

Project Report
On
Savory Spoon (A Food Ordering Platform)
COMPUTER SCIENCE AND ENGINEERING
B.E. Batch-2022
In
Jan -2025



Under the Guidance of:

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Submitted By:

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(Annexure –C)

CERTIFICATE

This is to be certified that the project entitled “Savory Spoon” has been submitted for the Bachelor of Computer Science Engineering at Chitkara University, Punjab during the academic semester January 2024- May-2024 is a Bonafide piece of project work carried out by Palak Garg(2210992014) and Palak(2210992012) towards the partial fulfillment for the award of the course Integrated Project (CS 203) under the guidance of Mr. Rahul and supervision.

Rahul Singh Rajput

(Annexure –D)

CANDIDATE’S DECLARATION

We, Palak Garg(2210992014) and Palak(2210992012), B.E.-2022 of the Chitkara University, Punjab hereby declare that the Integrated Project Report entitled “Savory Spoon” is an original work and data provided in the study is authentic to the best of our knowledge. This report has not been submitted to any other Institute for the award of any other course.

Palak Garg
2210992014

Palak
2210992012

Place:

Date:

(Annexure -E)

ACKNOWLEDGEMENT

It is our pleasure to be indebted to various people, who directly or indirectly contributed in the development of this work and who influenced my thinking, behavior and acts during the course of study. We express our sincere gratitude to all for providing me an opportunity to undergo Integrated Project as the part of the curriculum. We are thankful to Savory Spoon for his support, cooperation, and motivation provided to us during the training for constant inspiration, presence and blessings. We also extend our sincere appreciation to Mr. Rahul who provided his valuable suggestions and precious time in accomplishing our Integrated project report. Lastly, We would like to thank the almighty and our parents for their moral support and friends with whom we shared our day-to day experience and received lots of suggestions that improve our quality of work.

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1. Abstract

This project report presents the development of a web-based Savory Spoon food ordering platform, built using the MERN (MongoDB, Express.js, React.js, Node.js) stack. The platform offers a seamless ordering experience for users and restaurant owners through an intuitive, user friendly interface for browsing menus, placing orders, and managing restaurant listings.

The report delves into the technical implementation, including:

Functionality:

- Menu management: Restaurant owners can effortlessly add, update, and manage detailed menu items with descriptions, pricing, and availability, along with high-quality images.
- Search and filtering: Users can efficiently browse and filter through various restaurant options based on cuisine type, location, price range, and dietary preferences, ensuring a customized experience.
- Secure ordering and payment: The platform integrates secure payment gateways for smooth, safe, and easy transactions during the food ordering process.
- Order tracking: Users receive real-time order updates, including preparation time, dispatch, and delivery, creating a transparent ordering process.
- Communication tools: The platform enables direct communication between users and restaurant owners via built-in messaging, ensuring order queries and delivery issues are addressed promptly.

MERN Stack Implementation:

- The report explains the use of React.js for building modular, reusable UI components that offer dynamic, responsive user interactions.
- MongoDB handles the database requirements, allowing for efficient storage of restaurant data, user profiles, and orders in a scalable, NoSQL environment.
- Express.js and Node.js manage the server-side logic and API handling, offering seamless routing, data processing, and real-time updates.

The report further explores:

Challenges Encountered:

- The discussion includes handling large datasets of restaurant listings and optimizing the performance of real-time order updates.
- The integration of third-party APIs, such as payment gateways and geolocation services, and the solutions adopted to address these challenges are detailed.

Future Enhancements:

- Potential features such as user reviews, loyalty programs, advanced delivery tracking, and AI-powered recommendations based on user preferences are discussed as future improvements.

This report outlines the development of a robust and user-friendly food ordering platform using the MERN stack, demonstrating key technical decisions, the challenges tackled, and the potential for further enhancements.

2. Introduction

The food delivery industry has seen significant expansion, with online ordering platforms becoming a convenient solution for accessing a wide range of cuisines without leaving home. These platforms enable users to browse and order from a variety of restaurants, providing a seamless way to enjoy meals from local eateries to international chains. As the demand for OnDemand food services continues to grow, it becomes crucial to design user-friendly applications that enhance the ordering experience for both customers and restaurant owners. Savory Spoon aims to address this by offering an intuitive, efficient platform that streamlines food discovery, ordering, and delivery, while supporting local restaurants and fostering community connections.

2.1 Background

The rise of digital food delivery services has revolutionized how people order and enjoy meals, offering convenience, variety, and speed. As consumers become more tech-savvy and increasingly value on-demand services, the demand for efficient and intuitive food ordering platforms has surged. Despite the growing number of platforms, many still struggle with issues like cumbersome user interfaces, inefficient search capabilities, and limited personalization options. Additionally, smaller, local restaurants often face challenges in gaining visibility on larger platforms.

This project addresses these gaps by developing a food ordering platform, Savory Spoon, using the MERN stack, with a focus on delivering a seamless user experience, robust search and filtering capabilities, and promoting local restaurant engagement.

2.2 Problem Statement

Online food ordering platforms often provide minimal customization options, restricting users from fully tailoring their meals to their specific tastes, dietary needs, and preferences. This limitation not only curtails individual creativity but also decreases overall satisfaction with the dining experience. Consumers crave a more personalized approach, one that allows them to craft meals that align with their unique requirements. There is a clear need for a platform that goes beyond basic customization, offering a wide range of options to ensure that every meal is perfectly suited to each user's tastes and dietary restrictions.

3. Software and Hardware Requirement Specification

3.1 Methods

- **Code Editor/IDE:** ○ **Tools:** Visual Studio Code, Sublime Text, IntelliJ IDEA. ○
Availability: Free download from their official websites (e.g., Visual Studio Code).

3.2 Programming/Working Environment

- **Programming Languages and Frameworks:**
 - **JavaScript (for Frontend and Backend):**
 - **Tools:** Node.js runtime, npm (Node Package Manager).
 - **Availability:** Free download from the Node.js official website. ○ **Frontend**
 - Libraries and Frameworks:**
 - **React.js:** Available via npm (install using `npm install react`).
 - **Tailwind CSS:** Available via npm (install using `npm install tailwindcss`).
 - **Availability:** Documentation and installation guides can be found on the official React and Tailwind CSS websites.
- **Backend Frameworks:**
 - **Express.js:** Available via npm (install using `npm install express`).
 - **Availability:** Documentation is accessible on the Express.js official website.

3.3 Requirements to Run the Application

□ Database Management System (DBMS): ○

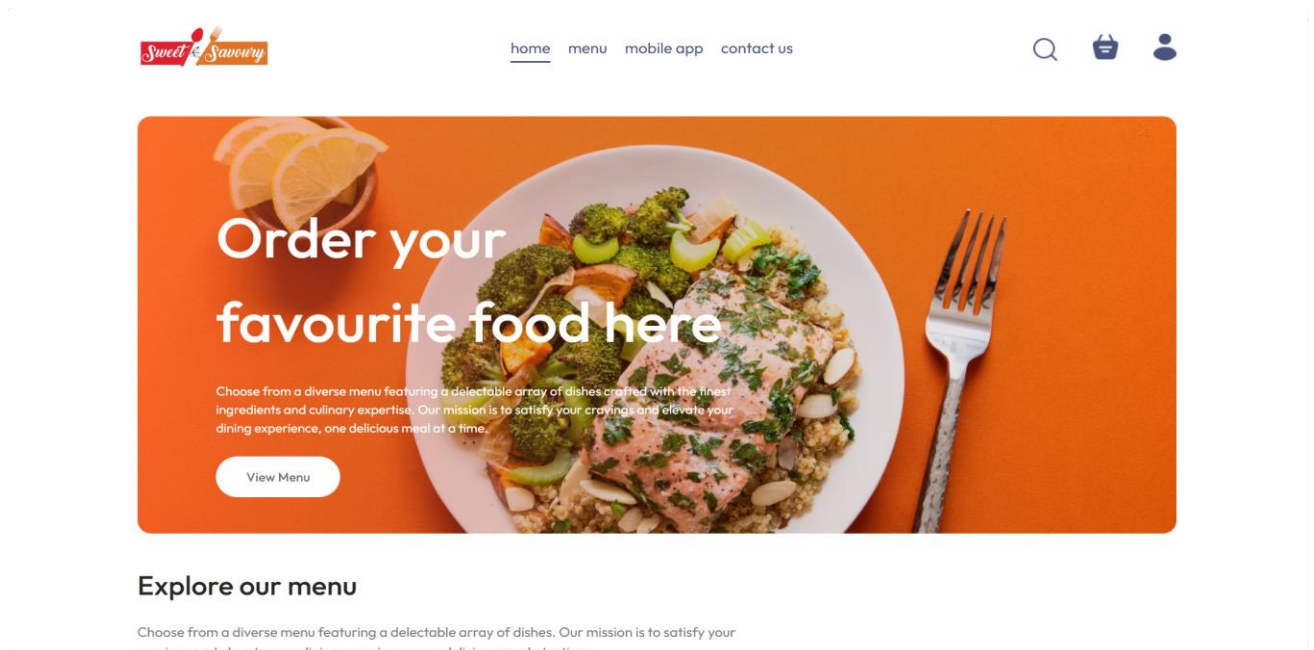
MongoDB (NoSQL Database):

- **Tools:** MongoDB, MongoDB Atlas (for cloud database), Mongoose (ODM).
- **Availability:** MongoDB can be downloaded for free from the official MongoDB website. MongoDB Atlas offers a free tier for cloud-based databases.


4. Database Analyzing, design and implementation (If any)

Not Applicable

5. Program's Structure Analyzing and GUI Constructing :



Top dishes near you

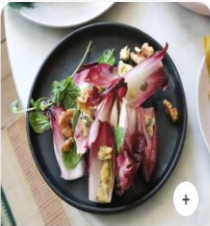


Veg Salad

★★★★☆

Fresh cucumbers, tomatoes, olives, and feta

₹180

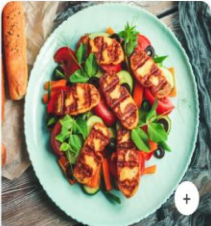


Clover Salad

★★★★☆

Spinach, nuts, berries, and light dressing

₹160




Chicken Salad

★★★★☆

Crisp romaine with creamy dressing and parmesan

₹240




Lasagna Rolls

★★★★☆


Soft flatbread rolled with fresh veggies and spicy mayo

₹140




Peri Peri Rolls

★★★★☆



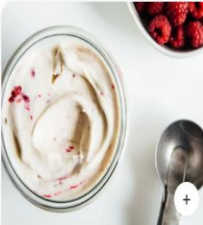
Chicken Rolls

★★★★☆



Vea Rolls

★★★★☆






Butterscotch Cake

★★★★☆



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[menu](#)
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Items	Title	Price	Quantity	Total	Remove
	Veg Salad	₹180	<input type="text" value="1"/>	₹180	x
	Vegan Sandwich	₹180	<input type="text" value="2"/>	₹360	x
	Butterscotch Cake	₹200	<input type="text" value="1"/>	₹200	x

Cart Totals

Subtotal	₹740
Delivery Fee	₹50
Total	₹790

PROCEED TO CHECKOUT

If you have a promo code, Enter it here

Submit



+

 Add Items

☒ List Items

☒ Orders

Order Page

Greek Salad x 1, Veg Salad x 1, Lasagna Rolls x 3

Items : 3

₹770

Out for delivery

siya garg
 Jhansla,
 rajpura, punjab, India, 140401
 2345675677

Greek Salad x 3, Veg Salad x 2, Peri Peri Rolls x 1, Chicken Rolls x 2

Items : 4

₹1690

Food Processing

Palak 123
 Jhansla,
 rajpura, punjab, India, 140401
 8564638972

Greek Salad x 3, Veg Salad x 2, Peri Peri Rolls x 1, Chicken Rolls x 2

Items : 4

₹1690

Food Processing

Palak 123
 Jhansla,
 rajpura, punjab, India, 140401
 8564638972

6. Code-Implementation and Database Connections (If any)

Not Applicable

7. System Testing (if any)

Not Applicable

8. Limitations (if any)

Not Applicable

9. Conclusion

In summary, the development of the Savory Spoon food ordering platform using the MERN stack represents a crucial advancement in addressing the limitations of existing food delivery services. By leveraging modern technologies, this project enhances user experience, streamlines the ordering process, and supports the growth of local restaurants.

The focus on an intuitive interface, robust search functionality, and secure payment systems ensures that both customers and restaurant owners can enjoy a smooth and efficient experience. With a responsive design and scalable data management, Savory

Spoon fosters seamless interactions between users, empowering them to explore diverse culinary options and manage their orders effortlessly.

As the demand for on-demand food services continues to rise, this project not only demonstrates the potential of the MERN stack but also establishes a foundation for future enhancements. By prioritizing user needs and embracing innovative solutions, Savory Spoon contributes to a more connected and convenient food ordering experience, benefiting both customers and local eateries alike.

10. Future Scope

10.1 Enhanced Geo-Map Functionality for Delivery Tracking

- **Real-time order tracking:** Implement a feature that allows users to track their food delivery in real-time on an interactive map, showing the delivery driver's live location and estimated arrival time.
- **Route optimization for delivery:** Enable restaurants to optimize delivery routes based on real-time traffic conditions, ensuring quicker and more efficient deliveries.
- **Integration with external data:** Connect the map functionality with external data sources like weather updates or traffic alerts, providing users with accurate delivery times and potential delays.

10.2 Expanded Media Features:

- **Menu item videos:** Allow restaurant owners to upload short promotional videos for menu items to enhance user engagement.
- **Video sharing:** Provide options for sharing restaurant videos or promotional content on social media platforms to attract a broader audience.
- **Live streaming events:** Explore the possibility of live-streaming special events, such as cooking demonstrations or restaurant promotions, to foster community engagement.

10.3 Advanced Security Features:

- **Two-factor authentication:** Implement two-factor authentication for users and restaurant owners to ensure secure logins and protect sensitive information, such as payment details.
- **Password recovery:** Provide a simple and effective password recovery mechanism for users who forget their login credentials.
- **Email verification:** Develop bulk email verification for restaurant marketing purposes to ensure that promotional campaigns reach verified users.

10.4 Enhanced Communication Features:

- **Group orders:** Enable users to create group orders where multiple people can add items to a single order, making it easier for large gatherings or office meals.
- **Voice and video chat:** Explore the possibility of adding voice and video chat features for users to communicate directly with restaurants regarding special orders or queries.
- **File sharing:** Allow restaurants to share files (e.g., promotional flyers, coupons) with users directly within the chat interface.

10.5 Integration with Other Platforms:

- **Social media integration:** Allow users to share their favorite meals, restaurant experiences, or promotions on popular social media platforms, increasing visibility and engagement.
- **Third-party API integration:** Explore integrations with third-party APIs like Google Maps (for delivery tracking) and YouTube (for restaurant videos) to enhance the user experience and provide additional value to restaurant owners.

10.6. User Interface and Experience:

- **Improved user interface design:** Focus on developing a sleek, visually appealing interface that enhances the user experience while making it easy to navigate the platform.
- **Accessibility:** Ensure the platform is accessible to users with disabilities by incorporating features like screen reader compatibility, keyboard navigation, and customizable text size.
- **Personalization:** Provide options for users to customize their experience by choosing preferred cuisines, setting delivery preferences, and selecting interface themes (e.g., light/dark mode).

These future enhancements will help **Savory Spoon** continue evolving, ensuring it provides a comprehensive, user-centric platform that meets the needs of both customers and restaurants.

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