HANOI UNIVERSITY OF SCIENCE AND TECHNOLOGY

School of Information and communications technology

Software Requirement Specification

<AIMS: An Internet Media Store>
Subject: ITSS Software Development

<Le Phu Tai 20210759>

Hanoi, <3, 2024>

Table of contents

1 Introduction

1.1 Objective

- Purpose: This SRS document provides detailed requirements about the AIMS software project, including all use case specification, activities flow and glossary.
- Audience: Developers.

1.2 Scope

- Software products are physical media products, such as: books, CDs, LP records, or DVDs,…
- A software product must have enough required information, including general information like title, category, value, current price and required information corresponding to each type of media product.
- This software is a desktop e-commerce software that operates 24/7, allowing new users to easily familiarize themselves and be used for buying and selling media products such as books, DVDs, CDs,...

1.3 Glossary

No	Term	Explanation	Example	Note
1	token	A piece of data created by server, and contains the user's information, as well as a special token code that user can pass to the server with every method that supports authentication, instead of passing a username and password directly.	JSON Web Token (JWT)	Compact, URL-safe and usable especially in web browser single sign-on (SSO) context.
2	cart	An virtual object that used to indicate lists of thing that customer want to buy	Cart in some e-commerce platforms,...	

1.4 References

2 Overall Description
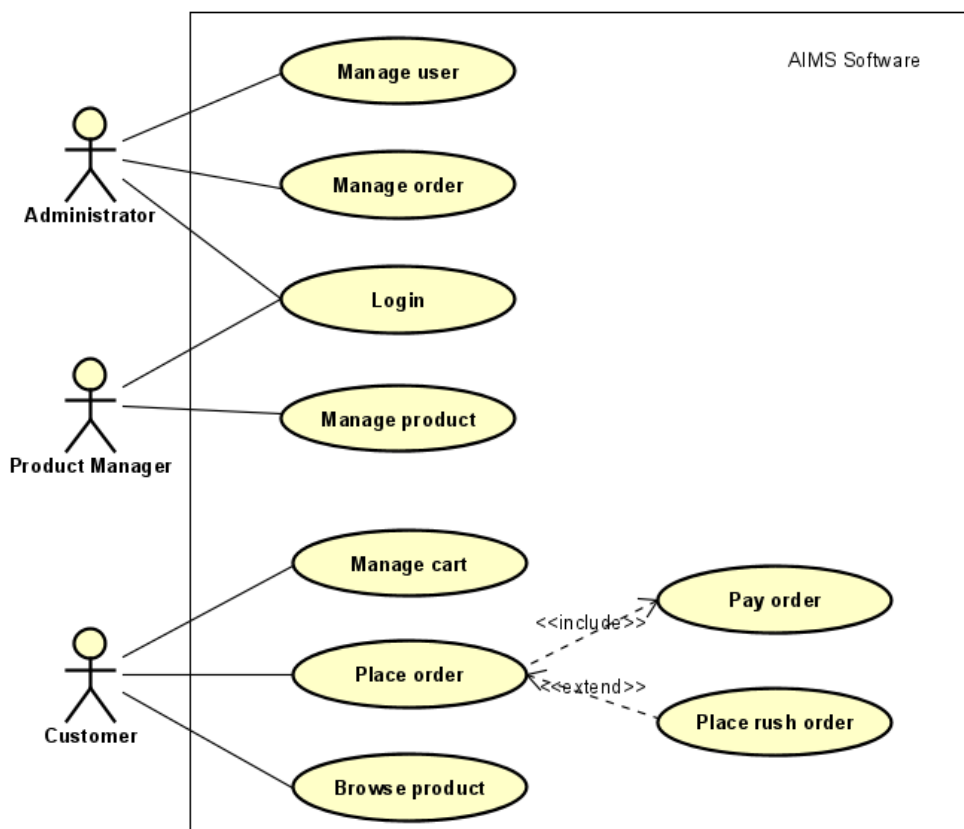
2.1 Survey

- Overall description:

AIMS Project is a desktop e-commerce software that operates 24/7, allowing new users to easily familiarize themselves. This software can serve up to 1,000 customers simultaneously without significantly reducing performance and can operate continuously for 300 hours without failure. Additionally, the software can resume normal operation within a maximum of 1 hour after an incident. The maximum response time of the software is 2 seconds under normal conditions or 5 seconds during peak hours.

- List of actors:

- Administrator: manage users.
- Product Manager: manage products.
- Customer: product's users.
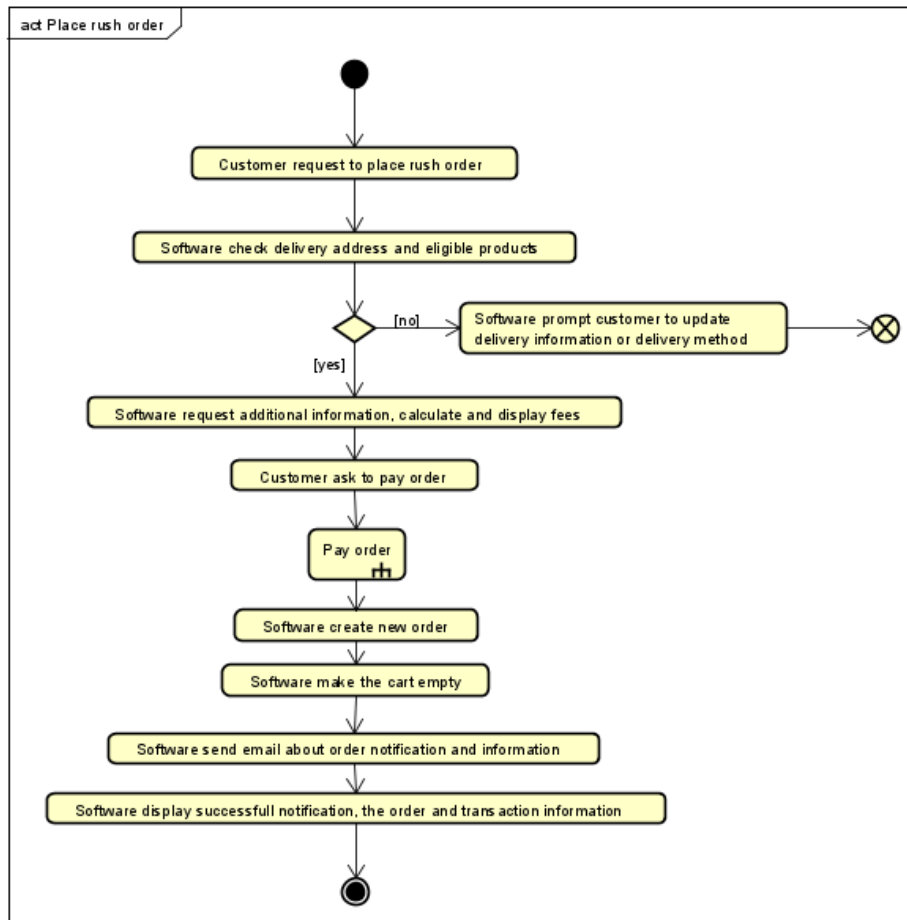- VNPay software: a software used for transaction payment.

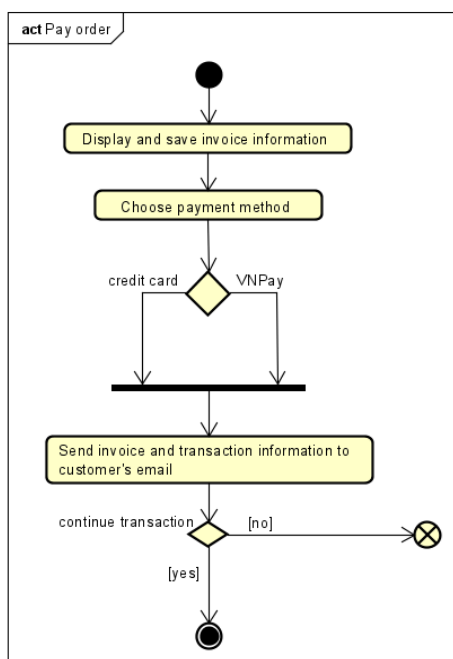## 2.2 Overall requirements

- **General use case diagram:**

2.3 Business process

● **Activity "Place rush order" diagram:**

● **Activity "Pay order" diagram:**

3 Detailed Requirements

3.1 Use case "Place Order"

<div style="border:1px solid black">

Use Case "Place Order"

1. Use case code: UC002

2. Brief descriptions:
- This use case describes the interaction between customer and AIMS software when customer wants to place their order.

3. Actors:
3.1. Customer
3.2. AIMS software

4. Preconditions:
- The customer needs to review the cart and select the products they want to purchase.
- There is at least one item in the cart.

5. Basic flow of events:
1. Customer requests to place order in the cart.
2. AIMS software checks the availability of products in the cart.
3. AIMS software displays the form of delivery information with order information.
4. Customer enters and submits delivery information.
5. AIMS software calculates and displays order and shipping fees.
6. Customer asks to pay order.
7. AIMS software calls use case "Pay Order".
8. AIMS software creates a new order.
9. AIMS software makes the cart empty.
10. AIMS software sends email about the order notification and information.
11. AIMS software displays the successful notification, the order and the transaction information.

6. Alternative flows:

</div>

No	Location	Condition	Action	Resume location
1	Step 3	If the products are not available	AIMS software notifies that the products in the cart are not available and stay at use case "View cart"	Use case end
2	Step 5	If the delivery information is invalid	AIMS software notifies that the delivery information is invalid	Step 3
3	Step 5	If customer choose to place a rush order	AIMS software inserts use case "Place rush order"	Step 6
4	Step 8	If the order payment is not successful or goes back from payment		Step 5

7. Input data

No	Data fields	Descriptions	Mandatory	Valid condition	Example
1	Receiver name		Yes		Name
2	Phone number		Yes		Number
3	Province	Choose from a list	Yes		Province
4	Address		Yes		Address
5	Shipping instructions		No		

8. Output data

No	Data fields	Descriptions	Display format	Example
1	Title	Title of a media product		Product_name
2	Price	Price of the corresponding media product	- Comma for thousands separator - Positive integer - Right alignment	123,000
3	Quantity	Quantity of the corresponding media	- Positive integer - Right alignment	2

		product		
4	Amount	Total money of the corresponding media product	- Comma for thousands separator - Positive integer - Right alignment	123,000
5	Subtotal before VAT	Total price of products in the cart before VAT	- Comma for thousands separator - Positive integer - Right alignment	123,000
6	Subtotal	Total price of products in the cart with VAT		123,000
7	Shipping fees			123,000
8	Total	Sum of subtotal and shipping fees		123,000
9	Currency			VND
10	Name			Name
11	Phone number			Number
12	Province			Province
13	Address			Address
14	Shipping instructions			
15	Transaction ID			
16	Transaction content			
17	Transaction date		dd/mm/yy	

9. Postconditions:
- A new order is created, and its information is sent via email to the customer or nothing happens if payment is not successful.

3.2 Use case "Pay Order"

Use Case "Pay Order"

1. Use case code: UC001

2. Brief descriptions:
- This use case describes the interaction between customer and AIMS software when customer wants to pay their order.

3. Actors:
3.1. Customer
3.2. AIMS software
3.3. VNPay software

4. Preconditions:
- The customer had set up delivery information.

5. Basic flow of events:
1. AIMS software displays and temporarily saves the invoice information.
2. Customer asks to pay the order by credit card.
3. AIMS software sends the invoice and payment transaction information to the customer's email.
4. AIMS software saves the payment transaction.

6. Alternative flows:

No	Location	Condition	Action	Resume location
1	Step 2	If customer asks to pay the order by VNPay	AIMS software redirects to VNPay with payment information	Step 3
2	Step 4	If customer cancels the payment transactions		Step 1

7. Input data

No	Data fields	Descriptions	Mandatory	Valid condition	Example

8. Output data

No	Data fields	Descriptions	Display format	Example
1	Title	Title of a media product		Product_name
2	Price	Price of the corresponding media product	- Comma for thousands separator - Positive integer - Right alignment	123,000
3	Quantity	Quantity of the corresponding media product	- Positive integer - Right alignment	2
4	Amount	Total money of the corresponding media product	- Comma for thousands separator - Positive integer - Right alignment	123,000
5	Subtotal before VAT	Total price of products in the cart before VAT	- Comma for thousands separator - Positive integer - Right alignment	123,000
6	Subtotal	Total price of products in the cart with VAT		123,000
7	Shipping fees			123,000
8	Total	Sum of subtotal and shipping fees		123,000
9	Currency			VND
10	Name			Name
11	Phone number			Number
12	Province			Province
13	Address			Address
14	Shipping instructions			

9. Postconditions: None

3.3 Use case "Place Rush Order"

Use case "Place rush order"

1. Use case code: UC003

2. Brief descriptions:
- This use case describes the interaction between customer and AIMS software when customer wants to place rush order.

3. Actors:
3.1. Customer
3.2. AIMS software

4. Preconditions:
- The customer needs to review the cart and select the products they want to purchase.
- There is at least one item in the cart.

5. Basic flow of events:
1. Customer requests to place rush orders.
2. AIMS software check delivery address and eligible products.
3. AIMS software requests additional delivery information and calculates and displays order and shipping fees.
4. Customer asks to pay order.
5. AIMS software calls use case "Pay Order".
6. AIMS software creates a new order.
7. AIMS software makes the cart empty.
8. AIMS software sends email about the order notification and information.
9. AIMS software displays the successful notification, the order and the transaction information.

6. Alternative flows:

No	Location	Condition	Action	Resume location
1	Step 2	If no products are eligible or delivery address doesn't support rush order delivery	AIMS software prompts the customer to update delivery information or delivery method	Use case end

7. Input data

No	Data fields	Descriptions	Mandatory	Valid condition	Example
1	Receiver name		Yes		Name
2	Phone number		Yes		Number
3	Province	Choose from a list	Yes		Province
4	Address		Yes		Address
5	Shipping instructions		No		

8. Output data

No	Data fields	Descriptions	Display format	Example
1	Title	Title of a media product		Product_name
2	Price	Price of the corresponding media product	- Comma for thousands separator - Positive integer - Right alignment	123,000
3	Quantity	Quantity of the corresponding media product	- Positive integer - Right alignment	2
4	Amount	Total money of the corresponding media product	- Comma for thousands separator - Positive integer - Right alignment	123,000
5	Subtotal before VAT	Total price of products in the cart before VAT	- Comma for thousands separator - Positive integer - Right alignment	123,000
6	Subtotal	Total price of products in the cart with VAT		123,000
7	Shipping fees			123,000
8	Total	Sum of subtotal and shipping fees		123,000
9	Currency			VND
10	Name			Name

11	Phone number				Number
12	Province				Province
13	Address				Address
14	Shipping instructions				
15	Transaction ID				
16	Transaction content				
17	Transaction date		dd/mm/yy		

9. Postconditions:

- A new order is created, and its information is sent via email to the customer or nothing happens if payment is not successful.

4 Supplementary specification

4.1 Functionality

<Functional requirements that are general to many use cases>

4.2 Usability

<Requirements that relate to, or affect, the usability of the system. Examples include ease-of-use requirements or training requirements that specify how readily the system can be used by its actors>

4.3 Reliability

<Any requirements concerning the reliability of the system. Quantitative measures such as mean time between failure or defects per thousand lines of code should be stated>

4.4 Performance

- Can serve up to 1,000 customers simultaneously without significantly reducing performance.

- Can operate continuously for 300 hours without failure.

- Can resume normal operation within a maximum of 1 hour after an incident.

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

4.5 Supportability

4.6 Other requirements