

Simplified Documentation: Building a Full-Stack E-Commerce Website with React, Node.js, MongoDB

Team name:-Ecom Innovators

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1. Navbar (Navigation Bar)

Day: Monday

- **Component:** `Navbar`
 - **Frontend Setup:**
 - **Description:** Manages site navigation.
 - **Key Elements:**
 - `Logo`: Links to the homepage.
 - `CartIcon`: Displays cart items.
 - `UserIcon`: For login/register or account details.
 - **Responsive Design:** Collapses into a hamburger menu on small screens.
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2. User Authentication and Authorization

Day: Tuesday

- **Components:** `AuthForm`, `Profile`
 - **Frontend Setup:** Manages user sign-up, login, and profile display.
 - **Backend Setup:**
 - **User Model:** MongoDB schema for users (name, email, password, roles).
 - **API Routes:**
 - `POST /api/auth/register`: Register a new user.
 - `POST /api/auth/login`: Authenticate and issue JWT.
 - `GET /api/auth/profile`: Fetch the user's profile (protected).
 - **Middleware:** `authMiddleware` to protect routes.
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3. Product Details Page

Day: Wednesday, Thursday, Friday

- **Component:** `ProductDetails`
- **Frontend Setup:**
 - **Description:** Displays product info.
 - **Key Elements:**
 - `ProductImages`: Show product images.
 - `ProductInfo`: Shows title, description, price, etc.

- **AddToCartButton, WishlistButton:** Add to cart or wishlist.
 - **Reviews:** Displays reviews and ratings.
 - **Backend Setup:**
 - **Product Model:** MongoDB schema for products.
 - **API Routes:**
 - **GET /api/products/:id:** Fetch product details.
 - **GET /api/products:** Fetch all products with filters.
 - **POST /api/products:** Admin adds a product.
 - **PUT /api/products/:id:** Admin updates a product.
 - **DELETE /api/products/:id:** Admin deletes a product.
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4. Responsive Design

Day: Saturday

- **Component:** **ResponsiveDesign**
 - **Frontend Setup:** Ensures mobile-friendly layout.
 - **Backend Setup:** Optimize APIs for mobile performance.
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5. Product Management

Day: Monday

- **Components:** **ProductList, SearchBar, FilterOptions, Cart, Wishlist**
 - **Frontend Setup:** Manages product display, search, and filtering.
 - **Backend Setup:**
 - **API Routes:**
 - **GET /api/products/search:** Search products.
 - **GET /api/products/filter:** Filter products.
 - **POST /api/cart:** Add to cart.
 - **GET /api/cart:** Fetch cart items.
 - **POST /api/wishlist:** Add to wishlist.
 - **GET /api/wishlist:** Fetch wishlist items.
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6. Footer

Day: Tuesday

- **Day:** Tuesday
- **Component:** **Footer**
- **Frontend Setup:** Provides quick access to important links.
 - **Key Elements:** **QuickLinks, SocialMediaLinks, ContactInfo**
- **Backend Setup:**

- **Contact Form API:** `POST /api/contact` to handle user inquiries.
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7. Backend Setup and API Routes

Day: Wednesday

- **Component:** `Server`
 - **Backend Setup:**
 - **Framework:** Use Express.js.
 - **Database:** Use MongoDB with Mongoose.
 - **Server Setup:** Create an Express server, connect to MongoDB, and set up middleware.
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8. Integrating AI (Artificial Intelligence)

Day: Thursday

- **Components:** `RecommendationSection`, `Chatbot`
 - **Frontend Setup:** Add recommended products and chatbot.
 - **Backend Setup:**
 - **Recommendation Engine:**
 - **API Route:** `GET /api/recommendations` for product suggestions.
 - **Implementation:** Use TensorFlow.js or Amazon Personalize.
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