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| RAZDA Co. | | |
| **Filename: [cart.py]** | | |
| **Summary***:*  cart.py manages shopping cart operations, enabling users to add, update, remove, and view items in their cart. It calculates totals, handles discounts, and manages cart data across sessions. Integrates with product catalog, inventory, and pricing for real-time data synchronization and user convenience. | | |
| ***Processes*** | | |
| * **View Cart** | **view\_cart() retrieves and displays items in the user’s cart along with the total price. Redirects to login if the user is not authenticated** | |
| * **Add to Cart** | **add\_to\_cart() adds specified product and quantity to the cart. Checks product availability and user authentication before proceeding.** | |
| * **Remove from Cart** | **remove\_from\_cart() removes specified product from the user’s cart, ensuring user is authenticated before modifying.** | |
| * **Clear Cart** | **clear\_cart() clears all items from the user’s cart, providing a fresh start for adding items. Requires user authentication.** | |
| **Files it Gets Information From:** | | **Files it Sends too:** |
| * **Product Catalog**: uses get\_user\_cart(), get\_cart\_items(), get\_product(), add\_to\_cart(), remove\_from\_cart(), and clear\_cart() to retrieve products, add items, manage quantities, and clear cart data. | * **Templates (cart.html)**: renders cart.html with cart items and total for the user to review before proceeding to checkout. | |
| * **Session/User Login**: checks session for user\_id to ensure user is logged in before performing cart actions. | * **Product Detail Page**: redirects to the product detail page for adding items to the cart when user selects a product to add. | |
| * **Inventory**: works indirectly with inventory data through the product catalog to validate stock availability before adding items to cart. | * **Logs**: records cart interactions, user actions, and errors in cart.log for easy monitoring. | |
| **Expected input into file:** | | **Expected output from file:** |
| * **User Authentication**: expects user\_id in session to validate user access and modify cart data accordingly. * **Product ID**: expects a valid product\_id to perform add, remove, or view actions on a particular item * **Quantity**: expects quantity input for items being added to the cart; defaults to 1 if unspecified. * **Total Calculation**: calculates total by multiplying item price with quantity for each item in the cart. | | - **Successful Add to Cart**: confirms item added with success message and redirects to product detail page.  - **Cart View**: renders cart.html with current cart items and total for the user’s review.  - **Flash Messages**: provides messages confirming successful or failed actions for add, remove, and clear operations.  - **Log Output**: logs all major actions (add, remove, clear) and any encountered issues (like failed add or remove operations) to cart.log. |
| **Things that need to be taking place:** | | |
| |  | | --- | | **- Cart Persistence: Ensure cart items persist across sessions and can be restored if the user logs out and logs back in later.** |  |  | | --- | | **- Quantity Validation: Ensure valid quantity values to avoid unintended charges or negative values in the cart.** |  |  | | --- | | **- Real-time Inventory Sync: Sync cart contents with real-time inventory levels to prevent overselling.** |  |  | | --- | | **- Security Enhancements: Add session security to protect cart actions from unauthorized access.** |  |  | | --- | | **- Error Handling: Provide clear error messages and handle potential issues (e.g., failed database connections) gracefully.** |  |  | | --- | |  | | | |
| Edit log (update each time you make changes to doc or file). | | |
| * Oliver Smith (Razda Admin) Nov 8, 2024: | | |