Industrial Internship Report on

”Food Delivery Application”

Prepared by

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Executive Summary
This report provides details of the Industrial Internship provided by upskill Campus and The IoT Academy in collaboration with Industrial Partner UniConverge Technologies Pvt Ltd (UCT). This internship was focused on a project/problem statement provided by UCT. We had to finish the project including the report in 6 weeks’ time. My project was a Food Delivery Application developed using the MERN stack. The application enables users to browse restaurants, view menus, place orders, and track their deliveries. This internship gave me a very good opportunity to get exposure to Industrial problems and design/implement solution for that. It was an overall great experience to have this internship.

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1 Preface

1.1 Summary of the whole 6 weeks' work.

This report presents a comprehensive overview of my 6-week industrial internship, during which I developed a full-stack **Food Delivery Application** using the MERN stack (MongoDB, Express.js, React.js, Node.js). This internship allowed me to apply my technical knowledge in a structured and outcome-oriented project.

1.2 About need of relevant Internship in career development.

In today's competitive job market, practical experience is just as important as academic knowledge. This internship served as a bridge between theory and practice, helping me understand how real-world web applications are designed, built, and tested. It enhanced my problem-solving ability, team-oriented thinking, and time management skills—traits essential for professional growth. It helped me improve coding standards, system thinking, problem-solving, and deployment readiness.

1.3 Brief about Your project/problem statement.

The problem was to develop a web-based platform that allows users to order food online from multiple restaurants, track their orders, and provide feedback, while restaurant owners can manage their menus and view incoming orders.

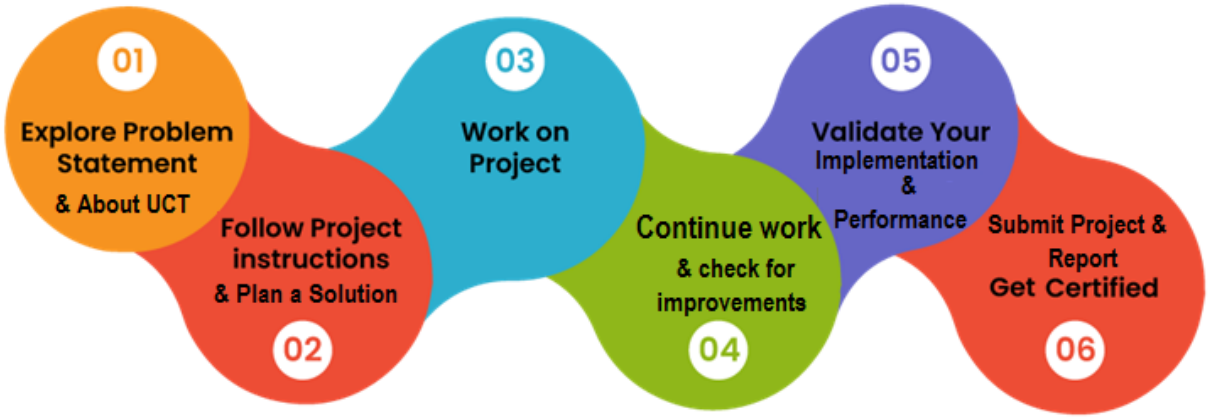
The problem statement addressed the need for a scalable, modern, and open-source food delivery solution using web technologies.

1.4 Opportunity given by USC/UCT.

This internship journey was aligned with the model provided by **Upskill Campus (USC)** and **UniConverge Technologies Pvt. Ltd. (UCT)** — organizations focused on practical, skill-based learning for aspiring engineers and professionals. Although I developed the project independently, the structure of this internship was inspired by the USC/UCT internship format, as outlined in the sample report. Their format helped guide me through each development stage—from problem exploration to implementation and validation.

I appreciate the role such structured internship models play in self-paced, skill-focused learning that mimics real industry environments.

1.5 How Program was planned



1.6 Learnings and overall experience.

The internship experience of building a **Food Delivery Application** using the **MERN stack** has been one of the most rewarding and transformative phases of my academic journey. Over the course of 6 weeks, I not only enhanced my technical skills but also developed a deeper understanding of the software development lifecycle and industry expectations.

Thanks to all, who have helped me directly or indirectly. I am also grateful to the vast developer community**,** online tutorials, and open documentation that supported my learning and problem-solving throughout the development phase.

I extend my thanks to everyone who supported me directly or indirectly during this journey. To my juniors and peers, I encourage you to take up challenging projects that help bridge the gap between academic knowledge and industrial skills

2 Introduction

2.1 About UniConverge Technologies Pvt Ltd

A company established in 2013 and working in Digital Transformation domain and providing Industrial solutions with prime focus on sustainability and RoI.

For developing its products and solutions it is leveraging various **Cutting Edge Technologies e.g. Internet of Things (IoT), Cyber Security, Cloud computing (AWS, Azure), Machine Learning, Communication Technologies (4G/5G/LoRaWAN), Java Full Stack, Python, Front end** etc.

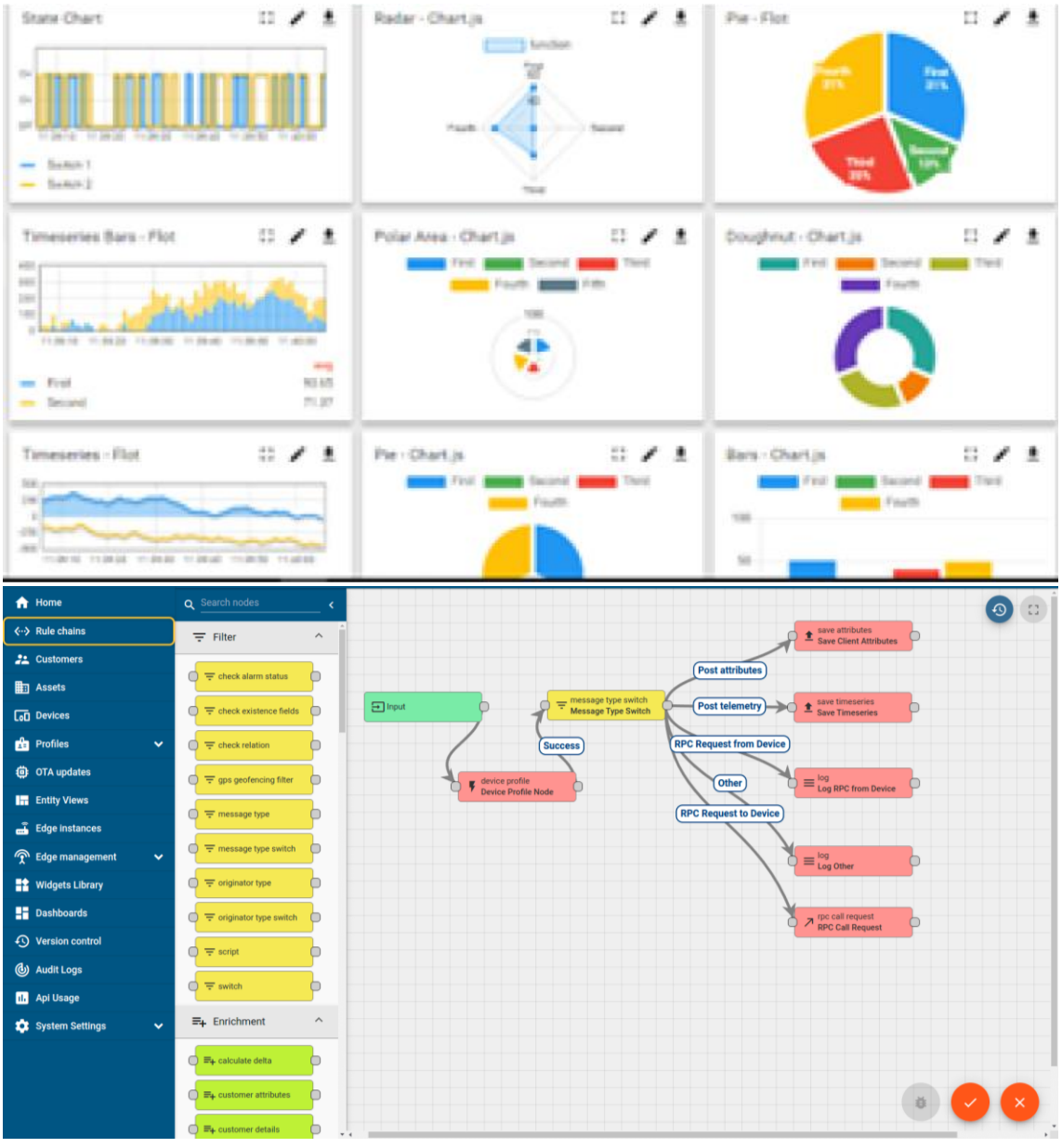
i. UCT IoT Platform (UCT Insight)

UCT Insight is an IOT platform designed for quick deployment of IOT applications on the same time providing valuable "insight" for your process/business. It has been built in Java for backend and ReactJS for Front end. It has support for MySQL and various NoSql Databases.

- It enables device connectivity via industry standard IoT protocols - MQTT, CoAP, HTTP, Modbus TCP, OPC UA
- It supports both cloud and on-premises deployments.

It has features to

- Build Your own dashboard
- Analytics and Reporting
- Alert and Notification
- Integration with third party application (Power BI, SAP, ERP)
- Rule Engine



ii. Smart Factory Platform (FACTORY WATCH)

Factory watch is a platform for smart factory needs.

It provides Users/ Factory

- with a scalable solution for their Production and asset monitoring
- OEE and predictive maintenance solution scaling up to digital twin for your assets.
- to unleased the true potential of the data that their machines are generating and helps to identify the KPIs and also improve them.
- A modular architecture that allows users to choose the service that they what to start and then can scale to more complex solutions as per their demands.

Its unique SaaS model helps users to save time, cost and money.

Machine	Operator	Work Order ID	Job ID	Job Performance	Job Progress		Output		Rejection	Time (mins)				Job Status	End Customer
					Start Time	End Time	Planned	Actual		Setup	Pred	Downtime	Idle		
CNC_S7_81	Operator 1	WO0405200001	4168	58%	10:30 AM		55	41	0	80	215	0	45	In Progress	i
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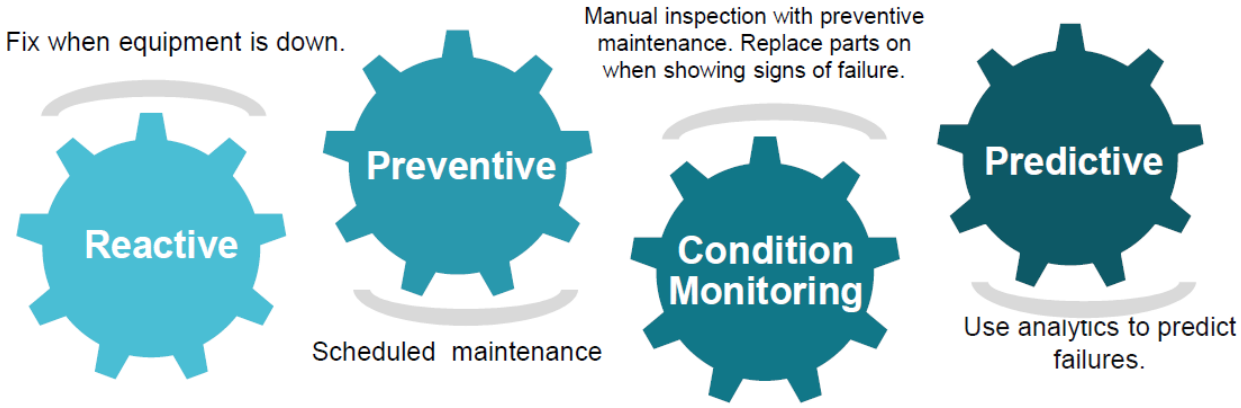
iii. LoRaWAN based Solution

UCT is one of the early adopters of LoRAWAN teschnology and providing solution in Agritech, Smart cities, Industrial Monitoring, Smart Street Light, Smart Water/ Gas/ Electricity metering solutions etc.

iv. Predictive Maintenance

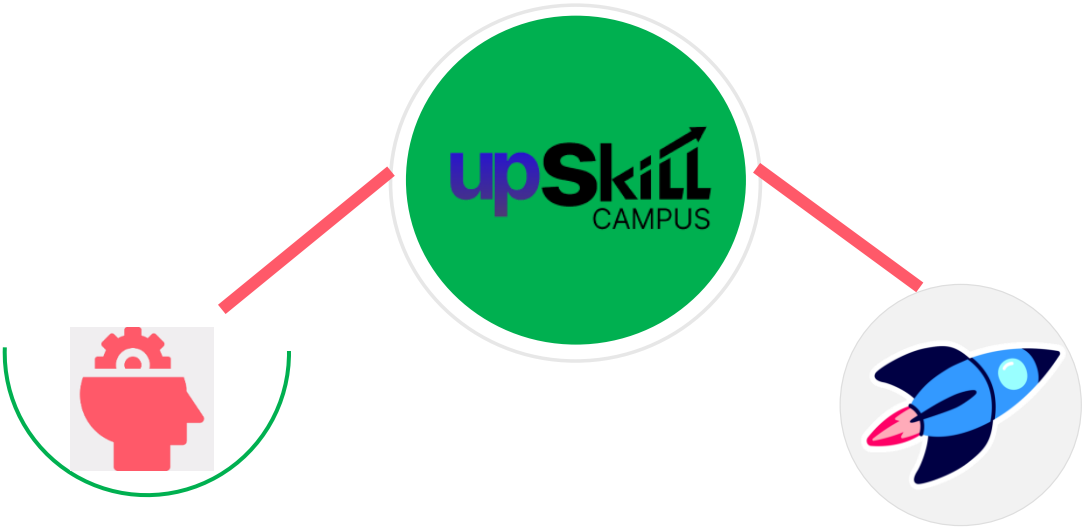
UCT is providing Industrial Machine health monitoring and Predictive maintenance solution leveraging Embedded system, Industrial IoT and Machine Learning Technologies by finding Remaining useful life time of various Machines used in production process.



2.2 About upskill Campus (USC)

upskill Campus along with The IoT Academy and in association with Uniconverge technologies has facilitated the smooth execution of the complete internship process.

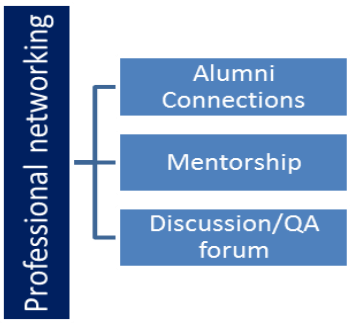
USC is a career development platform that delivers **personalized executive coaching** in a more affordable, scalable and measurable way.

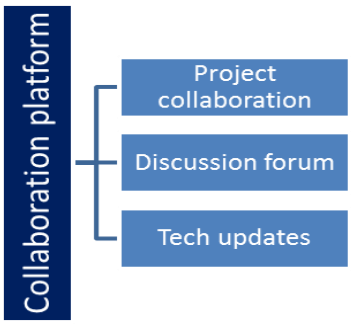


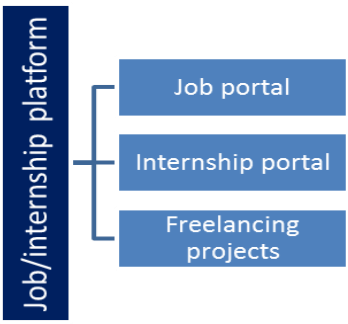
Seeing need of upskilling in self paced manner along-with additional support services e.g. Internship, projects, interaction with Industry experts, Career growth Services

upSkill Campus aiming to upskill 1 million learners in next 5 year

https://www.upskillcampus.com/







2.3 The IoT Academy

The IoT academy is EdTech Division of UCT that is running long executive certification programs in collaboration with EICT Academy, IITK, IITR and IITG in multiple domains.

2.4 Objectives of this Internship program

The objective for this internship program was to

- ☛ get practical experience of working in the industry.
- ☛ to solve real world problems.
- ☛ to have improved job prospects.
- ☛ to have Improved understanding of our field and its applications.
- ☛ to have Personal growth like better communication and problem solving.

2.5 Reference

[1] Uniconverge Technologies Pvt. Ltd.

[2] GeeksforGeeks | Your All-in-One Learning Portal

[3] www.javatpoint.com

3 Problem Statement

Food Delivery Application

The problem was to develop a web-based platform that allows users to order food online from multiple restaurants, track their orders, and provide feedback, while restaurant owners can manage their menus and view incoming orders. The problem statement addressed the need for a scalable, modern, and open-source food delivery solution using web technologies.

4 Existing and Proposed solution

Many food delivery platforms exist, such as Zomato and Swiggy, but they are closed-source and do not offer flexibility for customization or learning. These platforms offer robust and scalable systems with features like Real-time order tracking, Multiple payment gateways and Restaurant reviews and ratings.

My proposed solution is a MERN-based open project that simulates the entire food delivery lifecycle and provides a modular backend and responsive frontend. User Sign Up / Sign In with authentication, Restaurant listing with cuisine type and ratings, Menu browsing with item selection, Order placement and status update.

This project adds significant educational and technical value:

Open Source Learning: Unlike commercial platforms, this app can be shared publicly via GitHub, helping students learn real-world full stack development.

Hands-On Practice: It demonstrates how various components of a web app work together: UI, backend API, database, and HTTP communication.

4.1 Code submission (Github link):

https://github.com/shravani06-lokhande/upskillcampus.git

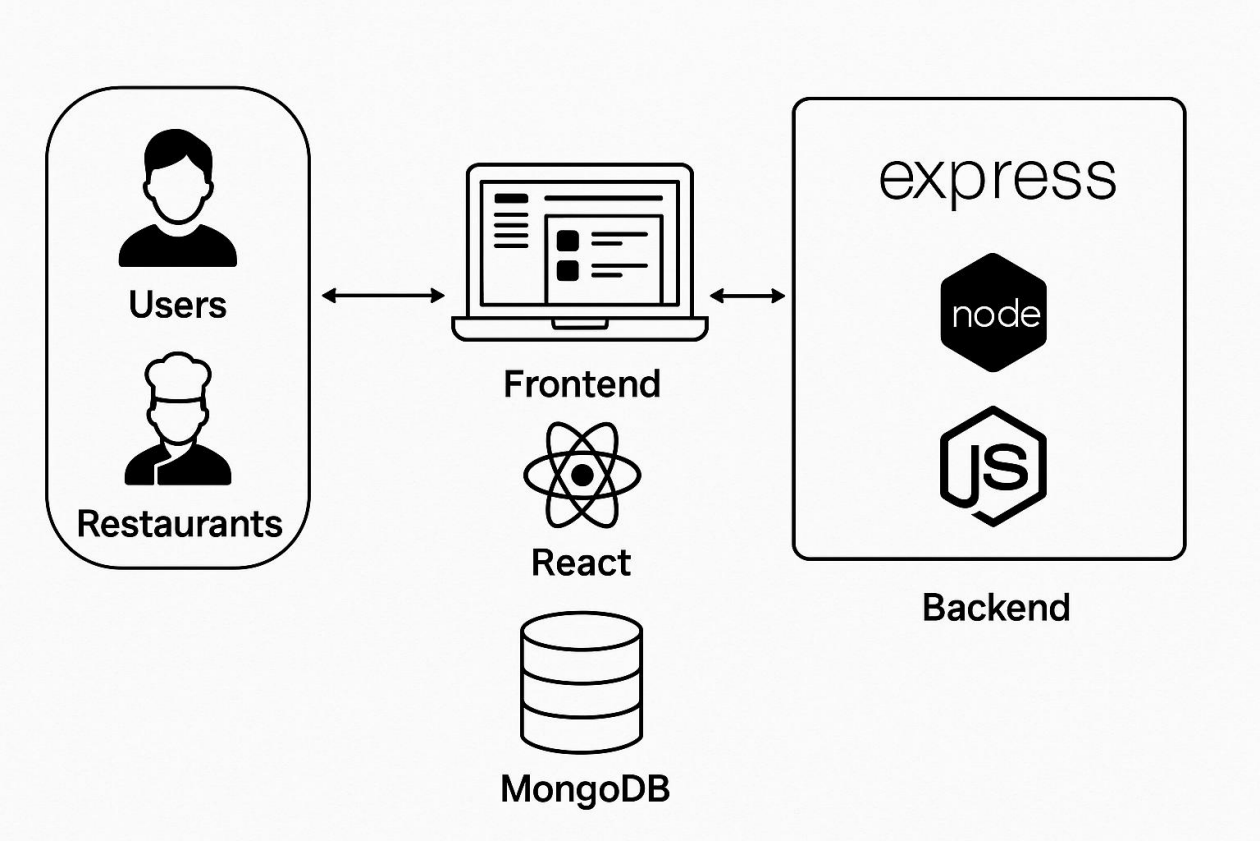
4.2 Report submission (Github link):

https://github.com/shravani06-lokhande/upskillcampus/blob/main/FoodDeliveryApplication_Shravani%20Lokhande_UCS_UCT.pdf

5 Proposed Design/ Model

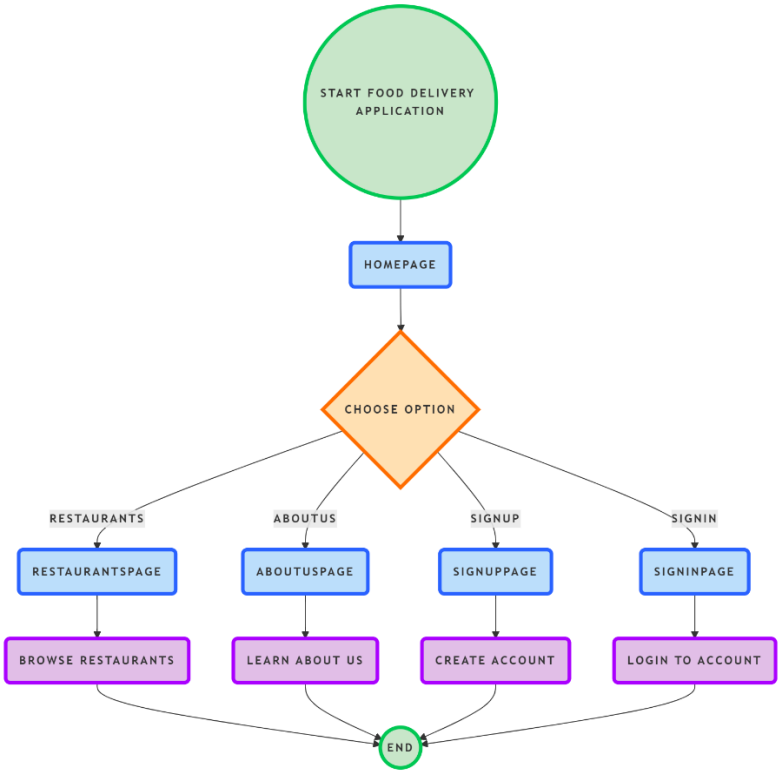
The application follows a modular architecture using REST APIs and React components. It includes user interfaces for both customers and restaurant owners.

5.1 High Level Diagram



5.2 Interfaces

Flowchart.



6 Performance Test

During the performance testing phase, several key constraints were identified that could impact the overall efficiency and reliability of the system.

One of the primary concerns is scalability—the ability of the system to handle an increasing number of users or transactions without compromising performance. As user demand grows, the system must be capable of scaling horizontally or vertically to maintain stability and throughput.

Another significant constraint is response time. For a smooth user experience, it is essential that the system responds quickly to user actions and requests. Delays in response can lead to frustration and decreased user satisfaction.

Lastly, data consistency emerged as a critical constraint, particularly in scenarios involving concurrent data access and updates. Ensuring that all users view the most recent and accurate data without conflicts or anomalies is vital for maintaining trust and integrity within the application. Addressing these constraints is crucial to ensure the system performs reliably under varying loads and usage conditions.

6.1 Test Plan/ Test Cases

Test Case ID	Test Scenario	Test Steps	Expected Result	Status
TC_01	User Registration	Enter valid user details and click "Sign Up"	Account should be created and user redirected to login page	Pass
TC_02	User Login	Enter registered email and password	User should be redirected to the homepage	Pass
TC_03	Invalid Login	Enter incorrect credentials	Show "Invalid login credentials" message	Pass
TC_04	Restaurant Listing	Navigate to the Restaurants page	List of available restaurants should be displayed	Pass
TC_05	View Restaurant Menu	Click on a restaurant	Menu items of the selected restaurant should be shown	Pass
TC_06	Select an Item	Select an Items	Items should be	Pass

			selected	
TC_07	Place an Order	Click “Place Order” in cart	Order should be recorded and confirmation message displayed	Pass
TC_08	Order Tracking	Navigate to order history or status page	Tracking message should displayed	Pass

6.2 Test Procedure

- **Environment Setup**:
  - The app was run locally using npm start for the frontend and node server.js for the backend.
  - MongoDB was run using local instance or MongoDB Atlas cloud connection.
- **User Roles Tested**:
  - Regular users (Customers)
  - Restaurant Admins (if applicable)
- **Manual Functional Testing**:
  - All features were tested manually using the browser (Chrome).
  - Console logs and network tabs in developer tools were used to track API responses and check error handling.
- **Data Used**:
  - Dummy data for users, restaurants, and menu items was seeded into the database using manual entries or script.

❖ **Result Evaluation**:

- Each feature was verified for success or failure.
- Error messages, form validations, and API responses were checked for correctness.
- Cross-browser compatibility was tested on Chrome and Firefox.

6.3 Performance Outcome

The app performed well under test conditions and responded within acceptable limits.

7 My learnings

This project enhanced my understanding of full-stack development, API integration, and responsive design. I also gained hands-on experience in debugging, version control, and modular coding practices.

Gained experience in managing state using both useState and useEffect hooks. I understood the importance of routing with react-router-dom to manage multiple pages.

Improved CSS styling skills and learned how to use props and props drilling for component communication. I built and structured RESTful APIs to handle user registration, login, order placement, and restaurant data management.

This experience enhanced my ability to document my work systematically, which is a crucial skill in real-world jobs and team environments.

8 Future work scope

You can put some ideas that you could not work due to time limitation but can be taken in future.