

Online Store

Description of Project:

Customer: The customer is central to the application's functionality, interacting with both the product and gambling features. After entering their name and balance, the customer can browse available products, add items to their shopping cart, and adjust quantities as needed.

Browsing Products: Customers can browse through categories of products. Each category contains multiple products with their respective prices, names, and quantities.

Adding Products to Cart: A customer can add products to their shopping cart. They also have the option to specify the quantity of each product they wish to purchase.

Checking Out: Once the customer has finished shopping, they can proceed to checkout. The total price of the products in the cart is calculated, and the amount is deducted from their balance.

Playing Slots: The customer has the option to play a slot machine game. They guess a number between 1 and 25 and place a bet. If their guessed number matches the randomly generated number, they win double their bet amount; otherwise, they lose the bet.

Money Management: The application allows the customer to manage their balance. They can add more money to their account and choose to bet money in the slot machine game. If they win, their balance is increased accordingly.

Product and Category Management: Each product is associated with a Category, and every Category contains a list of products. The customer can view product details, and the store administrator (or the system) can manage products and categories.

Key Components:

Customer

- Attributes:
 - name: The name of the customer.
 - balance: The customer's available balance for shopping and gambling.
- Operations:
 - setName(String name): Sets the customer's name.
 - setBalance(double sum): Updates the customer's balance.
 - playSlots(int guessedNumber): Allows the customer to play a slot game by guessing a number.
 - getName(): Retrieves the customer's name.
 - getBalance(): Retrieves the customer's balance.

Product

- Attributes:
 - name: The name of the product.
 - description: A brief description of the product.
 - price: The price of the product.
 - quantity: The available quantity of the product.
 - inStock: A boolean indicating whether the product is in stock.
- Operations:
 - setName(): Sets the product name.
 - getName(): Retrieves the product name.
 - setDescription(): Sets the product description.
 - getDescription(): Retrieves the product description.
 - setPrice(): Sets the product price.
 - getPrice(): Retrieves the product price.
 - setQuantity(): Sets the quantity of the product.
 - getQuantity(): Retrieves the quantity of the product.

Category

- Attributes:

- categoryName: The name of the product category.
- categoryDesc: A description of the category.
- products: A list of products that fall under this category.
- Operations:
 - getCategoryName(): Retrieves the name of the category.
 - getCategoryDesc(): Retrieves the category description.
 - getCategory(): Retrieves the list of products in the category.
 - setCategoryName():

Sets the name of the category.

- setCategoryDesc(): Sets the description of the category.

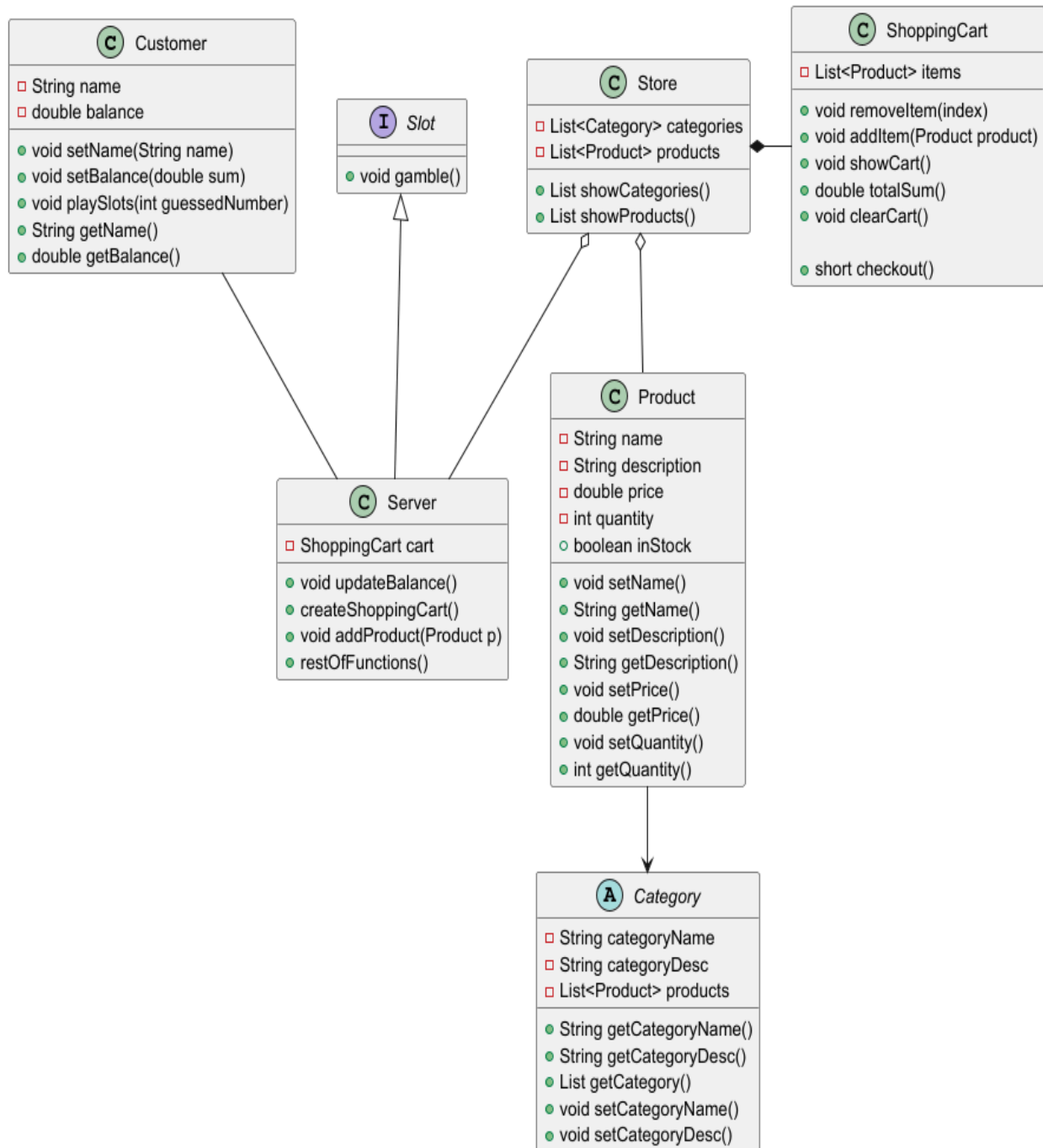
Store

- Attributes:
 - categories: A list of categories available in the store.
 - products: A list of products available for purchase in the store.
- Operations:
 - showCategories(): Displays the list of product categories.
 - showProducts(): Displays the list of products available in the store.

Shopping Cart

- Attributes:
 - items: A list of products the customer has added to their shopping cart.
- Operations:
 - removeItem(index): Removes a product from the shopping cart by its index.
 - addItem(Product product): Adds a product to the shopping cart.
 - showCart(): Displays the contents of the shopping cart.
 - totalSum(): Calculates the total cost of the items in the cart.
 - clearCart(): Empties the shopping cart.
 - checkout(): Processes the shopping cart and charges the customer's balance for the total sum.

Class Diagram



Sequence Diagram

