

Full Stack Development with MERN

Project Documentation

1. Introduction

- **Project Title:** Orderonthego: your on-demand food ordering solution
- **Team Members:**
 1. MANVITH SAI YARLAGADDA – FULL STACK DEVELOPER
 2. HARSHA DODDA – FRONTEND DEVELOPER
 3. PARDHASARADHI PUJALA – BACKEND DEVELOPER
 4. YUSUF VALI SHAIK – DATABASE ADMINSTRATOR

2. Project Overview

Purpose

Steamy Pot is a multi-role food ordering and delivery platform designed to provide a smooth and reliable food delivery experience similar to Swiggy and Zomato. The system supports users, restaurants, delivery drivers, and administrators, enabling seamless order placement, real-time tracking, payments, reviews, and administrative control.

Goals

- Deliver smooth and intuitive user experience
- Maintain reliable order lifecycle tracking
- Provide role-specific dashboards
- Ensure INR-first pricing model
- Enable scalable and secure backend architecture

Key Features

- Restaurant discovery and filtering
- Menu browsing and cart management
- Checkout with offers and discounts
- Payment state management (COD/Card/UPI states)
- Real-time order status timeline
- Driver assignment and tracking
- Reviews and restaurant replies
- Admin dashboard with search, filters, and metrics

3. Architecture

Technology Stack

MERN Stack with Socket.io

- MongoDB
- Express.js
- React.js
- Node.js
- Socket.io for real-time communication

REST APIs are used for core operations.
Socket connections are used for real-time notifications.

Frontend Architecture (React + Vite)

- Routing via React Router
- Role-protected routes using ProtectedRoute
- Global state management using AuthContext (JWT handling)
- Toast notifications via ToastContext
- TailwindCSS for styling
- Axios client configured with /api base URL

Pages include:

- User pages (restaurants list, menu, cart, checkout, orders, profile)
- Restaurant dashboard
- Driver dashboard
- Admin dashboard
- Shared landing and authentication pages

Backend Architecture (Node.js + Express)

- RESTful API design
- Controllers organized by domain (auth, order, cart, admin, etc.)
- JWT authentication middleware
- Role-based access control
- Centralized error handling
- Async wrapper for controller functions
- Socket.io gateway with authenticated rooms

Database Architecture (MongoDB + Mongoose)

Collections include:

User

- username
- email
- role
- approval status
- blocked flag

FoodItem

- name
- description
- price
- imageUrl
- restaurantId

Cart

- userId
- restaurantId

- items (foodId, name, price, quantity)

Order

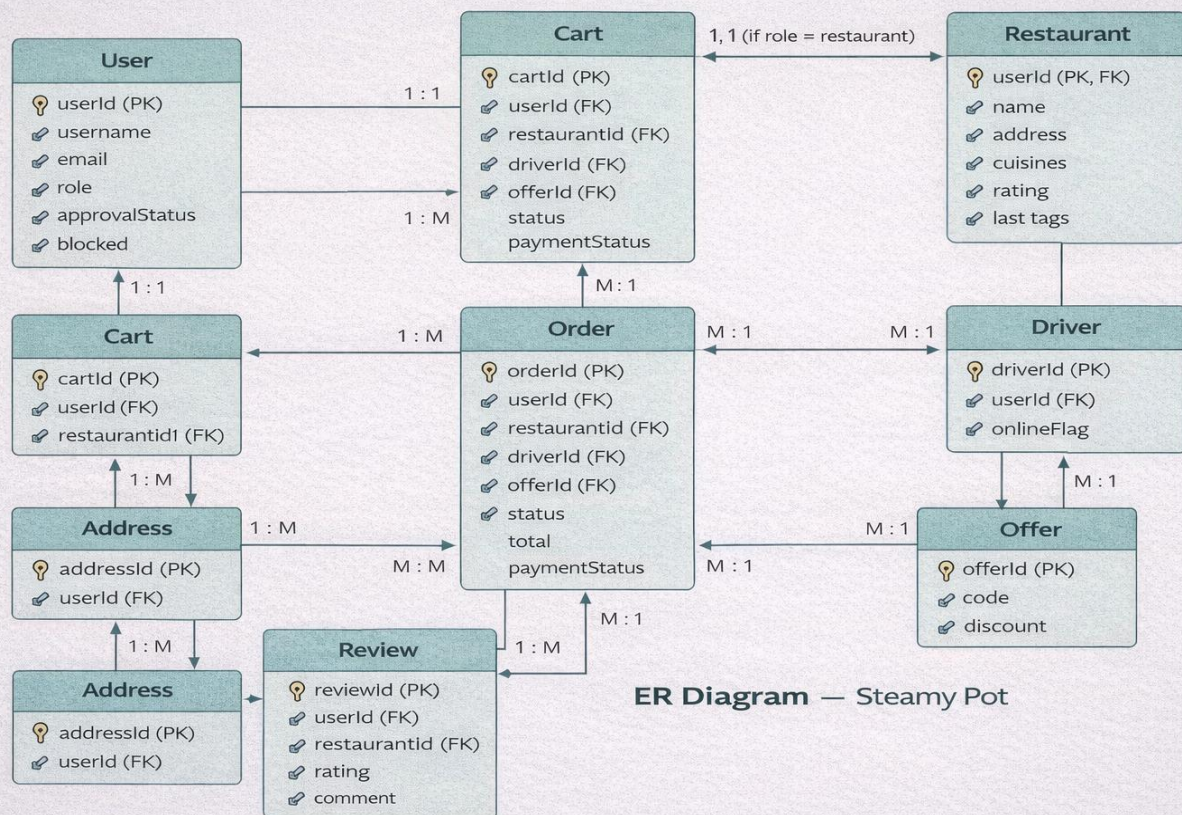
- userId
- restaurantId
- items
- subtotal
- discount
- deliveryFee
- total
- paymentMethod
- paymentStatus
- driverId
- status
- statusHistory

Driver

- userId
- online flag
- currentOrderId

Additional Collections:

- Address
- Offer
- Review



4. Setup Instructions

Prerequisites

- Node.js (v18 or higher)
- MongoDB instance
- npm
- Git

Installation Steps

Clone Repository

```
git clone <repo-url>
```

Navigate to project

```
cd FINAL YEAR/STEAMY POT
```

Server Setup

```
cd server  
npm install
```

Create .env file

```
MONGO_URI=<mongodb-connection-string>  
JWT_SECRET=<strong-secret>  
PORT=5000
```

Run backend

```
npm run dev  
or  
npm start
```

Client Setup

```
cd client  
npm install  
npm run dev
```

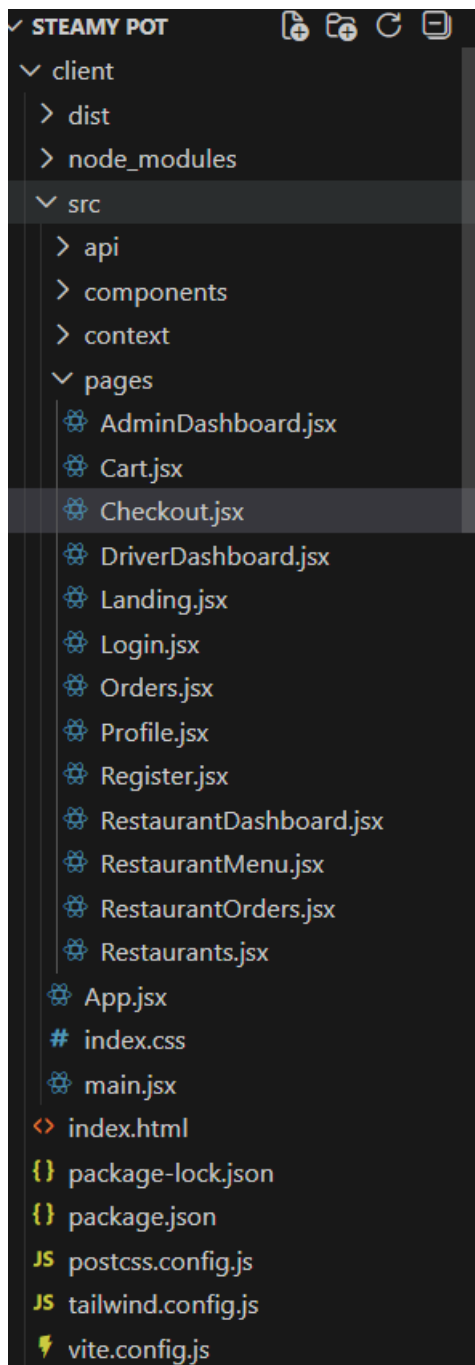
Frontend runs at:

<http://localhost:5173>

5. Folder Structure

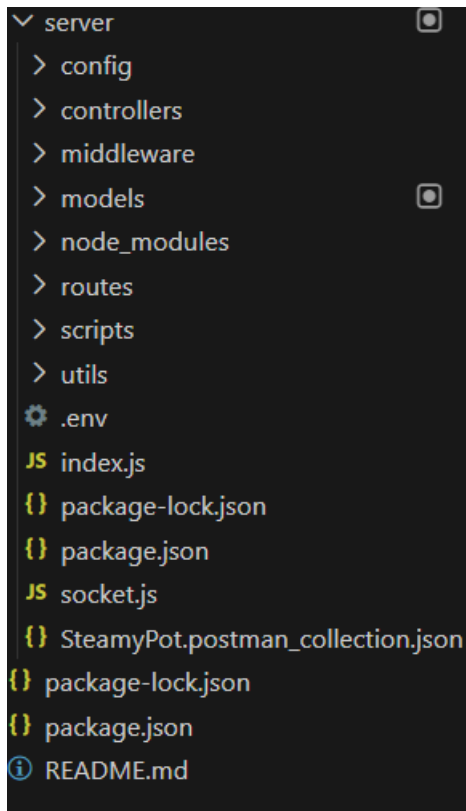
client/

- React application
- Routing, contexts, pages, Tailwind config



server/

- Express API
- Controllers
- Middleware
- Models
- Routes
- Socket.io setup



server/scripts/seed.js

- Optional seed data

6. Running the Application

Frontend

From client folder

npm run dev

```
PS D:\FINAL YEAR\STEAMY POT\client> npm run dev

> sb-foods-client@0.1.0 dev
> vite

VITE v5.4.21 ready in 706 ms

→ Local:   http://localhost:5173/
→ Network: use --host to expose
→ press h + enter to show help
```

Backend

From server folder

npm start

```
PS D:\FINAL_YEAR\STEAMY POT\server> npm start

> start
> node index.js

[dotenv@17.2.3] injecting env (2) from .env -- tip: ⚙ enable debug logging with { debug: true }
Connected to MongoDB
Server running on port 5000
█
```

Ensure MongoDB is connected and environment variables are configured.

7. API Documentation

Base Path: /api

Authentication uses JWT Bearer tokens.

Authorization Header Format:

Authorization: Bearer <token>

Auth

POST /auth/register

POST /auth/login

User

GET /user/profile

GET /user/orders

POST /user/addresses

PATCH /user/addresses/:id

DELETE /user/addresses/:id

Cart

GET /cart

POST /cart/add

PATCH /cart/item

DELETE /cart/item/:foodId

Orders

POST /orders

GET /orders

PATCH /orders/:id/status

Restaurant

POST /restaurant/food

GET /restaurant/menu

PATCH /restaurant/food/:id

DELETE /restaurant/food/:id

Driver

PATCH /driver/online
GET /driver/orders
PATCH /driver/orders/:id/status

Admin

GET /admin/users
GET /admin/orders
PATCH /admin/users/:id/block
GET /admin/metrics

Health

GET /health
Returns:
{ status: "ok" }

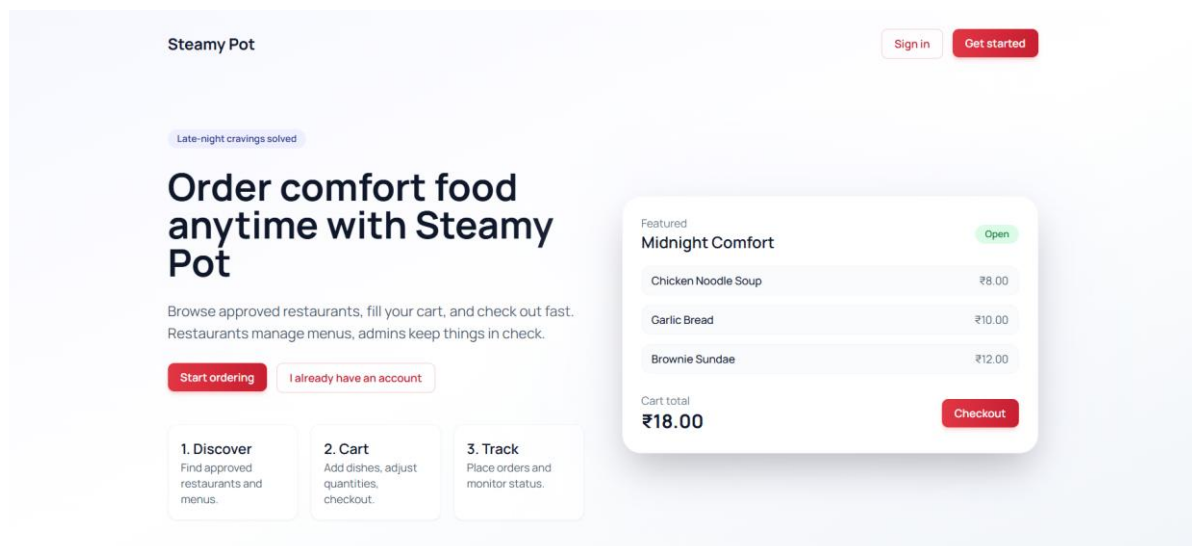
8. Authentication

- JWT tokens issued during login
- Token stored client-side
- Middleware verifies token
- Role-based access control enforced
- Passwords hashed using bcrypt
- Token expiry: 7 days

9. User Interface

Includes:

- Landing page



• Login and Registration

Create account

Join Steamy Pot

Username

Email

Password

Role

User

Create account

Already have an account? [Sign in](#)

Steamy Pot

Sign in to continue

Email

user@example.com

Password

.....

Sign in

• Restaurant listing

SteamyPot Restaurants Orders Cart Profile

User (user) Logout

Restaurants

Search

Restaurant or cuisine

Cuisines (comma)

Indian, Chinese

Tags

Biryani, Pizza

Sort by

Top rated

Open now

Apply

Restaurant

5.0 ★
2 ratings

Fee: ₹0.00 ETA: 30 mins Open

View menu

• Menu listing


SteamyPot

Restaurants Orders Cart Profile

User (user) Logout

Restaurant


ETA 30 mins Fee ₹0.00 5.0 ★ (2) Open



Chicken Biryani Full
Flavoured rice with 3-piece chicken

- 1 +


₹320.00



chicken curry
juicy chicken curry (250 gms)

Add to cart

₹150.00



CHICKEN 65
juicy chicken 65 (250 gms)

Add to cart

₹200.00

• Cart and checkout

SteamyPot

Restaurants Orders Cart Profile

User (user) Logout

Your Cart

Checkout

Chicken Biryani Full
₹320.00

- 1 +

Remove

Total: ₹320.00

Checkout

Delivery

Choose saved address

No saved addresses. Add one below.

Or enter a new delivery address

Promo code

Apply

Payment method

Cash on delivery

| | |
|--------------|---------|
| Subtotal | ₹320.00 |
| Delivery fee | ₹0.00 |
| Discount | -₹0.00 |
| Total | ₹320.00 |

Pay: ₹320.00

Place order

• Order timeline view

SteamyPot

Restaurants

Orders

Cart

Profile

User (user)

Logout

Your Orders

Order #7e1cf3

ETA ~ 12:29

placed

Cancel

Progress

Placed

Confirmed

Preparing

Out For Delivery

Delivered

Chicken Biryani Full x 1

₹320.00

Payment: COD

pending

Subtotal

₹320.00

Delivery

₹0.00

Discount

-₹0.00

Total

₹320.00

placed

20/02/2026, 11:54:16

Order #b0acbc

delivered

Driver: Driver

Driver assignment: accepted

Progress

Placed

Confirmed

Preparing

Out For Delivery

Delivered

Chicken Biryani Full x 1

₹320.00

Payment: COD

paid

• Restaurant dashboard

SteamyPot

Restaurant

Orders

Restaurant (restaurant)

Logout

Restaurant Dashboard

Open status

Control whether customers can place orders.

Set to Closed

Performance

Total orders

0

Delivered

0

Cancelled

0

GMV

₹0.00

Delivery fees

₹0.00

Avg delivery (mins)

0.0

Add menu item

Name

Description

Price

Image URL

https://...

Add

SteamyPot

Restaurant

Orders

Restaurant (restaurant)

Logout

Restaurant Orders

Order #7e1cf3

User: User

Status:

Accept

Reject

preparing

cancelled

Driver: Unassigned

Select driver

Assign

Auto-assign

No online drivers

Chicken Biryani Full x 1

₹320.00

Payment: COD – pending

Subtotal

₹320.00

Delivery

₹0.00

Discount

-₹0.00

Total

₹320.00

placed

20/02/2026, 11:54:16

Order #b0acbc

User: User

Driver acceptance: accepted

Status:

preparing

cancelled

Driver: Driver

Driver: Driver

Select driver

Assign

Auto-assign

No online drivers

Chicken Biryani Full x 1

₹320.00

• Driver dashboard

SteamyPot

Driver

Driver (driver)

Logout

Driver Dashboard

Go offline

Manage your availability and assigned orders.

Order #7e1cf3

preparing

Driver acceptance: pending

placed

confirmed

preparing

out for delivery

delivered

Customer

User

user@example.com

Restaurant

Restaurant

Restaurant@gmail.com

Chicken Biryani Full x 1

₹320.00

Accept

Decline

placed

20/02/2026, 11:54:16

confirmed

20/02/2026, 11:56:07

preparing

20/02/2026, 11:56:10

preparing

20/02/2026, 11:56:48

Order #b0acbc

delivered

Driver acceptance: accepted

placed

confirmed

preparing

out for delivery

delivered

Customer

User

Restaurant

- Admin analytics dashboard

SteamyPot

Admin

Admin (admin)Logout

Admin Dashboard

Platform metrics

Total orders
6

Delivered
4

Cancelled
0

GMV
₹1690.00

Discounts
₹0.00

Delivery fees
₹0.00

Avg delivery (mins)
0.1

Top restaurants (by revenue)

| | |
|------------|---------------------|
| Restaurant | ₹1190.00 (4 orders) |
| 228x1a42h3 | ₹500.00 (2 orders) |

Restaurants

Restaurant

Restaurant@gmail.com

Approved: Yes

Users

Search user

All roles

Blocked?

Approval

10. Testing

Manual Testing:

- Postman collection used

Future Testing:

- Jest and Supertest for API testing
- React Testing Library for UI

11. Screenshots or Demo

Video Link : [\(LINK\)](#)

Steamy Pot

Sign inGet started

Late-night cravings solved

Order comfort food anytime with Steamy Pot

Browse approved restaurants, fill your cart, and check out fast. Restaurants manage menus, admins keep things in check.

Start ordering

I already have an account

1. Discover
Find approved restaurants and menus.

2. Cart
Add dishes, adjust quantities, checkout.

3. Track
Place orders and monitor status.

Featured

Midnight Comfort

Open

Chicken Noodle Soup

₹8.00

Garlic Bread

₹10.00

Brownie Sundae

₹12.00

Cart total

₹18.00

Checkout

SteamyPot

Restaurants

Orders

Cart

Profile

User (user)

Logout

Restaurants

Search

Restaurant or cuisine

Cuisines (comma)

Indian, Chinese

Tags

Biryani, Pizza

Sort by

Top rated

☒ Open now

Apply

Restaurant

5.0 2 ratings

Fee: ₹0.00

ETA: 30 mins

Open

View menu

SteamyPot

Restaurants

Orders

Cart

Profile

User (user)

Logout

Restaurant

ETA 30 mins Fee ₹0.00 5.0 (2)

Open

Chicken Biryani Full

Flavoured rice with 3-piece chicken

-

1

+

₹320.00

chicken curry

juicy chicken curry (250 gms)

Add to cart

₹150.00

CHICKEN 65

juicy chicken 65 (250 gms)

Add to cart

₹200.00

SteamyPot

Restaurants

Orders

Cart

Profile

User (user)

Logout

Your Orders

Order #7e1cf3

ETA ~ 12:29

placed

Cancel

Progress

Placed

Confirmed

Preparing

Out For Delivery

Delivered

Chicken Biryani Full x 1

₹320.00

Payment: COD

pending

Subtotal

₹320.00

Delivery

₹0.00

Discount

-₹0.00

Total

₹320.00

placed

20/02/2026, 11:54:16

Order #b0acbc

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Driver: Driver

Driver assignment: accepted

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Preparing

Out For Delivery

Delivered

Chicken Biryani Full x 1

₹320.00

Payment: COD

paid

Restaurant Dashboard

Open status

Control whether customers can place orders.

Set to Closed

Performance

Total orders

0

Delivered

0

Cancelled

0

GMV

₹0.00

Delivery fees

₹0.00

Avg delivery (mins)

0.0

Add menu item

Name

Description

Price

Image URL

https://...

Add

Driver Dashboard

Manage your availability and assigned orders.

Go offline

Order #7e1cf3

preparing

Driver acceptance: pending

placed

confirmed

preparing

out for delivery

delivered

Customer

User

user@example.com

Restaurant

Restaurant

Restaurant@gmail.com

Chicken Biryani Full x 1

₹320.00

Accept

Decline

placed

confirmed

preparing

preparing

20/02/2026, 11:54:16

20/02/2026, 11:56:07

20/02/2026, 11:56:10

20/02/2026, 11:56:48

Order #b0acbc

delivered

Driver acceptance: accepted

placed

confirmed

preparing

out for delivery

delivered

Customer

User

Restaurant

Restaurant

SteamyPot Admin

Admin (admin) Logout

Admin Dashboard

Platform metrics

Total orders

6

Delivered

4

Cancelled

0

GMV

₹1690.00

Discounts

₹0.00

Delivery fees

₹0.00

Avg delivery (mins)

0.1

Top restaurants (by revenue)

Restaurant

228x1a42h3

₹1190.00 (4 orders)

₹500.00 (2 orders)

Restaurants

Restaurant

Restaurant@gmail.com

Approved: Yes

Users

Search user

All roles

Blocked?

Approval

12. Known Issues

- Real-time updates need full socket integration
- Payment flow uses mock state transitions
- Requires MongoDB running locally

13. Future Enhancements

- Real-time ETA calculations
- Full payment gateway integration
- Driver and restaurant verification
- Advanced analytics dashboards
- Mobile app or PWA support