

MESS MANAGEMENT SYSTEM

A Project Report

submitted in partial fulfillment of the requirements

of

.....Techsaksham Program.....

by

Ashok Kumar G, 61072011103

Keerthana A, 61072011118

Prasanth A, 61072012130

Hari Haran G, 61072012108

Koushik V, 61072011122

Jaisurya S, 61072011113

Under the Esteemed Guidance of

Bharathi Raja M

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ABSTRACT

The Mess Management System (MMS) is an innovative software solution designed to enhance the efficiency and effectiveness of managing dining operations in various establishments, such as college campuses, corporate offices, and military bases. The system leverages technology to automate and streamline key aspects of mess management, including meal planning, inventory control, billing, and communication.

By implementing the Mess Management System, institutions can optimize their resources, minimize wastage, and improve overall user satisfaction. The system offers a user-friendly interface for both administrators and end-users, providing seamless interaction and easy access to essential features.

The MMS incorporates advanced features such as menu planning, where administrators can create dynamic menus based on nutritional requirements, dietary restrictions, and feedback from users. The system also assists in efficient inventory management by automatically tracking and updating ingredient quantities, minimizing food spoilage and ensuring timely replenishment.

Billing processes are simplified through the integration of MMS with payment systems, enabling accurate tracking of meal consumption, and generating comprehensive reports for accounting purposes. This ensures transparency and facilitates effective financial management.

Effective communication is vital for smooth mess operations, and the Mess Management System offers a centralized platform for administrators, chefs, and users to interact. Users can provide feedback, make special requests, and receive important updates, fostering a collaborative environment and ensuring prompt responses to individual needs.

Overall, the Mess Management System is a comprehensive solution that revolutionizes the way dining operations are managed. By leveraging technology and automation, it

MESS MANAGEMENT SYSTEM

optimizes resource allocation, reduces manual effort, and enhances the overall dining experience. With its user-friendly interface and robust functionality, the MMS is poised to significantly improve efficiency, accuracy, and user satisfaction in mess management across various sectors.

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CHAPTER 1

INTRODUCTION

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INTRODUCTION

The main aim of the mess is to provide clean and fresh food to the students/employees of the organization. In Today's world the entire Mess Management and costing calculations are done manually to date. It is very time-consuming & increases the chances of performing calculation mistakes. Thus, there arises a need to create software that will make the entire Mess Management an automated system. This software will be used by the students at Ghulam Ishaq Khan institute of engineering sciences and technology to maintain a mess. The main aim of this project is that students can pay and view their bills online and choose the days they want to eat at the mess. Similarly, students can choose to mess in or mess out anytime, and also enable the student to view the menu, provide feedback on their attended meals, register the complaint, and update their personal information. This system will be utilized by the GIKI administrator as after enrollment they authenticate the student id to use the mess management system. The institute needs to implement a mess management system as it provides a range of benefits by streamlining and automating several features of food service, increasing efficiency and finance management, and enhancing security.

CHAPTER 2

LITERATURE SURVEY

CHAPTER 2

LITERATURE SURVEY

The overall goal of this project was to firstly study and understand the existing mess/canteen management softwares, then identify the limitations and contribute in the same topic with greater benefits. The main advantage of our proposed system over other existing systems is the GUI in Tamil language. This has enabled complete understanding and convenience for the user. Also, complex calculations are done within seconds and bills are generated on the single click of a button. As the name suggests, it is a software for maintaining any mess/canteen but it also enables handling of the information related to the students/employees who are a part of the organization. Another attractive feature in our software which is lacking in the existing softwares is the Backup and Recovery option. All data can be stored as a copy, that is, taking backup is also possible on a single click, plus recovery of lost data in case any failure occurs is also possible on a single click.

Thus, this system with great added features will serve beneficial to the people.

CHAPTER 3

PROPOSED METHODOLOGY

CHAPTER 3

PROPOSED METHODOLOGY

3.1 System Design

The user interface (UI) is the point of human-computer interaction and communication in Client Application: Handles user interaction and sends CRUD requests.

API Gateway: Receives requests and routes them to services.

CRUD Service: Performs Create, Read, Update, and Delete operations on data.

Data Storage: Stores and retrieves data efficiently and securely.

3.2 Modules Used

The Mess Management System incorporates the following key features:-

User Registration and Login: Users can register and create accounts to access the system. They can log in using their credentials to perform various actions.

Menu Management: Mess managers can create and update menus based on predefined criteria such as dietary requirements and nutritional guidelines. Users can view the menu and select their preferred meals.

Ordering System: Users can place meal orders, specify their preferences, and view their order history. Mess managers can track and manage the orders efficiently.

Inventory Management: The system allows mess managers to manage the inventory of ingredients and supplies. It notifies them when stock levels are low and generates purchase orders.

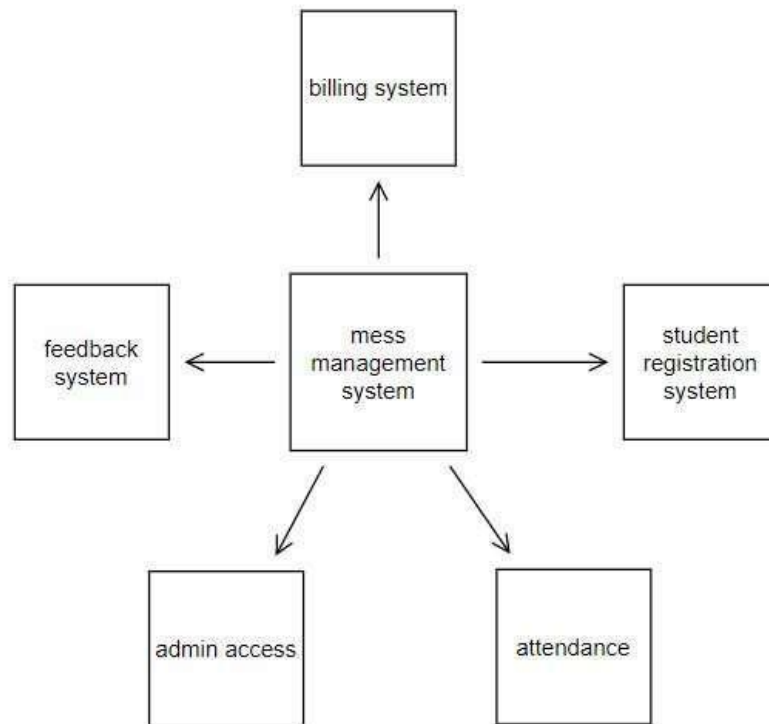
Billing and Payment: Users can view their bills, which are generated based on their meal orders. They can make payments online through secure payment gateways.

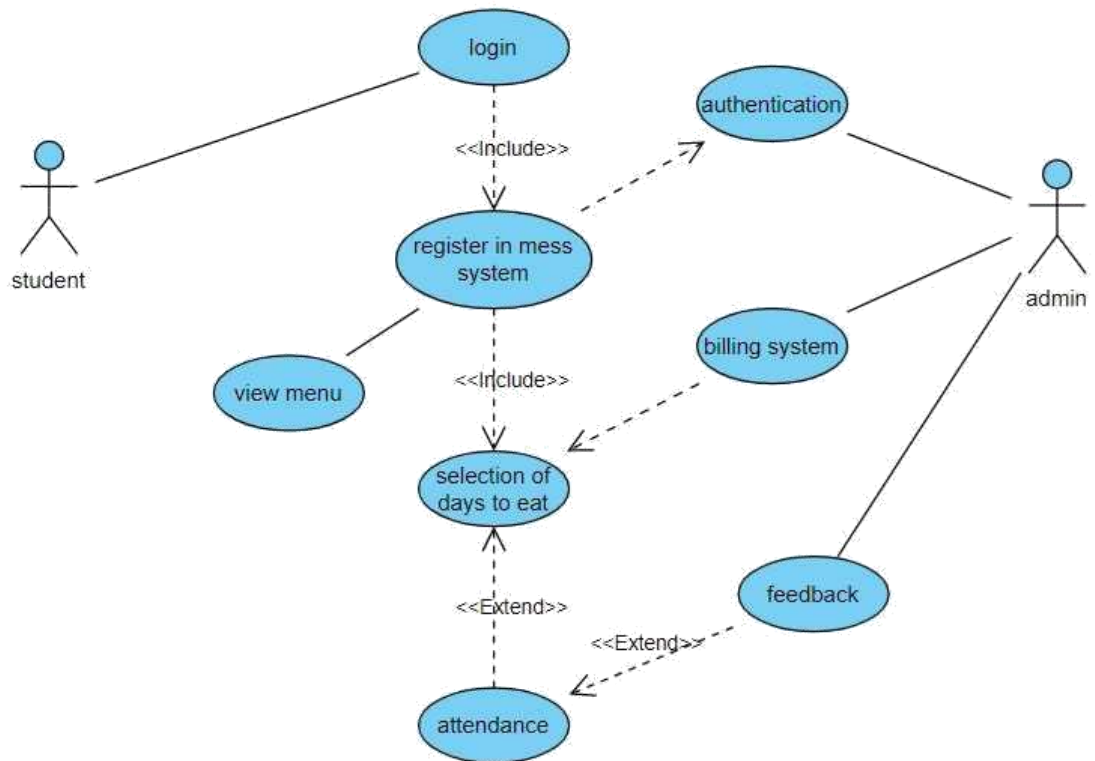
Reporting and Analytics: The system generates reports on meal consumption, inventory usage, financial transactions, and other relevant metrics to facilitate informed decision-making.

Feedback and Complaints: Users can provide feedback, lodge complaints, and communicate with mess managers through the system. Mess managers can respond to user queries and resolve issues effectively.

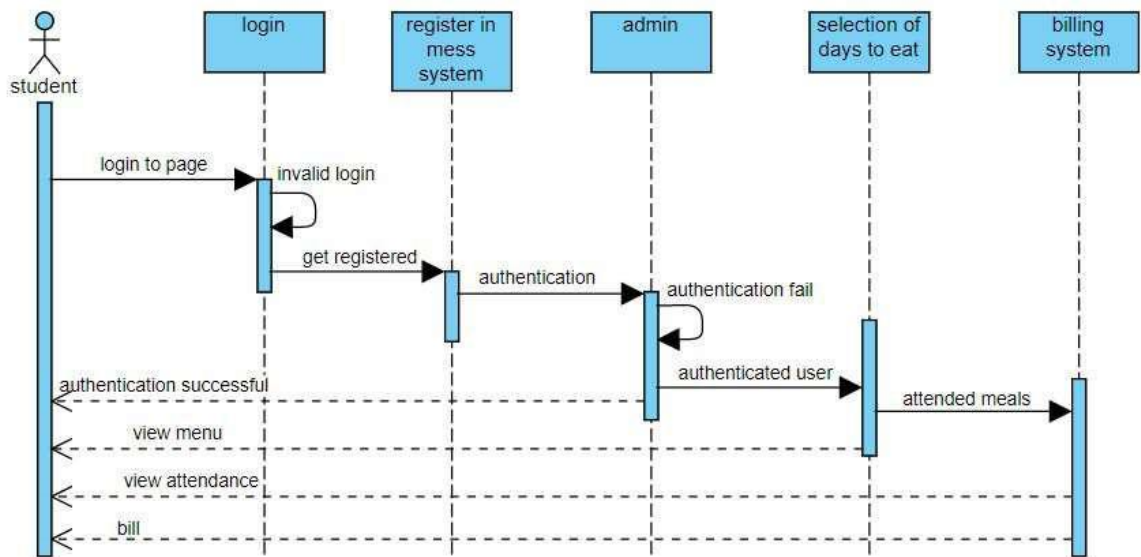
3.3 Diagrams

3.3.1. Context Diagram:

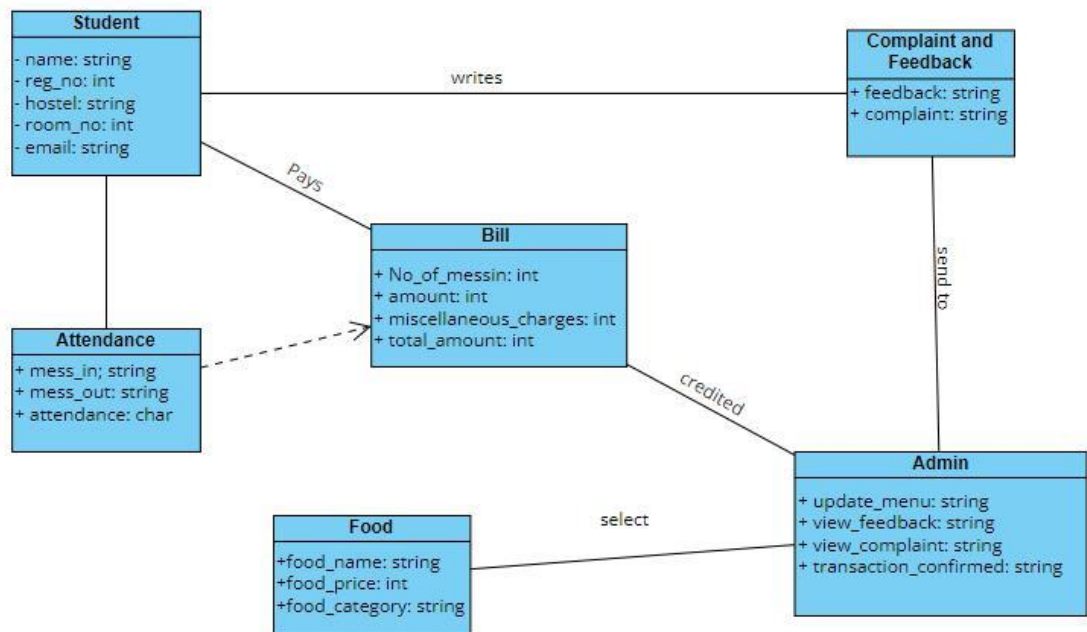


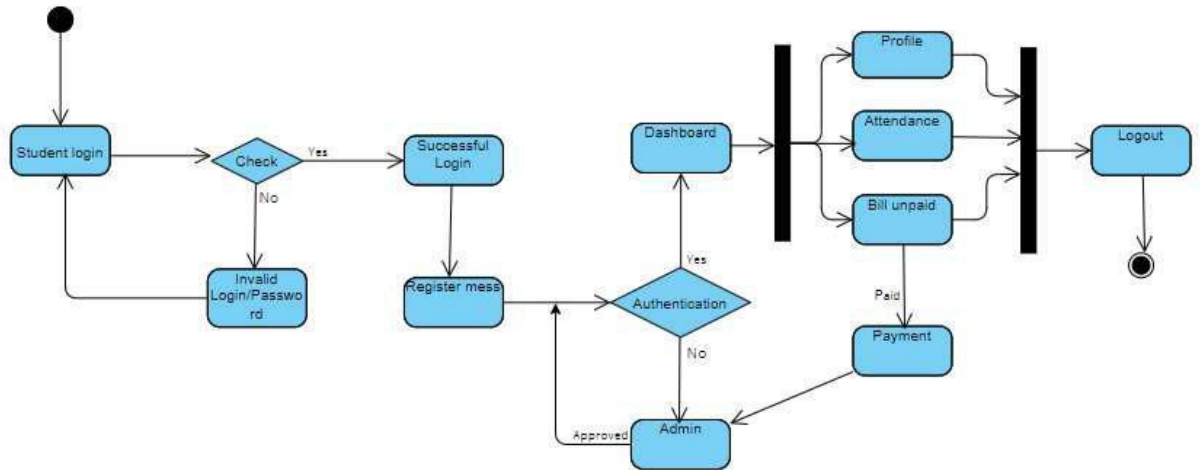
3.3.2. Use Case Diagram:

3.3.3. Sequence Diagram:



3.3.4. Class Diagram:



3.3.5. State/Process Model Diagram:

3.4 Advantages

Automation: Tasks such as meal planning, inventory management, billing, and reporting are automated, reducing manual effort and errors.

Efficiency: Operations are streamlined, allowing tasks to be completed faster and enabling staff to focus on more critical aspects of managing the mess.

Accuracy: Automation reduces the likelihood of errors in billing, inventory management, and other tasks, leading to more accurate records and financial data.

Cost-Effectiveness: Streamlining operations and reducing manual effort can result in cost savings for the organization running the mess.

Improved Communication: Features for communication between mess staff, management, and users facilitate better coordination and issue resolution.

Customization: The system offers customization options to meet the specific needs of different users or institutions, improving user satisfaction and effectiveness.

Data Analysis: The system collects data on various aspects of mess operations, providing insights for optimizing processes, menu planning, and decision-making.

User Convenience: Features such as online meal booking, menu previews, and feedback submission make the dining experience more convenient and user-friendly.

Transparency: Digital billing and reporting improve transparency in financial transactions and overall mess operations, enhancing trust between stakeholders.

Scalability: The system is designed to scale with the institution's needs, accommodating more users, expanding to additional locations, or adding new features as required.

3.5 Requirement Specification

User Requirements:

- The ability to view and pay bills or make payments for meals.
- The ability to provide feedback on meals or the overall service.
- Ability to mess in and mess out.
- Ability to mark attendance at each meal.

System Requirements:

- A database to store information about payments.
- A user interface for students to view menus.
- Security measures to protect sensitive and financial information.
- A system for tracking and billing for meals and other services.
- A feedback and complaint form for students to write out suggestions, and problems.

3.5.1.Hardware Requirements:

- Processor : Intel processor 2.6.0 GHZ
- RAM : 1GB
- Hard disk : 160 GB
- Compact Disk : 650 MB
- Keyboard : Standard keyboard
- Monitor : 15-inch colour monitor

3.5.2.Software Requirements:

- Operating System : Windows OS 7
- Front End : PHP
- Back End : MySQL Server
- Application : Web Application
- IDE : Visual Studio

CHAPTER 4

Implementation and Result

CHAPTER 4

IMPLEMENTATION and RESULT

Resistance to Change: Introducing a new system may face resistance from stakeholders, including administrators, staff members, and users accustomed to traditional methods. Overcoming resistance and gaining buy-in from all parties involved is crucial for successful implementation.

Data Migration and Integration: Migrating existing data, such as user profiles, menus, inventory records, and billing information, to the new system can be complex. Integration with existing systems, such as payment gateways or student databases, may require careful planning and technical expertise to ensure smooth data transfer and compatibility.

Infrastructure and Technical Requirements: Implementing an MMS may involve setting up new hardware, such as servers, or upgrading existing infrastructure to handle increased data processing and user traffic. Ensuring the availability of a stable network connection and suitable hardware resources is essential for a seamless user experience.

User Training and Adoption: Proper training and onboarding of administrators, staff members, and end-users are vital for successful adoption of the MMS. Providing comprehensive training sessions, documentation, and ongoing support can help users understand the system's features and functionality, encouraging its effective utilization.

Customization and Scalability: Each institution or organization may have unique requirements and workflows. Customizing the MMS to align with specific needs can be challenging, requiring close collaboration between the system provider and the

implementing organization. Additionally, ensuring scalability to accommodate future growth and evolving demands is crucial.

information, including personal data, payment details, and dietary restrictions.

Implementing robust security measures, such as data encryption, access controls, and regular security audits, is essential to protect user privacy and prevent unauthorized access or data breaches.

CHAPTER 5
CONCLUSION

CHAPTER 5

CONCLUSION

In conclusion, the implementation of a mess management system offers numerous benefits and advantages for various organizations, such as educational institutions, military barracks, and corporate offices. This system streamlines the entire process of managing and organizing meals, resulting in improved efficiency, cost savings, and enhanced customer satisfaction.

Firstly, a mess management system automates several tasks that were previously time-consuming and prone to errors. It simplifies meal planning, menu creation, inventory management, and procurement processes, ensuring that the right quantity of ingredients is available at the right time. This automation reduces manual effort, minimizes human error, and optimizes resource allocation, leading to significant time and cost savings.

Furthermore, the system provides greater transparency and accountability in the mess operations. It enables real-time tracking of food consumption, inventory levels, and expenses. This information empowers administrators to make informed decisions, identify areas for improvement, and reduce wastage. By ensuring accurate record-keeping and financial management, the system enhances financial efficiency and budget control.

Additionally, a mess management system improves the overall dining experience for the end-users. It allows individuals to pre-order meals, customize their preferences, and provide feedback. This personalized approach enhances customer satisfaction and increases engagement. Moreover, the system facilitates the accommodation of special dietary requirements, allergies, or cultural preferences, promoting inclusivity and diversity in meal planning.

Furthermore, the system supports sustainability efforts by enabling effective waste management. It helps in monitoring and reducing food waste by optimizing portion sizes, managing surplus inventory, and tracking consumption patterns. By minimizing food

wastage and promoting responsible practices, the system contributes to environmental conservation and reduces the organization's ecological footprint.

In conclusion, a mess management system revolutionizes the way organizations handle their food services. It streamlines operations, enhances efficiency, improves financial management, and promotes customer satisfaction. By leveraging automation, transparency, and personalization, this system leads to significant benefits for both the organization and its constituents. Implementing a mess management system.

REFERENCES

References that helped me building this website:

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- www.tutorialspoint.com
- www.envanto.com (For website UI inspiration)
- www.carbonmade.com
- www.behance.net
- React- The Complete Guide (incl Hooks, React Router, Redux)

CHAPTER 6

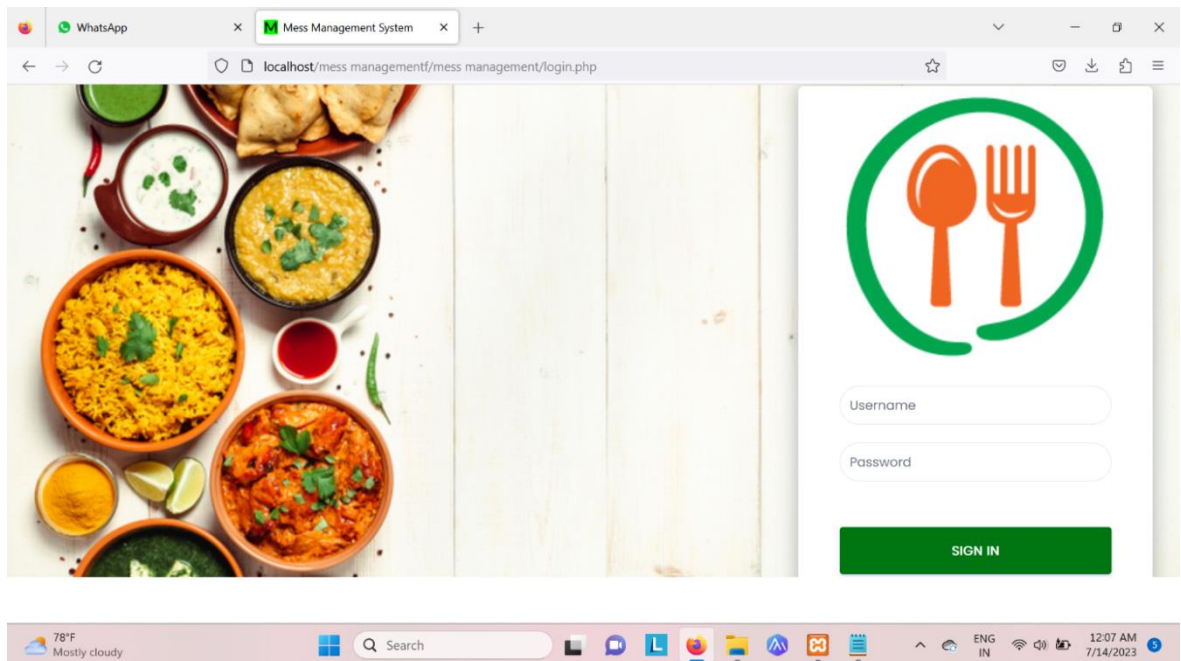
APPENDIX

CHAPTER 6

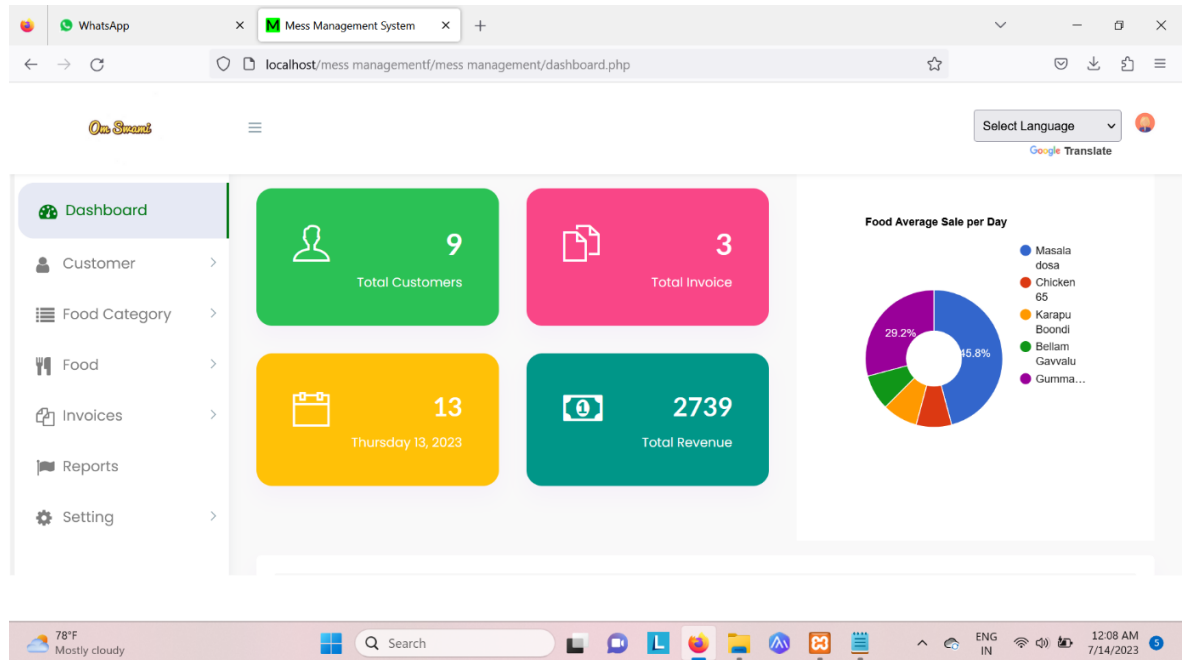
APPENDIX

Screenshots:

Login Page:



Admin Dashboard:



MESS MANAGEMENT SYSTEM

The screenshot shows the 'Edit Test Categories Management' page in the Mess Management System. The browser address bar shows the URL: localhost/mess managementf/mess management/editcategory.php?id=1. The page features a sidebar with navigation links: Dashboard, Customer, Food Category, Food, Invoices, Reports, and Setting. The main content area has a form for editing a category. The form includes a 'Categories Name' field with the value 'Sweet' and a 'Status' dropdown menu currently set to 'Available'. A green 'Update' button is located below the form. The top right of the page has a 'Select Language' dropdown and a Google Translate icon. The bottom of the page shows a Windows taskbar with the date 7/14/2023 and time 12:10 AM.

78°F Mostly cloudy

Search

ENG IN

12:10 AM 7/14/2023

Menu/food:















The screenshot shows the 'Menu/food' page in the Mess Management System. The browser address bar shows the URL: localhost/mess managementf/mess management/food.php. The page features a sidebar with navigation links: Dashboard, Customer, Food Category, Food, Invoices, Reports, and Setting. The 'Food' link is highlighted. The main content area displays a table of food items. The table has columns for #, Food Name, Rate, Category, Status, and Action. There are 7 entries listed. The 'Status' column shows 'Available' or 'Not Available' for each item. The 'Action' column contains edit and delete icons. The top right of the page has a 'Select Language' dropdown and a Google Translate icon. The bottom of the page shows a Windows taskbar with the date 7/14/2023 and time 12:11 AM.

78°F Mostly cloudy

Search

ENG IN

12:11 AM 7/14/2023

#	Food Name	Rate	Category	Status	Action
1	Tapeswaram Madatha Kaja	175	Sweet	Available	 
2	Bellam Gavvalu	140	Sweet	Not Available	 
3	Special Pappu Chegodi	140	Hot	Available	 
4	Karapu Boondi	140	Hot	Available	 
5	Gummadikaya Vadiyalu	180	Vadiyalu	Available	 
6	Biyyam Pindi Vadiyalu	170	Vadiyalu	Not Available	 
7	Masala dosa	180	Hot	Available	 

MESS MANAGEMENT SYSTEM

Invoices:

WhatsApp x Mess Management System x +

localhost/mess management/mess management/invoice.php

Select Language Google Translate

Dashboard Customer Food Category Food Invoices Add Invoice Manage Invoices Reports

Show 10 entries Search:

#	Invoice Date	Customer Name	Contact	Total Amount	Paid Amount	Payment Status	Action
1	2023-09-25	1	8090809080	993.28	993	Full Payment	
2	2023-09-25	1	8090809080	1239.00	1239	Full Payment	
3	2023-09-25	1	8090809080	507.40	507	Full Payment	

Showing 1 to 1 of 1 entries Previous 1 Next

78°F Mostly cloudy Search ENG IN 12:11 AM 7/14/2023

Report:

WhatsApp x Mess Management System x +

localhost/mess management/mess management/report.php

Select Language Google Translate

Dashboard Customer Food Category Food Invoices Reports Setting

Datewise Report Management Home > Datewise Report

Start Date mm / dd / yyyy

End Date mm / dd / yyyy

Generate Report

78°F Mostly cloudy Search ENG IN 12:11 AM 7/14/2023