

## Use Case “Place order”

### 1. Use case code: UC001

### 2. Brief Description

This use case describes the interaction between Customer and Order System when Customer wishes to place order, Customer can add products to the cart, provide shipping information, select a payment method and complete the order

### 3. Actor

- a. Customer
- b. VnPay System (Payment System)

### 4. Preconditions

- Customer has at least 1 product in cart.
- The products are available in stock to fulfill the customer's order.

### 5. Basic Flow of Events

- The customer access the shopping cart to view selected products
- The system displays a list of products in the cart, including quantity, price(excluding VAT) and the total amount.
- The customer reviews the products in the cart, modifies quantities or removes items if needed.
- The system checks product availability in stock:
  - If sufficient, the flow continues.
  - If not, the system notifies the customer to update the cart
- The customer provides shipping information, including recipient name, phone number and delivery address.
- The system calculates the shipping fee based on delivery address and product weight and then displays the total cost (including VAT and shipping fees)
- The customer confirms the order and selects a payment method (currently only credit card payment via VNPay).

- The system connects to VNPay to process the payment.
- After successful payment, the system creates the invoice and sends an order confirmation email to the customer.
- The shopping cart is cleared after successful payment.

#### **6. Alternative Flows:**

- Product Out of Stock: If stock is insufficient, the system notifies the customer and requests them to update the cart with available quantities.
- Invalid Shipping Information: If required shipping information is missing or incorrect, the system prompts the customer to update the details.
- Payment Failure: If the payment fails, the system notifies the customer and requests them to try again.

#### **7. Input Data:**

- Selected product information (name, quantity).
- Shipping information (recipient name, phone number, address).
- Payment information (credit card details, VNPay information).

#### **8. Output Data:**

- Order confirmation, including product details, total cost (including VAT), shipping fee, and total amount due.
- Invoice and transaction information sent to the customer's email.

#### **9. Postconditions:**

- The order has been created and successfully paid for.
- The invoice and shipping details are sent to the customer via email.

- The shopping cart is emptied after payment.