

Full Stack Development with MERN

Project Documentation

1. Introduction

Project Title: SB Foods - On-Demand Food Ordering Platform

Team ID: LTVIP2025TMID53161

Team Size: 4

Team Leader: Kunapareddy Syamala

Team member: Kotha Yaswanthi

Team member: Kotha Purandesh

Team member: Kothakota Likitha

2. Project Overview

Purpose:

To provide users with a seamless digital food ordering experience while enabling restaurants and

administrators to manage their offerings and operations effectively.

Features:

- User registration and login
- Browse food products by restaurant
- Add to cart and checkout
- Email confirmation
- Restaurant and admin dashboards
- Order management system

3. Architecture

Frontend:

Built using React.js. Components are modular and pages are rendered dynamically based on user

authentication. Routing is handled with React Router.

Backend:

Node.js with Express.js is used to define RESTful APIs. Middleware handles authentication, logging, and error-handling.

Database:

MongoDB Atlas stores collections for Users, Restaurants, Admins, Products, Carts, and Orders.

Mongoose ODM is used for schema definition.

4. Setup Instructions

Prerequisites:

- Node.js (v16+)
- MongoDB Atlas Account
- Git

Installation:

Clone the repository

<https://github.com/harsha-varadhan-reddy-07/Food-Ordering-App-MERN>

Navigate to root folder

cd Food-Ordering-App-MERN

Install backend dependencies

npm install

Navigate to client folder

cd client

npm install

Environment Variables:

Create a .env file in the root directory and configure MongoDB URI, JWT secret, and PORT.

5. Folder Structure

Frontend: React.js]

|

└─ Pages: Login | Menu | Cart | Checkout | Profile | Admin Dashboard



[Backend: Node.js + Express]

|

└─ APIs:

|

└─ /api/users

|

└─ /api/orders

|

└─ /api/products

|

└─ /api/admin

|

[Database: MongoDB]

└─ Collections:

|

└─ Users

|

└─ Products

|

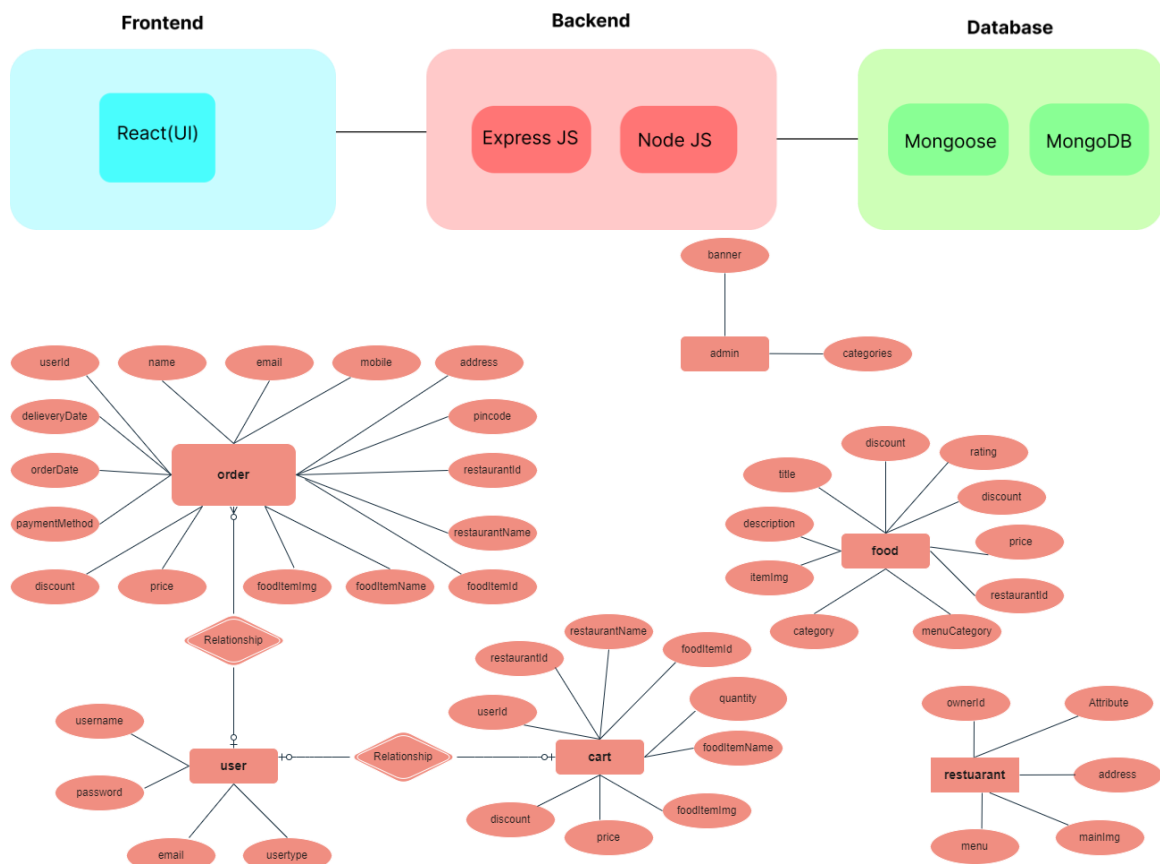
└─ Orders

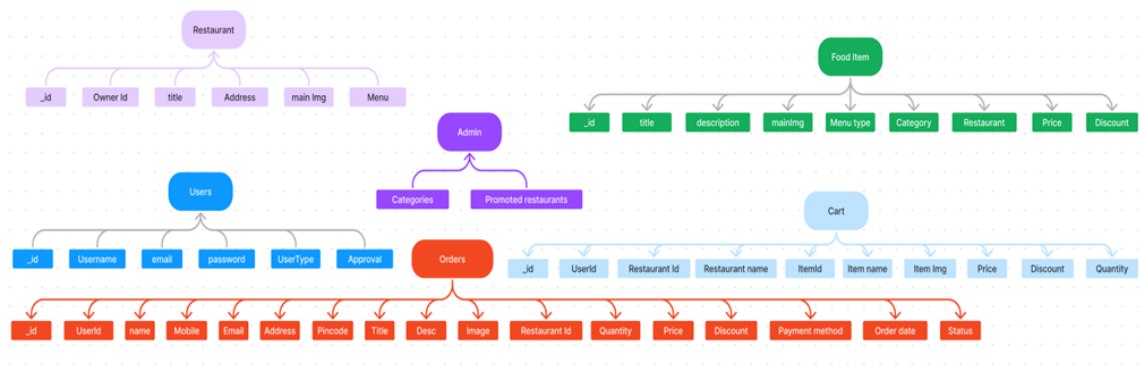
|

└─ Cart

|

└─ Admin





6. Running the Application

Frontend:

cd client

npm start

Backend:

cd server

npm start

App runs at: <http://localhost:3000>

7. API Documentation

User Routes

- POST /api/users/register – Register user
- POST /api/users/login – Login
- GET /api/users/profile – Get user profile

Product Routes

- GET /api/products – Fetch all products
- POST /api/products – Add new product (admin only)

Order Routes

- POST /api/orders – Place an order
- GET /api/orders/:id – View specific order

Cart Routes

- POST /api/cart – Add to cart

- GET /api/cart/:userId – View user cart

8. Authentication

JWT-based authentication with tokens stored in local storage.

- Passwords are encrypted using bcrypt.
- Protected routes are guarded by middleware.

9. User Interface

- Registration/Login page
- Home page with food listings
- Cart and order confirmation page
- Admin and restaurant dashboards

10. Testing

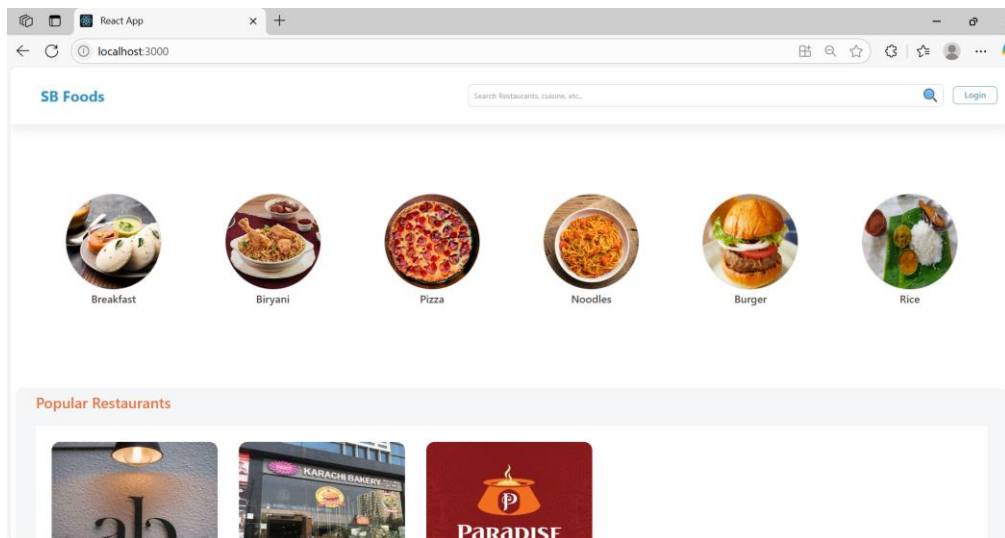
Testing Tools:

- Postman for API testing
- Manual testing of UAT scenarios
- Basic unit testing with Jest (if extended)

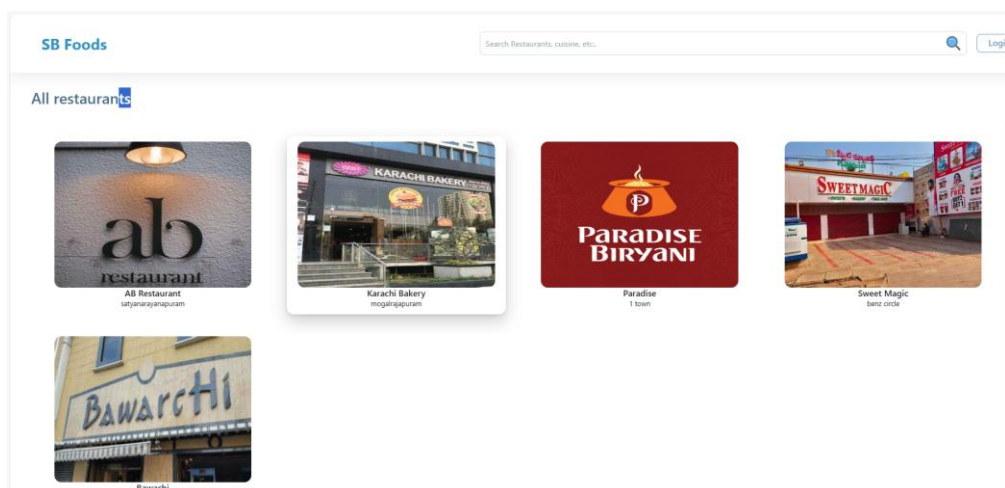
11. Screenshots or Demo

GitHub Repository: <https://github.com/syamalakunapareddy1/OrderOnTheGo-Your-On-Demand-Food-Ordering-Solution>

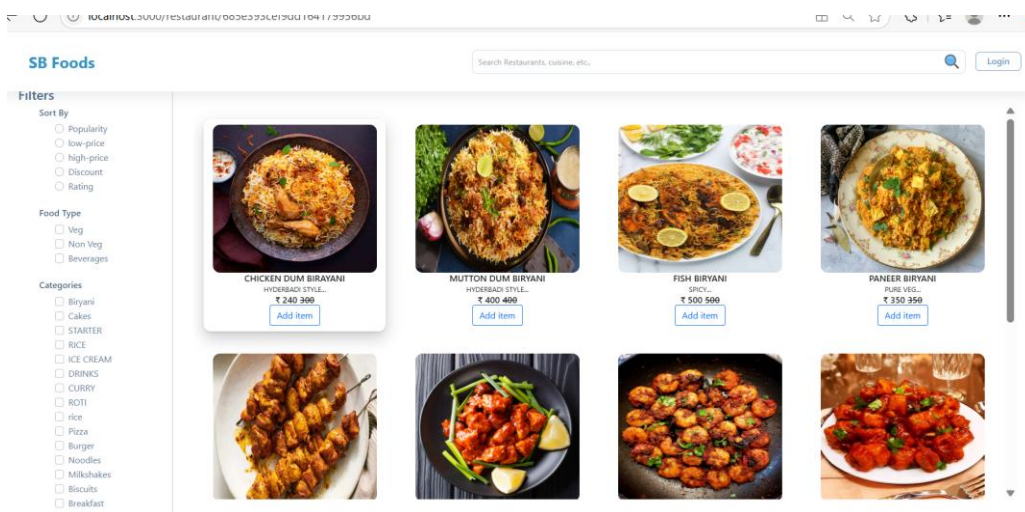
Landing page



Restaurants



Restaurant Menu



Authentication

Register

Username

Email address

Password

Password must be at least 6 characters, include an uppercase letter, a number, and a special character.

✔

Sign up

Already registered? [Login](#)

Login

[Sign in](#)

[Not registered? Register](#)

User Profile

SB Foods

Home

Search Restaurants, cuisine, etc.

Bhavs

Username: Bhavs

Email: bhavs8@gmail.com

Orders: 3

Logout

Orders

CHOCOLATE MILKSHAKE

Karachi Bakery

Quantity: 2 Total Price: ₹ 400 ~~₹ 400~~ Payment mode: upi
 Ordered on: 2025-06-28 Time: 02:59 status: order placed

Cancel

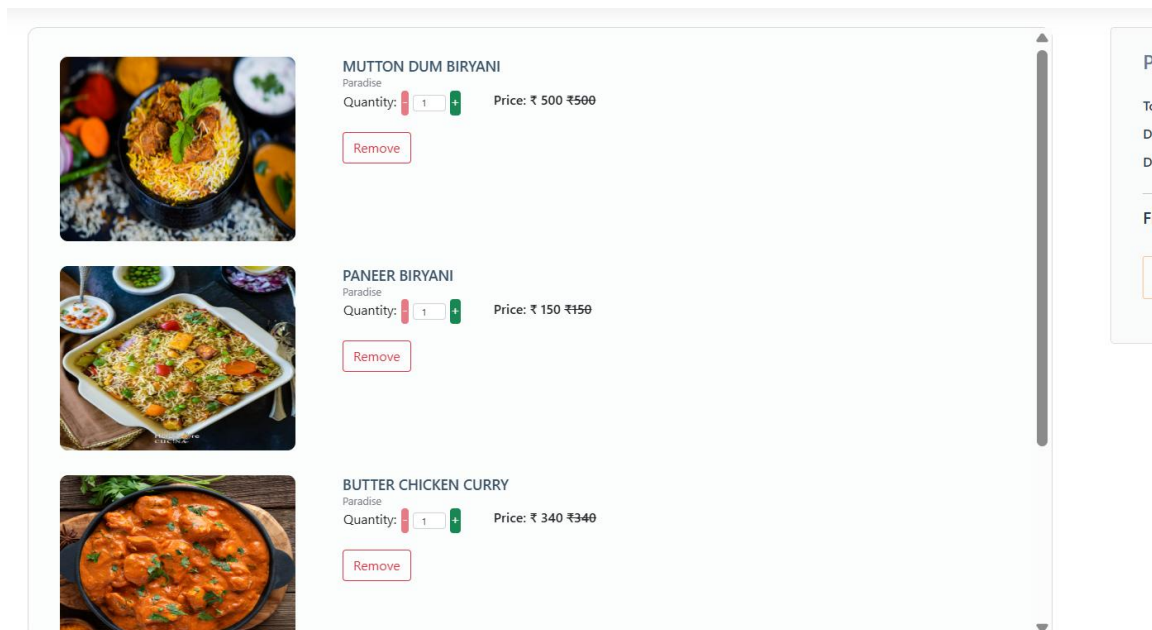
Vanilla cool cake

Karachi Bakery

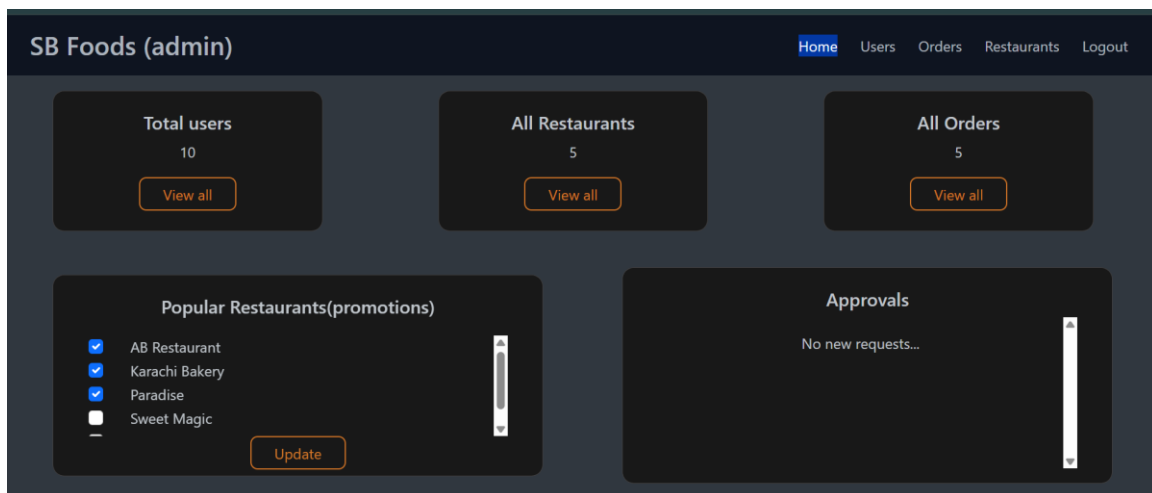
Quantity: 1 Total Price: ₹ 350 ~~₹ 350~~ Payment mode: upi
 Ordered on: 2025-06-28 Time: 02:59 status: order placed

Cancel

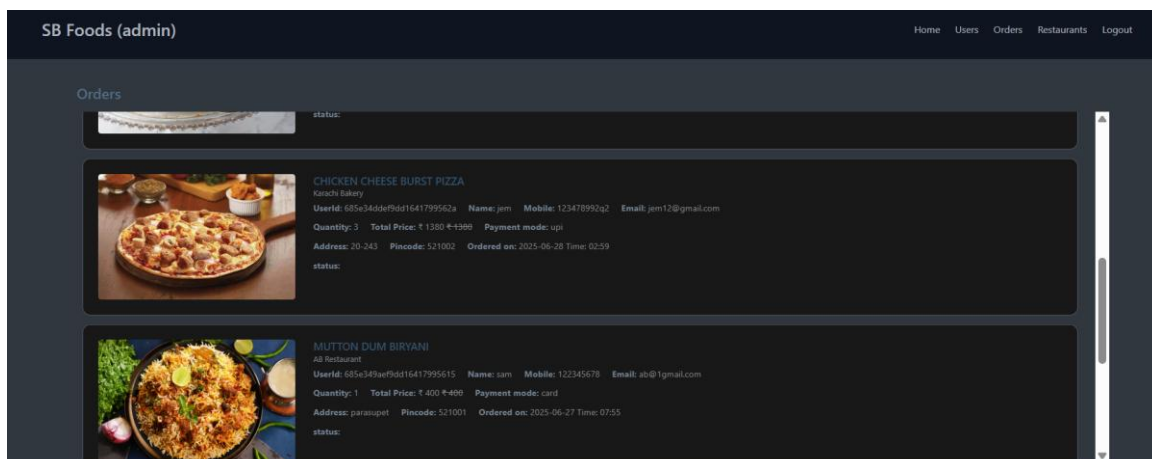
Cart



Admin Dashboard



All Orders




All Restaurants


SB Foods (admin)

[Home](#) [Users](#) [Orders](#) [Restaurants](#) [Logout](#)


All restaurants




AB Restaurant
safyanagarapuram




Karachi Bakery
mogalrajapuram



Paradise
1 town



Sweet Magic
benz orle



Bawarchi

Restaurant Dashboard

SB Foods (Restaurant)

[Home](#) [Orders](#) [Menu](#) [New Item](#) [Logout](#)

All Items
10

View all

All Orders
2

View all

Add Item
(new)

Add now

New Item

SB Foods (Restaurant)

[Home](#) [Orders](#) [Menu](#) [New Item](#) [Logout](#)

New Product

Product name

Product Description

Thumbnail img url

Choice

☐ Veg

☐ Non Veg

☐ Beverages

Category

Choose Product category

Price

0

Discount (in %)

0

Add product

12. Known Issues

- No payment gateway integration
- Lack of mobile responsiveness in certain views

13. Future Enhancements

- Mobile app version with React Native
- AI-based food recommendations
- Wallet integration and reward system
- Multi-language support

Appendix A: Ideation Phase – Brainstorm & Idea Prioritization

Team Gathering & Collaboration:

Our team initiated the project by organizing a virtual brainstorming session to bring together diverse ideas and explore real-world problems that can be solved through technology. Each member was encouraged to share pain points they personally experienced or observed in their daily lives. The discussion focused on areas such as health, education, entertainment, and lifestyle.

Prioritization Criteria:

- Relevance and urgency of the problem
- Feasibility of solution within project timeline
- Technical scope and learning opportunities
- User base and social impact potential

Selected Idea – SB Foods (Digital Food Ordering App):

After careful analysis and ranking based on feasibility, scope, and user demand, we finalized our problem statement around late-night food cravings and inefficient food ordering systems. We selected SB Foods, a full-stack food ordering app, which allows users to explore restaurants, add items to their cart, and place orders with ease.

This idea resonated with all team members and allowed us to incorporate a variety of technical concepts including React, Node, Express, MongoDB, and JWT authentication, while solving a relatable real-world challenge.