SB FOODS: ON-DEMAND FOOD ORDERING APPLICATION

1. INTRODUCTION

1.1 Project Overview

SB Foods is a web-based food ordering application that enables customers to browse restaurants, place orders, and track deliveries. Restaurant owners can manage menus and process orders, while administrators oversee platform activities.

The system is developed using:

- Frontend: React.js (Vite)
- Backend: Supabase (PostgreSQL + Authentication)
- Styling: Tailwind CSS / Bootstrap
- Authentication: Supabase Auth

1.2 Purpose

The purpose of this project is to provide a centralized digital food ordering system with:

- Role-based access (Customer, Restaurant, Admin)
- Secure authentication
- Real-time order management
- Restaurant approval system
- Modern responsive UI

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2. IDEATION PHASE

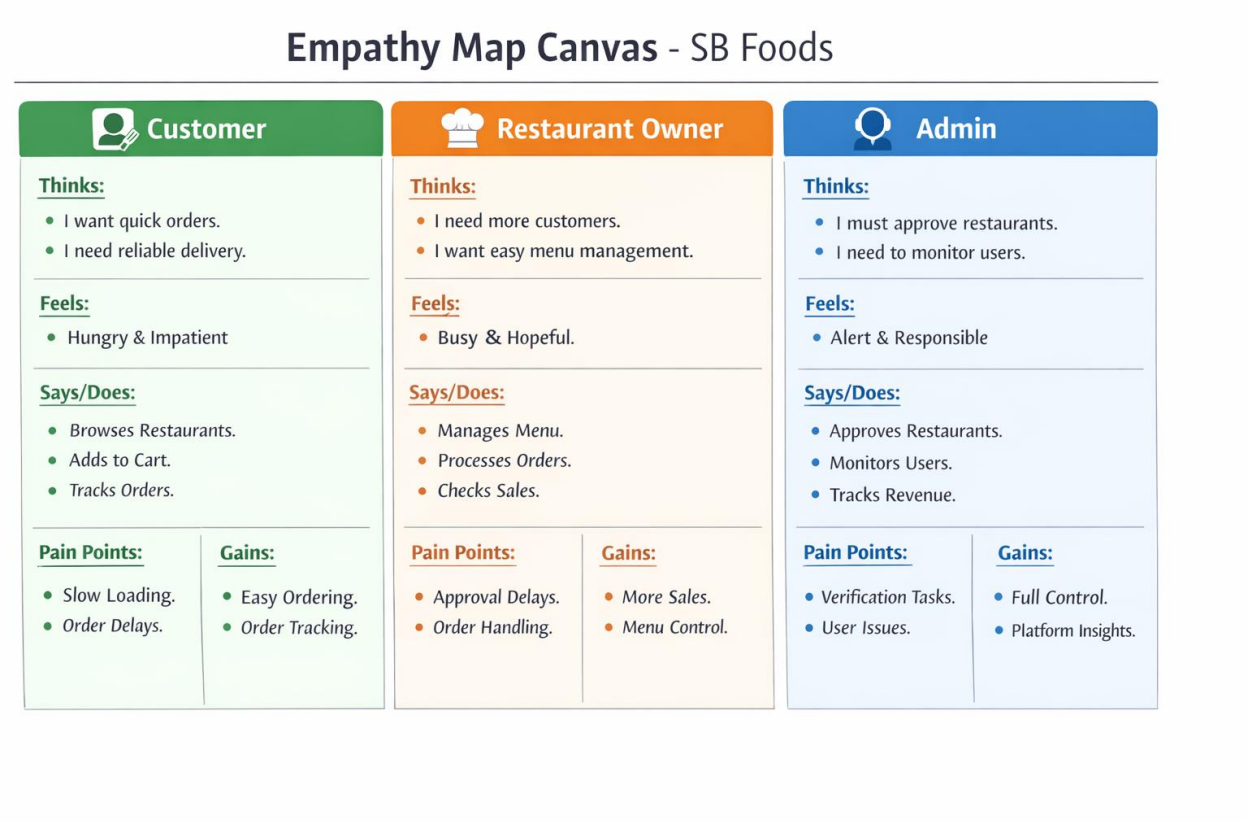
2.1 Problem Statement

Traditional food ordering systems lack:

- Centralized management
- Role-based access control
- Automated order tracking
- Secure authentication
- Real-time order updates

This project solves these challenges through a scalable full-stack web platform using modern technologies.

2.2 Empathy Map Canvas



2.3 Brainstorming

- User authentication system
- Role-based dashboards
- Restaurant approval workflow
- Cart and order management
- Search and filter functionality
- Revenue tracking dashboard

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3. REQUIREMENT ANALYSIS

3.1 Customer Journey Map

3.2 Solution Requirements

- Supabase Database (PostgreSQL)
- React.js Frontend
- Supabase Authentication
- REST API integration
- Role-based access control
- Responsive UI

3.3 Data Flow Diagram

User → React Frontend → Supabase Auth → Supabase Database → Response → UI Update

Orders Flow:

Customer → Order Table → Restaurant Dashboard → Status Update → Customer Notification

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3.4 Technology Stack

Frontend

- React.js
- Vite
- Tailwind CSS / Bootstrap
- Axios

Backend

- Supabase (PostgreSQL + Auth)

Authentication

- Supabase JWT Authentication

Tools

- VS Code
- GitHub
- npm

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4. PROJECT DESIGN

4.1 Problem-Solution Fit

Problem: Lack of centralized digital food ordering system.

Solution: Role-based web application using React and Supabase with secure authentication and order lifecycle management.

4.2 Proposed Solution

- Role-based login system
- Restaurant approval system
- Menu management
- Cart and checkout system
- Order tracking
- Admin dashboard

4.3 ER Diagram Description

Entities:

- Users
- Restaurants
- Products
- Orders
- Cart
- Admin

Relationships:

- One user can place multiple orders
- One restaurant has multiple products
- One order contains multiple products
- Admin approves restaurants

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5. PROJECT PLANNING & SCHEDULING

- Setup & Configuration – 1 Week
- Database Design – 1 Week
- Frontend Development – 2 Weeks
- Role-based Logic Implementation – 1 Week
- Testing & Debugging – 1 Week

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6. FUNCTIONAL AND PERFORMANCE TESTING

Functional Testing

- User registration and login validation
- Restaurant approval process
- Cart functionality
- Order placement
- Order status update
- Admin management features

Performance Testing

- Page load time under 3 seconds
- Optimized database queries
- Efficient UI rendering

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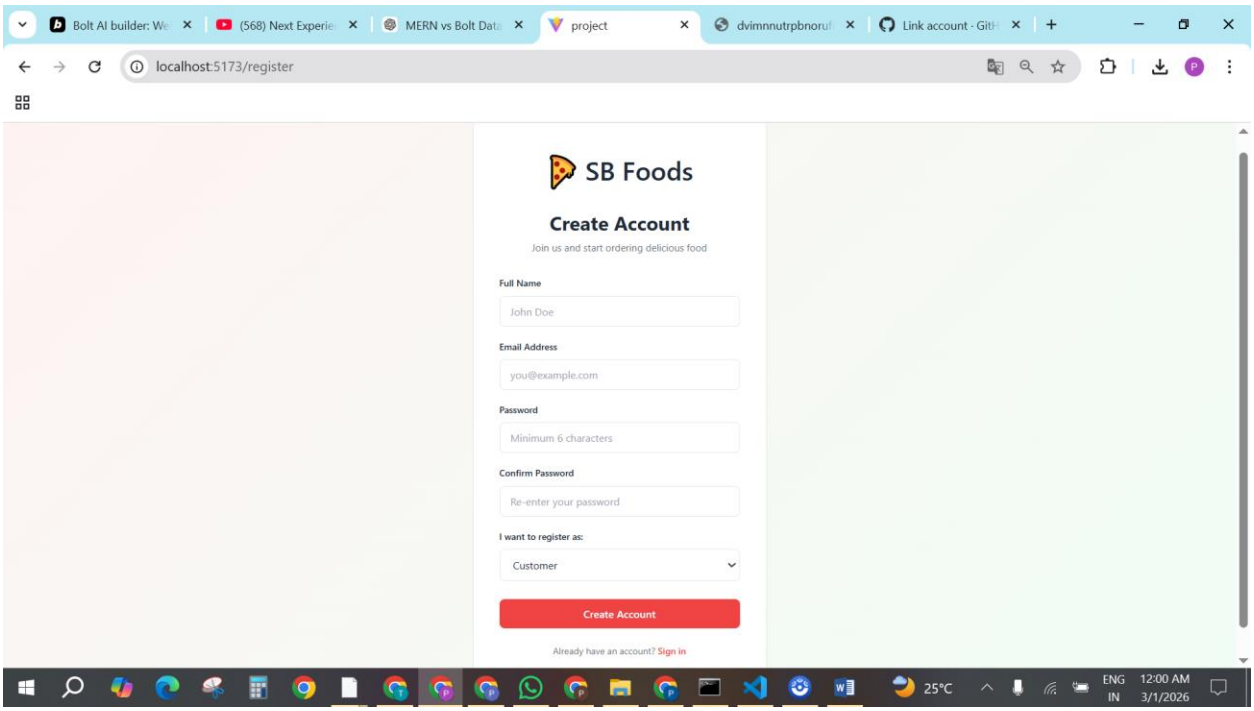
7. RESULTS

The SB Foods application successfully implements:

- Secure authentication system
- Role-based dashboards
- Restaurant approval workflow
- Full order lifecycle management
- Responsive modern UI

Users can browse restaurants, place orders, and track them efficiently. Restaurants can manage menus and update order status. Admin has full control over the platform.



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8. ADVANTAGES & DISADVANTAGES

Advantages

- Modern scalable architecture
- Secure authentication
- Real-time database updates
- Clean responsive UI
- Centralized management system

Disadvantages

- Dependency on internet connectivity
- Supabase free tier limitations
- Complex role-based logic implementation

9. CONCLUSION

SB Foods provides a secure, scalable, and user-friendly digital food ordering solution. By integrating React with Supabase, the application ensures real-time data handling, role-based access control, and efficient order management.

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10. FUTURE SCOPE

- Online payment integration (Stripe/Razorpay)
- Real-time order tracking map
- Push notifications
- Ratings & Reviews system
- AI-based restaurant recommendations
- Mobile application version
- Cloud deployment with custom domain

Github Repo Link: https://github.com/Prajna543/SmartBridge