Project Report

1. INTRODUCTION

1.1 Project Overview

SB Foods is a comprehensive full-stack MERN-based food ordering web platform that offers users a seamless experience to browse, select, and order food online. It simplifies the interaction between customers, restaurants, and administrators.

1.2 Purpose

To create a scalable, intuitive food ordering system that enhances user convenience, improves restaurant visibility, and optimizes the order management process.

2. IDEATION PHASE

2.1 Problem Statement

People face difficulties ordering food during odd hours, busy routines, or emergencies. The current platforms lack personalized recommendations and efficient dashboards for restaurants.

2.2 Empathy Map Canvas

Users like Lisa need late-night food with minimal effort. Empathy mapping revealed desires for speed, clarity, comfort, and secure transactions.

2.3 Brainstorming

Multiple ideas were generated ranging from drone deliveries to meal planners. "SB Foods" was chosen for its feasibility, impact, and scalability.

3. REQUIREMENT ANALYSIS

3.1 Customer Journey Map

The journey spans user registration, product selection, checkout, order tracking, and delivery. Admins and restaurants have their own flows.

3.2 Solution Requirement

Functional Requirements: User Registration, Product Browsing, Cart, Order Placement, Admin Panel, etc.
Non-functional Requirements: Usability, Security, Reliability, Performance, Availability, Scalability.

3.3 Data Flow Diagram

Graphically depicts how data flows between users, the server, database, and external APIs.

3.4 Technology Stack

Frontend: React.js
Backend: Node.js, Express.js
Database: MongoDB Atlas
Authentication: JWT, bcrypt
Cloud Hosting: Railway/Vercel

4. PROJECT DESIGN

4.1 Problem Solution Fit

SB Foods solves the need for late-night, easy-to-order food by providing a seamless, AI-backed ordering system.

4.2 Proposed Solution

A web-based platform with user authentication, food browsing, cart management, payment processing, and admin/restaurant dashboards.

4.3 Solution Architecture

Three-tier architecture: Client (React), Server (Node + Express), Database (MongoDB), External APIs for email, location, and payments.

5. PROJECT PLANNING & SCHEDULING

5.1 Project Planning

Two sprints were planned:

- **Sprint 1 (8 Story Points):** Data Collection, Preprocessing

- **Sprint 2 (16 Story Points):** Model Building, Deployment

Velocity: 12 story points per sprint.
Product Backlog & Burndown: Structured and updated throughout the development process.

6. FUNCTIONAL AND PERFORMANCE TESTING

6.1 Performance Testing

User Acceptance Testing (UAT) covered all core functionalities, including registration, login, cart management, ordering, admin approval, and email notifications. All critical paths passed.

7. RESULTS

7.1 Output Screenshots

- Login/Registration

- Product Listings

- Cart Page

- Order Confirmation

- Admin Dashboard

- Restaurant Menu Management

8. ADVANTAGES & DISADVANTAGES

Advantages:

- Seamless UI/UX

- Scalable backend

- Role-based dashboards

- Secure checkout

Disadvantages:

- No native mobile app

- Dependency on internet access

9. CONCLUSION

SB Foods successfully addresses modern food delivery needs. It offers a complete digital platform, combining convenience, speed, and security for users and vendors alike.

10. FUTURE SCOPE

- AI-based food recommendations

- Mobile App version

- Wallet integration

- Loyalty program for frequent users

11. APPENDIX

Source Code: Included in GitHub Repository
Dataset: N/A (Dynamic Data Entry)
GitHub Link: https://github.com/GopiRebba/OrderOnTheGo-Your-On-Demand-Food-Ordering-Solution
Live Demo: Deployed on Railway / Vercel