## Documentation for TEGVER Application

### ****Index****

1. [Overview](" \l "overview)
2. [Application Modules](" \l "application-modules)
   1. [1. Main Menu](" \l "1-main-menu)
   2. [2. Products Module (P)](" \l "2-products-module-p)
   3. [3. Orders Module (O)](" \l "3-orders-module-o)
   4. [4. Shopping Cart Module (S)](" \l "4-shopping-cart-module-s)
   5. [5. Checkout Module (C)](" \l "5-checkout-module-c)
   6. [6. Quit Module (Q)](" \l "6-quit-module-q)
3. [User Stories](" \l "user-stories)
4. [Technical Details](" \l "technical-details)
5. [Conclusion](" \l "conclusion)

* **Overview**

The TEGVER application is a console-based shopping management system. It includes modules for handling products, orders, shopping carts, and checkouts. Users interact with these modules through a menu-driven interface to perform shopping operations and simulate payment processing.

* **Application Modules**

**1. Main Menu**

- Serve as the entry point to navigate to other modules.

- Options:

- P: Products Module

- O: Orders Module

- S: Shopping Cart Module

- C: Checkout Module

- Q: Quit Application

**2. Products Module (P)**

- Allow users to select product categories and specific products to update the total cost.

- Sub-Options:

- E: Electronics

- Products:

- Laptop ($1000)

- Smartphone ($800)

- F: Furniture

- Products:

- Sofa ($500)

- Dining Table ($300)

- C: Clothing

- Products:

- Jacket ($100)

- Jeans ($60)

- M: Return to Main Menu

- Functionality:

- Display categories and products.

- Accept user input to select products and quantity.

- Calculate and display product cost.

- Update the total cost with the cost of selected products.

- Return to Product Categories or Main Menu.

**3. Orders Module (O)**

- Provide options for viewing and managing orders.

- Sub-Options:

- V: View Orders

- Functionality: Placeholder for viewing orders.

- M: Manage Orders

- Functionality: Placeholder for managing orders.

- R: Return to Main Menu

- Functionality:

- Display options for viewing or managing orders.

- Return to Main Menu.

**4. Shopping Cart Module (S)**

- Manage items in the shopping cart, including adding or removing items.

- Sub-Options:

- A: Add Item

- Functionality: Placeholder for adding items to the cart.

- R: Remove Item

- Functionality: Placeholder for removing items from the cart.

- M: Return to Main Menu

- \*\*Functionality:\*\*

- Display options for adding or removing items.

- Return to Main Menu.

**5. Checkout Module (C)**

- Handle payment processing and display total cost.

- Sub-Options:

- T: Total Amount

- Functionality: Display the current total cost.

- P: Process Payment

- Functionality: Simulate payment processing with random success or failure.

- If payment succeeds, reset total cost and product cost.

- If payment fails, prompt the user to try again.

- M: Return to Main Menu

- Functionality:

- Display total cost or simulate payment.

- Handle payment success or failure.

- Return to Main Menu.

**6. Quit Module (Q)**

- Exit the application.

- Functionality: Close the application and terminate the program.

* **User Stories:**

1. As a user, I want to see the main menu so that I can choose which module to interact with.

- Users are presented with a main menu to navigate to different modules.

2. As a user, I want to select a product category and see available products so that I can choose what to buy.

- Users can select product categories and specific products, and view associated costs.

3. As a user, I want to view and update my total cost based on selected products so that I know how much I will pay.

- The application calculates and displays the total cost based on user selections.

4. As a user, I want to process my payment so that I can complete my purchase.

- The Checkout Module simulates payment processing and updates the total cost accordingly.

5. As a user, I want to manage my orders and view existing ones so that I can keep track of my purchases.

- Placeholders are provided for viewing and managing orders.

6. As a user, I want to add or remove items from my shopping cart so that I can modify my purchase.

- Placeholders are provided for adding and removing items from the cart.

7. As a user, I want to return to the main menu from any module so that I can navigate the application easily.

- Users can return to the main menu from any module.

8. As a user, I want to quit the application when I am done so that I can exit the program.

- Users can exit the application using the Quit Module.

* **Technical Details**

**- Enums Used:**

- Module: Represents different modules in the application (Products, Orders, Shopping Cart, Checkout, Quit).

- ProductType: Represents product categories (Electronics, Furniture, Clothing).

- OrderType: Represents order management options (View, Manage).

- ShoppingCartType: Represents shopping cart management options (Add, Remove).

- CheckoutType: Represents checkout options (Total, Process Payment).

**- Variables:**

- productCost: Tracks the cost of the current product selection.

- totalCost: Accumulates the total cost of all selected products.

- amountToBePaid: Represents the amount to be paid during checkout.

- count: Stores the number of items for the current product selection.

- random: Used to simulate payment processing with random outcomes.

**-Error Handling:**

- The application uses IllegalArgumentException to handle invalid module codes and input.

* **Conclusion:**

The TEGVER application provides a structured framework for managing a shopping system with modules for products, orders, shopping carts, and checkouts. It features a menu-driven interface and simulates payment processing, demonstrating core functionality for a console-based shopping management application.