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ecommerce

MainAppGUI
- currentShopper: Shopper
- shopperAuth: ShopperAuth
- shoppingBasket: ShoppingBasket
- inventory: Inventory
- MainAppGUI()
- createGUIComponents(): void
- createStyledButton(text: String): JButton
- showRegistrationDialog(): void
- showLoginDialog(): void
- showItemList(): void
- showAddToBasketDialog(): void
- removeFromBasketDialog(): void
- showBasket(): void
- placeOrder(): void
- isValidUsername(username: String): boolean
- isValidPassword(password: String): boolean
- isValidName(fullName: String): boolean
- isValidEmail(email: String): boolean
- findItemByName(items: List<Item>, itemName: String): Item
- calculateTotalPrice(shoppingBasket: ShoppingBasket): double

MainApp
- currentShopper: Shopper
- shopperAuth: ShopperAuth
- shoppingBasket: ShoppingBasket
- inventory: Inventory
- main(args: String[]): void
- isValidUsername(username: String): boolean
- isValidPassword(password: String): boolean
- isValidName(name: String): boolean
- isValidEmail(email: String): boolean
- displayItemList(itemList: List<Item>): void
- findItemByName(inventoryItems: List<Item>, itemName: String): Item
- calculateTotalPrice(shoppingBasket: ShoppingBasket): double

PaymentHandlerTest
- testHandlePaymentSuccess(): void
- testHandlePaymentInvalidAmount(): void
- testHandlePaymentInvalidMethod(): void

InventoryTest
- testAddItem(): void
- testAddItems(): void
- testGetItemByName(): void

ShopperAuth
- shoppers: List<Shopper>
- ShopperAuth()
- registerShopper(username: String, password: String, fullName: String, email: String): void
- login(username: String, password: String): Shopper
- isUsernameTaken(username: String): boolean

ActivityLogger
- log(message: String): void

Purchase
- shopper: Shopper
- basket: ShoppingBasket
- orderStatus: String
- Purchase(shopper: Shopper, basket: ShoppingBasket)
- placeOrder(): void
- getShopper(): Shopper
- getBasket(): ShoppingBasket
- getOrderStatus(): String

ShoppingBasketTest
- testGetTotalAmount(): void
- testAddItem(): void
- testRemoveItem(): void

ItemLoader
- loadItems(): List<Item>

PaymentHandler
- handlePayment(amount: double, paymentMethod: String): boolean
- isValidPaymentMethod(paymentMethod: String): boolean

ApparelItem
- name: String
- price: double
- description: String
- stock: int
- ApparelItem(name: String, price: double, description: String, stock: int)
- getItemName(): String
- getItemPrice(): double
- getItemDescription(): String
- getItemStock(): int
- toString(): String

GadgetItem
- name: String
- price: double
- description: String
- stock: int
- GadgetItem(name: String, price: double, description: String, stock: int)
- getItemName(): String
- getItemPrice(): double
- getItemDescription(): String
- getItemStock(): int
- toString(): String

Inventory
- items: List<Item>
- addItem(item: Item): void
- getItemByName(name: String): Item
- getAllItems(): List<Item>
- addItems(newItems: List<Item>): void

Shopper
- username: String
- password: String
- fullName: String
- email: String
- Shopper(username: String, password: String, fullName: String, email: String)
- getUsername(): String
- getPassword(): String
- getFullName(): String
- getEmail(): String

ShoppingBasket
- items: List<Item>
- addItem(item: Item): void
- removeItem(item: Item): void
- getItems(): List<Item>
- getTotalAmount(): double
- clear(): void

Item
- getItemName(): String
- getItemPrice(): double
- getItemDescription(): String
- getItemStock(): int