

# Pharmveda

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## User Role: Customer

### Permissions:

1. **Search for medicines:** Customers can search for medications by name or category using a search bar or filter options, making it easy to find products.
2. **Add medicines to the cart:** Customers can add medications to their shopping cart, allowing them to review and modify their selections before checkout.
3. **Proceed to checkout with flexible payment options:** After selecting items, users can proceed to a secure checkout, where they can choose from different payment methods (credit/debit card, online wallets, etc.).
4. **Track order status in real time:** Once the order is placed, customers can track their order's status in real-time, such as "Processing," "Shipped," or "Delivered."
5. **Cancel orders if applicable:** If the order hasn't been processed or shipped yet, customers can cancel it through their dashboard.

### Restricted Actions:

1. **Cannot manage stock or view inventory data:** Customers cannot access the admin tools for managing product inventory levels, ensuring that sensitive backend operations remain restricted.
  2. **No access to other users' data or admin features:** Customers cannot view other users' order history, personal data, or interact with admin functionalities like adding products or managing sales.
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## User Role: Admin

### Permissions:

1. **View real-time stock levels and inventory data:** Admins have full access to inventory management, including the ability to view current stock levels for each product in real time.
2. **Monitor usage patterns for medications:** Admins can track which products are frequently ordered, identifying sales trends and demand patterns to optimize stock management.
3. **Add or update stock levels as required:** Admins can add new stock or update existing stock quantities, ensuring the platform always reflects accurate availability.

4. **Manage all orders, including processing, tracking, and cancellations:** Admins can view and manage all customer orders, including fulfilling orders, updating order status, and handling cancellations.

#### Restricted Actions:

1. **No access to the customer's personal order history (beyond admin duties):** While admins can view orders for processing purposes, they cannot access detailed customer data beyond the order and shipping details.
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## Technical Implementation in MERN Stack

#### Authentication:

- **JWT Tokens:** During login, a JWT (JSON Web Token) is generated, which contains the user's role (either **customer** or **admin**). The token is signed and stored in an HTTP-only cookie or local storage, ensuring secure identification of the user.
- The token is sent in the Authorization header for each subsequent request, allowing the server to verify the user's identity.

#### Authorization:

- **Middleware for Role Verification:** Custom middleware checks the user's role and verifies whether they have the necessary permissions to access specific API routes.
  - For example, the **/inventory** route will only be accessible to users with the **admin** role.
  - Middleware checks the JWT token on each request to ensure the user has the right role and hasn't been logged out or their token expired.

#### Frontend And UI :

The **Pharmveda** UI is designed for simplicity and a smooth user experience. On the **frontend**, I used **React** to create interactive components, including a search bar for medicines, a cart system for easy item management, and a checkout process with multiple payment options. Admin functionalities are incorporated in a secure dashboard where admins can manage stock, track sales, and process orders. The layout is responsive, ensuring compatibility across devices, and **CSS** is used for styling to ensure a modern and consistent design.

Repository : <https://github.com/Avanisrepositories/Pharmveda.git>