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