**Use Case Specifications**

**1. View Order Info**

1. **Use-case Code**: UC001
2. **Brief Description**: This use case describes the interaction between the AIMS software and the customer when the customer desires to view order information.
3. **Actors**:
   * Actor 1: Customer
4. **Preconditions**:
   * The customer must be logged in.
5. **Basic flows of event**:
   * The customer selects the option to view order information.
   * The system retrieves the order details from the database.
   * The system displays the order details to the customer.
6. **Alternative flows**:
   * If the customer is not logged in, the system prompts the customer to log in.
   * If there are no orders, the system displays a message indicating that no orders are available.
7. **Input data**:
   * orderId (String): Unique identifier of the order.
     + Example: "ORD123456789"
8. **Output data**:
   * orderDetails (Object): Details of the order.
     + Example: { "orderId": "ORD123456789", "items": [{"itemId": "ITM001", "name": "Item 1", "price": 100.0, "quantity": 2}], "status": "Delivered" }
9. **Postconditions**:
   * The order details are displayed to the customer.

**2. Place an Order**

1. **Use-case Code**: UC002
2. **Brief Description**: This use case describes the interaction between the AIMS software and the customer when the customer desires to place an order.
3. **Actors**:
   * Actor 1: Customer
4. **Preconditions**:
   * The customer must be logged in.
   * The customer must have items in their cart.
5. **Basic flows of event**:
   * The customer selects the option to place an order.
   * The system creates a new order with the items in the customer's cart.
   * The system saves the order to the database.
   * The system displays an order confirmation to the customer.
6. **Alternative flows**:
   * If the customer is not logged in, the system prompts the customer to log in.
   * If the cart is empty, the system displays a message indicating that the cart is empty.
7. **Input data**:
   * cartItems (Array): Items in the customer's cart.
     + Example: [{"itemId": "ITM001", "name": "Item 1", "price": 100.0, "quantity": 2}]
   * userId (String): Unique identifier of the customer.
     + Example: "USR123456"
8. **Output data**:
   * orderConfirmation (Object): Confirmation of the placed order.
     + Example: { "orderId": "1", "status": "Confirmed" }
9. **Postconditions**:
   * A new order is created and added to the customer's order history.

**3. Place Rush Order**

1. **Use-case Code**: UC003
2. **Brief Description**: This use case describes the interaction between the AIMS software and the customer when the customer desires to place a rush order.
3. **Actors**:
   * Actor 1: Customer
4. **Preconditions**:
   * The customer must be logged in.
   * The customer must have items in their cart.
5. **Basic flows of event**:
   * The customer selects the option to place a rush order.
   * The system creates a new rush order with the items in the customer's cart.
   * The system saves the rush order to the database.
   * The system displays a rush order confirmation to the customer.
6. **Alternative flows**:
   * If the customer is not logged in, the system prompts the customer to log in.
   * If the cart is empty, the system displays a message indicating that the cart is empty.
7. **Input data**:
   * cartItems (Array): Items in the customer's cart.
     + Example: [{"itemId": "1", "name": "Item 1", "price": 100, "quantity": 2}]
   * userId (String): Unique identifier of the customer.
     + Example: "1"
8. **Output data**:
   * rushOrderConfirmation (Object): Confirmation of the placed rush order.
     + Example: { "orderId": "1", "status": "Rush Confirmed" }
9. **Postconditions**:
   * A new rush order is created and added to the customer's order history.

**4. Pay Order**

1. **Use-case Code**: UC004
2. **Brief Description**: This use case describes the interactions between the AIMS software and VNPay when the customer desires to pay for an order.
3. **Actors**:
   * Actor 1: Customer
   * Actor 2: VNPay
4. **Preconditions**:
   * The AIMS software has calculated the total amount of money that the customer has to pay.
   * The customer has confirmed the invoice.
5. **Basic flows of event**:
   * The customer selects the option to pay an order.
   * The system redirects the customer to the VNPay payment gateway.
   * The customer enters payment details in VNPay.
   * VNPay processes the payment and returns the result to the AIMS software.
   * The system updates the order status to "Paid."
   * The system displays the payment confirmation to the customer.
6. **Alternative flows**:
   * If the payment is declined, the system displays an error message to the customer.
   * If the customer cancels the payment, the system returns to the order details page.
7. **Input data**:
   * Payment Details (Object):
     + orderId (String): Unique identifier of the order being paid.
       - Example: "1"
     + amount (Int): The total amount to be paid.
       - Example: 150
     + paymentMethod (String): The method of payment chosen by the customer.
       - Example: "CreditCard"
     + cardNumber (String): The credit card number for the payment.
       - Example: "4111111111111111"
     + cardExpiryDate (String): The expiration date of the credit card.
       - Example: "12/24"
     + cardCVV (String): The CVV code of the credit card.
       - Example: "123"
     + billingAddress (String): The billing address associated with the payment method.
       - Example: "123 Main St, Anytown, AT 12345"
     + customerName (String): Name of the customer making the payment.
       - Example: "John Doe"
     + customerEmail (String): Email of the customer making the payment.
       - Example: "johndoe@example.com"
8. **Output data**:
   * Payment Confirmation (Object):
     + confirmationId (String): Unique identifier for the payment confirmation.
       - Example: "CONF987654321"
     + orderId (String): Unique identifier of the order that was paid.
       - Example: "1"
     + amount (Int): The total amount that was paid.
       - Example: 150
     + paymentMethod (String): The method of payment used.
       - Example: "CreditCard"
     + transactionDate (String): The date and time when the payment was processed.
       - Example: "2024-06-17T14:25:00Z"
     + status (String): The status of the payment.
       - Example: "Success"
     + message (String): Additional message regarding the payment status.
       - Example: "Payment processed successfully"
   * Payment Error Message (Object):
     + errorCode (String): The error code indicating the type of error.
       - Example: "ERR001"
     + errorMessage (String): A description of the error encountered.
       - Example: "Invalid credit card number"
     + orderId (String): Unique identifier of the order that failed to be paid.
       - Example: "ORD123456789"
     + amount (Double): The total amount that was attempted to be paid.
       - Example: 150.75
     + paymentMethod (String): The method of payment used.
       - Example: "CreditCard"
     + transactionDate (String): The date and time when the payment attempt was made.
       - Example: "2024-06-17T14:25:00Z"
9. **Postconditions**:
   * The order is marked as paid if the payment is successful.

**5. Cancel Order**

1. **Use-case Code**: UC005
2. **Brief Description**: This use case describes the interaction between the AIMS software and the customer when the customer desires to cancel an order.
3. **Actors**:
   * Actor 1: Customer
4. **Preconditions**:
   * The customer must be logged in.
   * The customer must have an order that is eligible for cancellation.
5. **Basic flows of event**:
   * The customer selects the option to cancel an order.
   * The system updates the order status to "Canceled."
   * The system displays the cancellation confirmation to the customer.
6. **Alternative flows**:
   * If the order is not eligible for cancellation, the system displays an error message to the customer.
7. **Input data**:
   * orderId (int): Unique identifier of the order.
     + Example: "1"
8. **Output data**:
   * cancellationConfirmation (Object): Confirmation of the order cancellation.
     + Example: { "orderId": "1", "status": "Canceled" }
   * cancellationErrorMessage (Object): Error message if the cancellation fails.
     + Example: { "errorCode": "ERR002", "errorMessage": "Order cannot be canceled" }
9. **Postconditions**:
   * The order is marked as canceled if eligible.

II. SEQUENCE DIAGRAM

View Order Info  
Ảnh có chứa văn bản, ảnh chụp màn hình, biểu đồ, hàng

Mô tả được tạo tự động

Place an Order

Ảnh có chứa văn bản, biểu đồ, Song song, Kế hoạch

Mô tả được tạo tự động

Place Rush Order

Ảnh có chứa văn bản, biểu đồ, Song song, hàng

Mô tả được tạo tự động

Pay Order

Ảnh có chứa văn bản, biểu đồ, Bản vẽ kỹ thuật, Kế hoạch

Mô tả được tạo tự động

Cancel Order

Ảnh có chứa văn bản, hàng, ảnh chụp màn hình, Song song

Mô tả được tạo tự động

III. Activity Diagram

View order info

Ảnh có chứa ảnh chụp màn hình, văn bản, Hình chữ nhật, biểu đồ

Mô tả được tạo tự động

Place an order

Ảnh có chứa văn bản, ảnh chụp màn hình, biểu đồ, Song song

Mô tả được tạo tự động

Place rush order  
Ảnh có chứa văn bản, ảnh chụp màn hình, màn hình, số

Mô tả được tạo tự động

Pay order  
Ảnh có chứa văn bản, ảnh chụp màn hình, biểu đồ, hàng

Mô tả được tạo tự động

Cancel order

Ảnh có chứa ảnh chụp màn hình, văn bản, biểu đồ, hàng

Mô tả được tạo tự động