

Clothing Brand E-Commerce Web App (MERN Stack)

Objective

Develop a fully functional **e-commerce web application** for a fictional **clothing brand** using the **MERN stack** (MongoDB, Express.js, React, Node.js).

The app should allow users to browse clothing items, register & log in, manage a shopping cart, and complete a checkout process.

Core Requirements

1. User Accounts & Authentication

- Register (name, email, password) and log in.
- Passwords stored securely with bcrypt.
- JWT-based authentication for protected routes.

2. Product Management (Clothing Items)

- Clothing catalog with seeded items.
- Each item has: name, description, price, image URL, category (Men/Women/Kids), sizes (S/M/L/XL).
- Product detail page.

3. Search, Filters & Pagination

- Search products by name/description.
- Filter by **category**, **size**, and **price range**.
- Filters should work together. (more than one at the time)
- Pagination (?page=1&limit=10)

4. Shopping Cart

- Add clothing items (with selected size).
- Update quantities, remove items.
- Cart saved per user.
- Even allow to add to card, when not login.

5. Checkout & Orders

- Mock checkout (no real payments).
- Save orders in MongoDB with:
 - User reference
 - Items purchased (with sizes/quantities)
 - Total price
 - Order date

6. Order Confirmation Email

- After successful checkout:
 - Send an **email to the user** confirming the order using **Nodemailer**.
 - The email should include:
 - Order summary (products, sizes, quantities, total)
 - Order ID
 - Order date

Note:

1. Prepare demo products as an array of objects (e.g., T-shirt, Jacket, Jeans, Dress, Hoodie).

(Add minimum 20 Products).

2. Frontend should be basic and functional only (React pages with simple UI) — no need for fancy design. Focus on Backend.