

Partial Fulfillment of Degree

A

COMMUNITY ENGINEERING PROJECT

REPORT

ON

"Mess Menu Display

Website"

By

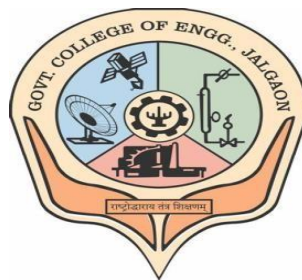
Mr. Umesh Laxman Jalandra

Mr. Siddhant Anil Kale

Mr. Suraj Vasant Karke

Mr. Dipak Laxman Khillare

S.Y. BTech (Computer Engineering) Sem-III



Department of Computer Engineering

Government College of Engineering,

Jalgaon - 425001

[An Autonomous Institute of Government of Maharashtra]

[2024-25]

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COMMUNITY ENGINEERING PROJECT
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In partial fulfilment of requirements for the degree of
Bachelor of Technology

In
Computer Engineering
Submitted By:

Mr. Umesh Laxman Jalandra

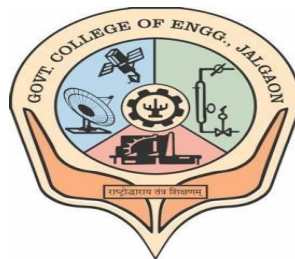
Mr. Siddhant Anil Kale

Mr. Suraj Vasant Karke

Mr. Dipak Laxman Khillare

Guided by:

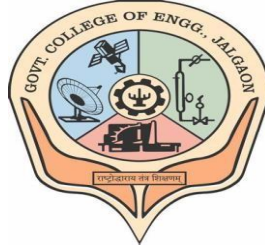
Prof. T. K. Gawali



Department of Computer Engineering
Government College of Engineering,
Jalgaon - 425001

[An Autonomous Institute of Government of Maharashtra]

[2024-25]



Department of Computer Engineering

Government College of Engineering, Jalgaon

CERTIFICATE

This is to certify that the Project entitled “[Mess Menu Display Website](#)” has been carried out by Mr. Umesh Laxman Jalandra, Mr. Siddhant Anil Kale, Mr. Suraj Vasant Karke, Mr. Dipak Laxman Khillare for Subject Community Engagement Project (CO250N) under the guidance of Prof. T. K. Gawali in partial fulfillment of the requirements for the degree of Bachelor of Technology in Computer Engineering of Government College of Engineering, Jalgaon during the academic year 2024-25 (Semester-III).

Date:

Place: Jalgaon

Prof. T. K. Gawali
Guide & Coordinator

Prof. D. V. Chaudhari
HOD

Dr. Suhas S. Gajare
Principal

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Acknowledgement

We take this opportunity to express our heartfelt gratitude towards the Department of computer Engineering, Government College of Engineering, Jalgaon that give us an opportunity for presentation of our community engagement project in their esteemed organization. It is a privilege for us to have been associated with Prof. T. K. Gawali (Seminar Coordinator, Computer Department), our guide and coordinator during community engagement project work. We have been greatly benefited by his valuable suggestions and ideas. It is with great pleasure that to express my deep sense of gratitude to him for valuable guidance, constant encouragement and patience throughout this work.

I am also thankful to Prof. D. V. Chaudhari (HOD, Computer Engineering) and Dr. Suhas S. Gajare (Principal, Government College of Engineering, Jalgaon) for giving us the necessary resources and support us to complete my Community Engagement Project.

Under these responsible and talented personalities, I was efficiently able to complete my community engagement project in time with success.

Mr. Umesh Laxman Jalandra [PRN 2341021]

Mr. Siddhant Anil Kale [PRN 2341022]

Mr. Suraj Vasant Karke [PRN 2341024]

Mr. Dipak Laxman Khillare [PRN 2341025]

Abstract

Finding reliable and affordable food services is a common challenge faced by students, especially those relocating to new regions for education. The absence of a unified platform dedicated to exploring nearby mess options often leads to time-consuming searches, lack of transparency, and inconsistent service quality. “Mess Junction” addresses this gap by providing a centralized, user-friendly web platform that allows students to browse, compare, and subscribe to nearby mess services based on their preferences.

The platform offers key features such as location-based mess listings, detailed menu previews, pricing information, and user reviews. Students can explore mess options by budget, cuisine, and proximity to their location. Mess providers benefit from a streamlined interface to manage their services, update menus, and interact with users.

By fostering transparency and reliability, “Mess Junction” aims to simplify students’ meal selection process, reducing stress and saving time. It bridges the gap between students and mess operators while promoting a community-driven approach to dining. This project lays the foundation for future scalability with potential features like mobile app integration and secure online payment systems.

Chapter 1: What is Community Engineering Project ?

The **Community Engineering Project (CEP)** course represents a unique and transformative approach to learning; Designed as a field-based program, the course seeks to bridge the gap between classroom learning and real-world application by enabling students to engage directly with local communities. Through the development of small, web-based applications, students leverage their technical skills to address socio-economic challenges, thus gaining not only technical expertise but also a deeper understanding of societal issues.

The primary objective of the CEP course is to provide students with hands-on experience in applying engineering principles to solve real-life problems. By collaborating in small teams of 2-3 members, students identify community needs, conduct literature surveys, and develop targeted solutions in the form of functional web applications. The emphasis is placed on a comprehensive learning experience, encompassing problem identification, solution design, teamwork, and effective communication of outcomes. This interdisciplinary and socially relevant approach allows students to grow as engineers and responsible citizens, capable of creating technology that serves a greater good.

Purpose and Scope

The CEP course is structured to achieve several critical outcomes. Upon its completion, students are expected to:

1. **Identify and Define Problems:** Through need analysis or literature surveys, students learn to pinpoint the challenges faced by their target community and frame these challenges into clear problem statements.
2. **Develop and Test Web Applications:** Students are tasked with designing and implementing small-scale web-based solutions using technologies such as HTML, CSS, Bootstrap, and open-source tools. These applications are tested for their functionality and usability in solving the identified problems.
3. **Enhance Team Collaboration:** As a team activity, the course promotes teamwork by encouraging students to collaborate, share responsibilities, and integrate their ideas to achieve common goals.
4. **Communicate Effectively:** Through comprehensive reporting and presentations, students refine their ability to document and share their work with clarity and precision.

5. Value of Community Engagement:

One of the most valuable aspects of this course is its emphasis on community involvement. By engaging with real-world challenges, students gain a deeper appreciation of the societal impact of technology. This engagement cultivates a sense of social responsibility and pride, motivating students to contribute positively to their surroundings.

Conclusion

The Community Engineering Project course is an exemplary initiative that integrates technical knowledge with practical application. It prepares students not just as engineers but as problem-solvers and contributors to society. By the end of the course, students will have developed functional web solutions, honed their teamwork and communication skills, and experienced the fulfilment of creating technology that benefits others. This comprehensive learning journey marks a pivotal step in their academic and professional development.

Chapter 2: Introduction to Project

1.1 Problem Statement

Finding reliable and affordable food options is one of the most common challenges faced by students, particularly those relocating to new regions for education. Without a proper system in place, students often rely on trial and error, word-of-mouth recommendations, or visiting multiple messes personally to evaluate their menus and pricing. This fragmented process leads to wasted time, lack of transparency, and inconsistent quality of service. Additionally, students often struggle to find options that align with their dietary preferences, budget constraints, or proximity to their accommodations. For mess providers, attracting student customers also becomes challenging without a digital platform for visibility.

The lack of a centralized platform where students can easily browse, compare, and subscribe to mess services exacerbates the issue. Moreover, current food delivery platforms like Zomato and Swiggy are not tailored for students seeking affordable daily meal services. This gap necessitates the development of a specialized platform designed to simplify the process of finding and subscribing to mess services while fostering trust and transparency.

1.2 Purpose

The purpose of this project is to create a web-based platform, “Mess Junction,” that connects students with mess providers in their vicinity. By offering detailed mess menus, pricing, reviews, and subscription options, the platform aims to streamline the process of finding reliable and affordable food services. Mess Junction seeks to address the inefficiencies of the current system, saving students time and effort while providing mess operators with a platform to expand their reach and manage their services effectively.

1.3 Objectives

The primary objective of this project is to create a platform that simplifies the process of identifying and subscribing to mess services. Specific objectives include:

1. **Centralized Information Repository:** Provide a platform that consolidates information about nearby mess services, including menus, prices, and availability.
2. **User-Friendly Interface:** Develop an intuitive and accessible interface that allows students to search and compare mess options based on their preferences.
3. **Subscription Management:** Integrate features for students to pre-book daily, weekly, or monthly meal plans directly by contacting the mess owners.
4. **Feedback Mechanism:** Implement a review and rating system to ensure transparency and build trust among users.
5. **Community Building:** Create a space where students and mess providers can interact effectively, fostering collaboration and mutual benefits.

1.4 Overview

Mess Junction is envisioned as a dynamic web platform that caters to the specific dining needs of students. The system will have multiple modules designed for different user groups:

1. **Student Module:** Allows students to register, browse nearby mess services, view detailed menus, and manage subscriptions.
2. **Mess Provider Module:** Enables mess operators to list their services, update menus and pricing, track customer feedback, and analyze subscription trends.
3. **Admin Module:** Oversees the platform's operations, ensuring data accuracy, approving mess listings, and addressing complaints or issues raised by users.

Using modern web technologies, the platform will focus on scalability, security, and accessibility. It will initially be designed as a web application but will have provisions for future expansion into mobile platforms.

1.5 Scope

The scope of Mess Junction extends beyond a simple listing site for mess services. It aims to create an ecosystem where students can make informed decisions about their dining options while ensuring mess providers can efficiently reach their target audience. Key features include:

1. **Transparent Reviews:** Enable students to rate and review mess services to enhance trust and reliability.
2. **Subscription Options:** Display flexible meal plans tailored to students' varying needs.
3. **User-Friendly UI:** Easy to navigate and understand, students can explore Messes and menus without any interference.
4. **Future Expansion:** Include potential features like secure payment gateways, real-time availability updates, and a mobile app.

By addressing the unique dining challenges faced by students, Mess Junction aims to improve their overall quality of life and focus on academics. The platform also seeks to empower mess providers by offering them a structured and efficient digital space to manage their operations.

In conclusion, Mess Junction is designed to solve a pressing issue in student communities by leveraging technology to build a user-friendly and reliable solution. The project's emphasis on transparency, convenience, and scalability ensures its long-term relevance and impact.

Chapter 3: Literature Survey

The growing reliance on web-based platforms to address specific community needs has revolutionized how services are accessed and delivered. For Mess Junction, a platform aiming to connect students with nearby mess services, a comprehensive review of existing systems and methodologies provides valuable insights into potential challenges and solutions.

Existing Platforms

Several existing online services, such as food delivery platforms (e.g., Zomato, Swiggy) and local restaurant listing websites, cater to general audiences but fail to address the specific needs of students relying on regular mess services. These platforms focus primarily on on-demand food delivery rather than providing comprehensive details about affordable mess options with consistent meal schedules. Moreover, meal subscription services like FreshMenu and meal box delivery options are typically expensive and not tailored to the student demographic.

Platforms offering location-based services for mess options remain scarce. Existing solutions like online restaurant aggregators do not cater to long-term, subscription-based meal requirements, nor do they emphasize dietary preferences, budget constraints, or the proximity to academic institutions, all of which are critical for students.

Challenges Identified

Several studies and user surveys highlight the following challenges faced by students seeking mess services:

1. **Lack of Centralized Information:**
Students rely on word-of-mouth or scattered listings, which are often outdated or inaccurate.
2. **Lack of Trust and Transparency:**
Many students are wary of unverified services, leading to hesitancy in trying new mess providers. Without reliable reviews or ratings, they often remain unaware of service quality.
3. **Unoptimized User Interfaces:**
Platforms designed for general audiences often overwhelm users with features, making navigation cumbersome for students who prefer a simple, intuitive design.

4. **Absence of Engagement Features:**

Existing platforms do not encourage community engagement, such as forums for sharing feedback or suggesting menu improvements.

Key Takeaways from Existing Literature

Based on studies and analysis of platforms in similar domains, certain design and functionality principles stand out as essential for creating a student-focused solution:

- **Centralized and Verified Listings:** Platforms with a centralized repository of listings are more effective in providing reliable information. Verification mechanisms, such as user authentication and admin oversight, build trust among users.
- **Student-Specific Filters:** Tailored search parameters, such as affordability, proximity, and dietary preferences, greatly enhance the user experience for the student demographic.
- **Review and Rating Systems:** Peer reviews are instrumental in fostering trust and transparency. Platforms that include user-generated feedback enjoy higher adoption rates.
- **Simplified Communication:** Direct communication features between users and service providers improve clarity and reduce friction.

Lessons from Other Domains

Online rental platforms and educational apps offer lessons in addressing niche community needs. Platforms like Housing.com have demonstrated the importance of location-based filtering, while apps like Udemy underscore the value of reviews in influencing user decisions. Mess Junction can adapt such features to create a robust, user-friendly platform tailored to students' requirements.

Proposed Features Based on the Survey

- A centralized, verified database of mess services.
- Intuitive search and filter options for meal type, budget, proximity, and preferences.
- Review and rating systems to ensure transparency.
- Community engagement tools like forums for sharing feedback and insights.

By addressing gaps in current platforms and leveraging proven strategies from other domains, Mess Junction seeks to create a reliable and student-centric solution. This literature review highlights the necessity of building a scalable, efficient, and transparent platform that simplifies the process of finding mess services for students.

Chapter 4: Ground Survey

A ground survey is a critical step in the development of any community-focused platform, as it ensures the final product aligns with the actual needs of the target audience. For *Mess Junction*, a platform aimed at connecting students with nearby mess services, the ground survey was conducted to identify pain points, preferences, and key features that users expect from such a platform. This chapter outlines the methodology, findings, and implications of the survey for the development of Mess Junction.

Survey Objectives

The primary goal of the survey was to gather actionable insights from two main stakeholder groups:

1. Students – To understand their dining preferences, challenges in finding mess services, and expectations from a centralized platform.
2. Mess Providers – To explore their requirements for listing services online and identify features that would make the platform beneficial for them.

Methodology

The ground survey was conducted using a mixed-method approach, combining online questionnaires and in-person interviews. Key details of the methodology include:

- **Target Audience:**
 - 150 students from local colleges and hostels.
 - 25 mess providers operating in close proximity to these educational institutions.
- **Data Collection Tools:**
 - Face-to-Face Interviews for students and mess providers who might lack digital access.
 - Observations in popular mess areas to understand foot traffic and service dynamics.

- **Survey Focus Areas:**
 - Challenges in accessing mess services.
 - Factors influencing student preferences (menu, pricing, proximity, reviews).
 - Mess providers' willingness to adopt a digital platform.

Key Findings

1. Student Insights

- **Proximity to Campus:**
 - 80% of students preferred mess services within walking distance from hostels or colleges.
- **Affordability:**
 - 75% emphasized the importance of cost-effective meal plans, particularly for long-term subscriptions.
- **Trust Issues:**
 - 50% of students expressed concerns about hygiene standards and inconsistent service quality.

2. Mess Provider Insights

- **Ease of Use:**
 - 70% of mess providers highlighted the need for a simple, user-friendly dashboard to manage menus and inquiries.
- **Visibility and Reach:**
 - 60% believed that a centralized platform could help attract more students without additional marketing costs.
- **Feedback Mechanisms:**
 - Providers expressed interest in a review system to build credibility and improve service quality.

Implications for Mess Junction

The findings emphasized several priorities for the platform's development:

1. **Affordability Focus:** Highlight cost-effective meal plans with clear pricing details.
2. **Menu Transparency:** Provide detailed menus with options for dietary customization.
3. **Trust and Verification:** Implement provider verification and allow student reviews to enhance transparency.
4. **Provider Tools:** Design an intuitive dashboard for mess providers to manage their listings and view analytics.

Conclusion

The ground survey provided a clear understanding of the challenges and expectations of students and mess providers. By integrating these insights into its design and functionality, *Mess Junction* aims to create a platform that effectively bridges the gap between students and mess services, enhancing convenience, trust, and accessibility.

Chapter 5: Web Development Methodology

Web development plays a vital role in addressing real-world challenges by creating digital solutions tailored to specific needs. In the context of *Mess Junction*, web development provides the technological foundation to resolve issues such as the unavailability of centralized mess information, lack of verified details, and inefficient communication between students and mess providers. By integrating modern web development practices, the platform ensures usability, reliability, and scalability, making the process of finding suitable mess services seamless and efficient.

Frontend Development

Frontend development defines the user interface (UI) and user experience (UX) of *Mess Junction*. By utilizing technologies like HTML, CSS, and JavaScript, the platform delivers a responsive and visually appealing design. Students can explore mess menus, filter options based on proximity, pricing, and dietary preferences, and view detailed descriptions through interactive and intuitive pages. Frameworks such as Bootstrap enhance development efficiency by providing pre-designed responsive components, ensuring seamless navigation across devices, including smartphones, tablets, and laptops. Features like an easily navigable search bar or menu cards simplify user interactions, creating a hassle-free experience.

Backend Development

The backend powers the platform's server-side operations and database management. Using Node.js and Express.js (from the MERN stack), *Mess Junction* efficiently processes user requests, manages data, and facilitates functionalities such as user authentication and menu updates. For instance, when a student searches for mess services, the backend retrieves the necessary data from the database and sends it to the frontend, ensuring a smooth and quick response.

Database and Data Management

MongoDB, a NoSQL database from the MERN stack, is ideal for storing dynamic data, such as mess details, user profiles, menus, and reviews. Its flexibility enables real-time updates, ensuring that menu changes, service availability, and user interactions are always current.

Problem Solving in Action

Through these technologies, *Mess Junction* addresses key challenges in connecting students with mess services:

1. **Search Efficiency:** Students can filter mess services based on location, budget, and preferences through a dynamic and interactive frontend.
2. **Trust and Transparency:** Verified mess provider profiles and student reviews promote reliability and reduce the risk of misinformation.
3. **Community Engagement:** The platform fosters trust and collaboration by allowing users to share feedback and experiences.
4. **Scalability:** Leveraging MongoDB and Node.js ensures that the platform can manage increased traffic as the user base grows.

Conclusion

Web development empowers *Mess Junction* to create a user-centric solution tailored to students' dining needs. By combining robust frontend tools, scalable backend technologies, responsive design frameworks like Bootstrap, and the versatility of the MERN stack, the platform effectively simplifies access to affordable and reliable mess services. This innovative and scalable application connects students and mess providers, making it an indispensable resource for the student community.

Chapter 6: Resources Required

6.1 SOFTWARE REQUIREMENT

- Platform /IDE : Microsoft Visual Studio Code
- Operating System : Windows 10 / 11
- Database: MongoDB
- Frontend : HTML, CSS, JavaScript, ReactJS
- Backend : Express.js, Node.js
- Package Manager: npm
- Development tools: GitHub, Browser
- Other Utilities: Terminal / Command Prompt

6.2 HARDWARE REQUIREMENT

Computer System or a Laptop with given specifications

- Minimum Processor (Intel Core i3 or equivalent).
- With Minimum RAM of 4GB
- External Hard Drive 512GB for Backup
- Internet Connectivity Required

Chapter 7: Output

Below are some screenshots of the final design of our website, named “Mess Junction” which includes:

I. Homepage

II. Mess

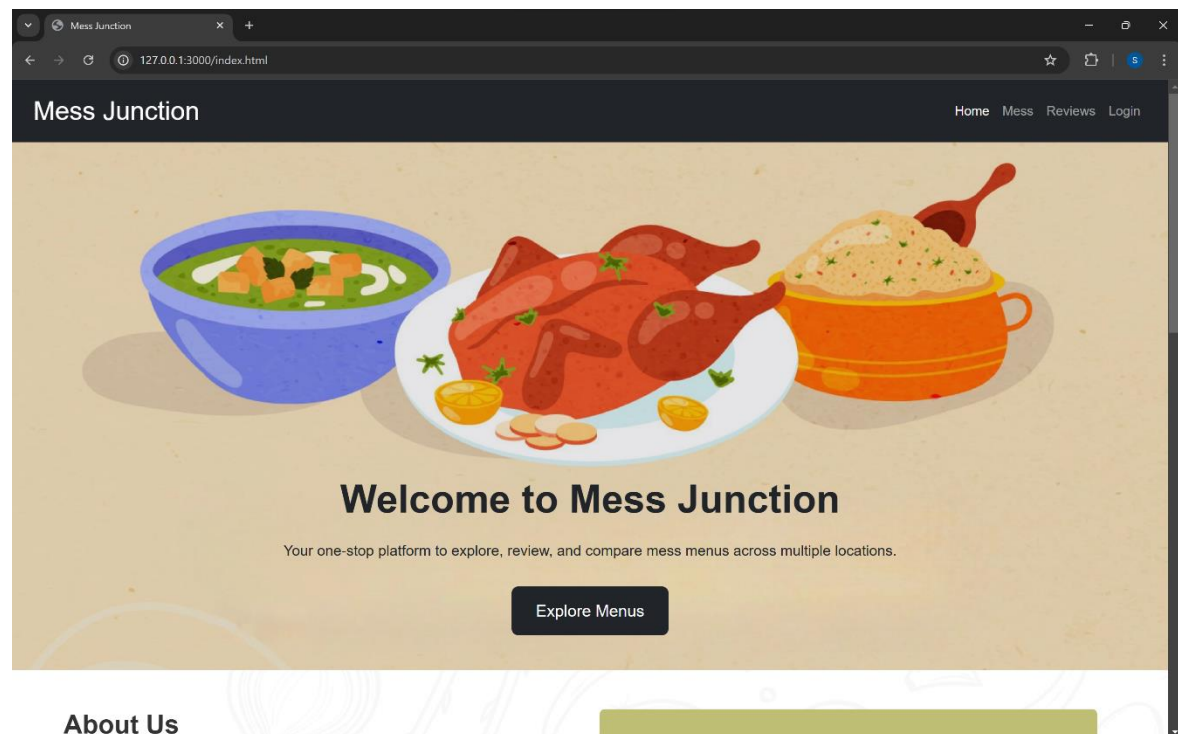
III. Explore Mess

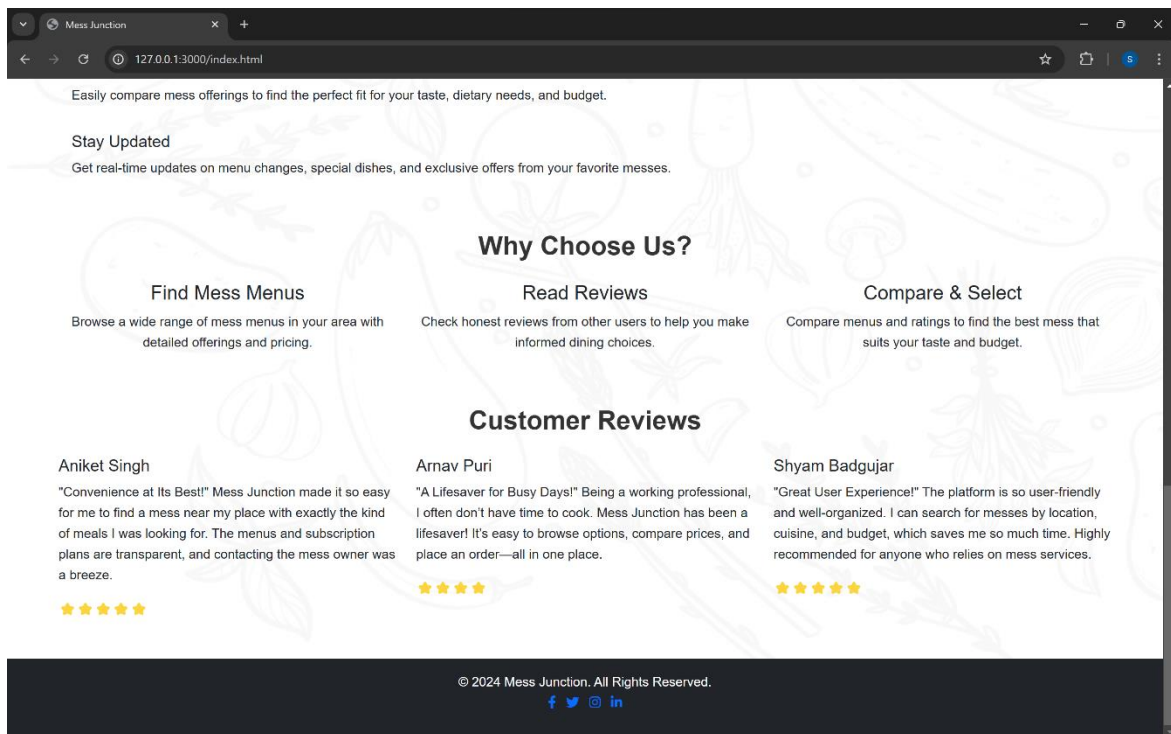
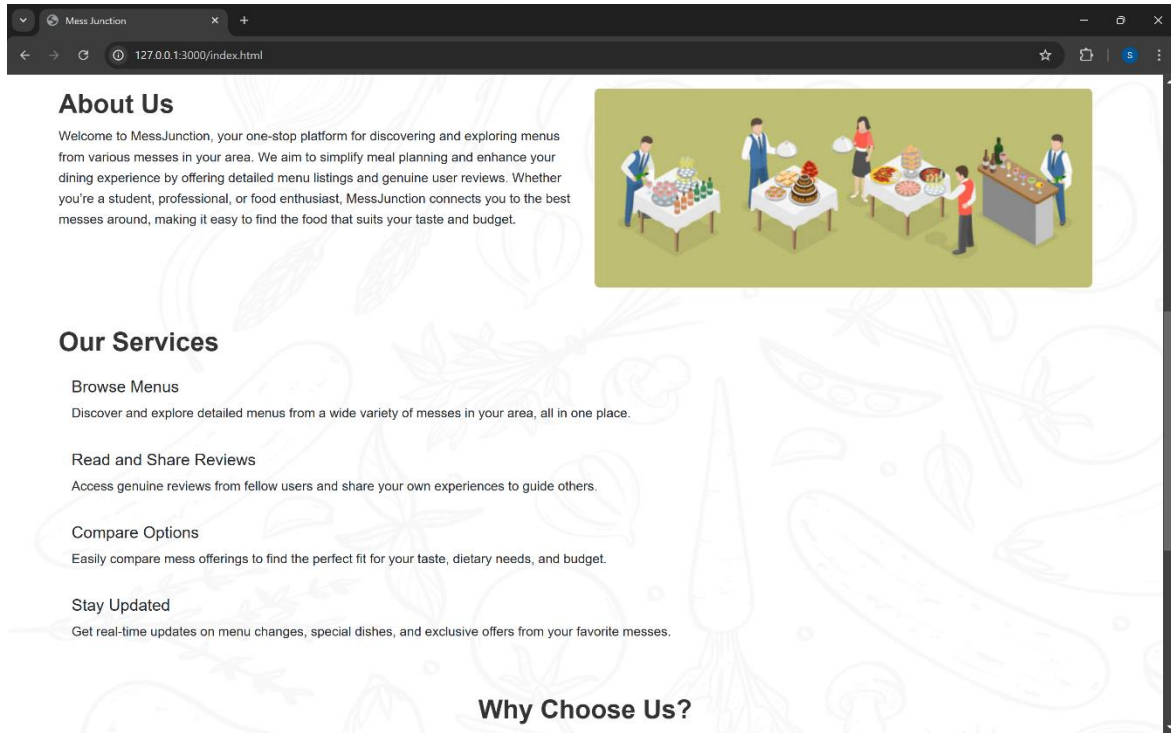
IV. Reviews

V. Signup and Login Pages

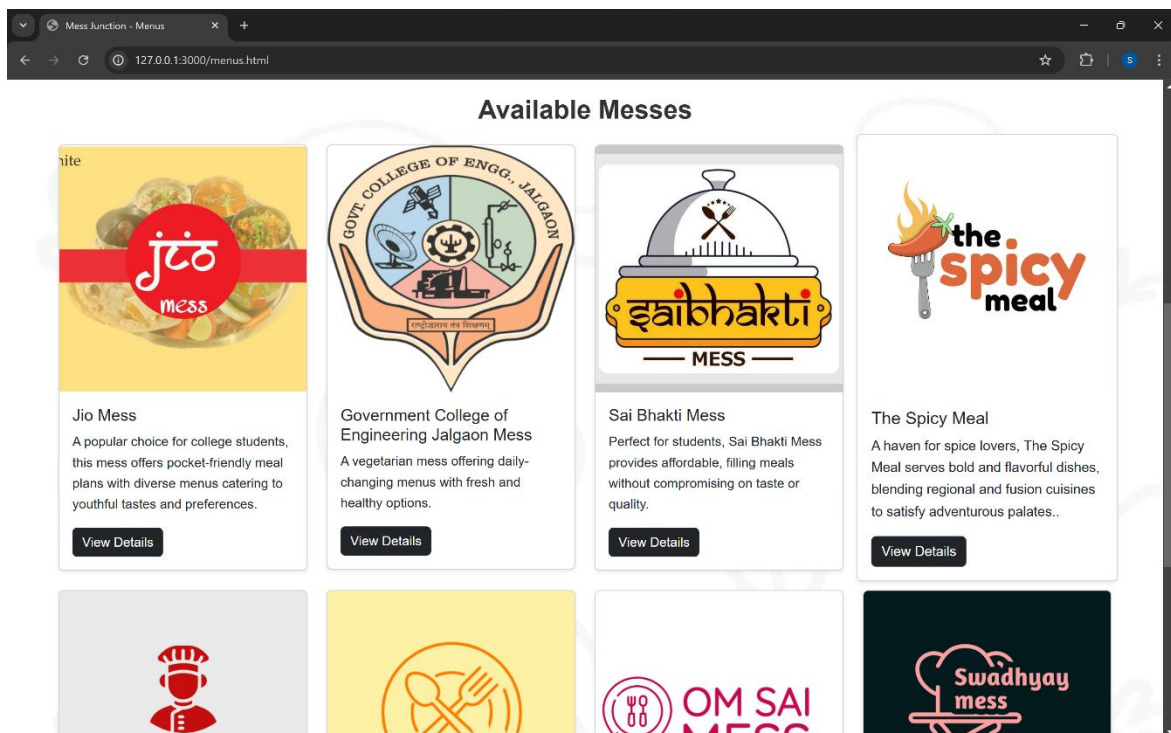
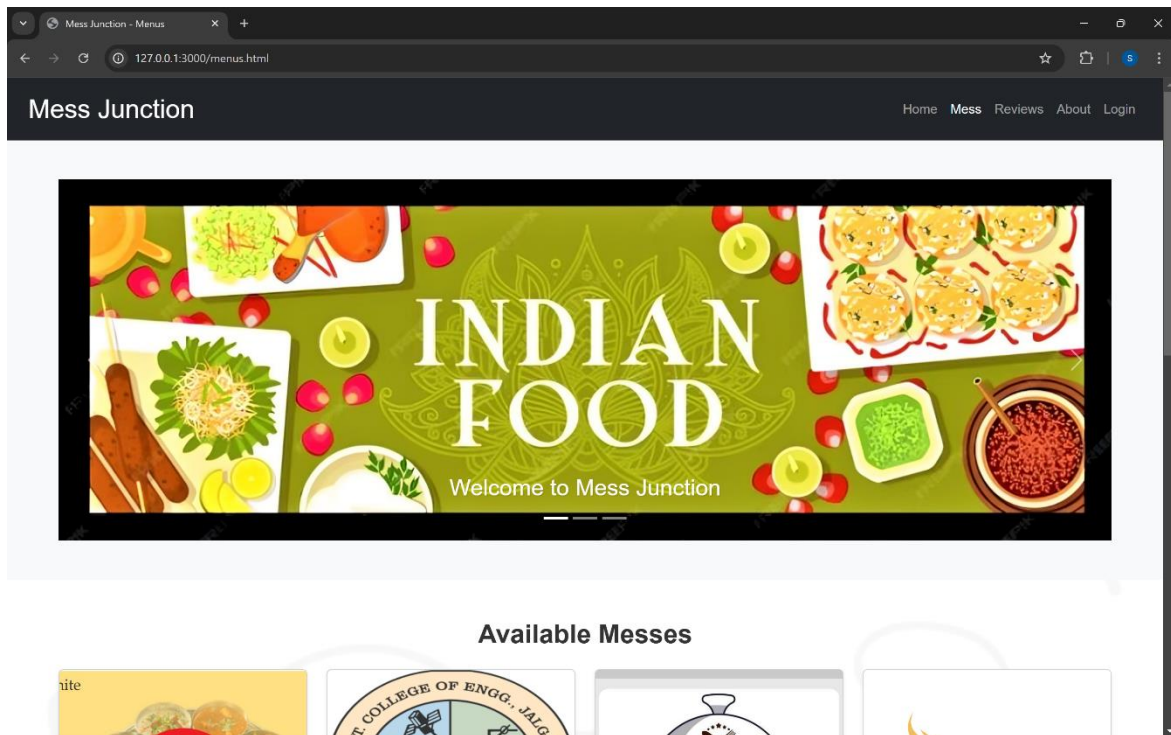
VI. About Us

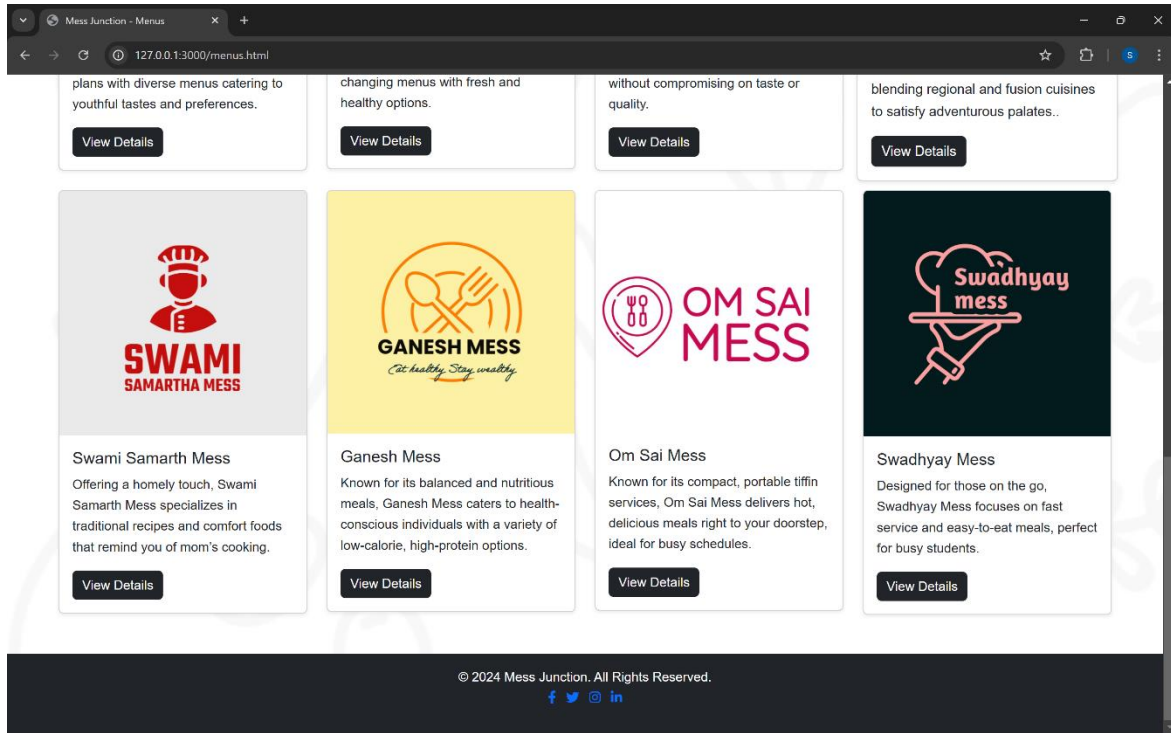
I. Homepage



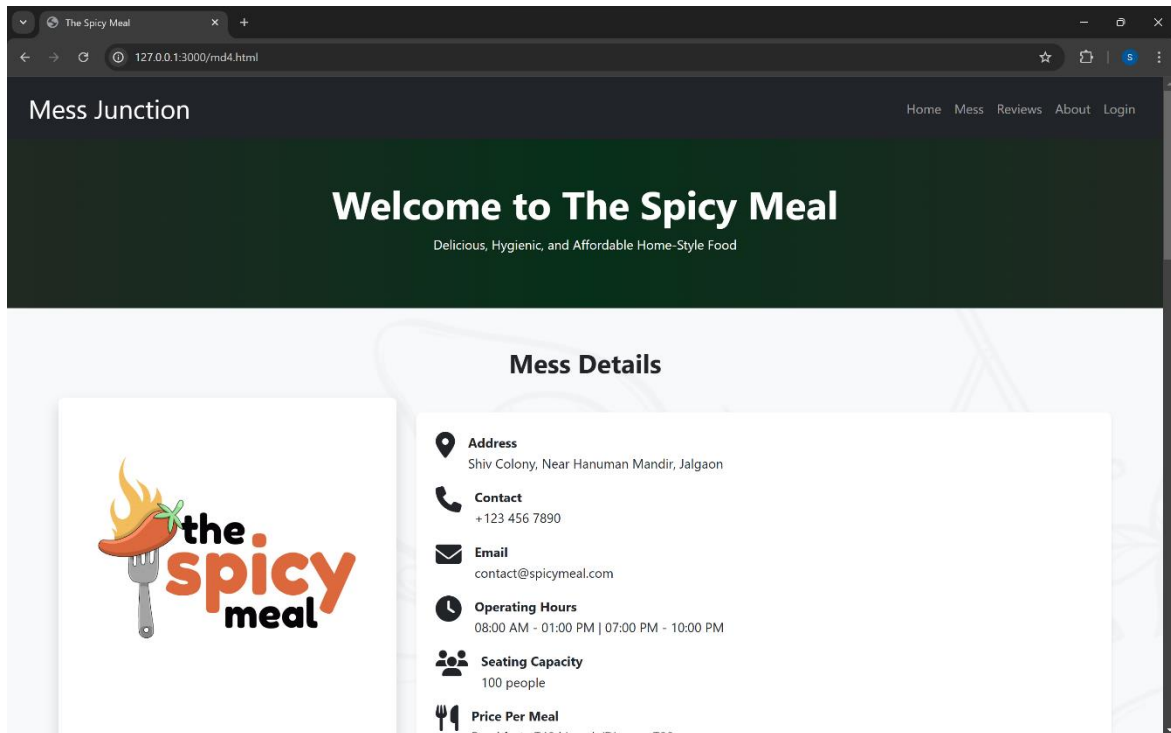


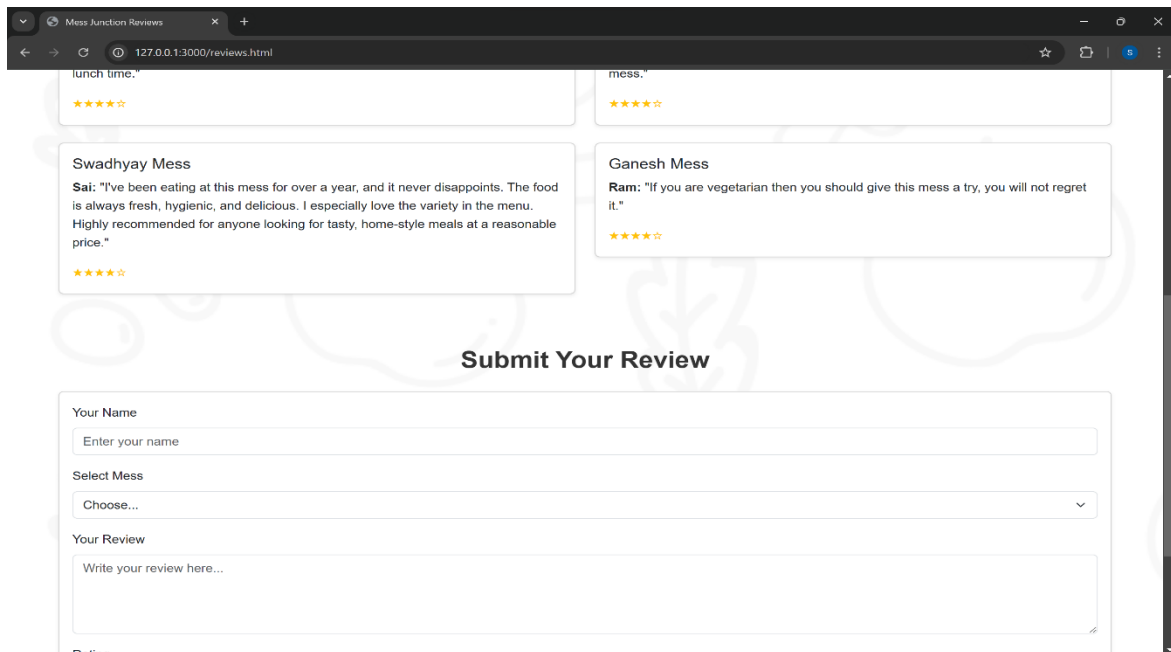
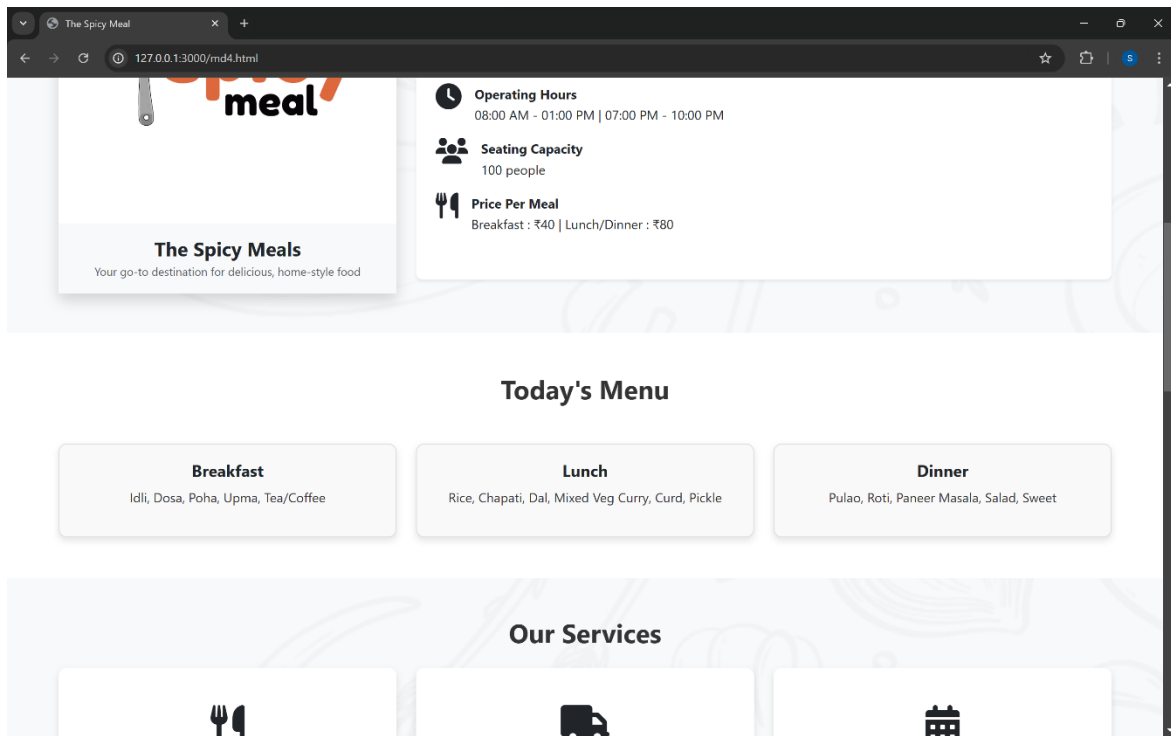
II. Mess





III. Explore Menus





The Spicy Meal

127.0.0.1:3000/md4.html

★★★★★

★★★★★

★★★★★

Submit Your Review

Your Name

Enter your name

Select Mess

Choose...

Your Review

Write your review here...

Rating

Rate...

Submit Review

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IV. Review

Mess Junction

Home Mess **Reviews** About Login

Mess Reviews

Read and share reviews to make better dining choices.

User Reviews

Government College of Engineering Jalgaon Mess

Abhijit : "The best thing about this mess is the opening hours, it aligns with the college Lunch time."

★★★★★

Jio Mess

Lalit: "One of the best mess service.The only problem is the waiting time, due to the lack of area to accomodate enough people at once."

★★★★★

Sai Bhakti Mess

Shubham: "Tasty affordable meals. The one of the only mess working during college lunch time."

★★★★★

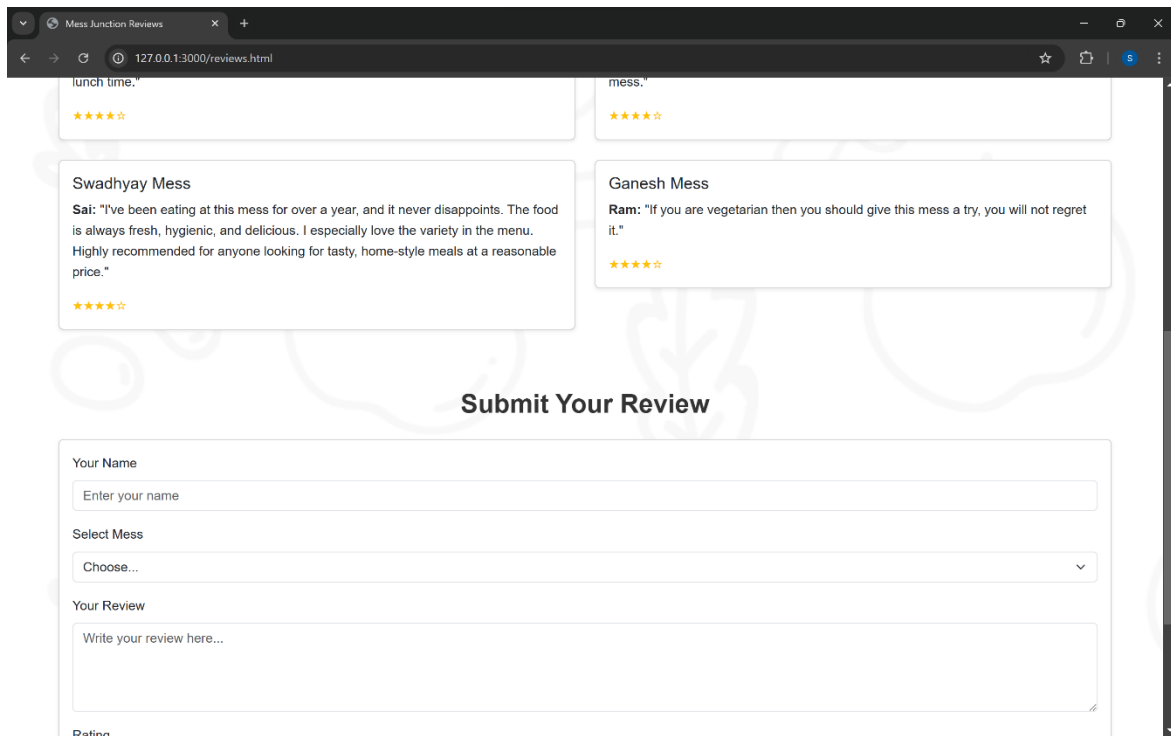
The Spicy Meal

Shyam: "Great food, if you are into spicy food then you should definitely try this mess."

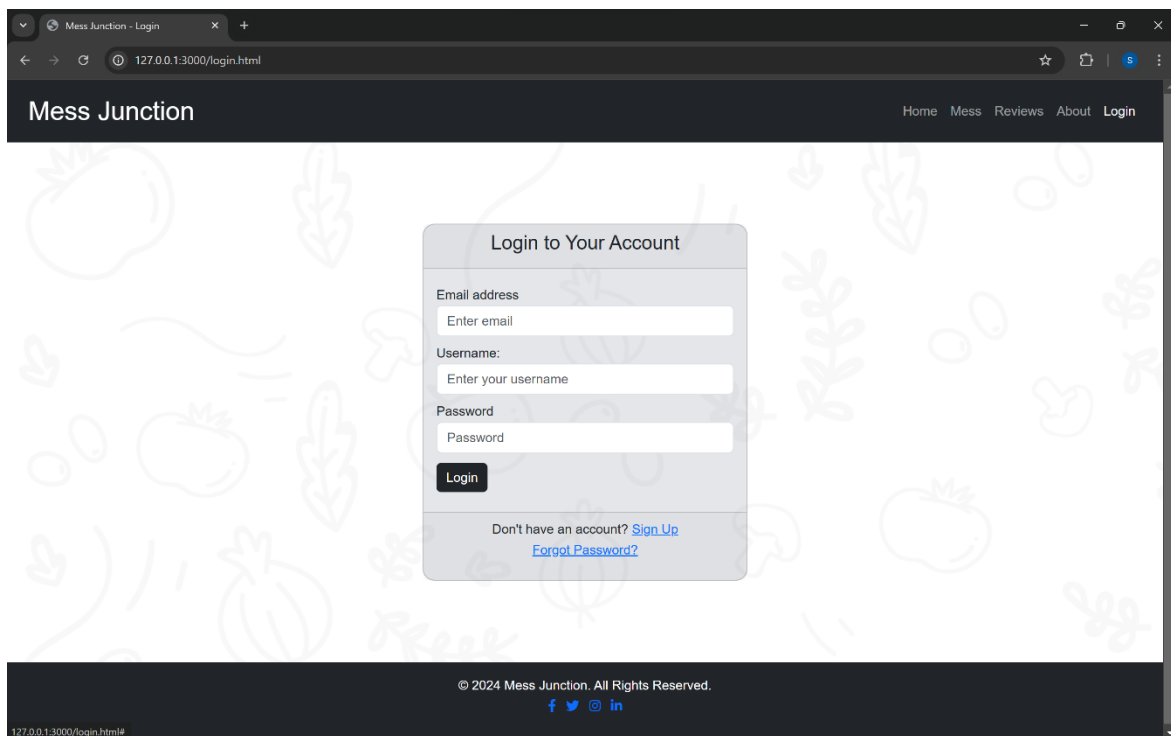
★★★★★

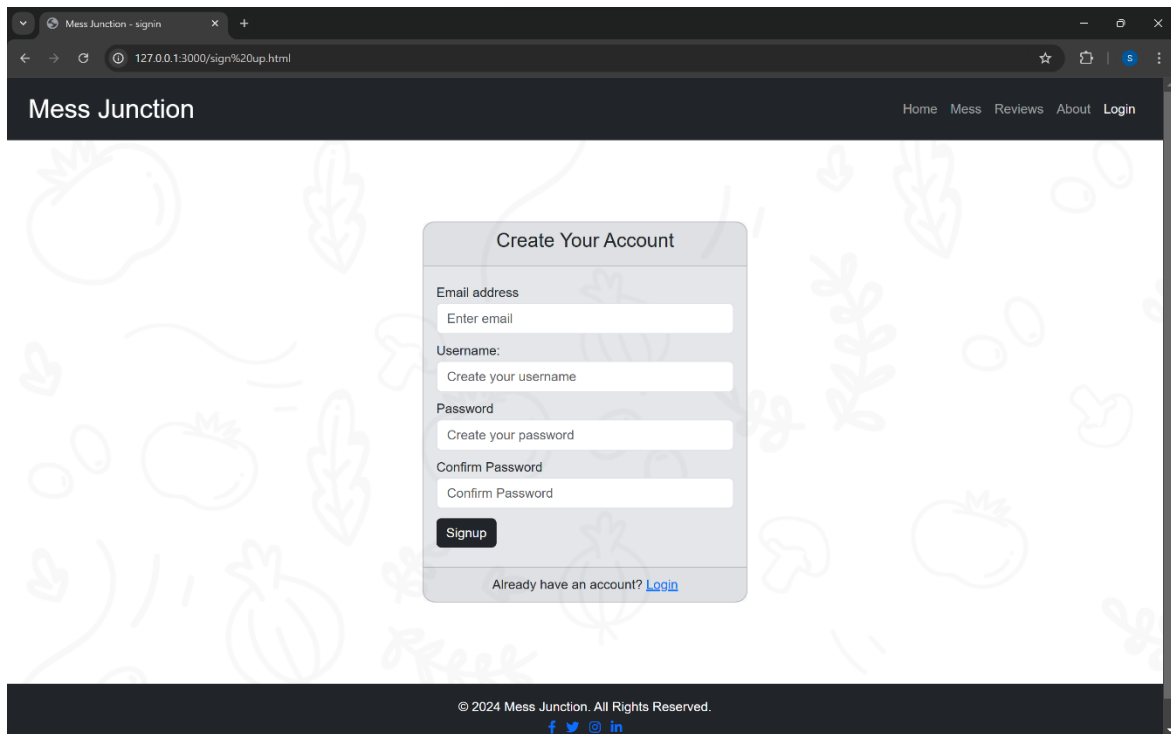
Government College of Engineering Jalgaon Mess

Ganesh Mess

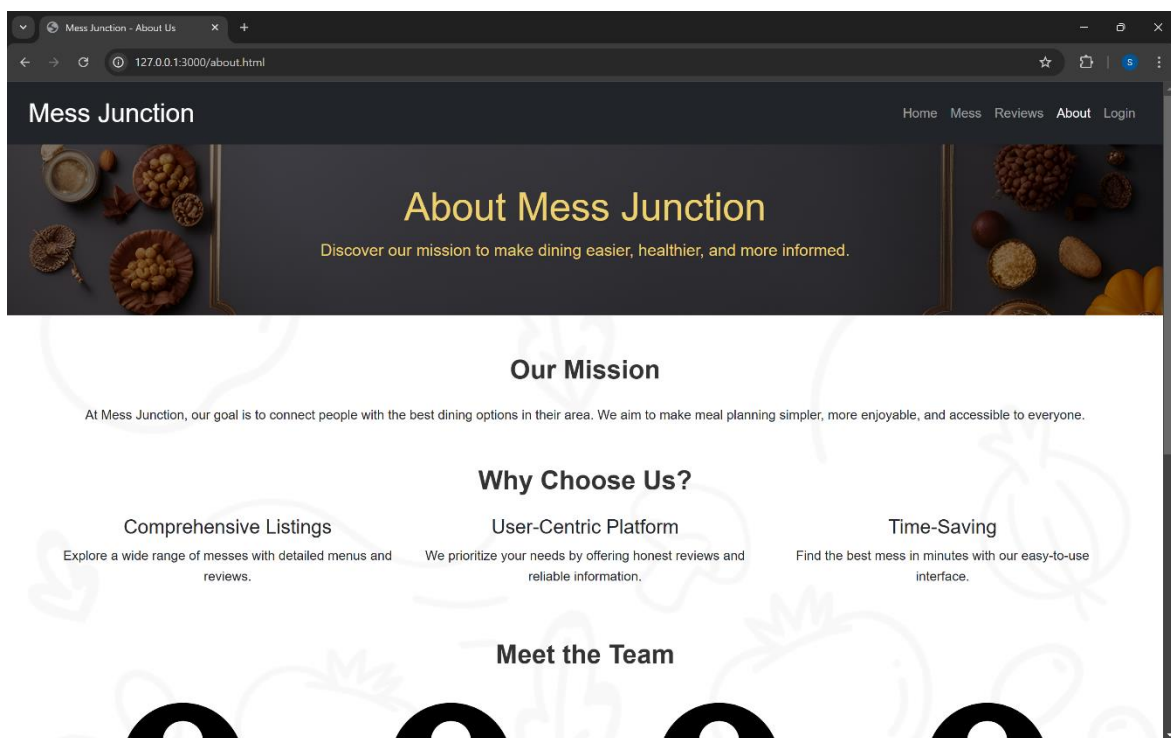


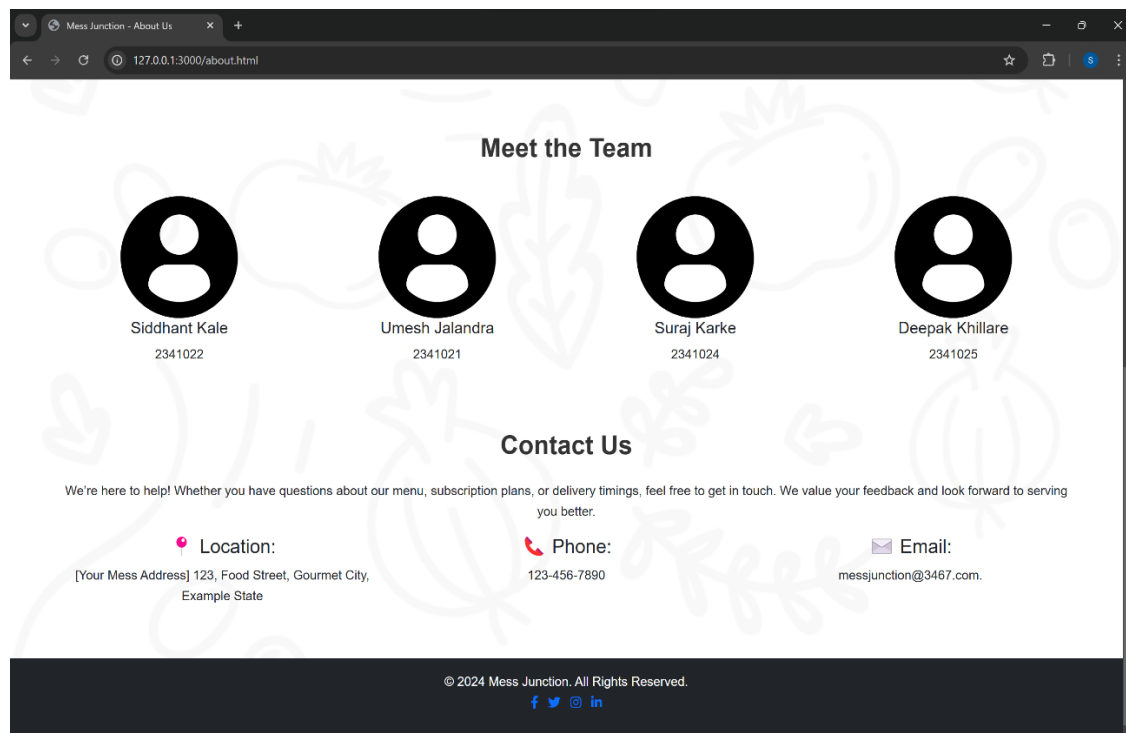
V. Signup and Login pages





VI. About us





Chapter 8: Conclusion And Reference

8.1 CONCLUSION

The Mess Junction website serves as a transformative platform for addressing the unorganized nature of the messes. By providing a digital solution, it empowers mess owners to efficiently manage their operations and expand their reach while ensuring customers have easy access to reliable and convenient meal options. The platform bridges the gap between service providers and users, promoting transparency and fostering seamless communication.

Mess Junction stands out as an innovative solution that addresses the key challenges faced by the mess business. It enables mess owners to upload daily menus, showcase subscription plans, making their services more accessible and appealing to a larger audience. For customers, the website offers a centralized hub to explore various mess options, compare menus and prices, and contact mess owners directly, eliminating the hassle of offline searches.

The website's user-friendly interface make it a one-stop solution for both mess owners and customers. By embracing digital transformation, Mess Junction not only enhances operational efficiency but also improves customer satisfaction and trust. Its ability to streamline processes and provide a structured approach to the mess industry ensures long-term benefits for all stakeholders.

8.2 REFERENCE

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