

HANOI UNIVERSITY OF SCIENCE AND TECHNOLOGY

School of Information and Communications Technology

Software Requirement Specification

Version 1.2

AIMS Project

Subject: ITSS Software Development

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1 Introduction

<The following subsections of the Software Requirements Specifications (SRS) document should provide an overview of the entire SRS. The thing to keep in mind as you write this document is that you are telling what the system must do – so that designers can ultimately build it. Do not use this document for design!!!>

1.1 Objective

<Identify the purpose of this SRS and its intended audience. In this subsection, describe the purpose of the particular SRS and specify the intended audience for the SRS>

1.2 Scope

<In this subsection:

- (1) Identify the software product(s) to be produced by name*
- (2) Explain what the software product(s) will, and, if necessary, will not do*
- (3) Describe the application of the software being specified, including relevant benefits, objectives, and goals*
- (4) Be consistent with similar statements in higher-level specifications if they exist*

This should be an executive-level summary. Do not enumerate the whole requirements list here>

1.3 Glossary

<i>No</i>	<i>Term</i>	<i>Explanation</i>	<i>Example</i>	<i>Note</i>
1	Desktop E-commerce Software	Software application installed on a computer that allows businesses to sell products online.	AIMS is a desktop e-commerce software designed for businesses to manage their online store.	This type of software typically doesn't require internet access to function.
2	24/7	Twenty-four hours a day, seven days a week.	AIMS operates 24/7, meaning businesses can manage their	

<i>No</i>	<i>Term</i>	<i>Explanation</i>	<i>Example</i>	<i>Note</i>
			store at any time.	
3	User-Friendly	Easy to learn and use, even for people with no prior experience.	AIMS is designed to be user-friendly so new users can quickly become familiar with its features.	
4	Scalability	The ability of a system to handle an increasing number of users or workload without significant performance degradation.	AIMS can serve up to 1,000 customers simultaneously without slowing down.	This is important for businesses that expect to grow their customer base.
5	Uptime	The amount of time a system is operational.	AIMS can operate continuously for 300 hours without failure.	High uptime ensures customers can access the store consistently.
6	Downtime	The amount of time a system is unavailable.	AIMS can resume normal operation within a maximum of 1 hour after an incident.	Minimizing downtime helps businesses avoid lost sales.
7	Response Time	The time it takes for a system to respond to a user's request.	AIMS has a maximum response time of 2 seconds under normal conditions and 5 seconds	Faster response times improve user experience.

<i>No</i>	<i>Term</i>	<i>Explanation</i>	<i>Example</i>	<i>Note</i>
			during peak hours.	
8	Product Manager	An individual responsible for managing the information and availability of products within an e-commerce platform.	In AIMS, product managers can add, edit, or delete products.	
9	CRUD Operations	Create, Read, Update, and Delete. These are the fundamental actions performed on data in software applications.	Product managers can perform CRUD operations on products within AIMS.	
10	Value-Added Tax (VAT)	A tax added to the price of a good or service at the point of sale.	The value and price entered for products in AIMS do not include the 10% VAT.	The software might calculate the final price including VAT during checkout.
11	Inventory	A list of items held by a business for sale.	The quantity field in AIMS helps track product inventory levels.	
12	Price Inflation	A significant increase in the price of goods and services over time.	AIMS limits price changes to prevent excessive price inflation.	
13	Audit Trail	A chronological record of user activity within a system.	AIMS will store a history of product addition, editing, and	This helps track changes made to products and identify any potential issues.

<i>No</i>	<i>Term</i>	<i>Explanation</i>	<i>Example</i>	<i>Note</i>
			deletion operations.	
14	User Role	A set of permissions that define what a user can do within a system.	In AIMS, users can have multiple roles, such as administrator or product manager.	
15	Product Attribute	A characteristic or quality of a product used for searching and filtering.	Customers can search for products using product attributes in AIMS.	Examples of product attributes might be title, author, genre, or price range.
16	Input Validation	The process of checking user input for errors or invalid data.	AIMS will check the delivery information entered by customers and ask them to update if there are any missing fields or invalid entries.	This helps prevent errors during order processing.
17	Invoice	A detailed list of products or services sold, their quantities, prices, and the total amount due.	AIMS will display a temporary invoice to customers before payment.	The invoice includes information such as product details, prices, delivery fees, and the total amount to be paid.

<i>No</i>	<i>Term</i>	<i>Explanation</i>	<i>Example</i>	<i>Note</i>
18	Payment Gateway	A secure online service that authorizes payments between customers and businesses.	AIMS connects to VNPay for credit card payments.	VNPay processes the payment transactions securely.
19	Rush Order Delivery	A delivery option that prioritizes faster delivery times for an additional fee.	Customers can choose rush order delivery in AIMS for eligible items within a specific timeframe.	
20	Pre-arranged Timeframe	An agreed-upon window of time for delivery.	Rush order delivery in AIMS offers a pre-arranged timeframe of 2 hours.	
21	Order Processing	The steps involved in fulfilling an order, from receiving the order to delivering the products.	After successful payment, the AIMS software will move the order to a pending processing state.	This may involve activities like picking, packing, and shipping the order.

1.4 References

2 Overall Description

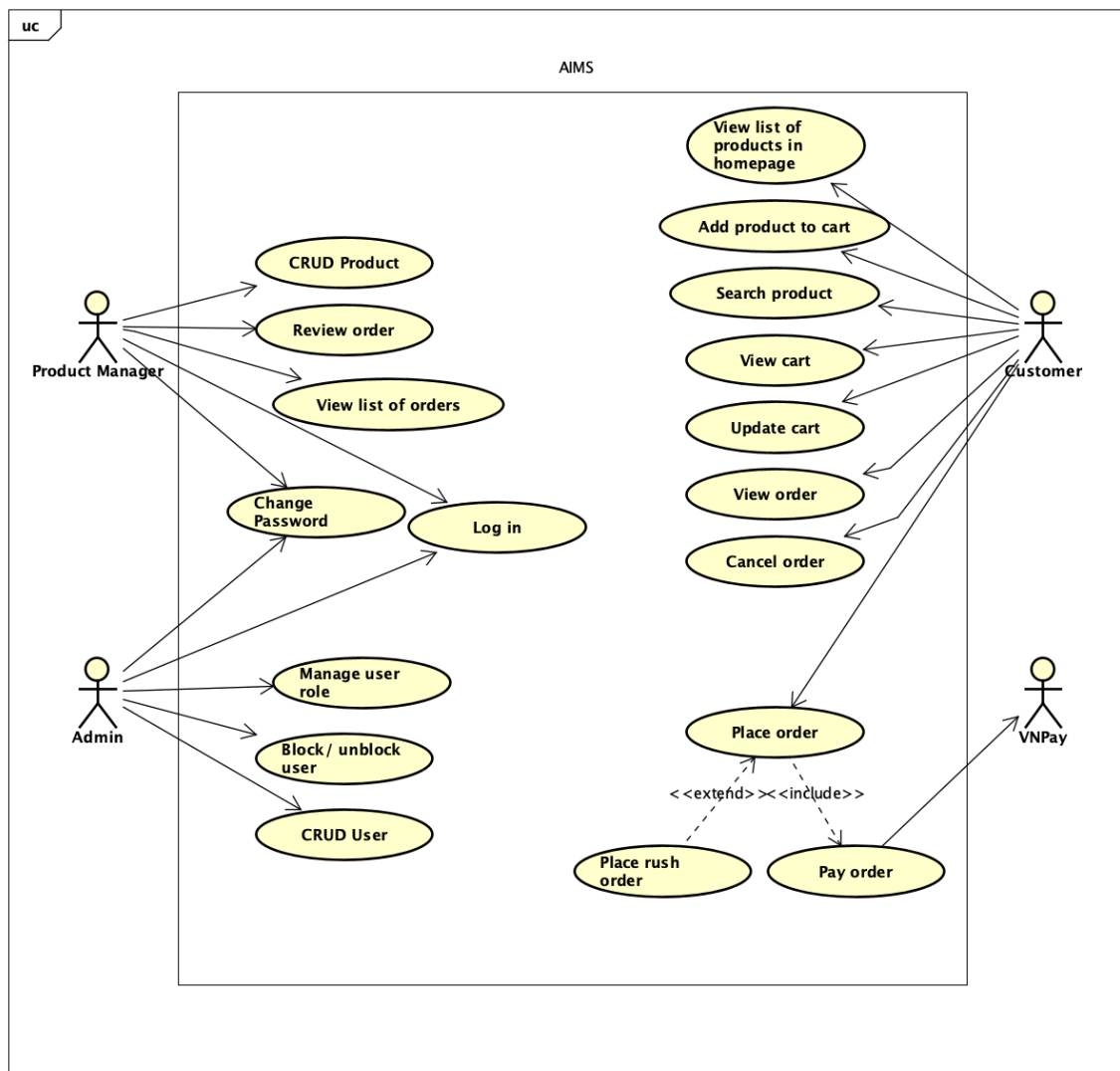
2.1 Survey

AIMS Project is a desktop e-commerce software that operates 24/7 that let users purchase media available from the store.

List of actors

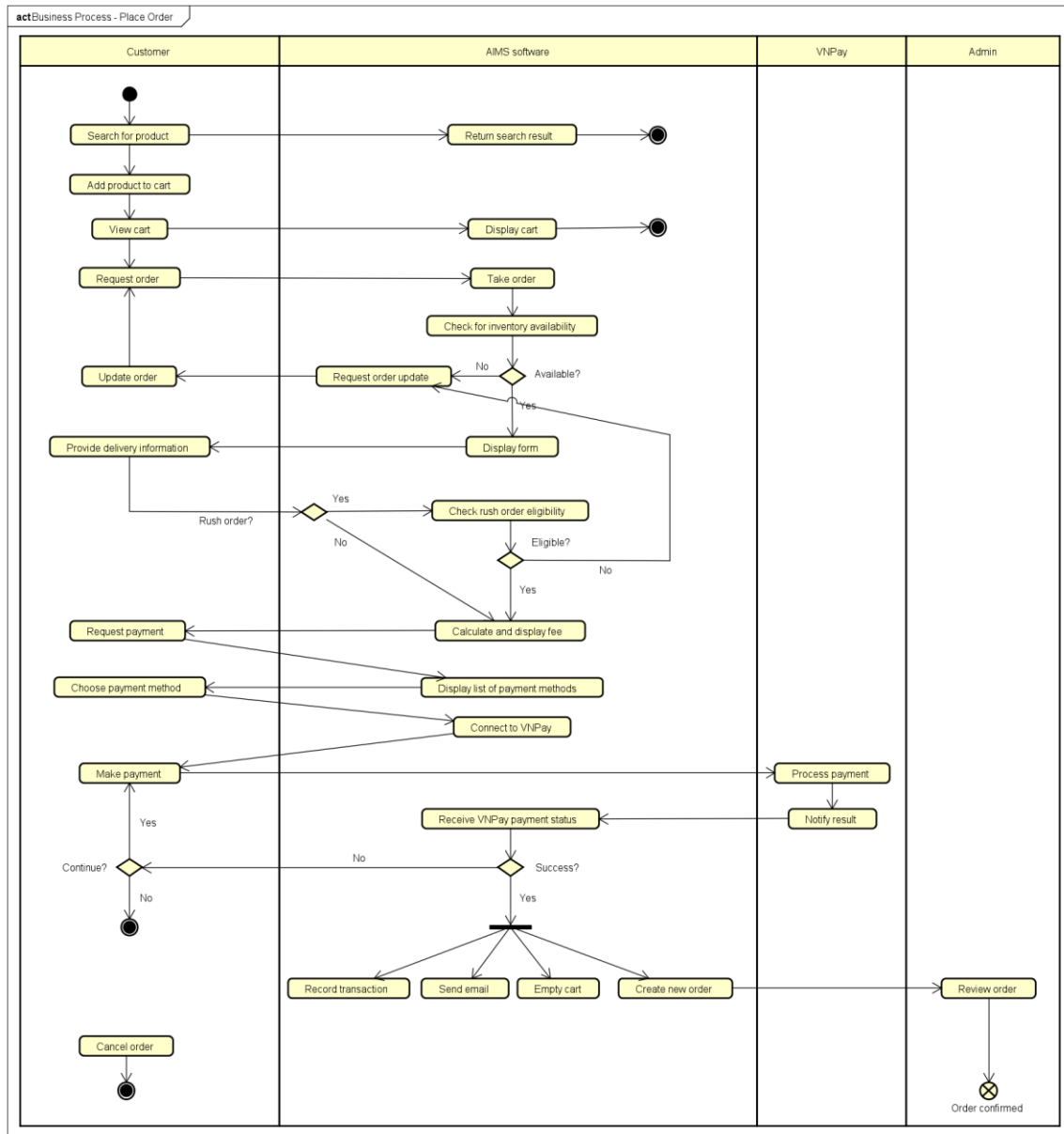
- Customer
- Product manager
- Administrator
- VNPay

2.2 Overall requirements



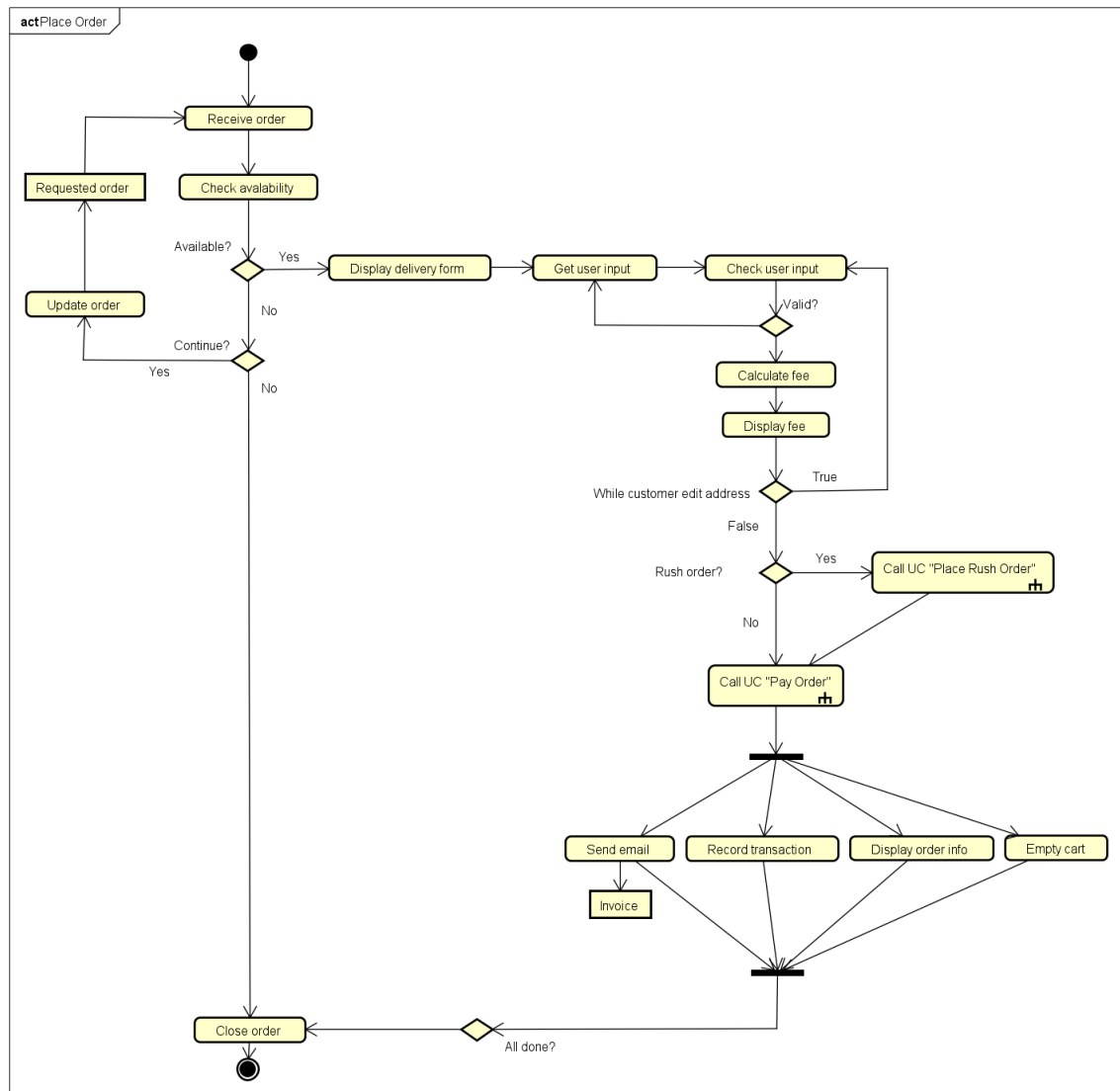
2.3 Business process

2.3.1. Place Order



3 Detailed Requirements

3.1 Use case “Place Order”



Use Case “Place Order”

1. Use case code

UC001

2. Brief Description

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

3. Actors

3.1 Customer

4. Preconditions

5. Basic Flow of Events

#	Doer	Actions
1	Customer	views the cart
2	Customer	requests to place an order
3	AIMS software	checks for inventory quantity
4	AIMS software	displays the form of delivery information with order information
5	Customer	provides delivery information
6	AIMS software	calculates and displays order and shipping fees (See Table A)
7	Customer	asks to pay order
8	AIMS software	calls UC “Pay Order”
9	AIMS software	creates a new order
10	AIMS software	empties the cart
11	AIMS software	sends invoice and payment transaction to the customer’s email
12	AIMS software	displays general information of the order (see Table C)

6. Alternative flows

Table N-Alternative flows of events for UC Place Order

No	Location	Condition	Action	Resume location
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1.	At Step 3	If the products are not available	▪ The AIMS software notifies that the the products in the cart are not available and stay at the use case “View cart”	Use case ends
2.	At Step 5	If the delivery info is invalid	▪ AIMS software notifies that the delivery info is invalid (blank or wrong format)	At Step 3
3.	At Step 5	If the user chooses to place a rush order	▪ AIMS software inserts use case “Place rush order”	At Step 6
4.	At Step 8	If the order payment is not successful or goes back from payment	▪ AIMS notifies “unsuccessful payment”	At Step 5

7. Input data

Table A-Input data of delivery information

No	Data fields	Description	Mandatory	Valid condition	Example
1.	Receiver Name		Yes		Nguyen Tieu Phuong
2.	Phone Number		Yes	10 digits	0987654321
3.	Province	Choose from a list	Yes		Hanoi
4.	Address		Yes		1 st Dai Co Viet Street, Hai Ba Trung District
5.	Shipping message		No		

8. Output data

Table B-Output data of order information and shipping fee

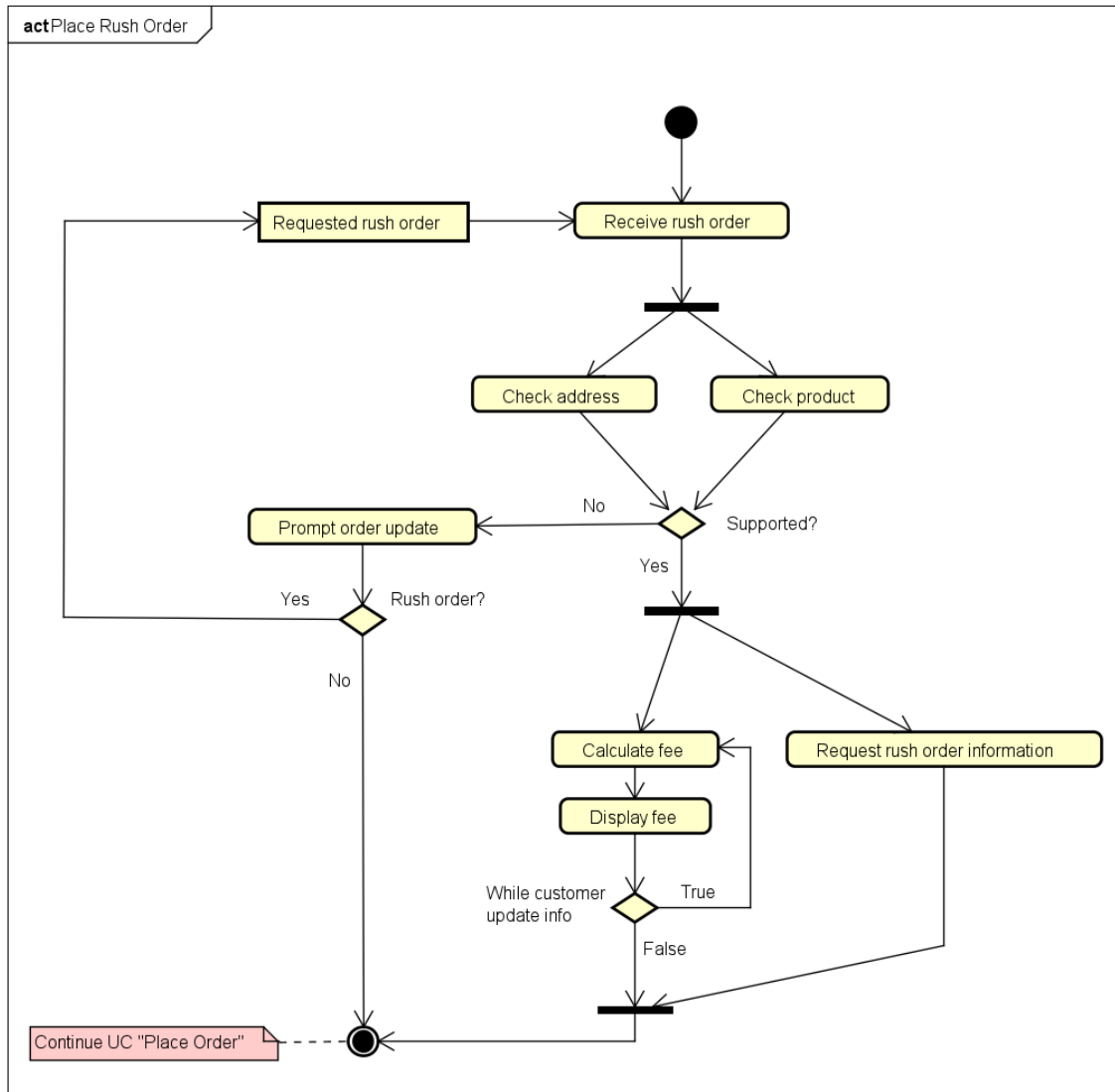
No	Data fields	Description	Display format	Example
1.	Title	Title of a media product		DVD Peach, Pho, Piano
2.	Price	Price of the corresponding media	<ul style="list-style-type: none"> Comma for thousands separator Positive integer Right alignment 	60,000
3.	Quantity	Quantity of the corresponding media	<ul style="list-style-type: none"> Positive integer Right alignment 	3
4.	Amount	Total money of the corresponding media	<ul style="list-style-type: none"> Comma for thousands separator Positive integer Right alignment 	180,000
5.	Subtotal	Total amount of all products in the order		1,035,000
6.	Shipping fee			30,000

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

No	Data fields	Description	Display format	Example
1.	Customer name			Nguyen Tieu Phuong
2.	Phone number			0987654321
3.	Province			Hanoi
4.	Address			1 st Dai Co Viet Street, Hai Ba Trung District
5.	Total amount		<ul style="list-style-type: none"> Right alignment Vietnamese currency (VND) Vietnamese locale 	1,035,000
6.	Transaction ID			
7.	Transaction content			
8.	Transaction date time		DD/MM/YYYY HH:MM	08/03/2024 21:04

9. Postconditions

3.2 Use case “Place Rush Order”



Use Case “Place Rush Order”

10. Use case code

UC002

11. Brief Description

This use case describes the interaction between customer and the AIMS software when the customer wants to place a rush order.

12. Actors

12.1 Customer

13. Preconditions

14. Basic Flow of Events

#	Doer	Actions
1	Customer	requests to place a rush order.
2	AIMS software	checks whether the delivery address supports this service and if any products are eligible.
3	AIMS software	displays the item list along with rush order eligibility status and fee
3	AIMS software	requests additional rush order delivery information.
4	Customer	provides the rush order delivery information. (see Table A)

15. Alternative flows

Table N-Alternative flows of events for UC Place order

No	Location	Condition	Action	Resume location
5.	At Step 2	If no products are eligible or the delivery address doesn't support rush order delivery	<ul style="list-style-type: none"> The software prompts the customer to update the delivery information or delivery method. 	End use case
6.	At Step 4	If the customer wants to adjust the delivery method or the items they wish to purchase		Resumes at Step 5

16. Input data

Table A-Input data of rush delivery information

No	Data fields	Description	Mandatory	Valid condition	Example
6.	Delivery time		Yes	HH:MM	15:40
7.	Delivery instruction		No		

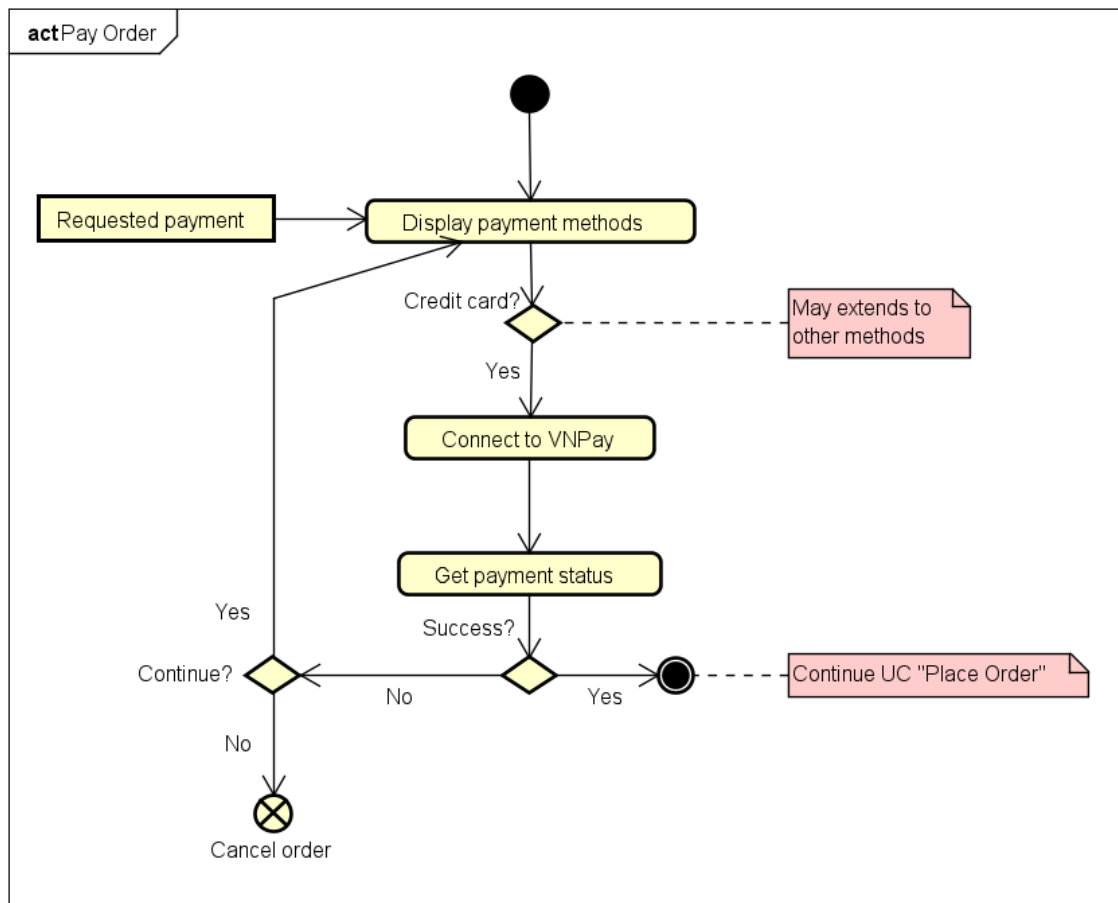
17. Output data

Table B-Output data of ...

No	Data fields	Description	Display format	Example
7.				

18. Postconditions

3.3 Use case “Pay Order”



Use Case “Pay Order”

19. Use case code

UC003

20. Brief Description

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

21. Actors

21.1 Customer

21.2 VNPay

22. Preconditions

23. Basic Flow of Events

#	Doer	Actions
1	Customer	chooses the payment method.
2	AIMS software	connects to VNPay for further payment by credit cards.
3	AIMS software	redirects to VNPay with payment information
4	VNPay	notifies the transaction result
5	AIMS software	saves the payment transaction.

24. Alternative flows

Table N-Alternative flows of events for UC Pay Order

No	Location	Condition	Action	Resume location
7.	At Step 4	If customer does not complete mandatory field(s)	▪ VNPay requires customer to provide the information before proceeding	Resumes at Step 3
8.	At Step 5	If the payment is not successful	▪ VNPay notifies the customer about the failed payment	Resumes at Step 3

9.	At Step 5	If the customer cancels the payment transaction	▪	Resumes at Step 1
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25. Input data

Table A-Input data of payment information

No	Data fields	Description	Mandatory	Valid condition	Example
8.	Card number		Yes	<ul style="list-style-type: none"> 16-digit number Valid credit card number 	9704 5356 4413 6232
9.	Expiration date		Yes	MM/YY	08/27
10.	Security code (CVV code)		Yes	3-digit number	123

26. Output data

Table B-Output data of ...

No	Data fields	Description	Display format	Example
8.				

27. Postconditions

4 Supplementary specification

4.1 Functionality

<Functional requirements that are general to many use cases>

4.2 Usability

AIMS Project allows new users to easily familiarize themselves.

4.3 Reliability

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.

4.4 Performance

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

4.5 Supportability

<Any requirements that will enhance the supportability or maintainability of the system being built>

4.6 Other requirements

<Descriptions of other requirements are located here>