

Use Case “PLACE ORDER”

1. Use case code

UC001

2. Brief description

This use case describes the interaction between the customer and the AIMS software when the customer wishes to place an order.

3. Actors:

3.1 Customer – Initiates the order and provides necessary details for delivery.

4. Preconditions:

- The customer must have selected products in the cart.
- The software must have access to the inventory system.

5. Basic Flow of Events:

1. The customer reviews the cart and selects the products they want to purchase.
2. The system displays the products in the cart with their quantities, individual prices (excluding VAT), and the total price.
3. The customer requests to place an order.
4. The system checks if any product is out of stock or if the available quantity is insufficient.
5. The system prompts the customer to provide delivery information, including recipient name, email, phone number, province/city, and delivery address.
6. The customer enters delivery information.
7. The system validates the delivery information.
8. The system calculates and displays the delivery fee.
9. The system checks if the delivery address supports the service and calculates a separate delivery fee for eligible products when rush order delivery is selected.
10. The customer chooses to pay for the order.
11. The system displays and temporarily saves the invoice, which includes:
 - List of products

- Prices, VAT, and delivery fee

- Total amount to be paid

12. The customer chooses the payment method.

13. The customer provides all necessary information and places the order.

14. The system connect to VNPay to process the payment

15. The system displays general information of the order and transaction details.

16. The system sends the invoice and payment transaction information to the customer's email.

17. The system records the payment transaction information and the successfully paid order.

6. Alternative Flows:

Table 1: Alternative flow of events in use case "Place Order"

No	Location	Condition	Action	Resume location
1	At step 4	If any product is out of stock	1. The system displays a message to the customer to adjust the cart. 2. The customer updates the cart and retries placing the order.	Step 4
2	At step 7	If delivery information is invalid	1. The system prompts the customer to correct the information. 2. The customer provides the correct information and continues with the order.	Step 7

3	At step 9	If rush delivery is unavailable	<p>1. The system informs the customer that rush order delivery is unavailable for some or all products.</p> <p>2. The customer updates the delivery information or product selection.</p> <p>3. The system recalculates the delivery fee and updates the invoice.</p>	Step 9
4	At step 14	If payment is declined by VNPay	<p>1. The system displays a message to the customer with the option to retry or update payment details.</p> <p>2. The customer retries the payment or updates the payment information.</p>	Step 14

7. Input Data:

Table 2: Input data of delivery information

No.	Data Fields	Description	Mandatory	Valid Condition	Example
1	Recipient Name	Name of the person receiving order	Yes	Non-empty	Viet Anh
2	Email	Customer's email address	Yes	Valid email format	vietanh@gmail.com
3	Phone Number	Contact number for delivery	Yes	Valid phone number	0123456789

4	Province/City	Delivery location	Yes	Selected from predefined list	Hanoi
5	Delivery Address	Street address for delivery	Yes	Non empty	123 Main St
6	Credit Card Details	Payment information	Yes	Valid card information as per VNPay requirements	N/A

8. Output Data:

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

No.	Data Field	Description	Display Format	Example
1	Customer Name	Name of the customer placing the order	Text	Viet Anh
2	Phone Number	Customer's contact number	Phone number format	0123456789
3	Province	Customer's province or city for delivery	Text	Hanoi
4	Address	Customer's full delivery address	Text	123 Main St
5	Total Amount (Cash)	Total payment amount including VAT and delivery	Currency format	9,900,000 VND
6	Transaction ID	Unique ID for the payment transaction	Alphanumeric	TX123456789

7	Transaction Content	Description of the transaction or order purpose	Text	"Order payment for electronics"
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9. Post conditions:

- The order is successfully placed and payment is processed.
- The customer receives an invoice and order confirmation via email.
- The system records the transaction and the order is queued for fulfillment.
- Update inventory