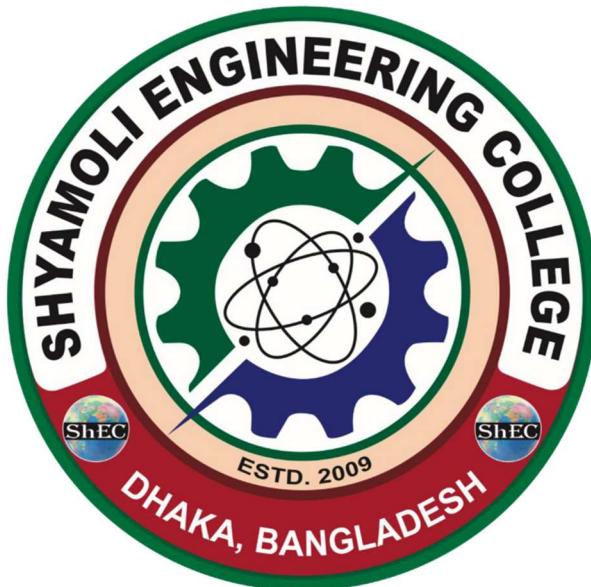


SHYAMOLI ENGINEERING COLLEGE
(A CONSTITUENT COLLEGE OF UNIVERSITY OF DHAKA)
DHAKA, BANGLADESH



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 massage.
- 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.

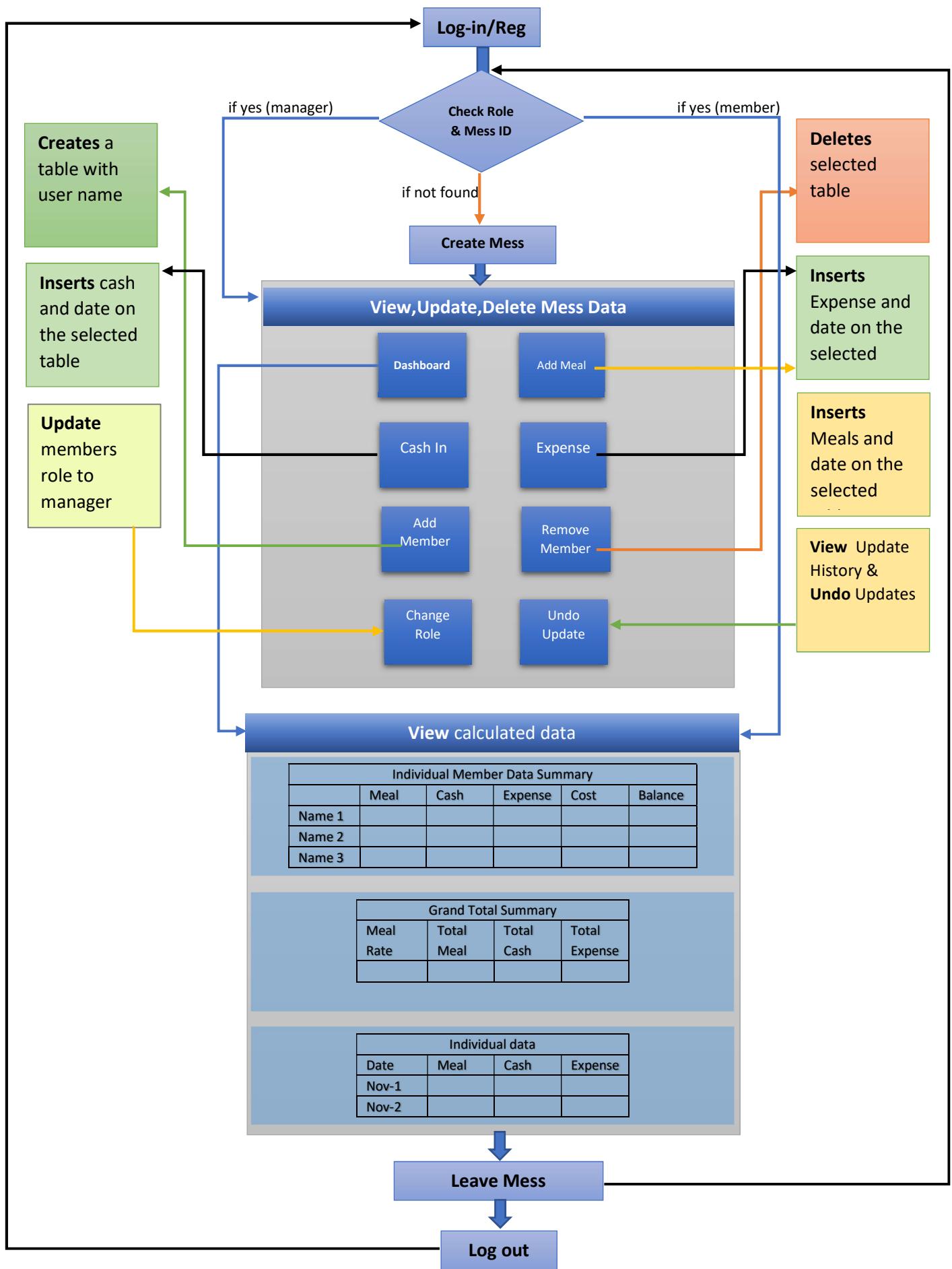
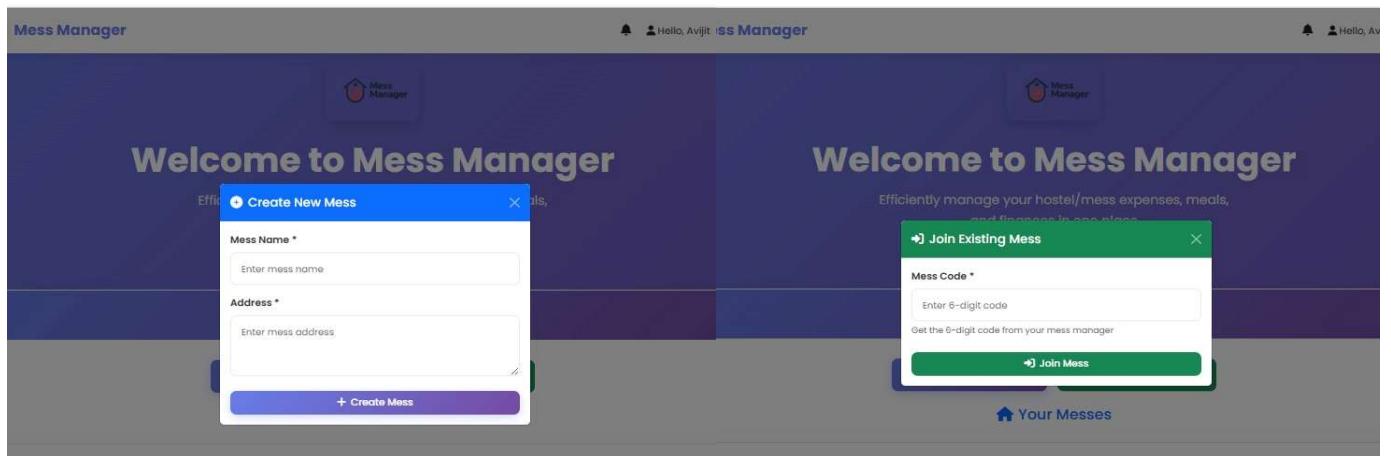
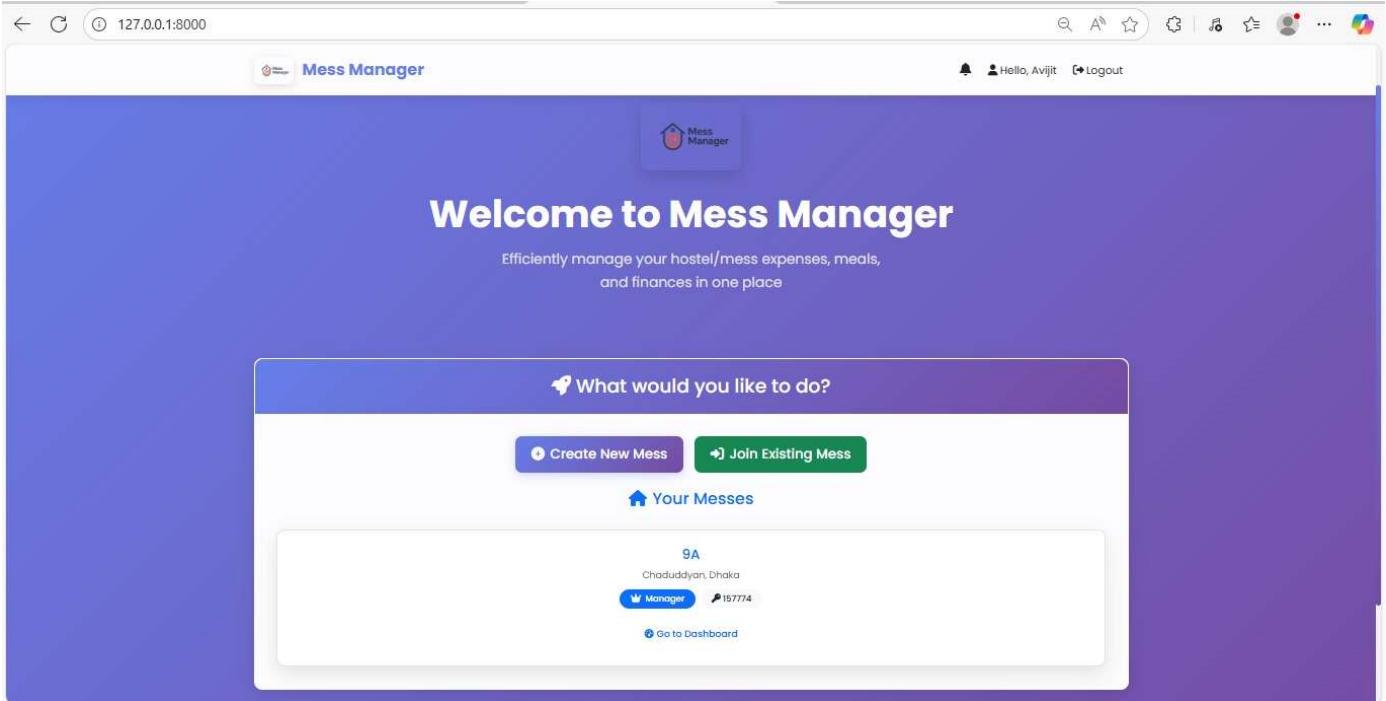
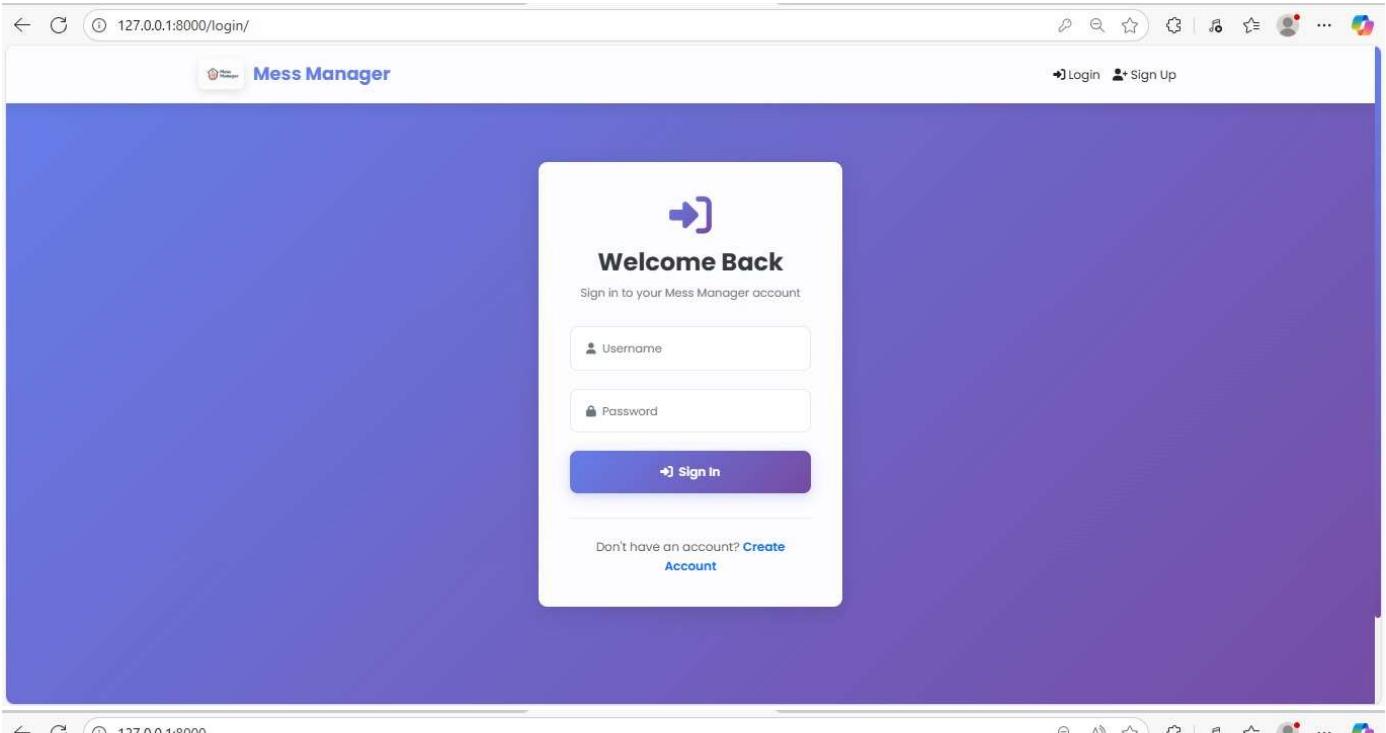


Figure: Activity Diagram of proposed system

UI DESIGN:



← ⌛ 127.0.0.1:8000/mess/1/dashboard/

Mess Manager

9A
Chaduayan, Dhaka
Mess Code: 157774

Manager

Total Members: 2
Total Meals: 3
Total Expense: 0.00
Total Deposit: 0.00

Quick Actions:

- Manage Members
- Update Accounts
- View Reports
- Messages
- Download PDF

Role Change

This screenshot shows the main dashboard of the Mess Manager application. At the top, it displays the mess code '9A' and location 'Chaduayan, Dhaka'. Below this, there are four summary cards: 'Total Members' (2), 'Total Meals' (3), 'Total Expense' (0.00), and 'Total Deposit' (0.00). A 'Quick Actions' sidebar on the right provides links to manage members, update accounts, view reports, send messages, download PDFs, and change roles. The background has a purple gradient.

← ⌛ 127.0.0.1:8000/mess/1/manage-members/

Mess Manager

Manage Members

Fuad Member

Joined: Sep 18, 2025
Email: fuad@gmail.com
Phone: +8801700000000

Avijit You Manager

Joined: Sep 18, 2025
Email: avijit@gmail.com
Phone: +8801700000000

Back to Dashboard

Invite Members

Share this unique mess code with others to let them join your mess:

157774
6-digit mess code

Copy Code

Members can join by entering this code in the "Join Mess" section

This screenshot shows the 'Manage Members' page. It lists two members: 'Fuad' and 'Avijit'. Each member profile includes their name, role (e.g., 'Member' or 'Manager'), joining date, email, phone number, and a 'Remove' button. Below the profiles is an 'Invite Members' section where the unique mess code '157774' is displayed as a 6-digit code. A 'Copy Code' button is available, and a note explains that members can join by entering the code in the 'Join Mess' section.

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

Mess Manager

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

Mess Manager

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

Mess Manager

Monthly Reports

SA - September 2025

[Download PDF](#) [Dashboard](#)

September 2025
September
2025
[Filter](#)



3

Total Meals



0.00

Total Expenses



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
Fudd 	Member 	3	0.00	0.00	0.00

127.0.0.1:8000/mess/1/messages/

Mess Manager

Hello, Avijit | Logout

Mess Messages

9A

← Back to Dashboard

Send Message

Type your message here...

Send Message

Recent Messages

Fuad 2 days, 23 hours ago
hi

Mess Manager

This screenshot shows the 'Messages' section of the 'Mess Manager' application. It features a 'Send Message' form with a text input field and a green 'Send Message' button. Below it is a 'Recent Messages' section showing a conversation with 'Fuad' where he said 'hi' 2 days, 23 hours ago. The top navigation bar includes links for 'Hello, Avijit' and 'Logout'. A 'Back to Dashboard' button is also present.

127.0.0.1:8000/mess/1/role-change/

Mess Manager

Hello, Avijit | Logout

Transfer Manager Role

9A

← Back to Dashboard

Important Notice
You are about to transfer your manager role to another member. After this action, you will become a regular member and will lose all manager privileges. This action cannot be undone.

Select New Manager

Choose a member...
Select the member you want to promote to manager

I understand that I will lose all manager privileges after this action

Transfer Manager Role

Mess Manager

This screenshot shows the 'Transfer Manager Role' page. It contains an 'Important Notice' box warning the user that transferring the role will make them a regular member and lose manager privileges. Below this is a 'Select New Manager' section with a dropdown menu for choosing a member and a checkbox for accepting the terms. A large yellow 'Transfer Manager Role' button is at the bottom. The top navigation bar and a 'Back to Dashboard' button are also visible.

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

Mess Manager

My Dashboard

SA Chaudhury, Dhaka

50% Reset

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

View Members

My Deposits - September 2025

No Deposits

No deposits recorded for this month.

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 Chaudhury, Dhaka

Code: 187774

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

Meal Entry Added

Meal entry added for 2025-09-18: B1, L1, D1

2 days, 23 hours ago

SA

Back to Home

Mess Manager

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

Mess Manager

Hello, Fuad Logout

Mess Members

All Members Total members in your mess: 2 Members

Member	Role	Joined Date
Avijit avijit@gmail.com	Member	Sep 18, 2025
Fuad fuad@gmail.com	Member	Sep 18, 2025

Back to Dashboard

Mess Manager