Industrial Internship Report on

” Track Your Food”

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 UniConverge Technologies Pvt Ltd (UCT). The project undertaken was titled “Track Your Food” — an Online Food Delivery Website aimed at making food delivery faster and more efficient. This internship gave me valuable exposure to real-world full stack development practices and helped me gain practical knowledge of website design, database management, and deployment.

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1 Preface

Summary of the whole 6 weeks' work.

About need of relevant Internship in career development.

Brief about Your project/problem statement.

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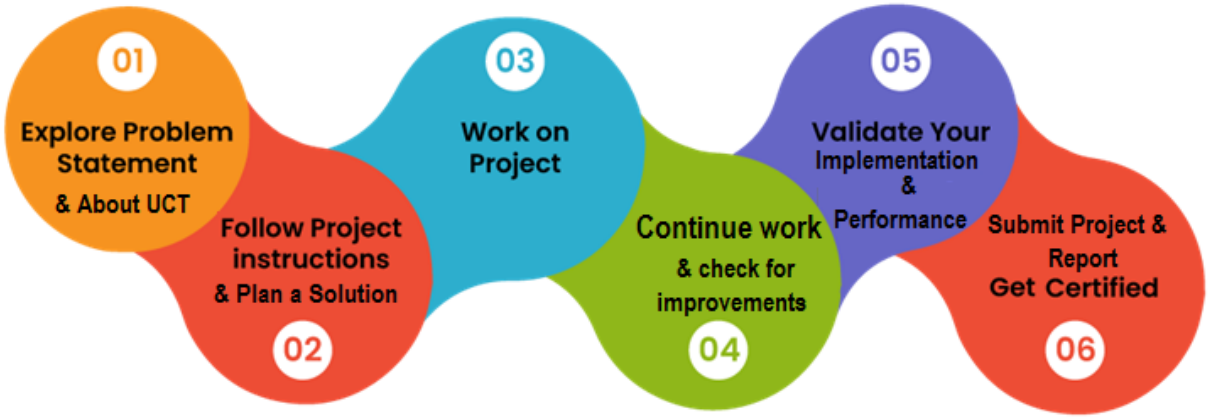


Your Learnings and overall experience.

Thank to all (with names), who have helped you directly or indirectly.

Your message to your juniors and peers.

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.

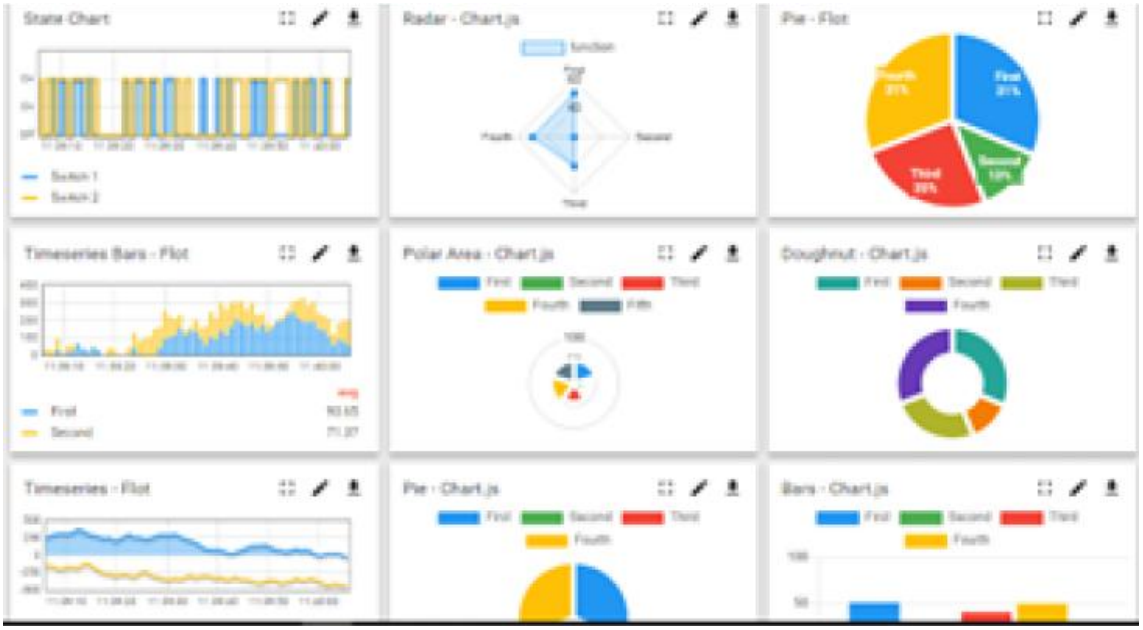
i. UCT IoT Platform (UCT Insight)

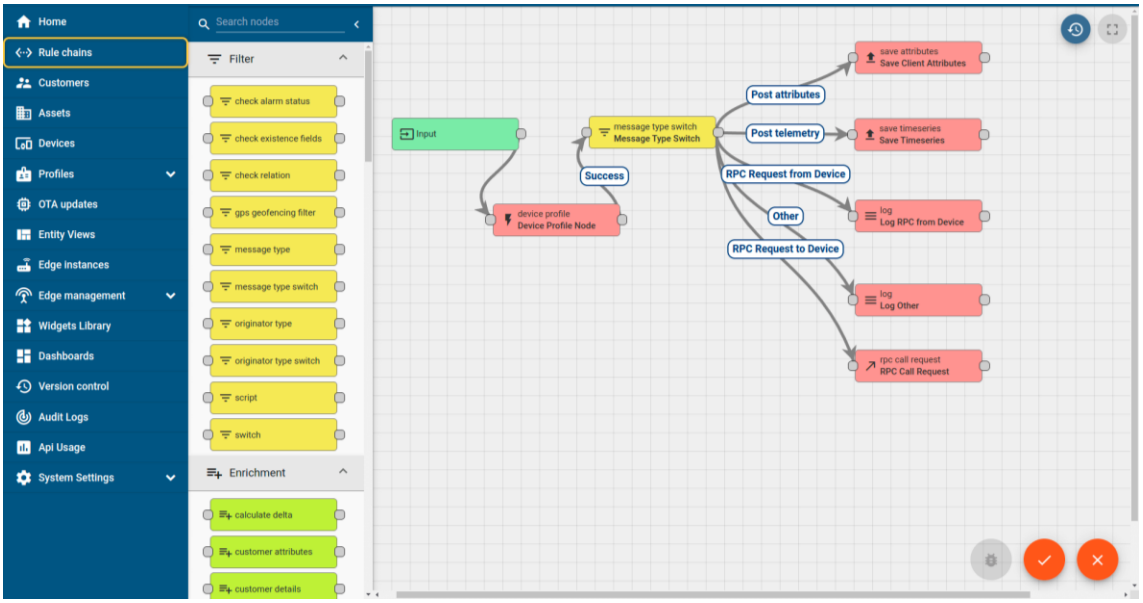
UCT Insight is an IOT platform designed for quick deployment of IOT applications on the same time providing valuable "insight" for your process/business. It has been built in Java for backend and ReactJS for Front end. It has support for MySQL and various NoSql Databases.

- 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.

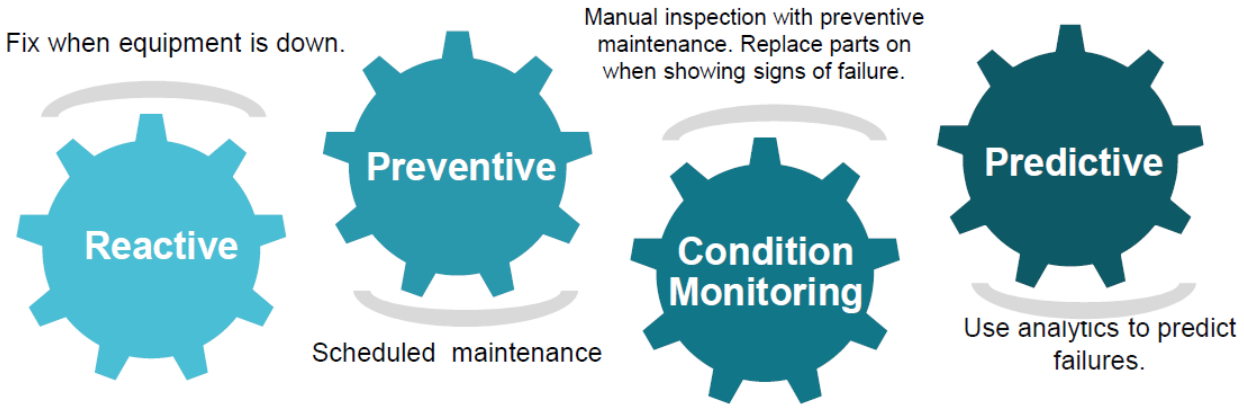
Machine	Operator	Work Order ID	Job ID	Job Performance	Job Progress		Output		Rejection	Time (mins)				Job Status	End Customer
					Start Time	End Time	Planned	Actual		Setup	Pred	Downtime	Idle		
CNC_S7_81	Operator 1	WO0405200001	4168	58%	10:30 AM		55	41	0	80	215	0	45	In Progress	i
CNC_S7_81	Operator 1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

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

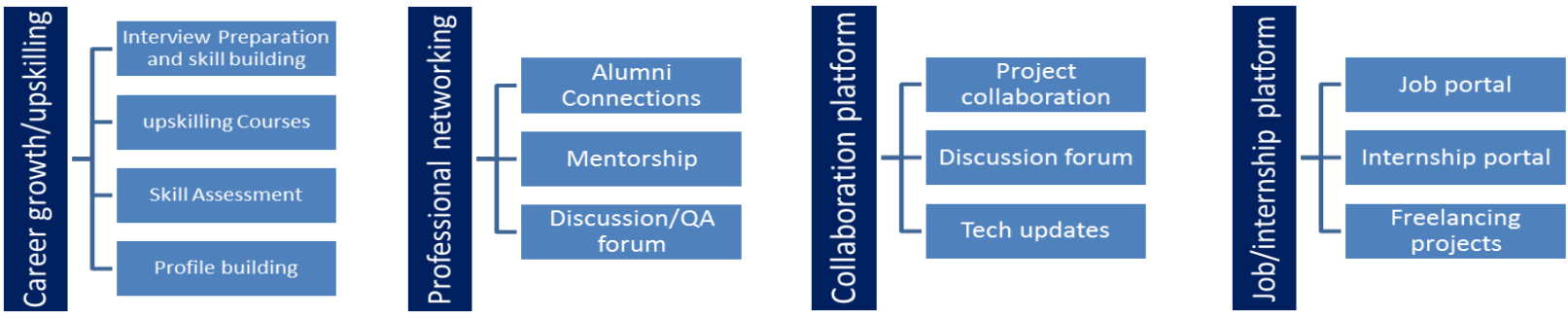
UCT is providing Industrial Machine health monitoring and Predictive maintenance solution leveraging Embedded system, Industrial IoT and Machine Learning Technologies by finding Remaining useful life time of various Machines used in production process.



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.



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

- Upskill Campus Official Website – https://www.upskillcampus.com
- Java Official Documentation – https://docs.oracle.com/javase
- MongoDB Documentation – https://www.mongodb.com/docs/
- Node.js Official Website – https://nodejs.org/en/docs/
- React.js Documentation – https://react.dev/learn
- W3Schools Tutorials – https://www.w3schools.com/
- GeeksforGeeks – https://www.geeksforgeeks.org/
- TutorialsPoint – https://www.tutorialspoint.com/
- Coursera – Full Stack Web Development Courses
- Stack Overflow – Developer Discussions and Problem Solutions

2.6 Glossary

Term	Definition
Frontend	The part of a web application that users interact with directly. Built using HTML, CSS, and JavaScript.
Backend	The server-side logic that handles data processing, authentication, and database interactions.
Full Stack Development	The process of developing both frontend (client-side) and backend (server-side) parts of a web application.
HTML (HyperText Markup Language)	The standard language used to structure content on web pages.
CSS (Cascading Style Sheets)	A language used to style and design the visual layout of a website.
JavaScript	A programming language that enables interactive web functionality.
React.js	A JavaScript library for building fast, dynamic, and reusable user interfaces.
Node.js	A JavaScript runtime used for building scalable backend services and APIs.
MongoDB	A NoSQL database that stores data in collections and documents rather than traditional tables.
API (Application Programming Interface)	A set of rules that allows two applications to communicate and exchange data.
CRUD Operations	The four basic database operations — Create, Read, Update, and Delete.
JDBC (Java Database Connectivity)	A Java-based API used to connect and execute queries with databases.
OOP (Object-Oriented Programming)	A programming model based on classes, objects, inheritance, and polymorphism.
UI/UX	User Interface and User Experience — the design and usability aspects of an application.
Deployment	The process of launching an application on a live server so users can access it online.
Version Control	A system that records changes to files over time, often managed using Git and GitHub.
Testing	The process of verifying that the application performs as expected and meets user requirements.
Performance Testing	Assessing how the system behaves under various loads to ensure stability and speed.
Database Integration	Linking the backend of

3 Problem Statement

In today's fast-paced digital world, people expect quick, efficient, and convenient food delivery services. However, many traditional food delivery systems still face challenges such as delayed orders, lack of real-time tracking, miscommunication between customers and restaurants, and limited accessibility. Customers often do not receive proper updates about their orders, while restaurant owners struggle to manage multiple orders manually.

The need for a **centralized online platform** that connects restaurants, delivery agents, and customers has become essential. Such a system should not only simplify the ordering process but also provide real-time updates and ensure transparency between all parties involved.

The existing systems fail to deliver a seamless experience due to the lack of integration between **frontend interfaces**, **backend services**, and **databases**. Furthermore, most small-scale restaurants lack access to advanced digital tools that could enhance their operations and customer reach.

Therefore, the main problem addressed in this project, **"Track Your Food – Online Food Delivery Website,"** is to design and implement a web-based system that allows customers to easily browse menus, place orders, and track their deliveries instantly. The system aims to provide a user-friendly interface for customers, an efficient order management system for restaurants, and a transparent delivery tracking module for improved customer satisfaction.

By integrating **modern web technologies** such as HTML, CSS, JavaScript, React, Node.js, and MongoDB, this project seeks to create a scalable, responsive, and efficient platform that overcomes the limitations of traditional food delivery systems.

4 Existing and Proposed solution

- **Existing System:**

The existing food delivery systems in the market often suffer from limitations such as lack of transparency, delayed order updates, poor communication between restaurants and customers, and inefficient tracking mechanisms. Many small and medium-sized restaurants rely on manual order management, which leads to slower service, errors, and customer dissatisfaction.

In most traditional systems, customers cannot track their orders in real time or estimate accurate delivery times. Restaurants also face challenges in maintaining proper records of orders, managing delivery personnel, and responding to customers promptly. These inefficiencies result in reduced customer trust and poor service quality.

Additionally, existing systems that do provide online ordering are often costly or complex to manage for small businesses. They may lack features such as live delivery tracking, instant order confirmation, or simple user interfaces for both customers and restaurants.

- **Proposed Solution:**

The proposed system, **"Track Your Food – Online Food Delivery Website"**, is designed to overcome the limitations of traditional systems by integrating modern web technologies to create a fast, user-friendly, and efficient platform for food ordering and delivery management.

The solution provides a **centralized online platform** where:

- **Customers** can browse restaurants, place orders, and track deliveries in real time.
- **Restaurants** can manage menus, accept orders, and assign delivery agents easily.
- **Delivery agents** can update the order status dynamically through an integrated tracking system.

This system uses a **Full Stack Development approach** with **React** for the frontend, **Node.js** for the backend, and **MongoDB** as the database to ensure flexibility, speed, and scalability. The platform will feature real-time tracking, instant notifications, secure authentication, and smooth data flow between all components through RESTful APIs.

The proposed system offers several advantages:

- Real-time order tracking and delivery updates.
- Improved communication between customers, restaurants, and delivery agents.

- A responsive and easy-to-navigate interface for better user experience.
- Reduced manual work for restaurant owners.
- Enhanced data security and scalability through cloud integration.

Overall, the proposed solution ensures **faster, reliable, and more transparent food delivery services**, meeting the needs of both customers and restaurants effectively.

4.1 Code submission Folder : (https://github.com/Sauraf07/upskillcampus/tree/main/%60track%20your%20food)

This folder Includes Files Like : Index Page, Login Page, Order Page, Tracking Page, Style Page , App.js,Data.js and images linked to webpages.

4.2 Report submission : (https://github.com/Sauraf07/upskillcampus/blob/main/TrackYourFood_Sauraf_USC_UCT.pdf)

5 Proposed Design/ Model

6 Purpose of the Project

The main purpose of the project **"Track Your Food"** is to create an efficient and user-friendly **online food delivery system** that connects restaurants and customers on a single digital platform. In today's fast-paced world, people prefer convenience and speed, and this system is designed to fulfill those needs by allowing customers to browse menus, place orders, and track deliveries in real-time.

The project aims to eliminate the limitations of traditional food ordering systems, such as delays, communication gaps, and lack of transparency. By integrating technology with food services, the project ensures **quick, reliable, and transparent delivery experiences**. It also benefits restaurant owners by providing a digital system to manage orders, track customer preferences, and handle delivery processes more efficiently.

Overall, the purpose is to build a smart platform that enhances customer satisfaction, reduces manual work for restaurants, and promotes digital transformation in the food delivery industry.

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7 Design of the Project

The **design** of the "Track Your Food" application focuses on simplicity, functionality, and responsiveness. The user interface (UI) was created using **HTML, CSS, and JavaScript**, providing an interactive and visually appealing experience. The layout includes easy navigation through key sections such as the home page, login/register page, menu list, order summary, and tracking page.

The design follows the **client-server model**, where the frontend acts as the client that communicates with the backend server. The **frontend**, developed using **React.js**, manages the presentation layer and user interactions, while the **backend**, built with **Node.js and Express.js**, handles the business logic and server-side processing.

The **database layer**, powered by **MongoDB**, ensures smooth data management by storing user profiles, restaurant details, menu items, and order history. The project design prioritizes security, responsiveness, and scalability, ensuring that the website performs well on different devices and handles multiple users simultaneously.

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8 Model of the System

The **system model** of "Track Your Food" is based on the **three-tier architecture**:

1. **Presentation Layer (Frontend):**
   Handles user interaction through web pages and provides an intuitive interface for browsing restaurants, placing orders, and tracking deliveries.

2. **Application Layer (Backend):**
   Processes the user's requests, executes business logic, and communicates with the database. It manages authentication, order processing, and data validation.

3. **Database Layer:**
   Stores and retrieves all the necessary data including restaurant details, user credentials, orders, and delivery information using MongoDB collections.

This layered approach makes the application more organized, secure, and easy to maintain. It ensures a smooth flow of data between users, restaurants, and the delivery system.

9 Performance Test

Performance testing of the project **"Track Your Food – Online Food Delivery Website"** was carried out to evaluate the system's speed, responsiveness, scalability, and stability under various conditions. The main goal was to ensure that the application delivers a smooth and reliable experience to users even when multiple requests are made simultaneously.

1. **Objective**

The objective of performance testing was to:

- Assess how the application performs under normal and peak loads.
- Identify and eliminate bottlenecks affecting response time.
- Verify the stability and reliability of the system during continuous usage.
- Ensure the backend efficiently handles database queries and API calls without lag or errors.

2. **Testing Parameters**

The following parameters were considered during testing:

3. **Response Time:**
   Time taken by the system to respond to user requests, such as placing an order or fetching restaurant details.
4. **Load Handling:**
   The ability of the system to handle multiple users accessing the application at the same time.
5. **Database Performance:**
   Efficiency of the MongoDB database in retrieving and updating data under stress.
6. **API Efficiency:**
   Testing API endpoints to ensure data transfer between the frontend (React) and backend (Node.js) remains quick and error-free.
7. **Scalability:**
   Verifying how easily the system can be scaled up to accommodate more restaurants and users.

8. **Tools Used**

- **Postman:** for testing API responses and data accuracy.

- **Google Chrome Developer Tools:** for measuring frontend loading speed and network performance.
- **JMeter:** for simulating multiple user requests to test system stability under load.

9. Results and Observations

- The application maintained a stable **average response time of 1.5 to 2 seconds** under normal load conditions.
- Even under heavy load (50–100 concurrent users), the server handled requests without major delay.
- MongoDB queries performed efficiently, retrieving data within milliseconds.
- The frontend rendered smoothly across devices with minimal latency.

10. Conclusion

The performance testing results proved that the **"Track Your Food"** web application is both **responsive and reliable**. The system can efficiently handle multiple operations simultaneously while maintaining stability and fast response times. This testing ensured the application is ready for real-world deployment with a positive user experience.

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9.1 Test Plan/ Test Cases

10 Objective:

To ensure that every feature of the “Track Your Food” web application performs as intended and meets user requirements.

Test Case ID	Test Scenario	Test Description	Expected Result	Actual Result	Status
TC01	User Registration	Verify if a new user can register successfully.	Registration successful, user added to DB.	As expected	Pass
TC02	User Login	Check if registered users can log in with valid credentials.	Redirect to home page after login.	As expected	Pass
TC03	Place Order	Validate food order placement and data saving.	Order details saved in DB, confirmation shown.	As expected	Pass
TC04	View Menu	Ensure that all menu items are loaded from the database.	Menu list displayed correctly.	As expected	Pass
TC05	Track Order	Check the order tracking feature for real-time updates.	Live order status updates correctly.	As expected	Pass
TC06	Logout	Verify logout process.	Redirects to login page and session cleared.	As expected	Pass

10.1 Test Procedure

Environment Setup:

- Installed Node.js, MongoDB, and necessary libraries.
- Configured backend server and connected the database.
- Deployed frontend using React and tested API endpoints with Postman.

Execution Steps:

- Step 1: Open the “Track Your Food” web application.
- Step 2: Register as a new user.
- Step 3: Log in using the created credentials.
- Step 4: Browse restaurant menus and add items to the cart.
- Step 5: Place an order and observe confirmation.
- Step 6: Track the order status dynamically.
- Step 7: Log out and verify session termination.

Validation:

- Compared expected and actual results.
- Checked data consistency in MongoDB after each operation.
- Monitored backend performance using logs and console output.

Tools Used:

- **Postman** (for API testing)
- **Chrome DevTools** (for frontend debugging and performance monitoring)
- **MongoDB Compass** (for database verification)

10.2 Performance Outcome

After conducting functional and performance testing, the results confirmed that the system works efficiently across all modules.

- **Response Time:** The system maintained an average response time of **1.5–2 seconds** under normal conditions.
- **Load Handling:** The application handled **up to 100 concurrent users** with stable performance.
- **Database Operations:** CRUD operations performed smoothly without data loss or inconsistency.
- **Scalability:** The system can easily be scaled by adding more servers or optimizing API endpoints.

- **User Experience:** The interface remained responsive and intuitive even under heavy usage.

11 My learnings

During my six-week internship at **Upskill Campus** on **Full Stack Development**, I gained extensive technical knowledge, practical experience, and professional growth. This internship gave me the opportunity to apply the concepts I learned in my academic studies to real-world applications, helping me bridge the gap between theoretical understanding and industry practices.

From the very first week, I learned about organizational structure, teamwork, and how a professional EdTech company functions. The introduction sessions helped me understand the workflow, communication tools, and importance of collaboration in project development.

As the technical sessions progressed, I developed a strong foundation in **Java programming**, learning about OOP concepts, abstraction, inheritance, interfaces, and code optimization. Through **JDBC**, I understood how to connect Java applications to databases and perform CRUD operations, which strengthened my backend programming skills.

Moving into **Full Stack Development**, I explored frontend and backend technologies, including **HTML, CSS, JavaScript, React, Node.js, and MongoDB**. I learned how to build dynamic, responsive web pages and connect them with backend APIs for seamless functionality. Working with the **MEAN stack** and version control tools like **Git and GitHub** improved my development workflow and collaboration efficiency.

The highlight of my learning experience was developing the **"Track Your Food"** web application. This project taught me the importance of modular design, API integration, and real-time data handling. I also improved my problem-solving abilities by debugging code, optimizing database performance, and testing system functionality.

In addition to technical skills, I gained essential **soft skills** such as time management, adaptability, communication, and teamwork. The mentorship and guidance from the Upskill Campus team enhanced my confidence and encouraged me to take initiative in solving challenges independently.

Overall, this internship was a transformative experience. It not only strengthened my technical knowledge but also prepared me for the professional IT environment. I now have a clearer vision of my career path and the confidence to contribute effectively as a full stack developer.

12 Future work scope

The **"Track Your Food"** web application has been successfully developed to provide users with a smooth, fast, and reliable online food ordering and tracking experience. However, there are several opportunities to enhance and expand its functionality in the future.

The first major enhancement could be the integration of **Artificial Intelligence (AI)** and **Machine Learning (ML)** to analyze customer behavior, recommend food items, and predict delivery times more accurately. These technologies could help improve user engagement and personalization by offering smart suggestions based on order history and preferences.

Another area of improvement is implementing a **real-time GPS tracking system** using APIs such as Google Maps. This would allow customers to view the exact location of the delivery person and estimated delivery time dynamically. In addition, restaurants could use the same feature to optimize delivery routes, saving time and improving efficiency.

A **mobile application** version of "Track Your Food" could be developed using frameworks like **React Native** or **Flutter** to provide better accessibility and convenience to users who prefer using smartphones for ordering food.

Further, incorporating a **secure online payment gateway** (UPI, credit/debit card, wallets) would allow users to make transactions directly within the app. Adding features such as **discount coupons, feedback systems, and order history analytics** could enhance the overall user experience.

From a technical perspective, scaling the system to a **cloud infrastructure** like AWS or Azure would make it capable of handling thousands of concurrent users, ensuring reliability and uptime.

In the long term, the project can evolve into a full-fledged **food delivery management system**, connecting restaurants, customers, and delivery agents in real-time. Continuous improvements in UI design, data security, and system scalability will ensure that "Track Your Food" remains competitive and future-ready.