**Nguyễn Trung Kiên – 20226052**

**Github: https://github.com/kazuyuki114/ISD-20242-20226052.NguyenTrungKien.git**

**Use case: Place Order**

1. **Use case code**

UC00x

1. **Brief Description**

This use case describes the interaction between customer and AIMS system when customer wishes to place and submit a new order for desired products

1. **Actors**

* Customer
* VNPAY

1. **Preconditions**

* The cart must not be empty
* The AIMS software must have a working connection to VNPay for payment processing
* The products in the cart must have sufficient inventory quantity

1. **Basic flow of events**

Step 1: Customer reviews and selects products he/she wants to purchase

Step 2: Customer requests to place order in the cart

Step 3: AIMS software checks the availability of products in the cart

Step 4: AIMS software displays the form of delivery information with order information

Step 5: Customer enters and submits delivery information

Step 6: AIMS software checks input information validation

Step 7: AIMS software calculates and updates order information with shipping fees

Step 8: The customer asks to pay order

***Step 9: The AIMS software calls UC “Pay order”***

Step 10: The AIMS software creates and saves a new order

Step 11: The AIMS software makes the cart empty

Step 12: The AIMS software sends email about the order notification and information

Step 13: The AIMS software displays a successful order notification, the order and the transaction information

1. **Alternative flows**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Location** | **Condition** | **Action** | **Resume location** |
| **1.** | At Step 3 | If the software determines that the quantity of chosen products in cart is not enough | The software displays message error “Insufficient products” and asks customers to update their cart | At Step 2 |
| **2.** | At Step 6 | If the fields of delivery information are invalid | Software displays “Error! Invalid input” | At Step 5 |
| **3.** | At Step 5 | If the customer wants to choose the rush delivery method | Software calls UC “Place Rush Order” | At Step 6 |
| **4.** | At Step 12 | If email which contains transaction information has not been sent to customer yet. | Software requires the customer to check that the email provided is correct or not then resends an email | At Step 12 |
| **5.** | At Step 13 | If the customer wants to cancel the order | The software displays a dialog to confirm whether the customer is sure, then cancels the order and displays the cancellation status. | End of use cases |

1. **Input data**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No** | **Data Field** | **Description** | **Mandatory** | **Valid Condition** | **Example** |
| 1 | Receiver Name |  | Yes | Alphabet character | Nguyen Trung Kien |
| 2 | Phone number |  | Yes | 10 digits | 0987654321 |
| 3 | Province | Choose from a list of Vietnamese provinces | Yes |  | Hanoi |
| 4 | Address |  | Yes |  | 189Q/20 TonThat Thuyet Hanoi, Vietnam |
| 5 | Shipping instructions |  | No |  |  |

1. **Output data**

Table 2 – Output data of order information and shipping fee

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Data Field** | **Description** | **Display format** | **Example** |
| 1 | Title | Title of media product |  | DVD Anime Redo of the Healer |
| 2 | Price | Price of the corresponding media product | - Comma for a thousand separators.  - Positive Integer.  - Right alignment. | 390,000 |
| 3 | Quantity | Quantity of the corresponding media | - Positive integer  - Right alignment | 3 |
| 4 | Amount | Total money of the corresponding media | - Comma for thousands of separators  - Positive integer  - Right alignment | 1,170,000 |
| 5 | Subtotal | Total amount of all products in the order | - Comma for thousands of separators  - Positive integer  - Right alignment | 3,500,000 |
| 6 | Shipping fee |  | - Comma for thousands of separators  - Positive integer  - Right alignment | 25,000 |
| 7 | Total | Subtotal + shipping fee | - Comma for thousands of separators  - Positive integer  - Right alignment | 4,695,000 |

Table 3- Output data of general information of order and transaction info

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Data Field** | **Description** | **Display Format** | **Example** |
| 1 | Customer name |  |  | Nguyen Trung Kien |
| 2 | Phone number |  |  | 0987654321 |
| 3 | Province |  |  | Hanoi |
| 4 | Address |  |  | 189Q/20 TonThat Thuyet Hanoi, Vietnam |
| 5 | Total amount |  |  | 4,695,000 VND |
| 6 | Transaction ID |  |  |  |
| 7 | Transaction content |  |  |  |
| 8 | Transaction content |  | dd/mm/yyyy | 02/23/2025 |

1. **Postconditions**

A new order has been placed, and its details are emailed to the customer. If the payment is unsuccessful, no action is taken.

**Use case: Pay Order**

1. **Use case code**

UC00x1

1. **Brief Description**

This use case describes the interactions between the AIMS software with the customer and VNPay when the customer desires to pay order

1. **Actors**

* Customer
* VNPAY

1. **Preconditions**

* The balance of the customer must be enough to execute the payment action
* The VNPay credit card must be valid

1. **Basic flow of events**

Step 1: AIMS software displays the invoice

Step 2: Customer asks to pay the invoice

Step 3: AIMS software redirects to VNPay

Step 4: VNPay sends payment result to VNPay

Step 5: AIMS software saves invoice and payment transaction

Step 6: VNPay notifies the payment results

1. **Alternative flows**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Location** | **Condition** | **Action** | **Resume location** |
| **1.** | At Step 5 | If the customer cancels the payment transaction | Software refunds the full amount of the payment for this order through VNPay | At Step 1 |

1. **Input data**

No detail input data is described for the VNPay transaction method in the AIMS requirements (“Customers need to provide all the necessary information and steps as requested by VNPay to successfully complete the transaction.”)

1. **Output data**

Table 2 – Output data of invoice

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Data Field** | **Description** | **Display format** | **Example** |
| 1 | Title | Title of media product |  | DVD Anime Redo of the Healer |
| 2 | Price | Price of the corresponding media product | - Comma for a thousand separators.  - Positive Integer.  - Right alignment. | 390,000 |
| 3 | Quantity | Quantity of the corresponding media | - Positive integer  - Right alignment | 3 |
| 4 | Amount | Total money of the corresponding media | - Comma for thousands of separators  - Positive integer  - Right alignment | 1,170,000 |
| 5 | Subtotal before VAT | Total amount of all products in the order | - Comma for thousands of separators  - Positive integer  - Right alignment | 3,200,000 |
| 6 | Subtotal | Total amount of all products in the order | - Comma for thousands of separators  - Positive integer  - Right alignment | 3,500,000 |
| 7 | Shipping fee |  | - Comma for thousands of separators  - Positive integer  - Right alignment | 25,000 |
| 8 | Total | Subtotal + shipping fee | - Comma for thousands of separators  - Positive integer  - Right alignment | 4,695,000 |
| 9 | Currency |  |  | VN |
| 10 | Customer name |  |  | Nguyen Trung Kien |
| 11 | Phone number |  |  | 0987654321 |
| 12 | Province |  |  | Hanoi |
| 13 | Address |  |  | 189Q/20 TonThat Thuyet Hanoi, Vietnam |
| 14 | Shipping instructions |  |  |  |

1. **Postconditions**

The software will display payment results if the transaction is cancelled, the full amount of money for this order will be refunded to the customer through VNPay.

**Use case: Place Rush Order**

1. **Use case code**

UC00x2

1. **Brief Description**

This use case describes the interactions between the AIMS software with the customer when the customer desires to place a rush order

1. **Actors**

* Customer

1. **Preconditions**

* Customer has entered their delivery address
* Customer has items in their cart

1. **Basic flow of events**

Step 1: Customer choose rush order delivery option

Step 2: AIMS checks if delivery address is within the inner city of Hanoi

Step 3: AIMS checks which products are eligible for rush order delivery

Step 4: AIMS display eligible products and rush delivery information

Step 5: AIMS displays prompt and asks the customer to enter delivery time and delivery instruction

Step 6: AIMS calculates and displays updated invoices

Step 7: Customer confirms rush order selection

1. **Alternative flows**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Location** | **Condition** | **Action** | **Resume location** |
| **1.** | At Step 2 | If software determines delivery address is not in inner city Hanoi | Software notifies the customer that rush delivery is unavailable for their address | At Step 1 |
| **2.** | At Step 3 | If software determines no products are eligible for rush delivery | Software displays “No products supported with rush delivery” and asks the customer to update product selection or continue with regular delivery | At Step 2 |
| **3.** | At Step 3 | If software identifies some products are eligible for rush delivery | Software displays “Some products are not supported” and asks customer to update the cart | At Step 2 |

1. **Input data**

Table – Output data of rush delivery

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Data Field** | **Description** | **Display format** | **Example** |
| 1 | Delivery Address | Address for rush order delivery |  | 189Q/20 TonThat Thuyet Hanoi, Vietnam |
| 2 | Delivery Time | Delivery time for rush order | - 24-hour format (HH:mm) | 14:30 |
| 3 | Delivery Instructions | Instructions for delivery |  |  |
| 4 | Product List | List of products in cart to consider for rush delivery | - List of products | DVD Anime Redo of the Healer, DVD phim Deadpool |

1. **Output data**

Table – Output data of rush delivery

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Data Field** | **Description** | **Display format** | **Example** |
| 1 | Rush Eligible Products | List of products eligible for rush delivery |  | DVD Anime Redo of the Healer, DVD phim Deadpool |
| 2 | Regular Delivery Products | List of products for standard delivery |  | DVD phim con heo |
| 3 | Rush Delivery Fee | Fee for rush delivery items | - Comma for thousands of separators  - Positive integer  - Right alignment | 45,000 |
| 4 | Regular Delivery Fee | Fee for standard delivery items | - Comma for thousands of separators  - Positive integer  - Right alignment | 22,000 |
| 5 | Total Amount | Total amount including all fees | - Comma for thousands of separators  - Positive integer  - Right alignment | 67,000 |

1. **Postconditions**

 Rush order delivery is selected for eligible products

 Delivery fees are updated to include rush order charges

 Delivery information includes rush order information