

# Technical Career Education Private Limited

5th floor, Sahyadri Campus, Adyar, Mangalore 575007



## Full Stack Development Skill Lab Course

### PROJECTREPORT

**2024 - 25**

### Project Title: 'Name of the project'

Submitted by:

Pranav mepad	4SF23CI108
Likhith	4SF23CI072
Saathwik r	4SF23CI125
Durga prasad	4SF23CI056
Varshal g	4SF23CI183

Institution:



SAHYADRI COLLEGE OF ENGINEERING AND MANAGEMENT  
Adyar Mangalore 575007

# CONTENTS

## Project Overview

- 1. Introduction**
- 2. Problem Statement**
- 3. Solution**
  - 3.1 System requirements for the project.
  - 3.2 Flowchart of the project.
  - 3.3 Frontend
  - 3.4 Backend
- 4. Conclusion/Outcome:**
- 5. Reference List**

## Project Overview

Problem Statement	Food Delivery Website	
Solution Proposed (video Link)	<a href="https://1drv.ms/v/c/32e59eafee117226/ETBfOLRVjbtJjNj0T5eUr aEBi5o3doaNdO4IVxtKy2YBfw?e=6G7kyj">https://1drv.ms/v/c/32e59eafee117226/ETBfOLRVjbtJjNj0T5eUr aEBi5o3doaNdO4IVxtKy2YBfw?e=6G7kyj</a>	
Link to the final Challenge presentation	<a href="https://1drv.ms/p/c/708e0dElwAth&amp;nav=eyJzSWQjOjI1Nn0">https://1drv.ms/p/c/708e0dElwAth&amp;nav=eyJzSWQjOjI1Nn0</a>	
Link to photos/ videos drive	<a href="https://drive.google.com/drive/folders/1-6cq6DuIQ3xkjD1DOzicJ6Zs_Ce42Hw4">https://drive.google.com/drive/folders/1-6cq6DuIQ3xkjD1DOzicJ6Zs_Ce42Hw4</a>	
Class/ Section	3A	
Team Name	TEAM TOXIC	
Team Members	Name	USN
	Pranav mepad	4SF23CI108
	Saathwik	4SF23CI125
	Likhith	4SF23CI072
	Durga prasad	4SF23CI056
	Varshal g	4SF23CI183

## 1. Introduction

The final challenge focuses on designing and developing a responsive and user-friendly food business website using React.js and modern frontend technologies. This project aims to address key operational needs such as seamless menu browsing, real-time order customization, and efficient feedback collection. The website will also provide administrators with the ability to manage the menu and perform CRUD (Create, Read, Update, Delete) operations seamlessly, ensuring that the platform remains dynamic and adaptable to changing business requirements.

An essential goal of this project is to deliver an intuitive user experience that prioritizes accessibility and engagement. Key features like real-time price updates and dynamic filters will enhance usability. Real-time price updates will allow customers to see the immediate impact of their customizations, fostering transparency and trust. Dynamic filters will enable users to quickly locate menu items based on preferences such as dietary restrictions, ingredients, or price ranges, streamlining the browsing experience.

To allow participants to showcase their creativity and technical proficiency, the challenge encourages incorporating optional bonus features such as dark mode, drag-and-drop functionality, and CSS animations. Dark mode provides a visually comfortable alternative for users, especially in low-light environments, while also offering potential energy savings. Drag-and-drop functionality can enhance usability, particularly for tasks like customizing orders or rearranging menu items. CSS animations add visual flair, making the website more engaging and polished.

Evaluation criteria for this challenge include functionality, interactivity, code quality, and a demonstrated understanding of the tech stack. Functionality focuses on how well the website performs its intended tasks, such as menu browsing and order customization. Interactivity assesses the ease and efficiency with which users can navigate and interact with the platform. Code quality will be judged on factors such as readability, maintainability, and adherence to best practices. Finally, understanding of the tech stack involves showcasing proficiency in React.js and other modern frontend tools, demonstrating how these technologies were utilized to address challenges effectively.

This challenge is an opportunity for participants to design and build a practical and innovative solution for a real-world business need. By combining technical skills with thoughtful design and usability considerations, participants can create a standout product that addresses both operational efficiency and customer satisfaction.

## 2. Problem Statement

In today's digital era, food businesses need efficient and user-friendly online platforms to meet customer expectations and streamline operations. The chosen problem involves designing a responsive website that allows customers to browse a categorized menu, customize their orders, and provide feedback, while also enabling administrators to manage menu items, process orders, and perform CRUD (Create, Read, Update, Delete) operations. This dual-purpose approach ensures an enhanced user experience for customers and effective management tools for business owners, making the platform both intuitive and functional.

To achieve this, the project incorporates advanced features such as real-time price calculations, interactive filters, and drag-and-drop cart functionality, along with responsive design for consistent usability across devices. Bonus features like dark mode, CSS animations, and dynamic feedback tools further enrich the platform's interactivity and appeal. Using React.js as the core technology, the solution leverages a modular, component-based architecture for real-time updates and scalability. By addressing the key challenges of modern food businesses, the platform aims to improve customer satisfaction, enhance operational efficiency, and deliver a high-quality, future-ready solution.

### 3. Solution

#### 3.1 System requirements for the project

For this project, we leveraged React.js as the front-end framework to build dynamic and reusable UI components, delivering a seamless and interactive user experience. The flexibility and efficiency of React.js allowed us to create a highly functional interface tailored to user needs. Extensive use of CSS enabled us to design visually appealing and responsive layouts adaptable to various screen sizes and devices. To manage the application state effectively, we utilized the Context API, which simplified data handling and ensured smooth communication between components, significantly improving performance and reducing complexity. JavaScript was also employed for form validation, ensuring the accuracy and reliability of user inputs while providing immediate feedback for corrections. This combination of technologies resulted in a robust, responsive, and user-friendly website that successfully meets the project's objectives.

#### 3.2 Flowchart of the project

##### User Interface (UI) Design

- Design the app's screens:
  - o Home screen (search bar, categories, featured restaurants)
  - o Restaurant screen (menu, reviews, ratings, order button)
  - o Cart screen (items, total, checkout button)
  - o Order tracking screen (real-time status, map)
  - o Profile screen (account details, orders, settings)

##### Database Design:

- Design the database schema:
  - o User table (name, email, phone, address)
  - o Restaurant table (name, address, cuisine, rating)
  - o Menu table (item name, price, description)
  - o Order table (order ID, user ID, restaurant ID, items, status)

##### Frontend Development:

- Mobile app development:
  - o Choose a platform: iOS (Swift/Xcode) or Android (Kotlin/Android Studio) or cross-platform (React Native, Flutter)
  - o UI implementation: ♣ Build the UI using the designed screens and components. ♣ Implement user interactions (button clicks, text input, etc.)

### o Payment integration:

- ♣ Integrate payment gateways (e.g., Stripe, PayPal).

### o Map integration:

- ♣ Integrate mapping APIs (e.g., Google Maps) to display delivery routes.

## 3.3 Frontend

To successfully complete this project, a range of tools and technologies is required to ensure efficient development and smooth functionality. The primary tool is a code editor, such as Visual Studio Code or any Integrated Development Environment (IDE) that supports React.js. A modern browser like Google Chrome or Mozilla Firefox is necessary for testing and debugging the application. Version control tools like Git and GitHub are essential for tracking changes, collaborating with team members, and managing the project repository effectively. Additionally, a package manager like Node.js (which includes npm) or Yarn will facilitate the installation and management of dependencies, ensuring a streamlined development process.

On the technical front, core React libraries, including React.js and React Router, are fundamental for building the application's components and managing routing. For an enhanced user interface, developers can incorporate optional libraries like Framer Motion, React-Bootstrap, or Material-UI. Design tools like Figma or Adobe XD may be used for wireframing and prototyping, offering a clear visualization of the project before coding begins. To integrate advanced features, tools like the Google Maps API will enable dynamic map functionalities, especially for the contact page. For testing CRUD operations, a mock database such as JSON Server can be utilized, with the option of connecting to a real database for additional functionality.

### 3.4 Backend

```
src > pages > # About.css > submit-button
1 /* Center Our Story and Contact Us sections */
2 .bio, .contact {
3   text-align: center; /* Center-align content of these sections */
4   margin: 20px 0;
5 }
6
7 .bio h2, .contact h2 {
8   font-size: 2rem;
9   margin-bottom: 10px;
10  color: #d38510; /* Ensure consistent color for headings */
11 }
12
13 .bio p {
14   font-size: 1.2rem;
15   line-height: 1.6;
16   margin: 10px auto;
17   max-width: 600px; /* Restrict width for readability */
18 }
19
20 /* Center the About Us title */
21 .about-header h1 {
22   text-align: center; /* Center-align About Us title */
23   color: #d38510; /* Match color with other section headings */
24 }
```

Local: http://localhost:3001  
On Your Network: http://192.168.175.153:3001

Note that the development build is not optimized.  
To create a production build, use `npm run build`.

webpack compiled successfully

History restored

PS C:\Users\RDG\Downloads\milestone-1\milestone-1>

```
src > pages > # Cart.css > ...
1 /* General Cart Styles */
2 .cart-container {
3   padding: 20px;
4   font-family: 'Arial', sans-serif;
5   background-color: #f9f4ea;
6   min-height: 100vh;
7 }
8
9 .cart-heading {
10  text-align: center;
11  font-size: 2rem;
12  color: #2c3e50;
13  margin-bottom: 20px;
14 }
15
16 .empty-cart-message {
17  text-align: center;
18  font-size: 1.2rem;
19  color: #e74c3c;
20 }
21
22 /* Cart Items */
23 .cart-items {
24   display: flex;
25 }
```

Local: http://localhost:3001  
On Your Network: http://192.168.175.153:3001

Note that the development build is not optimized.  
To create a production build, use `npm run build`.

webpack compiled successfully

History restored

PS C:\Users\RDG\Downloads\milestone-1\milestone-1>



#### **4. Conclusion/Outcome**

**Summary of Achievements** The developed solution effectively addresses the key challenges faced by the food business. By implementing a user-friendly interface, dynamic menu management, seamless order customization, and a robust feedback system, the solution enhances customer satisfaction and engagement. The responsive design ensures accessibility across devices, while additional features like dark mode and cart reminders further elevate the user experience.

##### **Impact and Benefits**

The implementation of this solution has had a significant impact on the food business. It has streamlined operations, increased efficiency, and improved customer satisfaction. The intuitive interface and easy-to-use features have simplified the ordering process for customers, leading to higher sales and customer retention. For the business owners, the solution provides valuable insights through analytics, enabling data-driven decision-making.

##### **Future Directions**

While the current solution offers a robust foundation, there are opportunities for further improvement. Future developments could include integrating real-time delivery tracking, expanding payment options, and implementing personalized recommendations for customers. Additionally, exploring the integration of artificial intelligence and machine learning technologies could further optimize operations and enhance the overall user experience. By continuously adapting to evolving industry trends and customer needs, the solution can maintain its position as a leading platform in the food industry.

## **5. References**

(Links to external sites, documents, images, videos referred)