Grocery Webapp –Detailed Project Report

1.Introduction:

Project Title: Grocery Webapp : Simplifying Grocery Shopping
Team Members:
• Akshay G - Project Lead , Backend Developer
• Ashwath D - Frontend Developer
• Balaji G - Backend Developer
• Baskar M - UI/UX Developer
• Deepak Raj B - Frontend Developer & Database Engineer

2.Project Overview:

Purpose:

To create an intuitive web application that allows users to browse, search, and purchase groceries online, making grocery shopping efficient and user-friendly.

Features
: • User authentication and profile management.
• Real-time product search and filtering.
• Cart management with seamless checkout.
• Admin dashboard for managing inventory.

3. Architecture:

Frontend:

The frontend is built using React with component-based architecture, styled using TailwindCSS for modern and responsive design.

Backend:

Node.js and Express.js power the backend, managing API endpoints and handling requests

Database:

MongoDB serves as the database, with collections for users, products, orders, and categories

4. Setup Instructions

Prerequisites:

- Node.js (v16+)
- MongoDB (local or cloud instance)
- Git

5.Installation:

A. Clone the repository:

```
git clone
https://github.com/your-repo/groceryweb.git
```

B. Navigate to directories and install dependencies:

```
cd client
npm install
cd ../server
npm install
```

C. Set up environment variables:

- Create .env file in the server directory.
- Add variables like DB_URI, JWT_SECRET, and PORT.

5. Folder Structure

Client:

- src/components/ - React components.
- src/pages/ - Page-level components.

- src/services/ - API interaction logic.

Server:

- routes/ - API routes.
- controllers/ - Business logic.
- models/ - Mongoose schemas.

6.Running the Application:

Frontend:

```
cd client
npm start
```

Backend

```
: cd server
  npm start
```

7.API Documentation

- GET /api/products: Fetch all products.
- POST /api/auth/login: User login.
- POST /api/orders: Place an order

Example:

Request:

POST /api/auth/login

```
{
    "email": "user@example.com",
    "password": "password123"
}
```

Response:

Json

```
{
```

```
    "token": "jwt-token",
    "user": { "name": "John Doe" }
}
```

8.Authentication:

- JWT-based authentication is implemented.
- Tokens are issued at login and verified for secured endpoints.
- Middleware ensures only authorized users access restricted resources.

9.User Interface:

The user interface includes:

- A home page showcasing featured products.
- A responsive product search and filter page.
- A secure checkout flow

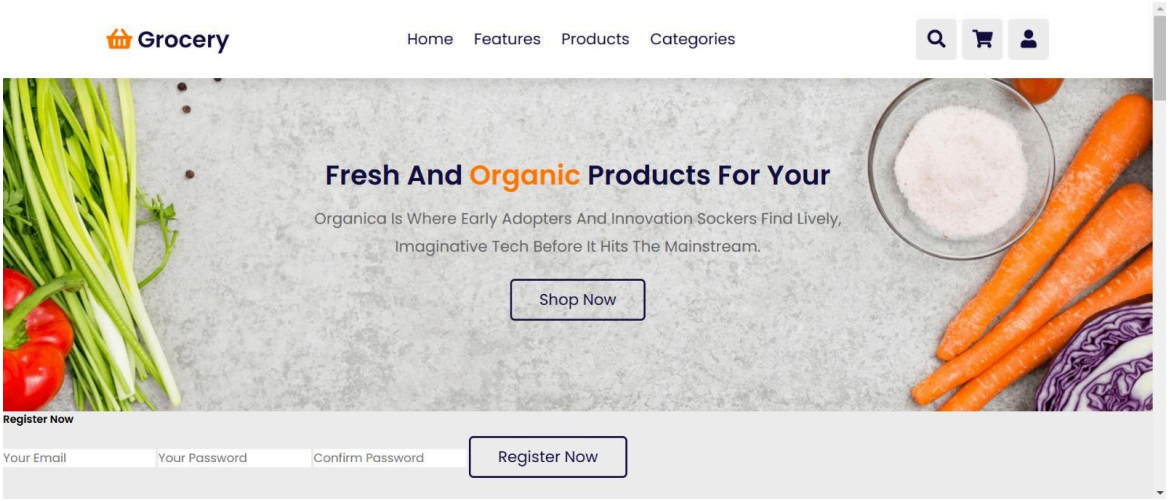
10.Testing:

Tools Used: Jest and Cypress.

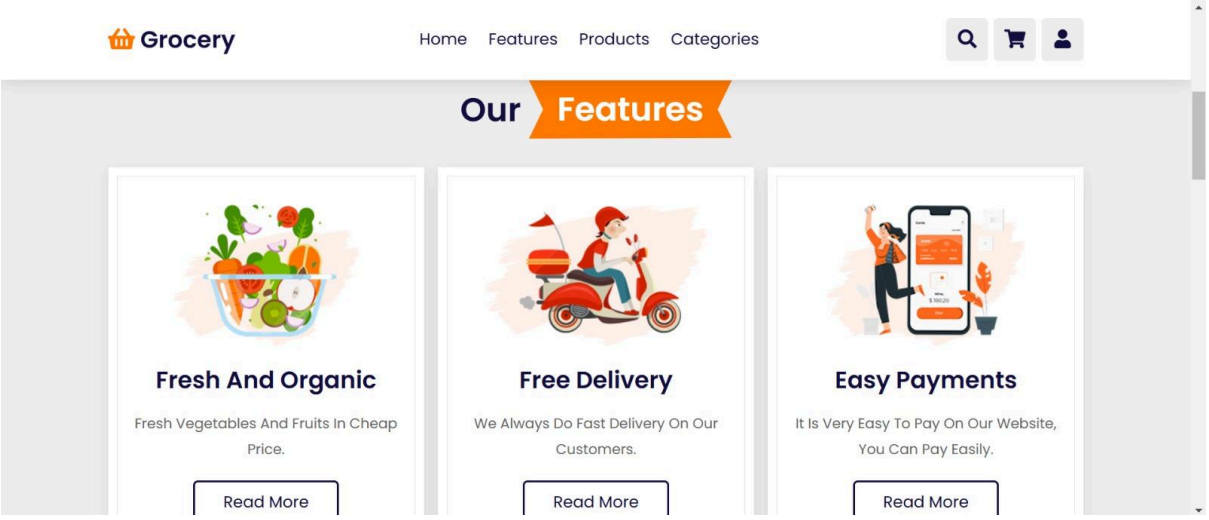
- Unit tests for critical functions.
- End-to-end tests for checkout and user registration flows

11.Screenshots or Demo:

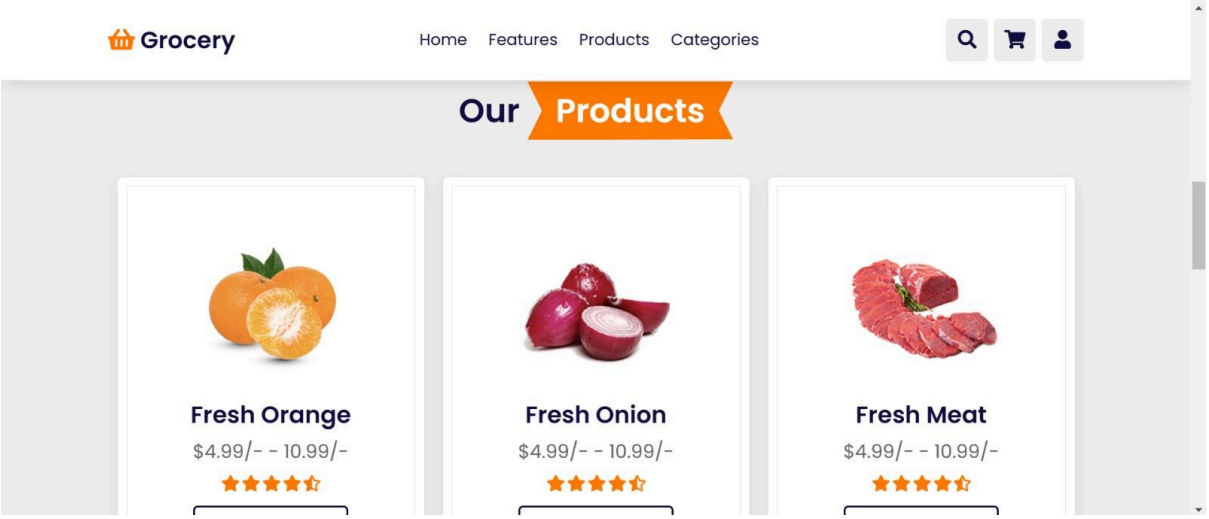
Home page

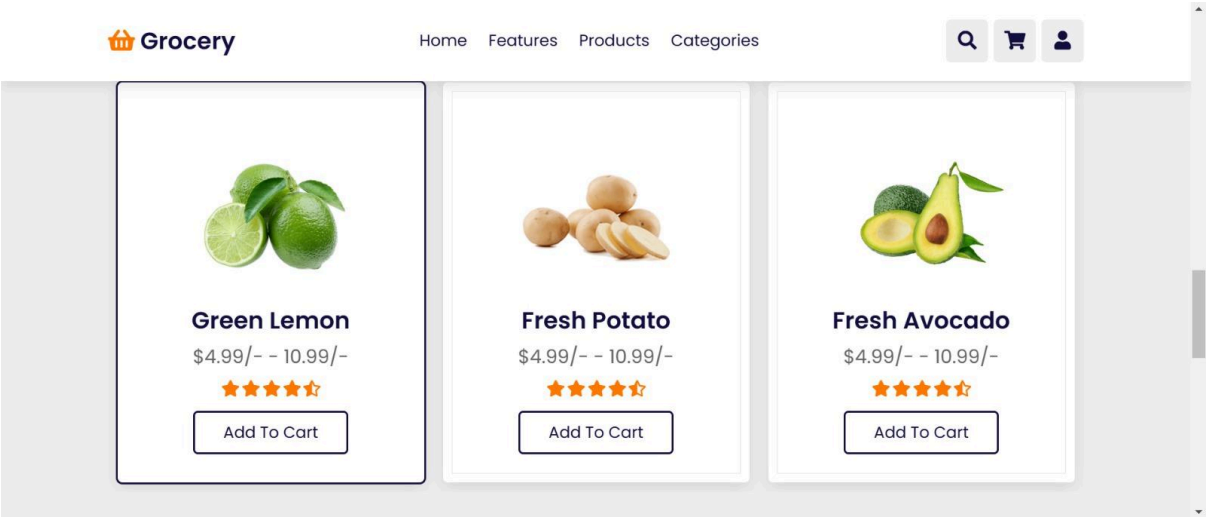


Features

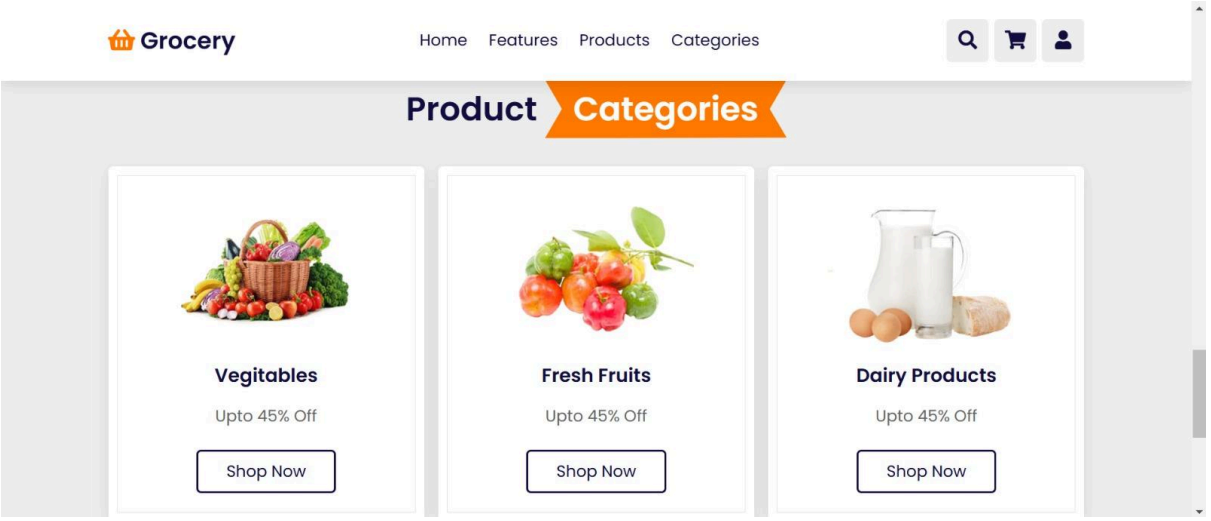


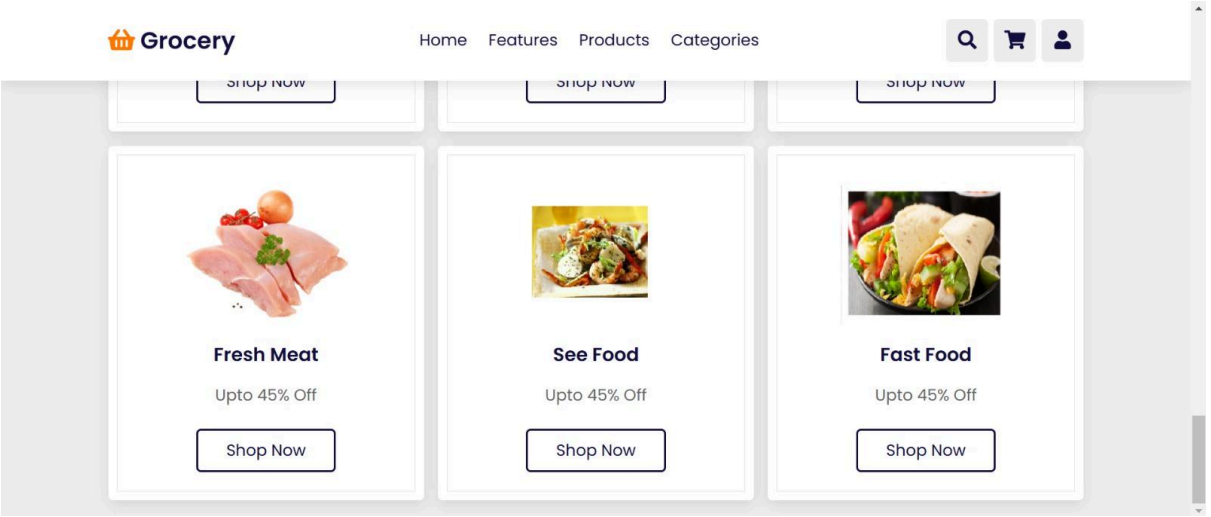
Products





Category


Grocery
Home
Features
Products
Categories
Product Categories
Vegitables
Upto 45% Off
Shop Now
Fresh Fruits
Upto 45% Off
Shop Now
Dairy Products
Upto 45% Off
Shop Now


Grocery
Home
Features
Products
Categories
Fresh Meat
Upto 45% Off
Shop Now
See Food
Upto 45% Off
Shop Now
Fast Food
Upto 45% Off
Shop Now