**Wishlist Functionality with Authentication Overview**

The wishlist functionality has been implemented to enhance user experience by allowing authenticated users to save their desired products for future reference. This feature is fully integrated with the database and ensures that only logged-in users can access and manage their wishlists. Below is a detailed description of how this functionality works:

**Key Features**

1. **Authentication Requirement:**
   * Users must be logged in to access the wishlist feature.
   * This ensures that the wishlist items are securely associated with the specific user account.
2. **Database Integration:**
   * The wishlist data is stored in a database rather than in session storage, allowing users to retain their wishlist across different sessions and devices.
   * Each wishlist item is linked to the authenticated user through their unique user ID.
3. **Wishlist Management:**
   * Users can add products to their wishlist by interacting with the "Add to Wishlist" functionality.
   * The system fetches the product details from the database and links them to the user.
   * The wishlist view (/wishlistview) filters items to display only those associated with the currently authenticated user.
4. **Security and Data Integrity:**
   * By requiring authentication, only the rightful user can view or modify their wishlist.
   * Unauthorized access to wishlist data is prevented.
5. **Ease of Use:**
   * The feature integrates seamlessly with the existing product and user management systems, making it intuitive for users to manage their wishlists.

**Workflow**

* **Adding to Wishlist:**  
  A logged-in user can add products to their wishlist. The product data, along with the user ID, is stored in the database.
* **Viewing Wishlist:**  
  When a user navigates to /wishlistview, the system retrieves all wishlist items linked to the user from the database and renders them in the view.
* **Session Independence:**  
  Since wishlist data is stored in the database, users can log in from any device and still access their saved items.

This functionality not only improves user engagement but also provides a personalized shopping experience while ensuring data security and integrity.