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| RAZDA Co. | | |
| **Filename: [product\_catalog.py]** | | |
| **Summary***:*  Manages product catalog functionalities, including adding, updating, retrieving, and deleting products. Handles wishlist and cart operations, and provides functions for managing product reviews and viewing order history. | | |
| ***Processes*** | | |
| * **Add Product:** | **Adds a new product with attributes such as name, description, price, category, inventory, and image.** | |
| * **Get Product:** | **Retrieves product information by product ID, including name, description, price, and other attributes.** | |
| * **Update Product:** | **Updates specified fields for a product, such as price, description, or inventory count.** | |
| * **Delete Product:** | **Deletes a product from the catalog by product ID.** | |
| * **List Product:** | **Lists all products, with optional filters by category or search query, and sorting options.** | |
| * **Add Product Review:** | **Allows users to add a review with rating and comment to a specific product.** | |
| * **Get Products Review:** | **Retrieves all reviews for a specific product.** | |
| * **Manage Wishlist:** | **Adds or removes a product from a user’s wishlist, and retrieves all wishlist items for a user.** | |
| * **Manage Cart** | **Manages cart operations such as adding, removing, clearing, and retrieving items in the user’s cart.** | |
| * **Get User Order:** | **Retrieves a paginated list of orders for a user, with filtering options.** | |
| * **Get Order Details:** | **Retrieves details and items for a specific order, allowing users to view what they purchased.** | |
| * **Manage Cart:** | **Updates the status of an order, or deletes an order and its associated items.** | |
| **Files it Gets Information From:** | | **Files it Sends too:** |
| * **Database**: Interacts extensively with products, wishlist, product\_reviews, cart\_items, and orders tables to manage all product and order-related data. | * **Logs (product\_catalog.log)**: Logs all operations, including successful product additions, updates, deletions, and error handling. | |
| * **.env**: Retrieves database credentials to establish secure database connectivity. |  | |
| **Expected input into file:** | | **Expected output from file:** |
| * **Product Information**: Required when adding or updating a product, including name, description, price, etc. * **Product ID / User ID**: Essential for all product, wishlist, cart, and order-related functions to retrieve specific data. | | * **Product Details**: Provides detailed product information for displaying or updating on the platform. * **Order and Cart Data**: Retrieves user-specific data for order and cart management. |
| **Things that need to be taking place:** | | |
| |  | | --- | | **- Secure Database Operations: Ensures all database transactions (insertions, deletions, updates) are conducted securely with proper rollback for failed transactions.** |  |  | | --- | | **- Comprehensive Product and Order Management: Supports a full suite of product catalog operations, including adding, updating, reviewing, and order history.** |  |  | | --- | | **- Wishlist and Cart Support: Manages user-specific operations such as adding to cart/wishlist and retrieving items for checkout.** |  |  | | --- | |  | | | |
| Edit log (update each time you make changes to doc or file). | | |
| | **Possible Enhancements:** | | --- |  |  | | --- | | - **Bulk Product Management**: Adds functionality to upload multiple products at once (e.g., from a CSV file), enhancing efficiency. |  |  | | --- | | - **Real-Time Inventory Tracking**: Integrates real-time inventory status, ensuring users can only add available stock to their cart. |  |  | | --- | | - **Dynamic Product Sorting and Filtering**: Offers additional sorting and filtering options based on popularity, ratings, or custom tags. |  |  | | --- | | - **Advanced Review Management**: Allows users to sort and filter reviews by rating, recency, or helpfulness. | | | |
| * Oliver Smith (Razda Admin) Nov 8, 2024: | | |