HANOI UNIVERSITY OF SCIENCE AND TECHNOLOGY

School of Information and Communications Technology

Software Requirement Specification

Version 1.2

AIMS: An Internet Media Store

Subject: ITSS Software Development

Class: 156812

Group 24

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1. Introduction

1.1. Objective

The main purpose of this SRS document is to provide a comprehensive overview of the AIMS: An Internet Media Store software, ensuring that all stakeholders have a clear understanding of the software's requirements. It serves as a foundation for the development and design of the AIMS system, facilitating effective communication between development team and other stakeholders, including users, clients.

1.2. Scope

AIMS Project is developed to be 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.

In AIMS, product managers can systematically manage their products for sale, while administrators can manage users. Customers can not only easily search for products as they desire, but also place orders or place rush orders if necessary. This software supports VNPay transactions, which helps customers to pay orders fast and efficiently.

1.3. Glossary

No	Term	Explanation	Example	Note
1.	VAT(value-added tax)	A consumption tax that is levied on the value added at each stage of a product's production and distribution		
2.	API(Application Programming Interface)	A collection of communication protocols and subroutines used by various programs to communicate between them	VNPay API	AIMS connects to API of VNPay for transaction

1.4.   References

- AIMS-ProblemStatement-v2.0.pdf

2. Overall Description

This section presents a survey of the overall description of the AIMS software, including its key stakeholders and main functionalities. Additionally, it examines the primary business processes of the software, illustrating them through activity diagrams.

2.1. *Survey*

The system under consideration is an internet media store designed to facilitate customers' online purchase of digital media products. This software acts as a comprehensive platform, serving both customers and shop or product managers.

This system includes 3 main actors:

- **Customer:** Customers can view, search or sort by various criteria of the products that are available in the store. To place an order, they need to add, update products in the cart and provide delivery information. If all information is valid, and the products are available, customers then proceed to pay the order through the VNPay platform. If the order is created successfully, they will receive an invoice message from the AIMS software through email. Moreover, customers can also choose to place rush orders, in order to get their delivery in 2 hours.
- **Product manager:** They manage their products in their shop through the user interface for the manager, provided by the AIMS software. They can add, update information and remove their products from the shop. Product managers can also apply sales for their products.
- **Administrator:** They can gain access to manage users in the system. They can also block or unblock the user (customer, product manager) and the system will send an email to that account. In addition, the administrator can also change the role of the user, like a user can be a customer and a product manager at the same time.

Besides, VNPay is also a stakeholder in the system when they supply the API to make the transaction in the AIMS software.

2.2. *Overall requirements*

The figure below shows the general use case diagram of AIMS software, which includes the actors and use cases that are involved in the system.
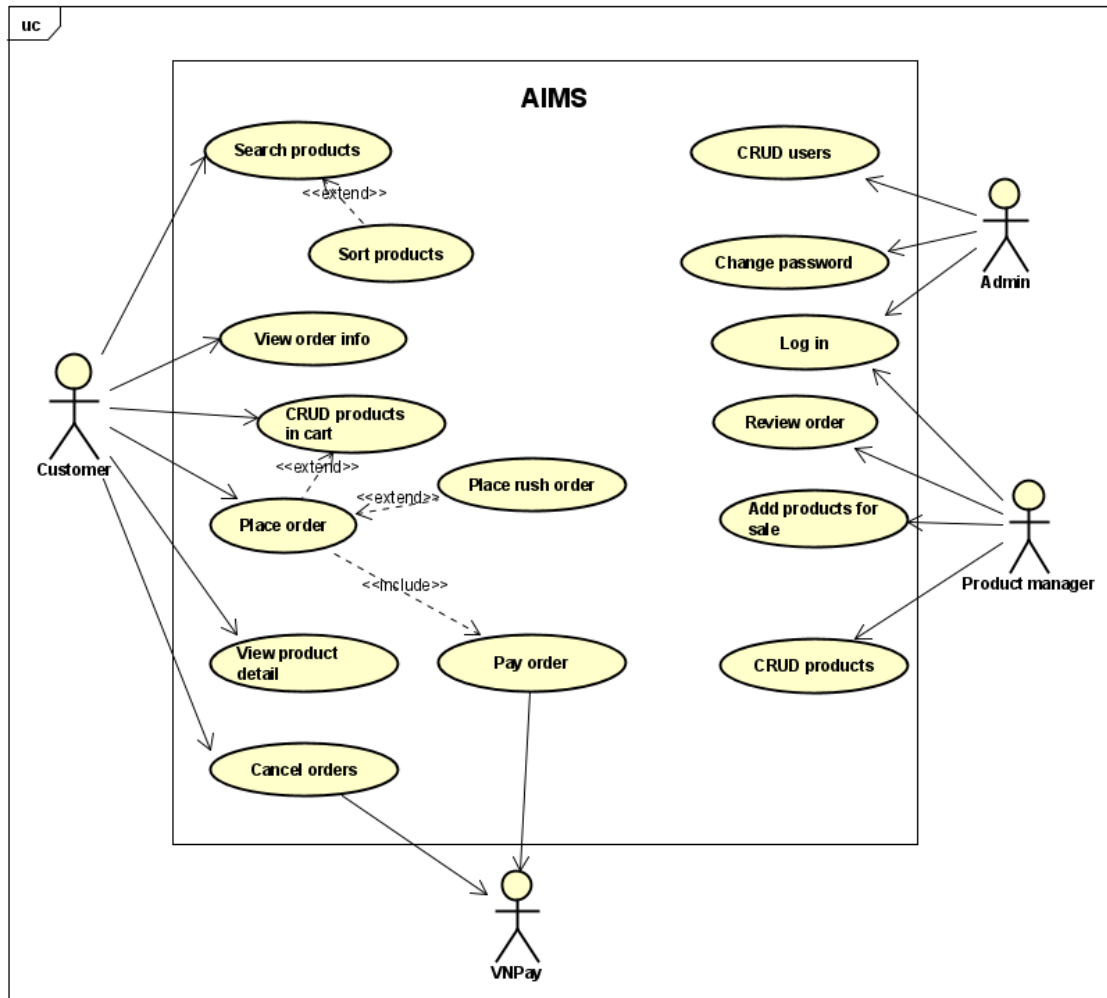
Figure 1: AIMS UseCase Diagram

2.3. Business process

AIMS software consists of 3 main business operations: "Place order" by the customer, "Manage product" by the product manager and "Manage user" by administrator. Additionally, AIMS software utilizes the VNPay transaction API to make any payment or refund transaction. The details of each business process are described by an activity diagram in each section of each one.

Activity diagrams visually represent workflows, decision points, and resource allocation, aiding stakeholders in analyzing and optimizing business processes. They also serve as documentation tools, enhancing communication and collaboration.

2.3.1. Operation "Place order":

Figure 2: "Place order" activity diagram

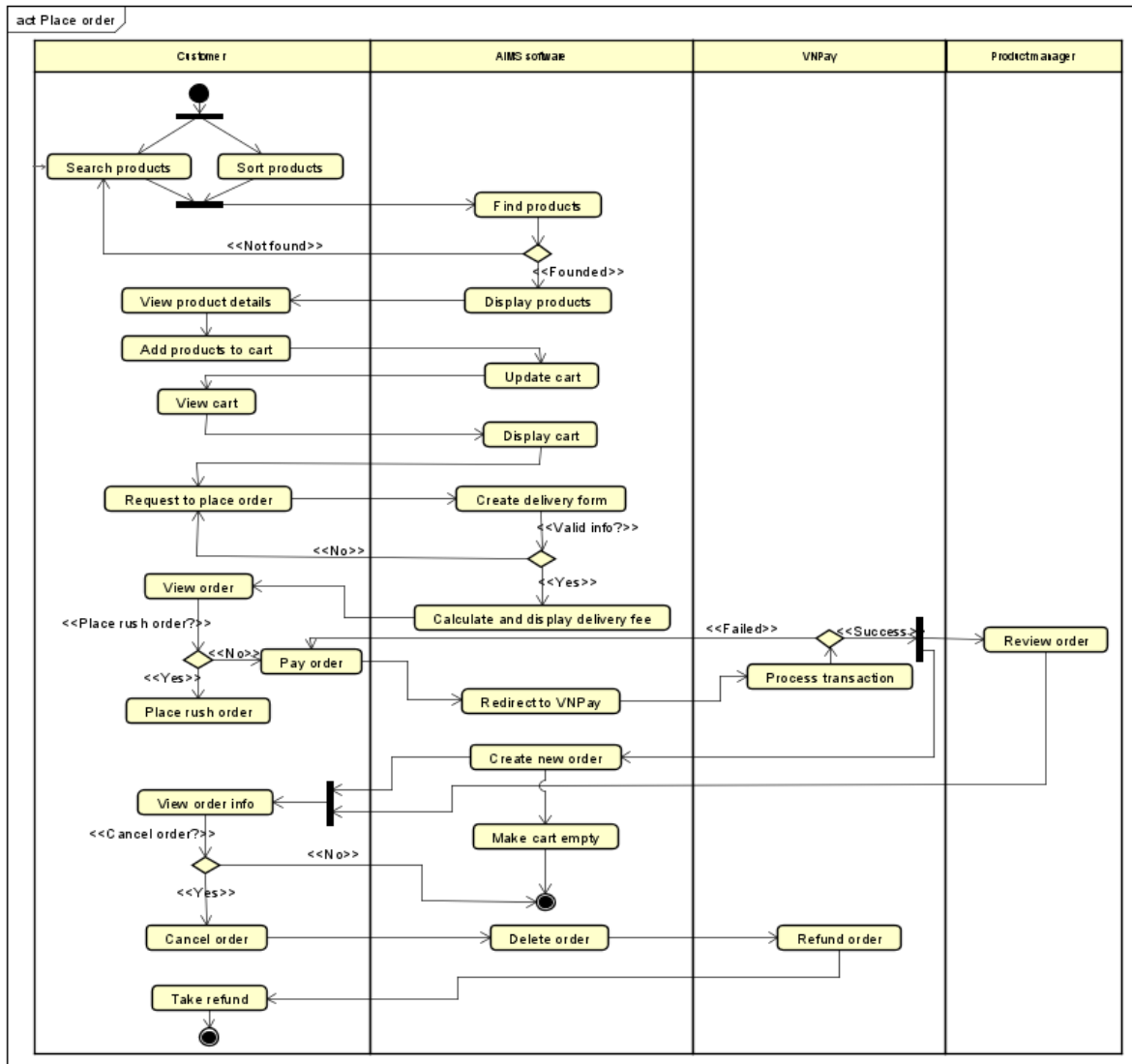## 2.3.2. Operation "Manage product" - by product manager:

- Add product:
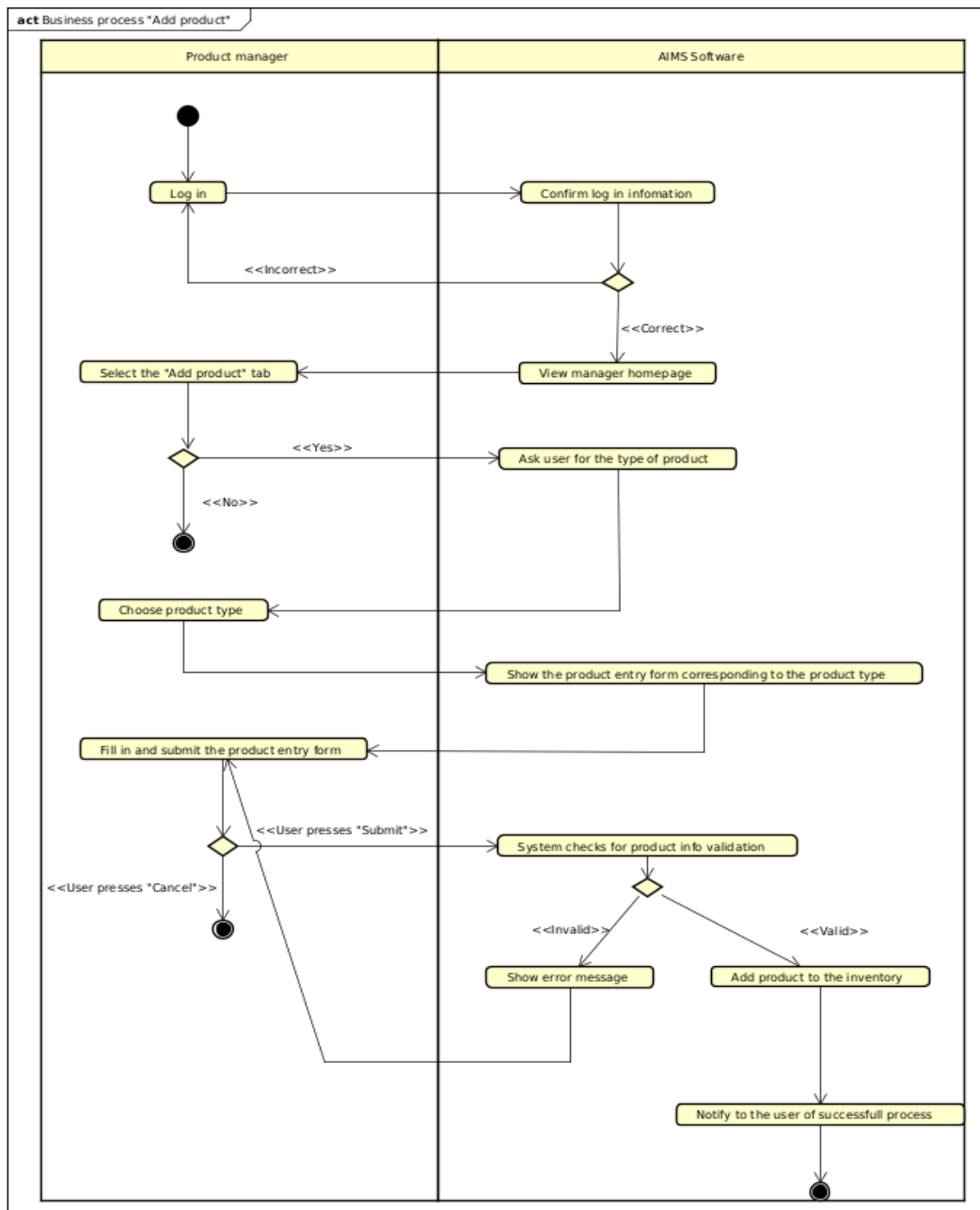
Figure 3: "Add product" activity diagram

- Update product:

Product manager	AIMS Software

Log in

Confirm log in infomation

<<Incorrect>>

<<Correct>>

Select the "Update product" tab

View manager homepage

<<Yes>>

Check if more than 30 products are updated on the current date (including the selected item)

<<No>>

<<No>>

<<Yes>>

Select a product that needs updating

Show the list of products in the inventory

Show a error message

Show the product update form corresponding to the selected item

Fill in and submit the product update form

System checks for product info validation

<<User presses "Submit">>

<<Invalid>>

<<Valid>>

<<User presses "Cancel">>

Show error message

Update the selected item in the inventory

Increment the number of updated product on the current date

Notify to the user of successfull process
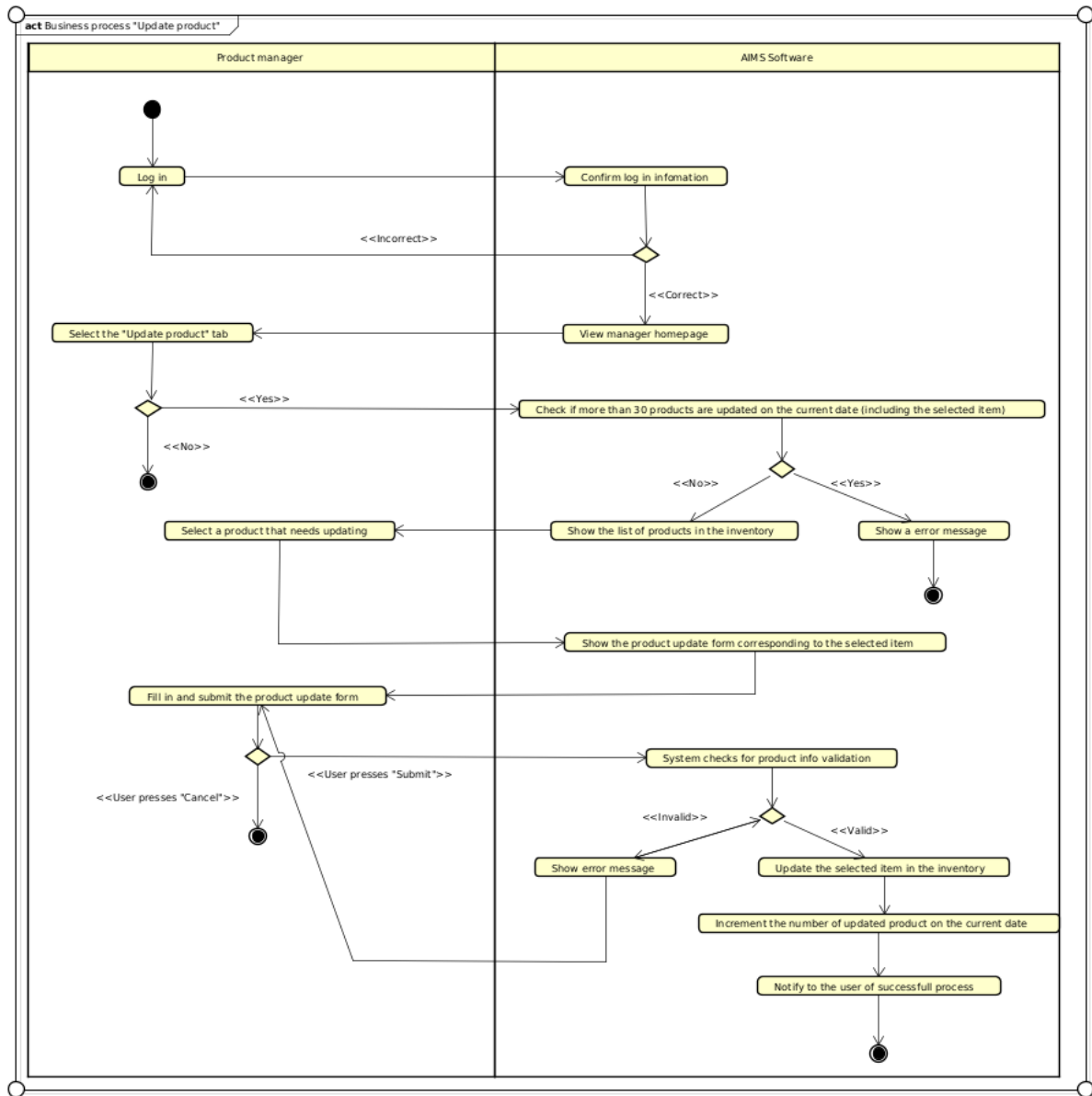
Figure 4: "Update product" activity diagram

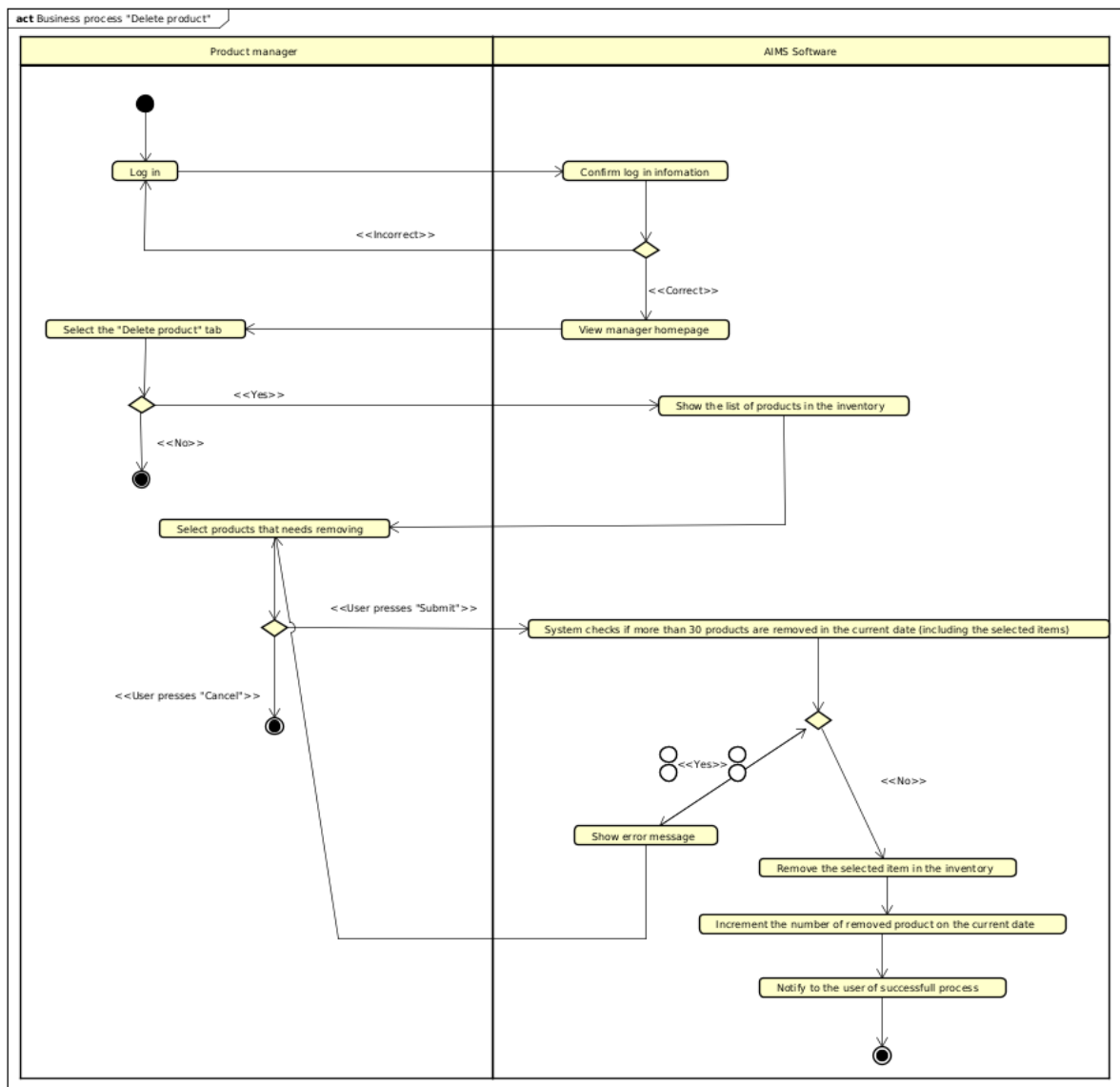- Delete product:

8

Figure 5: "Delete product" activity diagram

2.3.3. Operation "Manage user" - by administrator:

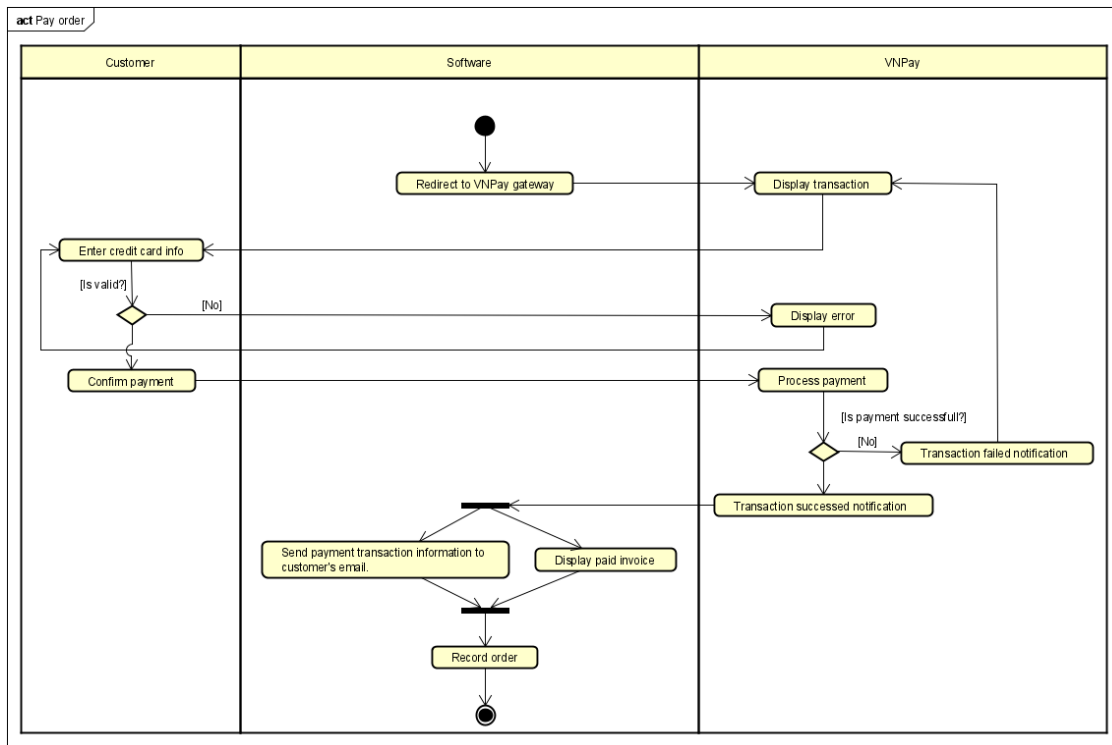*<To be updated…>*

2.3.4. "Pay order" through VNPay:

Figure 6: "Pay order" activity diagram

3. Detailed Requirements

3.1. *Place order*

<div style="border:1px solid black; padding:10px;">

Use Case "Place Order"

1. Use case code

UC001

2. Brief Description

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

3. Actors

- Customer

4. Preconditions

- Cart must have at least 1 item
- VNPay system is available for payment

5. Basic Flow of Events

1. Customer selects products and requests to place order

2. Software checks the product availability

3. Software checks the product availability

4. Customer provides submit delivery information

5. Software checks the validity of the delivery information

6. Software calculates the shipping fee

7. Software displays the invoice

8. Customer selects payment method and asks for payment

9. Software connects to VNPay to start the payment transaction

</div>

10. Customer performs the payment transaction with VNPay

11. Software saves the payment transaction

12. Software saves the new order

13. Software sends email to customer for the success order

14. Software makes cart empty

15. Software displays order and payment information

6. Alternative flows

Table 1-Alternative flows of events for UC "Place order"

No	Location	Condition	Action	Resume location
1.	At Step 2	If the products are not available	AIMS software notifies that the product is not available and stay at the previous use case	Use case ends
2.	At Step 4	If customer choose "Place rush order"	AIMS software inserts the use case "Place rush order"	Resumes at Step 5
3.	At Step 5	If the delivery information is invalid	AIMS software displays error: "Invalid delivery info"	Resumes at Step 4
4.	At Step 10	If the order payment is not successful or goes back from payment	AIMS software displays error: "Failed transaction"	Resumes at Step 10

7.   Input data

Table 2-Input data of delivery information

No	Data fields	Description	Mandatory	Valid condition	Example
1.	Receiver Name	Receiver's full name	Yes	Only alphabetical characters	Vu Nguyen Hao
2.	Email	Email for order confirmation	Yes	Valid email format	haovn@gmail.com
3.	Phone Number	Phone number for contacting recipient	Yes	10 digits	039xxxxxxx
4.	Province	City or Province name, choose from a list of options			Ha Noi
5.	Delivery address	Receiver's desired shipping address	Yes		Dai hoc Bach khoa Ha noi – Hai Ba Trung – Hanoi
6.	Delivery method	Choose normal delivery or	Yes		Rush order

No	Data fields	Description	Display format	Example
		"rush order"		
7.	Shipping instruction	Instructions and notes for shipping	No		Fragile,…

8.   Output data

Table 3-Output data of transaction

No	Data fields	Description	Display format	Example
1.	Title	Title of a product	Text	DVD abd
2.	Price	Price of the product	-Comma for thousands separator -Positive integer -Right alignment	123,000
3.	Quantity	Quantity of the product	Positive integer	2
4.	Amount	Total money of the product	-Comma for thousands separator -Positive integer -Right alignment	246,000
5.	Subtotal before VAT	Total price of products in the order before VAT		2,106,000
6.	Subtotal	Total price of products in the		2,316,600

No	Data fields	Description	Display format	Example
		order with VAT		
7.	Shipping fee	The fee for delivery		30,000
8.	Total	Sum of subtotal and shipping fee		2,346,600

Table 4-General information of the order and transaction information

No	Data fields	Description	Display format	Example
1.	Customer name	Full of name of customer	Text	Vu Nguyen Hao
2.	Phone number	The phone number of the customer	10 digits	039xxxxxxx
3.	Shipping address	Address of the customer	Text	Dai hoc Bach khoa Ha noi – Hai Ba Trung – Hanoi
4.	Province	Province of the shipping address	Text	Hanoi
5.	Total amount	Total cost of the order	-Comma for thousands separator -Positive integer -Right alignment	1,200,000

6.	Transaction ID	Unique identifier for the transaction	Alphanumeric	TRAN001
7.	Transaction content	Transaction message of customer	Text	VNPay Payment - ORD001
8.	Transaction date	Date of the transaction	dd/mm/yy	05/10/2024

9. Postconditions

- When the order is placed, the customer receives the confirmation via email
- The AIMS software records and stores the payment transaction information and the successfully paid order
- Update the inventory after the order has been placed and empty the cart

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Use Case "*Add products*"

1. Use case code
UC002

2. Brief Description
This use case describes the interaction between the product manager and the AIMS system when the product manager wishes to add new products to the system.

3. Actors

a. Product manager
- A product manager is an individual responsible for managing product listings, including adding, updating, or modifying product details in the system, to ensure that they meet business goals and customer needs.
- Product managers can only add one product at a time.
- Product managers can add an unlimited amount of products in a day.

4. Preconditions
- Product manager must be logged into the system.
- Currently, the software exclusively supports the buying and selling of physical media products. These products must include a barcode, product description (such as new, used, primary color, and return condition), quantity, warehouse entry date, dimensions, and weight.

5. Basic Flow of Events
1. The product manager logs into the system.
2. The product manager navigates to the product management tab.
3. The system shows a list box containing modifying options.
4. The product manager chooses the "Add a new product" button.
5. The system shows a dialog that asks for the type of product (Books, CDs, LP records, DVDs)
6. The software displays a product entry form corresponding to the product type.
7. The product manager fills in and submits the product entry form.
8. Software checks for the validation of the form.
9. The system adds the products to the inventory.
10. The system displays a textbox confirming the successful completion of the product entry process.
11. The system saves the data of the product entry form in the memory.

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6. Alternative flows

Table 1-Alternative flows of events for UC Add products

No	Location	Condition	Action	Resume location
1.	At Step 1	If the login information is invalid.	▪ System asks the user to enter the login information again.	Resumes at Step 1.
2.	At Step 4	If the product manager does not select the "Add product" button.		The use case ends.
3.	At Step 7	If the product manager presses the "Cancel" button.	▪ The system asks the product manager to confirm.	▪ If the user presses "Yes", the use case ends. ▪ If the user presses "No", resumes at Step 7.
4.	At Step 8	If the data in the product entry form is insufficient or invalid.	▪ The system displays an error message to notify the user.	Resumes at Step 7.
	At Step 8	If the product is already in the inventory.	▪ The system will notify the user ▪ The quantity of this entry will be accumulated to the quantity in the inventory..	Resumes at step 10..

7. Input data

Table 2-Input data of product entry form for "Book" product type

No	Data fields	Description	Mandatory	Valid condition	Example

1.	Title	The name of the product.	Yes		Wuthering Heights
	Category	The classification or group that the product belongs to.	Yes		Psychological Fiction, Romanticism
	Author	The person or entity that created the content of the book.	Yes		Emily Brontë
	Price	The price per product (excluding tax) in VND	Yes		100000
	Cover type	The material and format of the book's outer covering	Yes	Paperback/ hardcover	Paperback
	Publisher	An individual or company responsible for producing and distributing the book	Yes		Nha xuat ban Giao duc Viet Nam
7..	Publication date	The time when the publisher officially publishes the book.	Yes	dd/mm/yyyy	01/01/2025
	Number of pages	The number of pages per book.	No	A positive integer	300

No	Data fields	Description	Mandatory	Valid condition	Example
	Language	The languages that the book is written of	No		English
	Genre	Genre of the book			Gothic fiction
	Barcode	A pattern that stores the product information.	Yes		
	State	The status of the product based on its usage and wear.	Yes	Can be "New" or "Used"	New
	Product description	Some more description about the product.	No		
	Warehouse entry date	The date when the product enters the inventory	Yes	dd/mm/yyyy	05/01/2025
	Product dimensions	The measurements of the product (in centimetre)	Yes	Width x Length x Height	12.7 x 20.3 x 10.5
	Weight	The weight of a single product (in gram)	Yes	A positive number.	100

Table 3-Input data of product entry form for "CD" and "LP record" product type

No	Data fields	Description	Mandatory	Valid condition	Example

1.	Title	The name of the product.	Yes		Cheri Cheri Lady
	Category	The classification or group that the product belongs to.	Yes		Rock, Pop
	Artist	The person or entity that created the content of the product.	Yes		Modern Talking
	Price	The price per product (excluding tax) in VND	Yes		100000
	Record label	The company responsible for producing, distributing, and promoting music recordings.	Yes		Sony Music
	Tracklist	The ordered list of songs or audio recordings included on an album, CD, vinyl, or digital release	Yes		Song Title 1 – 3:45 Song Title 2 – 4:12 Song Title 3 (feat. Artist) – 3:58
7.	Genre	Genre of the product	Yes		Rock, Pop
	Release date	The date that the product is	No	dd/mm/yyyy	01/01/1980

		officially released			
	Barcode	A pattern that stores the product information.	Yes		
	State	The status of the product based on its usage and wear.	Yes	Can be "New" or "Used"	New
	Product description	Some more description about the product.	No		
	Warehouse entry date	The date when the product enters the inventory	Yes	dd/mm/yyyy	05/01/2025
	Product dimensions	The measurements of the product (in centimetre)	Yes	Width x Length x Height	12.7 x 20.3 x 10.5
	Weight	The weight of a single product (in gram)	Yes	A positive number.	100

Table 4-Input data of product entry form for "DVD" product type

No	Data fields	Description	Mandatory	Valid condition	Example
1.	Title	The name of the product.	Yes		The call of the Wild
	Disc type	The classification or group that	Yes	Blu-ray, HD-DVD	Blu-Ray

		the product belongs to.			
	Director	The person or entity that oversaw the creative aspect of the movie on DVD.	Yes		Chris Sanders
	Price	The price per product (excluding tax) in VND	Yes		100000
	Runtime	Total duration of the movie.	Yes	hh:mm:ss	02:30:01
	Studio	An individual or company responsible for producing the DVD	Yes		20th Century Studios
	Language	The languages of the DVD	Yes		English
	Subtitles	Information about the subtitles	Yes	Yes/No	Vietnamese subtitle
	Barcode	A pattern that stores the product information.	Yes		
	State	The status of the product based on its usage and wear.	Yes	Can be "New" or "Used"	New

Product description	Some more description about the product.	No		
Warehouse entry date	The date when the product enters the inventory	Yes	dd/mm/yyyy	05/01/2025
Product dimensions	The measurements of the product (in centimetre)	Yes	Width x Length x Height	12.7 x 20.3 x 10.5
Weight	The weight of a single product (in gram)	Yes	A positive number.	100

8. Output data

No

9. Postconditions

No

3.3.   Update products

Use Case "*Update products*"

1.   Use case code

UC003

2.   Brief Description

This use case describes the interaction between the product manager and the AIMS system when the product manager wishes to modify the details of products in the system.

3.   Actors

3.1   Product manager

- A product manager is an individual responsible for managing product listings, including adding, updating, or modifying product details in the system, to ensure that they meet business goals and customer needs.
- Product managers can only add one product at a time.
- Product managers can add an unlimited amount of products in a day.

4. Preconditions

- Product manager must be logged into the system.
- Currently, the software exclusively supports the buying and selling of physical media products. These products must include a barcode, product description (such as new, used, primary color, and return condition), quantity, warehouse entry date, dimensions, and weight.

5. Basic Flow of Events

1. The product manager logs into the system.
2. The product manager navigates to the product management tab.
3. The system shows a list box containing modifying options.
4. The product manager chooses the "Update product" button.
5. The system verifies whether more than 30 products have been updated on the current date.
6. The system shows a list of products in the inventory.
7. The product manager selects a product in the list.
8. Software shows the update form corresponding to the product type.
9. The manager fills in and submits the product update form.
10. Software checks for the validation of the form.
11. The system updates the products to the inventory.
12. The system displays a textbox confirming the successful completion of the product update process.
13. The system updates the number of updated products on the current date.
14. The system saves the data of the product update form.

6. Alternative flows

Table 1-Alternative flows of events for UC Update products

No	Location	Condition	Action	Resume location
1.	At Step 1	If the login information is invalid.	▪ System asks the user to enter the login information again.	Resumes at Step 1.

	At Step 4	If the product manager does not select the "Update product" button		The use case ends.
3.	At Step 5	If more than 30 products have been updated on the current date.	● The system shows an error message to notify the user	The use case ends.
4.	At Step 6	If the product manager presses the "Cancel" button.		The use case ends.
5.	At Step 8	If the data in the product update form is insufficient or invalid.	▪ The system displays an error message to notify the user.	Resumes at Step 8.
6.	At Step 8	If the product is already in the inventory.	▪ The system displays an error message to notify the user.	Resumes at Step 8.

7. Input data

Table 2-Input data of product update form for "Book" product type

No	Data fields	Description	Mandatory	Valid condition	Example
1.	Title	The name of the product.	Yes		Wuthering Heights
	Category	The classification or group that the product belongs to.	Yes		Psychological Fiction, Romanticism
	Author	The person or entity that created the	Yes		Emily Brontë

		content of the book.			
	Price	The price per product (excluding tax) in VND	Yes		100000
	Cover type	The material and format of the book's outer covering	Yes	Paperback/ hardcover	Paperback
	Publisher	An individual or company responsible for producing and distributing the book	Yes		Nha xuat ban Giao duc Viet Nam
7..	Publication date	The time when the publisher officially publishes the book.	Yes	dd/mm/yyyy	01/01/2025
	Number of pages	The number of pages per book.	No	A positive integer	300
	Language	The languages that the book is written of	No		English
	Genre	Genre of the book			Gothic fiction
	Barcode	A pattern that stores the product information.	Yes		

	State	The status of the product based on its usage and wear.	Yes	Can be "New" or "Used"	New
	Product description	Some more description about the product.	No		
	Warehouse entry date	The date when the product enters the inventory	Yes	dd/mm/yyyy	05/01/2025
	Product dimensions	The measurements of the product (in centimetre)	Yes	Width x Length x Height	12.7 x 20.3 x 10.5
	Weight	The weight of a single product (in gram)	Yes	A positive number.	100

Table 3-Input data of product update form for "CD" and "LP record" product type

No	Data fields	Description	Mandatory	Valid condition	Example
1.	Title	The name of the product.	Yes		Cheri Cheri Lady
	Category	The classification or group that the product belongs to.	Yes		Rock, Pop
	Artist	The person or entity that created the	Yes		Modern Talking

		content of the product.			
	Price	The price per product (excluding tax) in VND	Yes		100000
	Record label	The company responsible for producing, distributing, and promoting music recordings.	Yes		Sony Music
	Tracklist	The ordered list of songs or audio recordings included on an album, CD, vinyl, or digital release	Yes		Song Title 1 – 3:45 Song Title 2 – 4:12 Song Title 3 (feat. Artist) – 3:58
	Genre	Genre of the product	Yes		Rock, Pop
	Release date	The date that the product is officially released	No	dd/mm/yyyy	01/01/1980
	Barcode	A pattern that stores the product information.	Yes		
	State	The status of the product based on its	Yes	Can be "New" or "Used"	New

		usage and wear.			
	Product description	Some more description about the product.	No		
	Warehouse entry date	The date when the product enters the inventory	Yes	dd/mm/yyyy	05/01/2025
	Product dimensions	The measurements of the product (in centimetre)	Yes	Width x Length x Height	12.7 x 20.3 x 10.5
	Weight	The weight of a single product (in gram)	Yes	A positive number.	100

Table 4-Input data of product update form for "DVD" product type

No	Data fields	Description	Mandatory	Valid condition	Example
1.	Title	The name of the product.	Yes		The call of the Wild
	Disc type	The classification or group that the product belongs to.	Yes	Blu-ray, HD-DVD	Blu-Ray
	Director	The person or entity that oversaw the creative aspect of the movie on DVD.	Yes		Chris Sanders

Price	The price per product (excluding tax) in VND	Yes		100000
Runtime	Total duration of the movie.	Yes	hh:mm:ss	02:30:01
Studio	An individual or company responsible for producing the DVD	Yes		20th Century Studios
Language	The languages of the DVD	Yes		English
Subtitles	Information about the subtitles	Yes	Yes/No	Vietnamese subtitle
Barcode	A pattern that stores the product information.	Yes		
State	The status of the product based on its usage and wear.	Yes	Can be "New" or "Used"	New
Product description	Some more description about the product.	No		
Warehouse entry date	The date when the product enters the inventory	Yes	dd/mm/yyyy	05/01/2025
Product dimensions	The measurement	Yes	Width x Length x Height	12.7 x 20.3 x 10.5

		s of the product (in centimetre)			
	Weight	The weight of a single product (in gram)	Yes	A positive number.	100

10. Output data

No

11. Postconditions

No

3.4.   Delete products

Use Case "*Delete products*"

1. Use case code
UC004

2. Brief Description
This use case describes the interaction between the product manager and the AIMS system when the product manager wishes to remove products from the system.

3. Actors

a. Product manager
- A product manager is an individual responsible for managing product listings, including adding, updating, or modifying product details in the system, to ensure that they meet business goals and customer needs.
- Product managers can only delete up to 10 products at a time.
- Product managers cannot remove more than 30 products in a day, due to security reasons.

4. Preconditions
- Product manager must be logged into the system.

- Currently, the software exclusively supports the buying and selling of physical media products. These products must include a barcode, product description (such as new, used, primary color, and return condition), quantity, warehouse entry date, dimensions, and weight.

5. Basic Flow of Events

1. The product manager logs into the system.
2. The product manager navigates to the product management tab.
3. The system shows a list box containing modifying options.
4. The product manager chooses the "Remove products" button.
5. The software displays a list of products in the inventory.
6. The product manager selects the products that need removing, and then submits to the system.
7. The system verifies whether more than 30 products are removed on the current date (including the currently selected items).
8. The system displays a textbox confirming the successful completion of the product removal process.
9. The system updates the amount of deleted product on the current date.
10. The system saves the removal data.

7. Alternative flows

Table 1-Alternative flows of events for UC Add products

No	Location	Condition	Action	Resume location
1.	At Step 1	If the login information is invalid.	▪ System asks the user to enter the login information again.	Resumes at Step 1.
2.	At Step 4	If the product manager does not select the "Remove product" button.		The use case ends.
3.	At Step 7	If more than 30 products are removed on the current date (including the	● The system shows an error message to notify the user.	The use case ends.

		currently selected items).		
4.	At Step 6	If the product manager presses the "Cancel" button.	▪ The system asks the product manager to confirm.	▪ If the user presses "Yes", the use case ends. ▪ If the user presses "No", resumes at Step 6.

7. Input data

   No

8. Output data

   No

9. Postconditions

   No

3.5.   Pay order

Use Case "Pay order"

1. Use case code
   UC005

2. Brief Description
   This use case describes the interaction between Customer, AIMs Software, and VNPay when Customer wishes to pay an order.

3. Actors
-   Customer
-   VNPay
-   Software

4. Preconditions
-   A completed order must be created before the transaction is formed.

5. Basic Flow of Events
   1. AIMS software displays the order and total price.

2. Customer chooses payment method.

3. Software redirects to VNPay.

4. VNPay displays transaction details and total price.

5. Customer enters credit card information.

6. VNPay processes payment.

7. Return to software.

8. Software displays order information.

9. Software sends payment transaction information to the customer's email.

10. Software records order transaction.

6. Alternative flows

Table N-Alternative flows of events for UC Place order

No	Location	Condition	Action	Resume location
1	At Step 5	If the credit card information is invalid.	VNPay asks the customer to enter their credit card information again.	Resumes at Step 5.
2	At Step 6	If the payment process is unsuccessful.	VNPay displays error message. VNPay returns to transaction detail page.	Resumes at Step 4.

7. Input data

Table A - Input data of credit card information.

No	Data fields	Description	Mandatory	Valid condition	Example
1	Credit card number	Card number	Yes	16-digit numbers	0000 0000 0000 0000
2	Serial number	Card serial number	Yes	16 to 19-digit number	000000000000
3	Password	User's password	Yes		
4	Pin code	Personal Identification Number	Yes	3-digit numbers	000

8. Output data

Table B - Output data of invoice after successful payment.

No	Data fields	Description	Display format	Example
1	Transaction ID	Transaction ID	ID + Number	ID0001
2	Transaction date	Transaction date	yyyy/mm/dd	2025/01/01
3	Transaction time	Transaction time	hh:mm:ss	00:00:00
4	Transaction content	Transaction description		"Product Payment: Books: Harry Potter Collection"
5	Customer name	Customer name		Bùi Hoàng Việt
6	Phone number	Customer phone number		0966342369
7	Shipping address	Customer address		1 Phùng Chí Kiên, Hà Nội
8	Product	Product name		Books: Harry Potter Collection
9	Quantity	Product quantity	Number	1
10	Subtotal	Product price (excluding tax)	Vietnamese currency(VND) Comma for thousand separator	2,560,000
11	Shipping fee	Shipping fee	Vietnamese currency(VND) Comma for thousand separator	35,000
12	Tax	Tax	Vietnamese currency(VND) Comma for thousand separator	3,500

13	Total amount	Total amount	Vietnamese currency(VND) Comma for thousand separator	2,598,000
14	Process state	Process state	Can be "Pending process" or "Processing"	Pending process

9. Postconditions

- Payment successful:
    + Order state updated to "Pending process"
    + Customers receive payment confirmation email, including electronic invoice
- Payment unsuccessful:
    + AIMS system receives response from VNPay with status "Payment cancelled".
    + The order is not confirmed and remains in "Awaiting Payment" status.
    + The system displays an error message and allows the customer to retry payment or cancel the order.

3.6.   View product detail

Use Case "View product detail"

1. Use case code
UC006

2. Brief Description
This use case describes the interaction between customer and AIMS software when the customer wishes to view product detail.

3. Actors
- Customer

4. Preconditions
The AIMS software displays a list of products.

5. Basic Flow of Events
1. The customer chooses a product in the list of products screen.

2. The AIMS software shows the details of the corresponding product (see Table 2).

6. Alternative flows

Table 1-Alternative flows of events for UC View product detail

No	Location	Condition	Action	Resume location
1.	At Step 1	If the product is not available for sale	The AIMS notifies that the product is not available for sale	Use case ends

7. Output data

Table 2-Output data of product details

No	Data fields	Description	Display format	Example
1.	Title	Name of the product	● Bold	**Đắc nhân tâm**
2.	Category	Classification or group that the product belongs to	● Normal format	Book
3.	Product information	Details of the product	● New line for new item	Author: Dale Carnegie Subject: self-help

				Publisher: NXB Tuổi trẻ
4.	Product dimension	Measurements of the product	● Unit of measurement: centimeter(cm) ● Width x Length x Height	12.5 x 20 x 1.75
5.	Weight	Weight of a single product	● Unit of measurement: gram(g)	100
6.	Price	The price per product (excluding tax) in VND	● Vietnamese currency(VND) ● Comma for thousand separator	120,000

8. Postconditions:

No

3.7.   *Place rush order*

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Use Case "Place Rush Order"

1. **Use case code**
   UC007
2. **Brief Description**
   This use case describes the interaction between customer and the software when the customer wishes to place a rush order instead of normal order
3. **Actors**
   - Customer
4. **Preconditions**
   Customers must be in their working session; the cart is not empty, and the customer's information is valid
5. **Basic Flow of Events**
   1. Customer requests to place rush order
   2. AIMS software checks whether the delivery address supports this service and the eligibility of the products.
   3. AIMS software displays the form of additional information (See table 1) and requests customer to complete.
   4. Customer completes the form of additional information and submit the form.
   5. AIMS processes, calculates, and displays the order and shipping fees. (See table 2)
   6. Customer asks to pay.
6. **Alternative flows**

Table 1-Alternative flows of events for UC View product detail

No	Location	Condition	Action	Resume location
1	At step 2	If no products are available or the address is ineligible for a rush order.	- The AIMS software notifies the user that the products in the cart are unavailable or the address is not supported, keeping them in the "View Cart" use case. - Some products may	Use case ends

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			still be delivered through standard shipping.	
2	At any step	If the customer chooses other order methods	AIMS returns to use case "Place Order"	Use case ends

7. Input data

Table 2-Input data of delivery information

No	Data fields	Description	Mandatory	Valid condition	Example
1	Receiver name		Yes		Tran Nhu Thai
2	Phone number		Yes	11 digits	0963927247
3	Province	Select an option from the list.	Yes		Ninhbinh
4	Address		Yes		73, Tran Hung Dao Street, Ninh Binh city
5	Shipping instruction		No		
6	Delivery time	Rush order delivery time	No		1 day

8. Output data

Table 3-Output data of order information and shipping fee

No	Data fields	Description	Display format	Example

1	Title	The name of a media product		DVD"Davinci code"
2	Price	Price of the corresponding media product	- Comma for thousands separator - Positive integer - Right alignment	150,000
3	Quantity	Quantity of the corresponding media	- Positive integer - Right alignment	4
4	Amount	The total cost of the corresponding media.	- Comma for thousands separator - Positive integer - Right alignment	600,000
5	Subtotal	Total amount of all products in the order		1,436,000
6	Shipping fee			23,000

9. Postconditions

A new order is created, and the details are emailed to the customer. However, if the payment is unsuccessful, no action is taken.

4. Supplementary specification

4.1. Functionality

- In use cases involving transactional operations, any errors that occur during the connection or operation process must trigger appropriate error notifications, ensuring that users understand the issue is system-related rather than their own mistake.
- For use cases involving registration, account recovery, and password changes, it is essential to implement secure, reliable, and accurate confirmation methods, requiring at least two verification steps to authenticate the user's account.
- Use cases designed for Product Managers, and Administrators must require login with the appropriate roles.

4.2. Usability

- The functions should be designed for user-friendly operation.
- The layout should be intuitive and easy to navigate.
- The language should be clear and simple..

4.3. Reliability

...Updating <This will be updated when the AIMs Project is completed>

4.4. Performance

...Updating <This will be updated when the AIMs Project is completed>

4.5. Supportability

This software is compatible with Windows desktop and computer platforms. Additionally, the development team provides support for module upgrades and maintenance as needed by the client.

4.6. Other requirements

Attractive and user-friendly interface with intuitive navigation, rapid processing speed and high accuracy. Well-organized product categorization for easy searching.