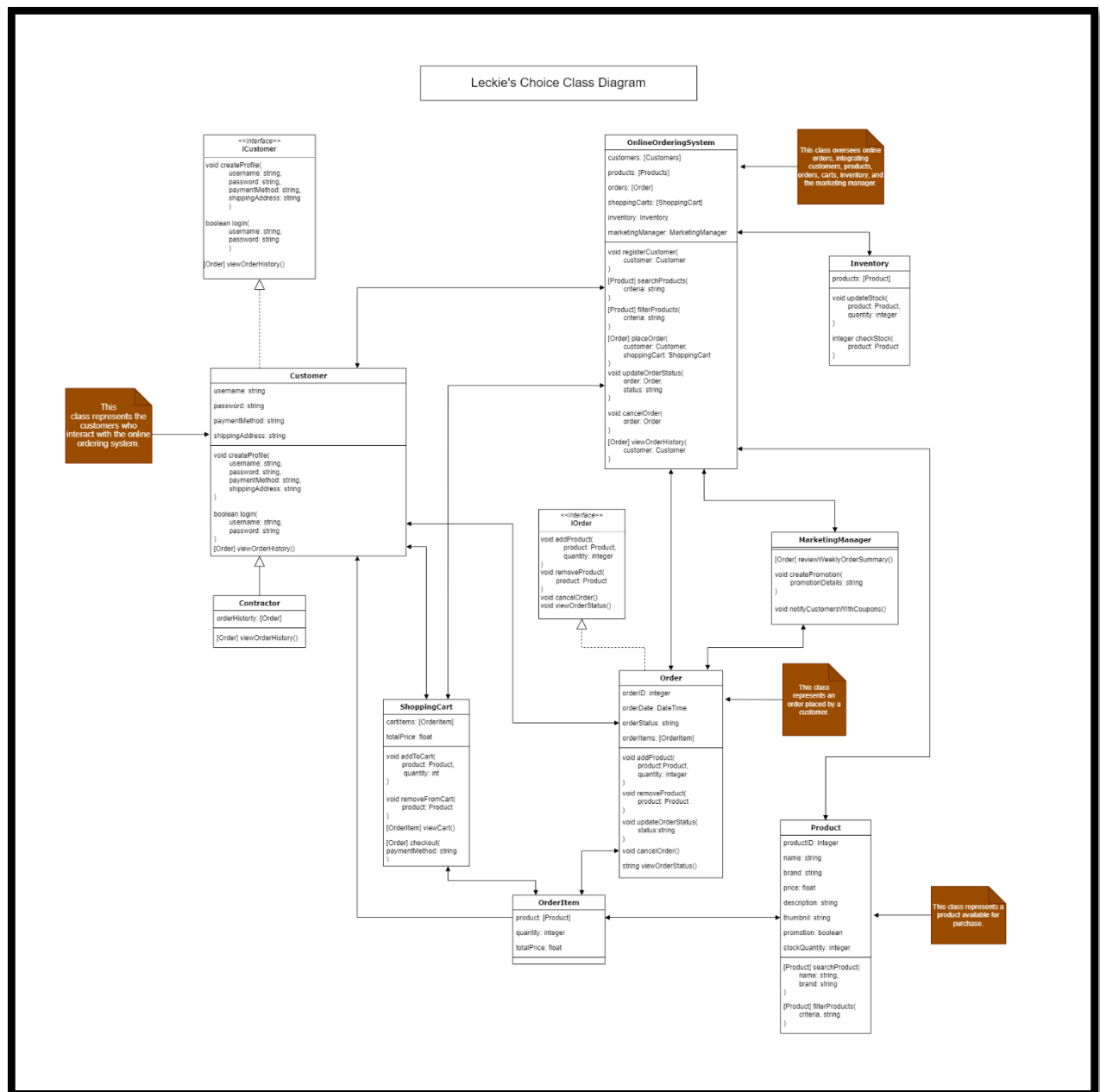


Class Diagram:



Details of Class Diagram of Leckie's Choice Online ordering System:

1. OnlineOrderingSystem

The entire mechanism for overseeing the online ordering procedure is represented by this class. Customers, goods, orders, shopping carts, inventory, and the marketing manager are all combined in it.

Attributes:

customers: List of Customer objects.

products: List of Product objects.

orders: List of Order objects.

shoppingCarts: List of ShoppingCart objects.

inventory: Inventory object.

marketingManager: MarketingManager object.

Methods:

registerCustomer(username, password, paymentMethod, shippingAddress): Registers a new customer.

handleProductCreation(name, brand, price, description, thumbnail, promotion): Creates a new product in the system.

placeOrder(customer: Customer, shoppingCart: ShoppingCart): Places an order for a customer.

updateOrderStatus(order: Order, status: string): Updates the status of an order.

cancelOrder(order: Order): Cancels an existing order.

viewOrderHistory(customer: Customer): Returns the order history for a customer.

2. Customer

This class represents the customers who interact with the online ordering system.

Attributes:

username: Username of the customer.

password: Password for the customer account.

paymentMethod: Payment method used by the customer.

shippingAddress: Shipping address of the customer.

Methods:

createProfile(username: string, password: string, paymentMethod: string, shippingAddress: string): Creates a new customer profile.

login(username: string, password: string): Logs the customer into the system.

viewOrderHistory(): Returns a list of orders placed by the customer.

3. Contractor

This class inherits from the Customer class and represents contractors who have additional functionality related to viewing order history.

Attributes:

ordersHistory: List of orders associated with the contractor.

Methods:

viewOrderHistory(): Returns the order history for the contractor.

4. ShoppingCart

This class represents the shopping cart used by customers to add and manage products before checkout.

Attributes:

cartItems: List of OrderItem objects in the cart.

totalPrice: Total price of all items in the cart.

Methods:

addToCart(product: Product, quantity: int): Adds a product to the cart.

removeFromCart(product: Product): Removes a product from the cart.

viewCartItems(): Returns a list of items currently in the cart.

checkout(paymentMethod: string): Checks out the cart and creates an order.

5. Order

This class represents an order placed by a customer.

Attributes:

orderId: Unique identifier for the order.

status: Current status of the order (e.g., pending, shipped, delivered).

orderDate: Date and time when the order was placed.

orderItems: List of OrderItem objects in the order.

totalAmount: Total amount for the order.

Methods:

addProduct(product: Product, quantity: int): Adds a product to the order.

removeProduct(product: Product): Removes a product from the order.

cancelOrder(): Cancels the order.

viewOrderStatus(): Returns the current status of the order.

6. OrderItem

This class represents an item within an order.

Attributes:

product: Product object associated with the order item.

quantity: Quantity of the product in the order item.

totalPrice: Total price for the order item (product price multiplied by quantity).

7. Product

This class represents a product available for purchase.

Attributes:

productId: Unique identifier for the product.

name: Name of the product.

brand: Brand of the product.

price: Price of the product.

description: Description of the product.

thumbnail: URL or file path to the product's thumbnail image.

promotion: Boolean indicating if the product is on promotion.

stockQuantity: Number of units of the product in stock.

Methods:

searchProducts(name: string, brand: string): Searches for products based on name and brand.

filterProducts(criteria: string): Filters products based on specified criteria.

8. Inventory

This class manages the inventory of products available in the system.

Attributes:

products: List of Product objects.

Methods:

updateStock(product: Product, quantity: int): Updates the stock quantity for a product.

checkStock(product: Product): Checks the stock level of a product.

9. MarketingManager

This class represents the marketing manager responsible for promotional activities and customer engagement.

Methods:

reviewOrderSummary(): Reviews the weekly order summary.

createPromotion(details: string): Creates a new promotion.

notifyCustomersWithCoupon(): Notifies customers with a coupon.

Customers, goods, orders, shopping carts, inventories, and marketing initiatives are all seamlessly integrated by the Online Ordering System (Leckie's Choice), guaranteeing a flawless online shopping experience. All classes, including MarketingManager and Customer, contain particular functions that support the system as a whole. Interfaces are used to improve modularity, make maintenance and scalability easier, and provide support for the Order and Customer classes.