SRI MUTHUKUMARAN INSTITUTE OF TECHNOLOGY NM1042 - NAAN MUDHALAVAN LABORATORY

Grocery webapp with MERN

Presenters

TEAM LEADER
Mohammed Jafran J
TEAM MEMBERS
Vignesh M
Elton jebasingh S
Raja Shankar M

INTRODUCTION

WHAT IS THE GROCERY WEB APP?

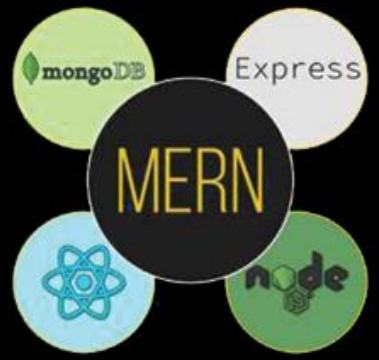
THE MERN STACK OVERVIEW

KEY FEATURES OF THE APP

SYSTEM ARCHITECTURE DESIGN

What is the Grocery Web App?

•This web application simplifies the grocery shopping experience by enabling users to browse products, add items to a cart, and securely check out.
•Designed with user-friendliness in mind, it ensures a smooth shopping journey from login to order confirmation.
•Built using the MERN stack, it leverages modern technologies to provide a fast, scalable, and interactive platform.



The MERN Stack Overview

- **MongoDB:** A NoSQL database used for storing product, user, and order data in a flexible, scalable format.
- **Express.js:** The backend framework that handles APIs and server-side logic for processing user requests and managing data.
- **React.js:** A powerful frontend library used to build a dynamic, responsive, and seamless user interface.
- **Node.js:** A JavaScript runtime environment that executes server-side code, enabling real-time operations.
- The MERN stack was chosen for its full-stack JavaScript capabilities, ensuring consistency and ease of development.

Key Features of the App

•**User Authentication:** Secure login and sign-up functionality using JWT for token-based authentication.
•**Product Browsing:** Users can search, sort, and filter products by categories, price, and availability.
•**Shopping Cart:** Real-time cart updates that allow users to add, remove, or update quantities of products.
•**Order Management:** Users can view their order history and track ongoing orders.
•**Secure Payment Gateway:** Integrated with a third-party payment processor for secure transactions.

System Architecture Design

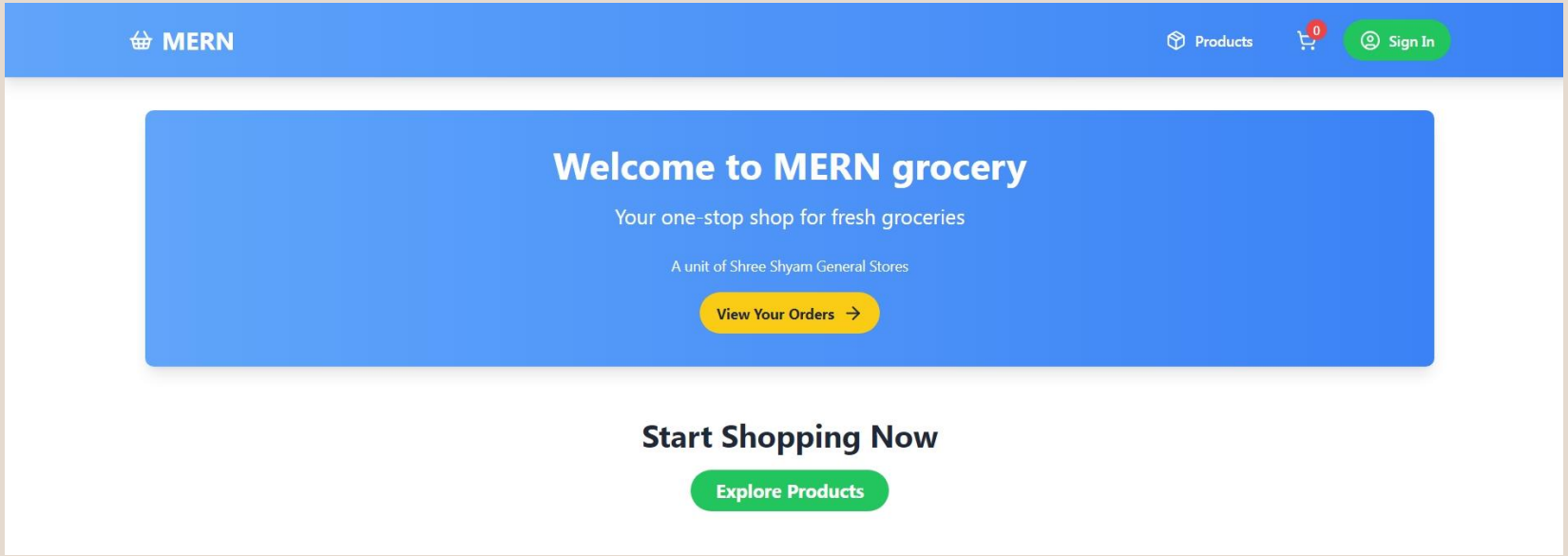
- **Frontend:** React communicates with the backend using REST APIs.
- **Backend:** Express.js and Node.js process requests, validate data, and interact with MongoDB.
- **Database:** MongoDB stores collections for users, products, orders, and more.

MongoDB Schema Design

- **Users Collection:** Stores user details, hashed passwords, and authentication tokens.
  Fields: _id, name, email, password, role, etc.
- **Products Collection:** Contains product details such as name, price, category, and stock availability.
  Fields: _id, name, description, price, category, stock, etc.
- **Orders Collection:** Tracks order history, including items purchased, user details, and payment status.
  Fields: _id, user_id, items, total_price, order_status, created_at, etc.
- **Cart Collection:** Temporary storage for products added to the user's cart.
  Fields: _id, user_id, items, total_price.

How Users Interact with the App

- **Login/Sign-Up:** Users create an account or log in using their credentials.
- **Browse Products:** A clean interface allows users to search for products or filter them based on categories.
- **Add to Cart:** Users can select items, adjust quantities, and view real-time updates in the cart.
- **Checkout Process:** Users complete their purchase by providing shipping details and making payments securely.
- **Order Tracking:** Users can track the status of their orders and view previous purchases.


MERN
Products
0
Sign In
Welcome to MERN grocery
Your one-stop shop for fresh groceries
A unit of Shree Shyam General Stores
View Your Orders
Start Shopping Now
Explore Products

MERN

Search for groceries...

Products

0

Sign In

Our Products

Filters

Clear all filters

Price Range

0.00 — 10000.00

Categories

- Atta & flours
- Biscuits
- Dental care
- Hair oils
- Handwash
- Indian Sweets
- Noodles
- Rice & Grains
- Spices
- Sugar & Salt
- Tea & Coffee
- breads
- milk products
- noodles
- snacks
- soaps

Brands

- Britannia
- Gowardhan
- Haldiram
- ITC
- India Gate

Nutri choice biscuit

snacks

Britannia

4.00

Add to Cart

Amul Butter 100g

milk products

amul

4.00

Add to Cart

Amul Milk 500ml

milk products

amul

28.00

Add to Cart

Amul masti dahi 200g

milk products

amul

19.00

Add to Cart

Britannia sandwich bread

breads

Britannia

49.00

Add to Cart

Britannia brown bread

breads

Britannia

50.00

Add to Cart

Fortune Besan 500gm

Atta & flours

fortune

65.00

Add to Cart

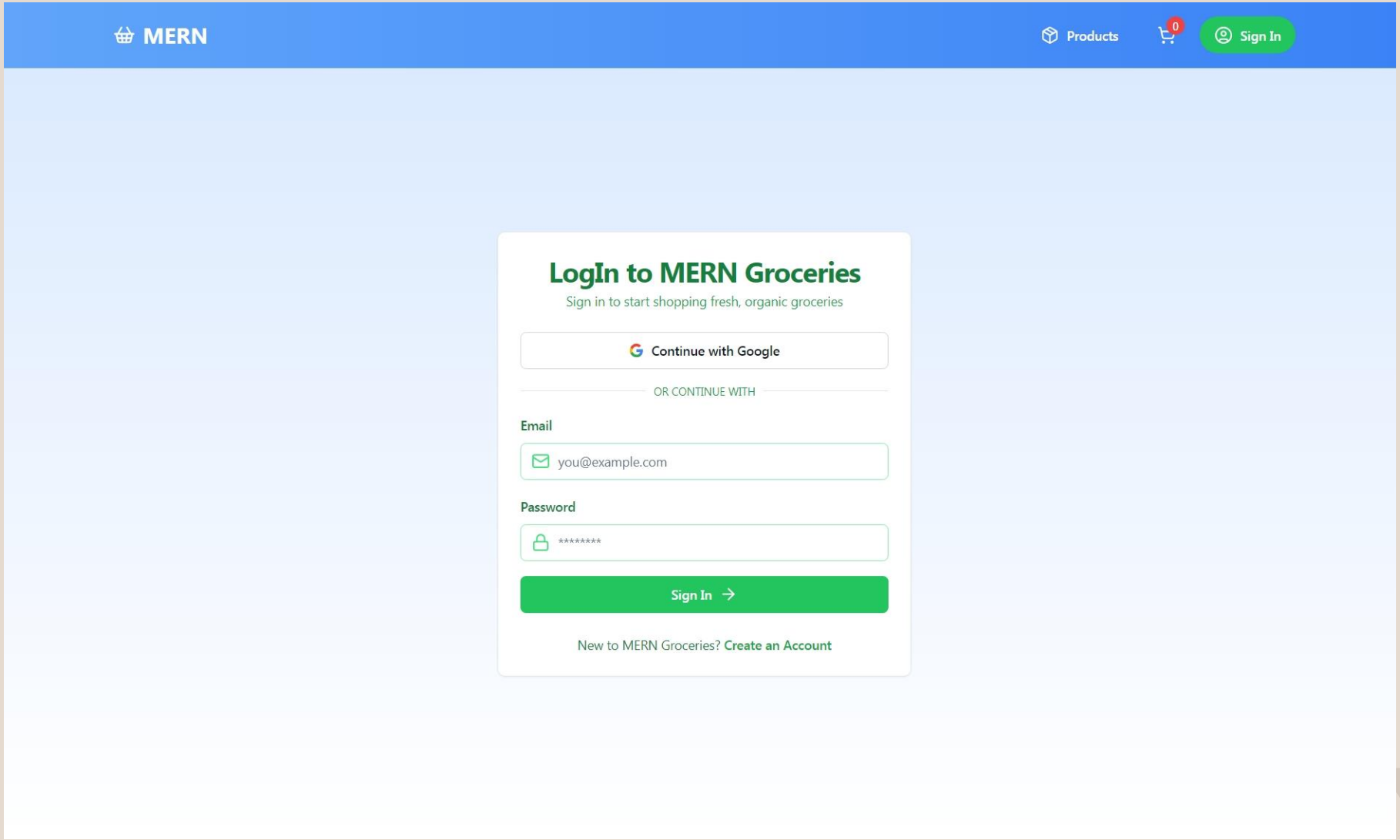
Fortune atta 5kg

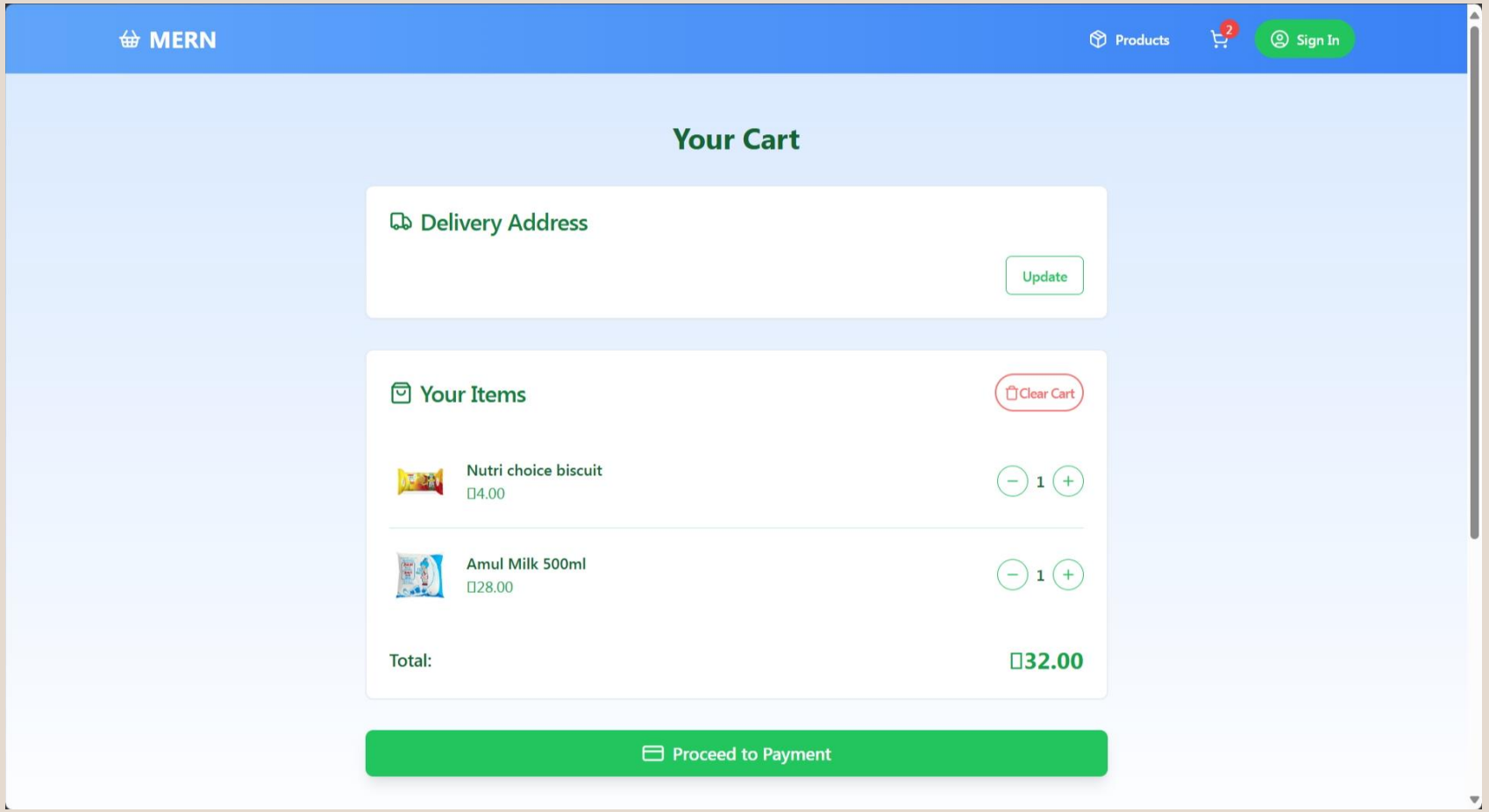
Atta & flours

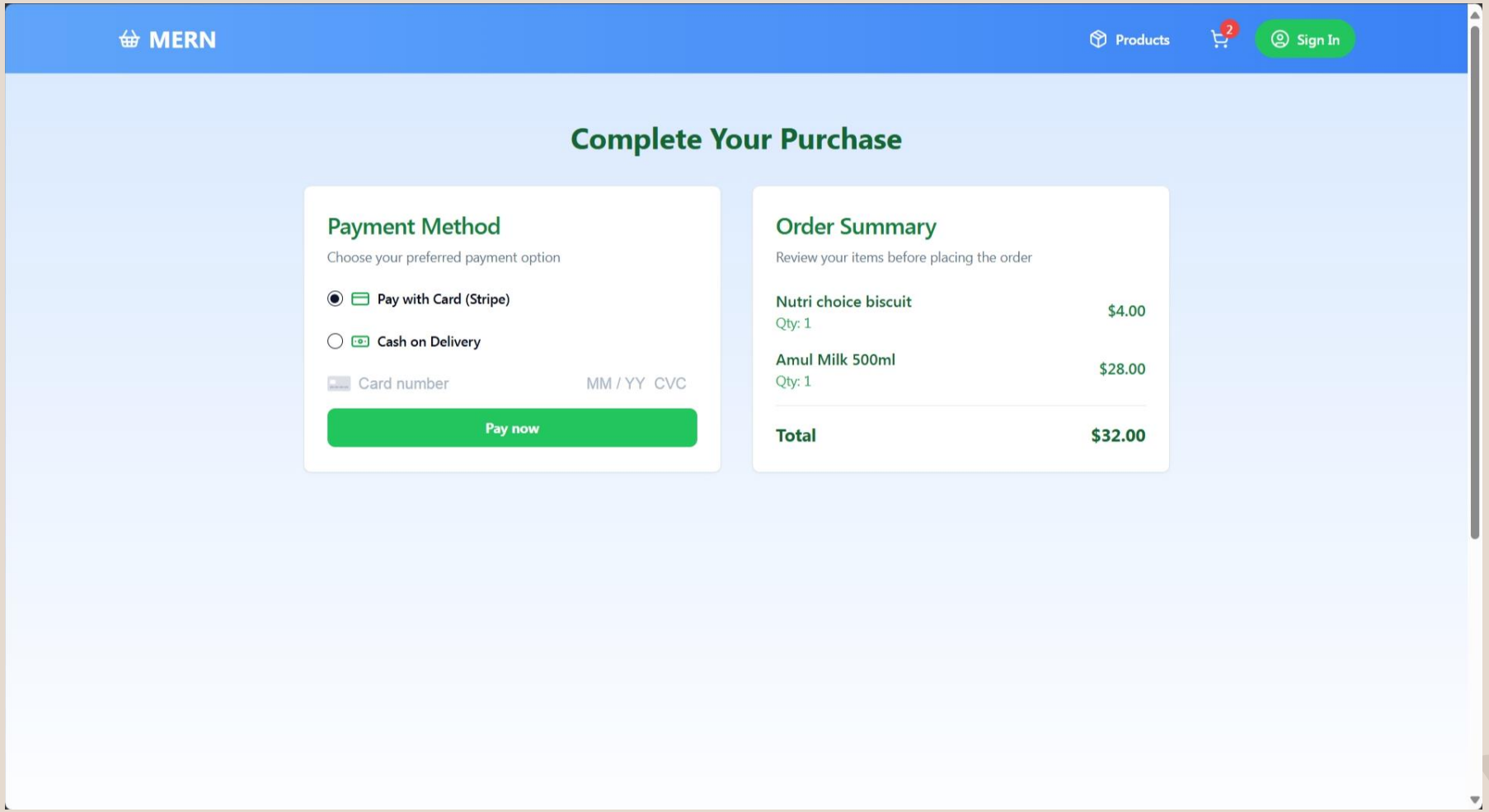
fortune

220.00

Add to Cart


MERN
Products
0
Sign In
LogIn to MERN Groceries
Sign in to start shopping fresh, organic groceries
Continue with Google
OR CONTINUE WITH
Email
you@example.com
Password
****
Sign In
New to MERN Groceries? Create an Account


MERN
Products
2
Sign In
Your Cart
Delivery Address
Update
Your Items
Clear Cart
Nutri choice biscuit
4.00
1
Amul Milk 500ml
28.00
1
Total:
32.00
Proceed to Payment


MERN
Products
2
Sign In
Complete Your Purchase
Payment Method
Choose your preferred payment option
Pay with Card (Stripe)
Cash on Delivery
Card number
MM / YY CVC
Pay now
Order Summary
Review your items before placing the order
Nutri choice biscuit
Qty: 1
$4.00
Amul Milk 500ml
Qty: 1
$28.00
Total
$32.00

Conclusion

- The grocery web app simplifies the shopping process, providing a seamless user experience.
- The MERN stack enabled fast, scalable, and dynamic development.
- This project is a testament to the possibilities of modern web technologies and will continue to evolve.