Project name:-

ShopSmart: Your Digital Grocery Store Experience

1. Introduction

ShopSmart is a digital grocery store web application developed using the MERN stack. It allows users to register, log in, browse products, add items to their cart, and place orders — creating a complete online grocery shopping experience.

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2. Objective

The primary objective of ShopSmart is to build a user-friendly web platform for online grocery shopping. It simplifies the purchase process and allows users to manage their cart and order history from a single interface.

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3. Tools & Technologies Used

- **Frontend: React.js, HTML, CSS**
- **Backend: Node.js, Express.js**
- **Database: MongoDB**
- **Other Tools: VS Code, Postman, Git, GitHub**

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4. System Design & Architecture

The app uses the MERN stack architecture:

- **React for frontend user interface**
- **Node.js + Express for backend REST APIs**

- **MongoDB for database operations**
  The frontend communicates with the backend over HTTP using axios, and data is persisted in MongoDB.

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5. Implementation

- **User registration and login with JWT authentication**
- **Product listing and dynamic add-to-cart functionality**
- **Order history is saved and displayed per user**
- **Admin can manage product listings (optional)**

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6. Features

- **User Signup/Login**
- **Product Listing**
- **Add to Cart**
- **View Cart & Checkout**
- **Order History**
- **Responsive UI**

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7. Testing

- **Manual testing through the browser for UI**
- **Backend API tested using Postman**
- **Checked user flows: signup, login, cart operations, order placement**

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8. Challenges Faced

- **Managing state across components (solved using React Context)**
- **Setting up secure JWT token handling**
- **Connecting backend to MongoDB Atlas**
- **Handling form validations and API errors gracefully**

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9. Conclusion

This project shows how the MERN stack can be used to build a complete e-commerce-like platform. Future enhancements can include online payment integration, better UI with animations, and admin dashboard functionality.

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10. References

- https://reactjs.org
- https://expressjs.com
- https://www.mongodb.com
- https://nodejs.org
- https://developer.mozilla.org