HANOI UNIVERSITY OF SCIENCE AND TECHNOLOGY

School of Information and communications technology

Software Requirement Specification

Trịnh TiếnDũng

20215187

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# Introduction

## Objective

## Scope

## Glossary

| ***No*** | ***Term*** | ***Explanation*** | ***Example*** | ***Note*** |
| --- | --- | --- | --- | --- |
| 1 | VAT (Value Added Tax) | A consumption tax added to the price of goods and services. The software calculates the total price of products excluding VAT. |  |  |
| 2 | Rush Order Delivery | An expedited shipping option that guarantees delivery within a shorter timeframe, typically within 2 hours for eligible products and addresses within the specified area. |  |  |
| 3 | AIMS | The name of the desktop e-commerce software designed for buying and selling physical media products |  |  |

## References

# Overall Description

## Survey

## Overall requirements

*A diagram of a product

Description automatically generated*

## Business process

*A diagram with text and a black dot

Description automatically generated with medium confidence*

# Detailed Requirements

## Use case 1

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Use Case “Place Order”**   1. **Use case code**   UC001   1. **Brief Description**   This use case describes the interaction between Customer and AIMS software when Customer wish(es) to place an order   1. **Actors**    1. **Customer** 2. **Preconditions**   There is at least one item in the cart.   1. **Basic Flow of Events** 2. Customer views the cart and select the products they want to purchase 3. Customer requests to place an order 4. AIMS software checks the availability of products in the car 5. AIMS software displays the form of delivery information with order information 6. Customers enters and submits delivery information (see Table A) 7. AIMS software checks the input information 8. Customer selects order delivery options: rush order delivery or default order delivery 9. AIMS software checks the delivery method 10. AIMS software calculates the payment and displays to customer (see Table B) 11. Customer asks to pay order 12. AIMS software calls UC “Pay order” 13. AIMS software creates a new order 14. AIMS software sends invoice and payment transaction information to thecustomer's email 15. The AIMS software displays the successful order notification, the order and the transaction information (see Table C). 16. **Alternative flows**   Table 1-Alternative flows of events for UC “Place order”   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **No** | **Location** | **Condition** | **Action** | **Resume location** | |  | At Step 3 | If the inventory quantity is insufficient | * AIMS software asks customers to update the cart | Resumes at Step 1 | |  | At Step 6 | If there are any required fields left blank or invalid information | * AIMS software asks customers to update information | Resumes at Step 5 | |  | At Step 8 | If customer chooses rush order delivery method | * AIMS software calls UC “Place rush order” | Resumes at Step 9 | |  | At Step 12 | If the order payment is not successul or goes back from payment |  | Resumes at Step 9 |  1. **Input data**   Table A-Input data of delivery informatin   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **No** | **Data fields** | **Description** | **Mandatory** | **Valid condition** | **Example** | |  | Receiver Name | Receiver’s name | Yes | English letters | Do Minh Hieu | |  | Phone number | Receiver’s phone number | Yes | 10 digits | 0987654321 | |  | Province | Choose from a list | Yes | NONE | Hanoi | |  | Address | Receiver’s  address | Yes | NONE | 12, 34 Alley of Tran Thai Tong street, Cau Giay district | |  | Shipping instructions | Shipping instructions | No | NONE | Hide receiver  information |  1. **Output data**   Table B-Output data of order information and shipping fee   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **No** | **Data fields** | **Description** | **Display format** | **Example** | |  | Title | Title of a media product | NONE | DVD Phim Vượt ngục | |  | Price | Price of the corresponding media | - Comma for thousands  - Positive integer  - Right alignment | 123,000 | |  | Quantity | Quantity of the corresponding media | - Positive integer  - Right alignmen | 2 | |  | Amount | Total money of the corresponding | - Comma for thousands  - Positive integer  - Right alignment | 246,000 | |  | Subtotal | Total amount of all products in the order | 2,316,600 | |  | Shipping fees | Shipping fees | 30,000 |   Table C-Output data of general information of order and transaction info   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **No** | **Data fields** | **Description** | **Display format** | **Example** | | 1. | Customer name | Customer’s name | English letters | Do Minh Hieu | | 2. | Phone number | Customer’s phone number | 10 digits | 0987654321 | | 3. | Province | Choose from a list | NONE | Hanoi | | 4. | Address | Customer’s address | NONE | 12, 34 Alley of Tran Thai Tong street, Cau Giay district | | 5. | Total amount | Total amount of all products in the order | - Right alignment  - Vietnamese currency (VNĐ)  - Vietnamese locale | 1.200.000 VNĐ | | 6. | Transaction ID | Created by software | NONE |  | | 7. | Transaction content | Default or edited by customer | NONE |  | | 8. | Transaction date | Date of transaction | dd/mm/yyyy | 05/10/2023 |  1. **Postconditions**   A new order is created, and its information is sent via email to the customer or nothing happens if payment is not successful. |

## Use case 2

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Use Case “Pay Order”**   1. **Use case code**   UC002   1. **Brief Description**   This use case describes the interaction between AIMS software and Customer, Product Manager, VNPay when Customer wish(es) to pay an order   1. **Actors**    1. **Customer**    2. **Product Manager**    3. **VNPay** 2. **Preconditions**   AIMS software have calculated the payment of the order and customer asked to pay the order.   1. **Basic Flow of Events** 2. AIMS software displays the invoice (see Table A) 3. Customer asks to pay the invoice 4. AIMS software redirects to VNPay with payment information 5. VNPay notifies the transaction result 6. AIMS software saves the payment transaction 7. **Alternative flows**   Table 1-Alternative flows of events for UC “Place order”   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **No** | **Location** | **Condition** | **Action** | **Resume location** | |  | At Step 5 | If the customer cancels the order or product manager rejects the order | * The payment is refunded through VNPay | Resumes at Step 1 |  1. **Input data** 2. **Output data**   Table A- Output data of invoice   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **No** | **Data fields** | **Description** | **Display format** | **Example** | |  | Title | Title of a media product | NONE | DVD Phim Vượt ngục | |  | Price | Price of the corresponding media | - Comma for thousands  - Positive integer  - Right alignment | 123,000 | |  | Quantity | Quantity of the corresponding media | - Positive integer  - Right alignmen | 2 | |  | Amount | Total money of the corresponding | - Comma for thousands  - Positive integer  - Right alignment | 246,000 | |  | Subtotal before VAT | Total price of products in the cart before VAT | - Comma for thousands  Separator  - Positive integer  - Right alignment | 2,106,000 | |  | Subtotal | Total price of products in the cart with VAT | 2,316,600 | |  | Shipping fees | Shipping fees | 30,000 | |  | Total | Sum of subtotal and shipping fees | 2,346,600 | |  | Currency | Currency of money | NONE | VND | |  | Name | Customer’s name | English letters | Do Minh Hieu | |  | Phone number | Customer’s phone number | 10 digits | 0987654321 | |  | Province | Choose from a list | NONE | Hanoi | |  | Address | Customer’s address | NONE | 12, 34 Alley of Tran Thai Tong street, Cau Giay district | |  | Shipping instructions | Shipping instructions | NONE | Hide information |  1. **Postconditions** |

## Use case 3

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Use Case “Place Order with Place Rush Order”**   1. **Use case code**   UC003   1. **Brief Description**   This use case describes the interaction between Customer and AIMS software when Customer wish(es) to place an rush order   1. **Actors**    1. **Customer** 2. **Preconditions**   There is at least one item in the cart. Customer selects rush order delivery method.   1. **Basic Flow of Events** 2. Customer views the cart and select the products they want to purchase 3. Customer requests to place an order 4. AIMS software checks the availability of products in the car 5. AIMS software displays the form of delivery information with order information 6. Customers enters and submits delivery information (see Table A) 7. AIMS software checks the input information 8. Customer selects rush order delivery method 9. AIMS software requests additional information from customer (see Table B) 10. AIMS software calculates the payment and displays to customer (see Table C) 11. Customer asks to pay order 12. AIMS software calls UC “Pay order” 13. AIMS software creates a new order 14. AIMS software sends invoice and payment transaction information to thecustomer's email 15. The AIMS software displays the successful order notification, the order and the transaction information (see Table D). 16. **Alternative flows**   Table 1-Alternative flows of events for UC “Place order”   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **No** | **Location** | **Condition** | **Action** | **Resume location** | |  | At Step 3 | If the inventory quantity is insufficient | * AIMS software asks customers to update the cart | Resumes at Step 1 | |  | At Step 6 | If there are any required fields left blank or invalid information | * AIMS software asks customers to update information | Resumes at Step 5 | |  | At Step 8 | If no products are eligible or the delivery address doesn't support rush order delivery | * AIMS software asks customer to update the delivery information or delivery method | Resumes at Step 5 | |  | At Step 12 | If the order payment is not successul or goes back from payment |  | Resumes at Step 9 |  1. **Input data**   Table A-Input data of delivery informatin   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **No** | **Data fields** | **Description** | **Mandatory** | **Valid condition** | **Example** | |  | Receiver Name | Receiver’s name | Yes | English letters | Do Minh Hieu | |  | Phone number | Receiver’s phone number | Yes | 10 digits | 0987654321 | |  | Province | Choose from a list | Yes | NONE | Hanoi | |  | Address | Receiver’s  address | Yes | NONE | 12, 34 Alley of Tran Thai Tong street, Cau Giay district | |  | Shipping instructions | Shipping instructions | No | NONE | Hide information |   Table B-Input data of rush order delivery   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **No** | **Data fields** | **Description** | **Mandatory** | **Valid condition** | **Example** | | 1. | Delivery time | Delivery time for rush order delivery | Yes | time range dd/mm/yyyy | 8h-10h 10/03/2024 | | 2. | Delivery instructions |  | No | NONE |  |  1. **Output data**   Table C-Output data of order information and shipping fee   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **No** | **Data fields** | **Description** | **Display format** | **Example** | |  | Title | Title of a media product | NONE | DVD Phim Vượt ngục | |  | Price | Price of the corresponding media | - Comma for thousands  - Positive integer  - Right alignment | 123,000 | |  | Quantity | Quantity of the corresponding media | - Positive integer  - Right alignmen | 2 | |  | Amount | Total money of the corresponding | - Comma for thousands  - Positive integer  - Right alignment | 246,000 | |  | Subtotal | Total amount of all products in the order | 2,316,600 | |  | Shipping fees | Shipping fees | 30,000 |   Table D-Output data of general information of order and transaction info   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **No** | **Data fields** | **Description** | **Display format** | **Example** | | 1. | Customer name | Customer’s name | English letters | Do Minh Hieu | | 2. | Phone number | Customer’s phone number | 10 digits | 0987654321 | | 3. | Province | Choose from a list | NONE | Hanoi | | 4. | Address | Customer’s address | NONE | 12, 34 Alley of Tran Thai Tong street, Cau Giay district | | 5. | Total amount | Total amount of all products in the order | - Right alignment  - Vietnamese currency (VNĐ)  - Vietnamese locale | 1.200.000 VNĐ | | 6. | Transaction ID | Created by software | NONE |  | | 7. | Transaction content | Default or edited by customer | NONE |  | | 8. | Transaction date | Date of transaction | dd/mm/yyyy | 05/10/2023 |  1. **Postconditions**   A new order is created, and its information is sent via email to the customer or nothing happens if payment is not successful. |

# Supplementary specification

## Functionality

- Customer: Place order, view product, search product, view cart, cancel order, view order.

- Product manager: manage product

- Administrator: manage user

## Usability

- Operates 24/7, allowing new users to easily familiarize themselves.

## Reliability

- The software can resume normal operation within a maximum of 1 hour after anincident

## Performance

- Can serve up to 1,000 customers simultaneously without significantly reducing performance and can operate continuously for 300 hours without failure.

- The maximum response time of the software is 2 seconds under normal conditions or 5seconds during peak hours

## Supportability