

Full Stack Development Project Documentation

1. Introduction

Project Title: ShopSmart: Your Digital Grocery Store Experience

2. Project Overview

Purpose: Our app provides a seamless online shopping experience for customers, allowing them to explore and purchase a wide range of products.

3. Architecture

Frontend: Angular

Backend: Node.js + Express.js

Database: MongoDB

4. Setup Instructions

- Node.js and npm
- MongoDB
- Express.js
- Angular CLI
- HTML, CSS, JavaScript
- Database Connectivity via Mongoose
- Version Control with Git
- IDE (VS Code, Sublime, WebStorm)

Clone repo, install dependencies, set up environment variables, and start frontend/backend servers.

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5. Folder Structure

Client: [Describe Angular folder structure]

Server: [Describe Node.js folder structure]

6. Running the Application

Frontend Command: npm start

Backend Command: npm run dev

7. API Documentation

- POST /api/register Register a new user
- GET /api/products Get all products
- POST /api/cart/add Add product to cart
- DELETE /api/cart/remove/:id Remove item from cart

8. Authentication

JWT tokens used for session management

Passwords hashed using bcrypt

Middleware protects private routes

9. User Interface

- Homepage with product listings
- Navbar (login/register/cart)
- Product details page
- Admin dashboard

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(Screenshots can be added here)

10. Testing

API testing via Postman

Manual UI testing

(Optional: Unit tests with Jasmine/Karma for Angular)

11. Screenshots or Demo

[Insert screenshots or demo link here]

12. Known Issues

- Admin page crashes on empty product list
- UI not fully mobile responsive

13. Future Enhancements

- Payment gateway integration
- Product reviews/ratings
- Order history
- Email notifications