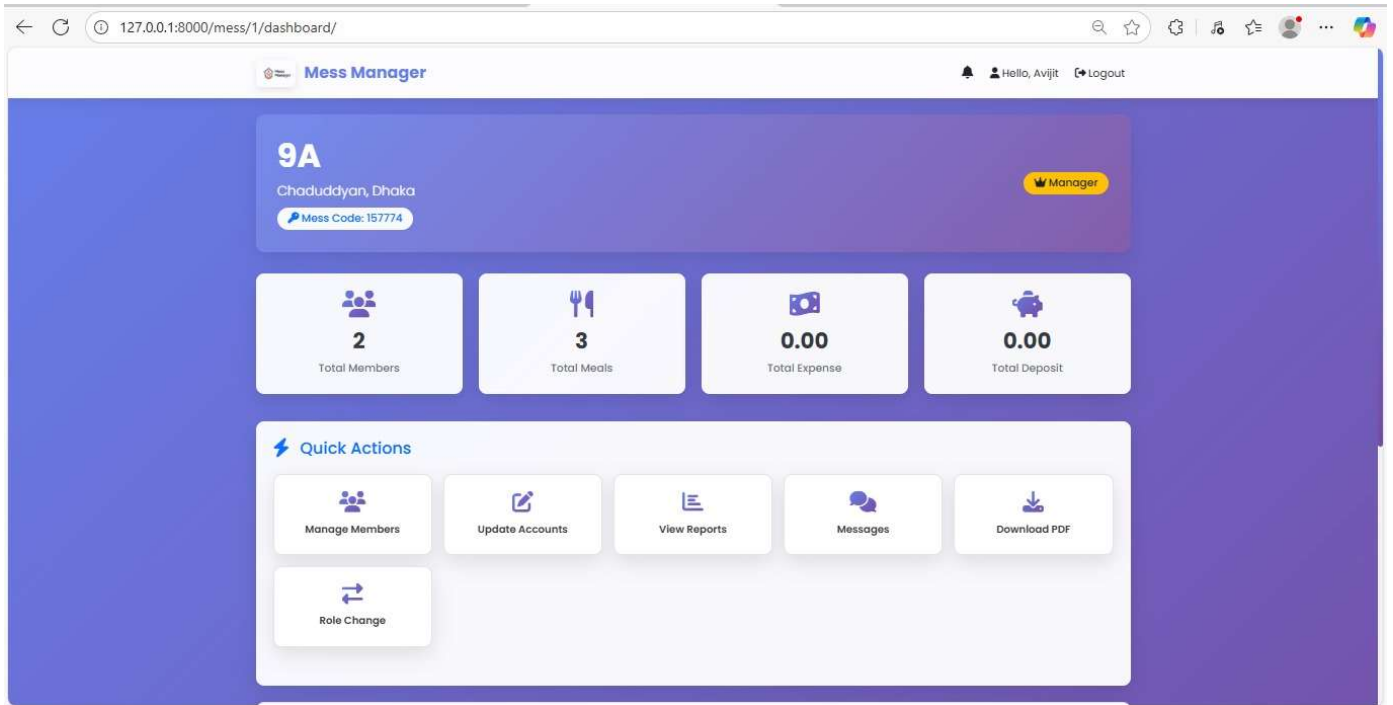


Figure: Activity Diagram of proposed system

UI DESIGN:





127.0.0.1:8000/mess/1/update-accounts/

Mess Manager

Hello, AvijitLogout

Update Accounts

SA - September 21, 2025

Back to Dashboard

Add Meal Entry

Member

Select Member

Date

09/21/2025

Meals

Breakfast

0

Lunch

0

Dinner

0

Save Meal Entry

Add Expense

Amount

0.00

Description

e.g., Grocery, Vegetables, Chicken, etc.

Date

09/21/2025

Add Expense

Add Deposit

Member

Select Member

Amount

0.00

Date

09/21/2025

Add Deposit

Today's Records (September 21, 2025)

Meals

No meals recorded today

Expenses

No expenses today

Deposits

No deposits today

127.0.0.1:8000/mess/1/view-reports/

Mess Manager

Hello, AvijitLogout

Monthly Reports

SA - September 2025

Download PDF

Dashboard

September 2025

September

2025

Filter

3

Total Meals

0.00

Total Expense

0.00

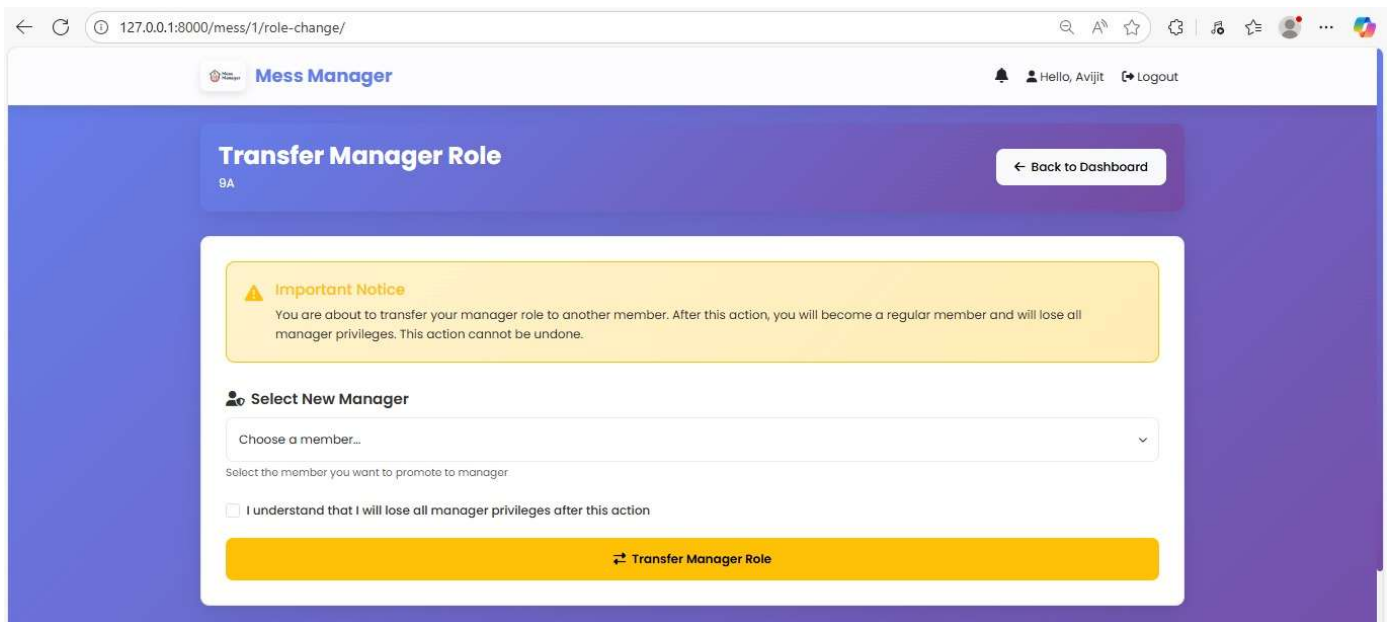
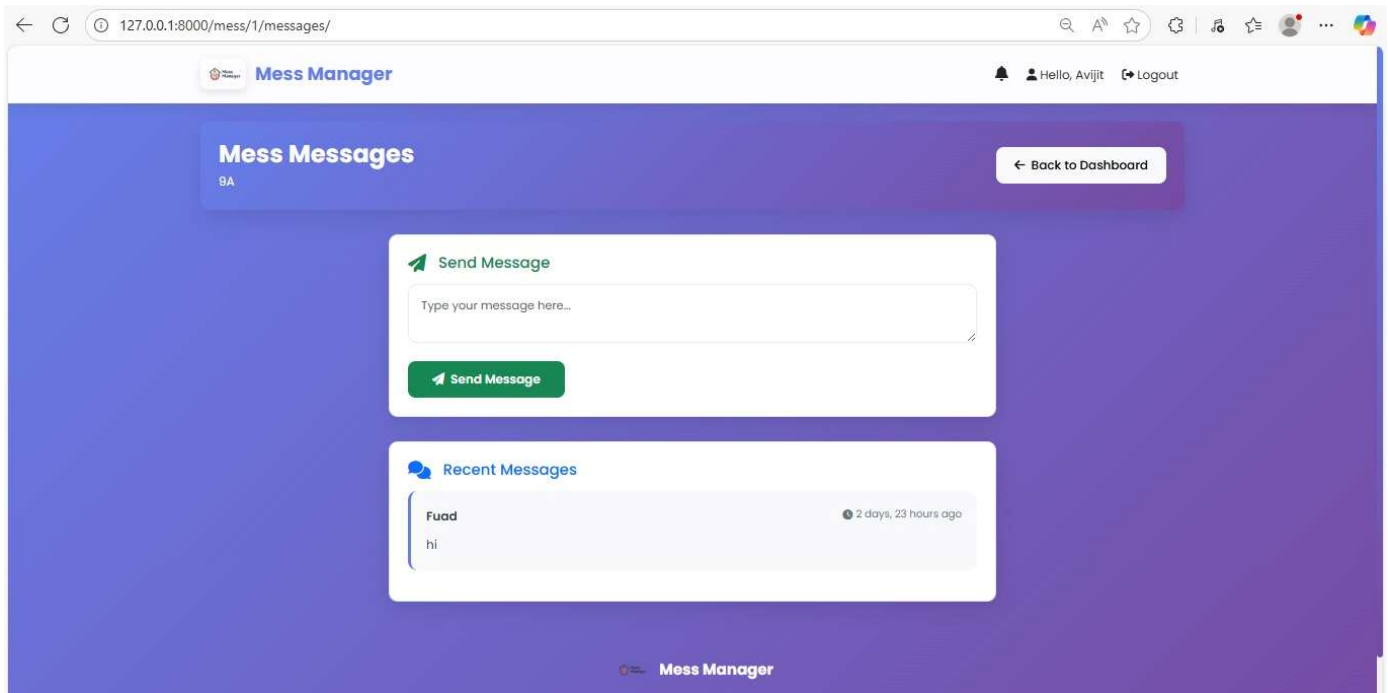
Meal Rate

0.00

Total Deposit

Member-wise Summary

Member	Role	Total Meals	Total Cost	Total Deposit	Balance
Avijit	Manager	0	0.00	0.00	0.00
Fuad	Member	3	0.00	0.00	0.00



127.0.0.1:8000/mess/1/member-dashboard/

Mess Manager

50%

Reset

My Dashboard

SA
Chakudityan, Dhaka

Back to Mess List

3

My Total Meals

0.00

My Total Deposit

0.00

My Total Cost

0.00

My Balance

Meal Rate
0.00

Current Month
September 2025

My Role
Member

My Meals - September 2025

Date	Breakfast	Lunch	Dinner	Total
Sep 18	1	1	1	3

My Deposits - September 2025

No Deposits
No deposits recorded for this month

View Members

Messages

My Messes

Mess Manager

127.0.0.1:8000/member/mess-list/

Mess Manager

Hello, Fuad Logout

My Messes

Manage all your mess memberships in one place

SA
Chakudityan, Dhaka

Member

Code: W7774

Joined On
Sep 18, 2025

Your Role
Member

Go to Dashboard

Mess Manager

127.0.0.1:8000/notifications/

Mess Manager

Hello, Fuad Logout

Notifications

Stay updated with your mess activities

Back to Home

Meal Entry Added

Meal entry added for 2025-09-18: BI, LI, DI

2 days, 23 hours ago

SA

Mess Manager

127.0.0.1:8000/member/mess/1/members/

Mess Manager

Hello, Fuad Logout

Mess Members

Back to Dashboard

All Members

Total members in your mess

2 Members

Member	Role	Joined Date
<div>Avijit</div> <div>avijit@gmail.com</div>	Admin	Sep 18, 2025
<div>Fuad</div> <div>fuad@gmail.com</div>	Member	Sep 18, 2025

Mess Manager