USECASE SPECIFICATIONS FOR AIMS SYSTEM

I. USECASE "PLACE ORDER"

1. Descriptions and flows

Usecase	**PLACE ORDER**
Usecase code	**UC-250**
Actors	Customer
Brief description	After having selected the goods to buy to the cart, customer requests to place an order with delivery details. Order payment must be done before the items being delivered.
Preconditions	- The cart of user has had some items - Customer is viewing the cart

Main flow of event

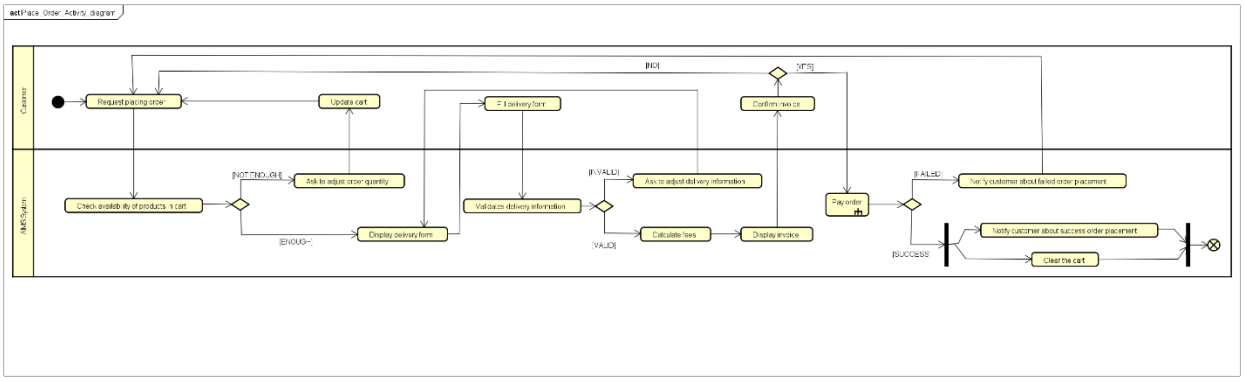
Step	Actor	Action
1	Customer	Customer chooses to place an order
2	System	AIMS checks and availability of products in the cart
3	System	AIMS shows the form to fill delivery information and delivery instruction
4	Customer	Customer fills in the delivery information and delivery instruction and submit
5	System	AIMS validates the customer's input
6	System	AIMS calculates fees
7	System	AIMS displays the invoice with details and total amount of money to pay
8	Customer	Customer confirms the invoice
9	System	AIMS saves the invoice
10	System	AIMS calls "PAY ORDER" usecase
11	System	AIMS notifies customer about order successful placement and clears the cart

Alternative flow of event

No.	At step	Conditions	Actor	Action	Cont. at step
1	1-10		Customer	Customer cancels order	
			System	AIMS saves current state of the cart and clears all delivery and transaction information	
2	After 10		Customer	Customer cancels order	
			System	AIMS asks for cancel order confirmation	
			Customer	Customer confirms cancellation	

				System	AIMS calls “REFUND” usecase	
	3	2	There is a product of which quantity is less than the ordered quantity	System	AIMS asks the customer to update the cart	2
				Customer	Customer updates the cart	
	4	5	Customer chooses to place rush order in previous step	System	AIMS calls “PLACE RUSH ORDER” usecase	6
	5	5	Customer lefts blank mandatory fields	System	AIMS asks customer to fill in the mandatory fields	3
	6	5	Phone number is invalid	System	AIMS asks customer to enter a valid phone number	3
	7	8	Customer declines invoice	System		1
	8	11	Payment failed	System	AIMS notifies about failure & keeps the cart’s current state	1
Postconditions	- The order has a state (success/failed)					

Activity diagram



2. *Input data*

Input data for ordering quantity

No.	Data field	Description	Mandatory	Valid conditions	Example
1	Quantity	Positive integer	Yes	Less than currently available number of selected product	4

Input data for delivery information

No.	Data field	Description	Mandatory	Valid conditions	Example
1	Receiver name		Yes		Ngo Nhu Dien
2	Phone number		Yes	- All numbers - At least 10 digits	0355290405
3	Province	Select from list	Yes		Hanoi
4	District	Select from list	Yes		Hoang Mai
5	Ward	Select from list	Yes		Hoang Mai
6	Address		Yes		14 X Street
7	Shipping notes/instruction		No		Please ship after 5pm

3. *Output data*

Output data for displaying cart

No.	Data field	Description	Format	Example
1	Title	Title of media product	String	Lord of rings
2	Quantity	Order quantity of corresponding media product	- Space separating thousands - Positive integer	5
3	Price	Price of corresponding media product		120 000
4	Amount	Total money for corresponding media product		600 000
5	Subtotal before VAT	Total price of products in the cart without VAT		600 000
6	Subtotal	Total price of products in the cart with VAT		606 000
7	Currency	Type of currency used for payment		VND

Output data for displaying invoice

No.	Data field	Description	Format	Example
1	Title	Title of media product	String	Lord of rings

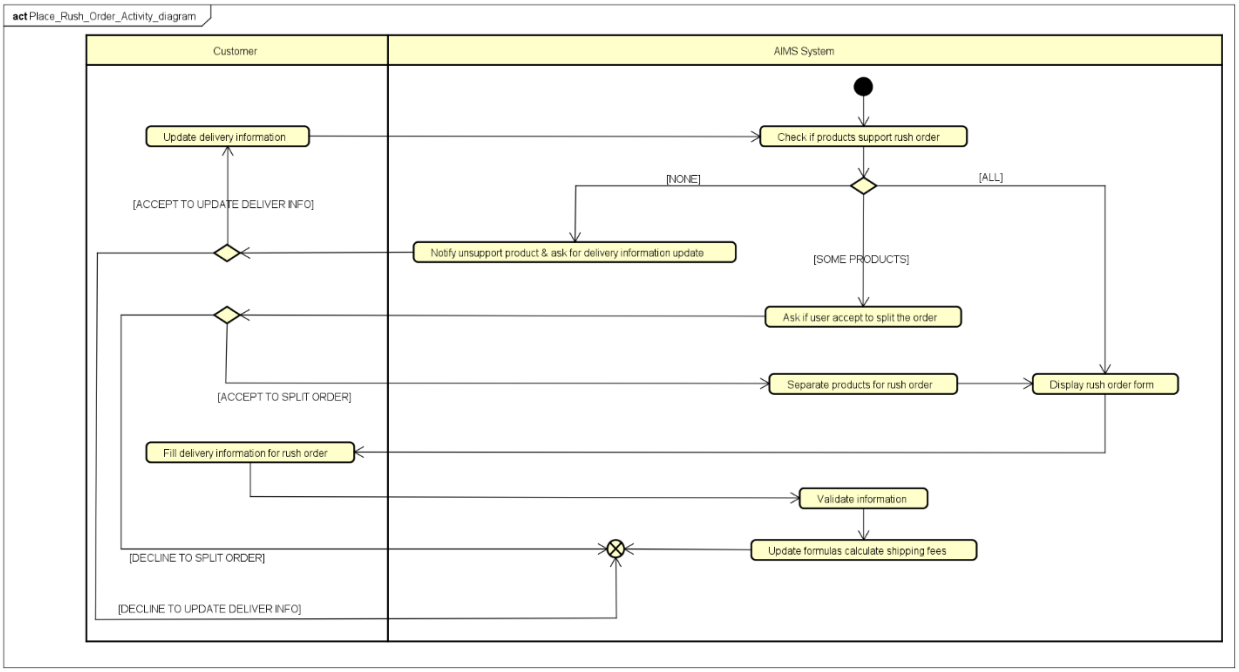
2	Quantity	Order quantity of corresponding media product	- Space separating thousands - Positive integer	5
3	Price	Price of corresponding media product		120 000
4	Amount	Total money for corresponding media product		600 000
5	Subtotal before VAT	Total price of products in the cart without VAT		600 000
6	Subtotal	Total price of products in the cart with VAT		606 000
7	Shipping fees			30 000
8	Total	Sum of subtotal and shipping fees		636 000
9	Currency	Type of currency used for payment		VND
10	Receiver	Name of receiver	String	Ngo Nhu Dien
11	Address	Full address of receiver	- String - Combination order from user input: <address>, <ward> Ward, <district> District, province	14 X Street, Hoang Mai Ward, Hoang Mai District, Hanoi
12	Shipping instruction		String	Please ship after 5pm

II. USECASE “PLACE RUSH ORDER”

1. Descriptions and flows

Usecase	**PLACE RUSH ORDER**					
Usecase code	**UC-251**					
Actors	Customer					
Brief description	The customer chooses to place rush order when entering delivery information					
Preconditions	Customer chosen to place rush order in delivery form					
Main flow of event	**Step**	**Actor**	**Action**			
	1	System	AIMS checks if products support rush order			
	2	System	AIMS displays rush order form			
	3	Customer	Customer updates rush order information			
	4	System	AIMS validates inputs			
	5	System	AIMS updates formula for calculate shipping fees			
Alternative flow of event	**No.**	**At step**	**Conditions**	**Actor**	**Action**	**Cont. at step**
	1	1, 4	Shipping address does not support rush order	System	AIMS notifies user and ask for update delivery information	
	2	1	All products do not support rush order	System	AIMS notifies user about unsupported rush order	
	3	2	Some products do not support rush order	System	AIMS notifies about unsupported rush order products and asks if customer wants to update delivery information	
	3a		Customer declines to updates delivery information	System	AIMS goes back to Step 4 of “PLACE ORDER” usecase	
	3b		Customer accepts updating delivery information	System	AIMS separates the products for rush order and normal order	4
	4	Any time	Cancel rush order	System	AIMS calls “PLACE ORDER” usecase	
Postconditions	None					

Activity diagram



2. Input data

Input data for rush delivery information

No.	Data field	Description	Mandatory	Valid conditions	Example
1	Receiver name		Yes		Ngo Nhu Dien
2	Phone number		Yes	- All numbers - At least 10 digits	0355290405
3	District	Select from list	Yes		Hoang Mai
4	Ward	Select from list	Yes		Hoang Mai
5	Address		Yes		14 X Street
6	Shipping notes/instruction		No		Please ship after 5pm

3. Output data

None

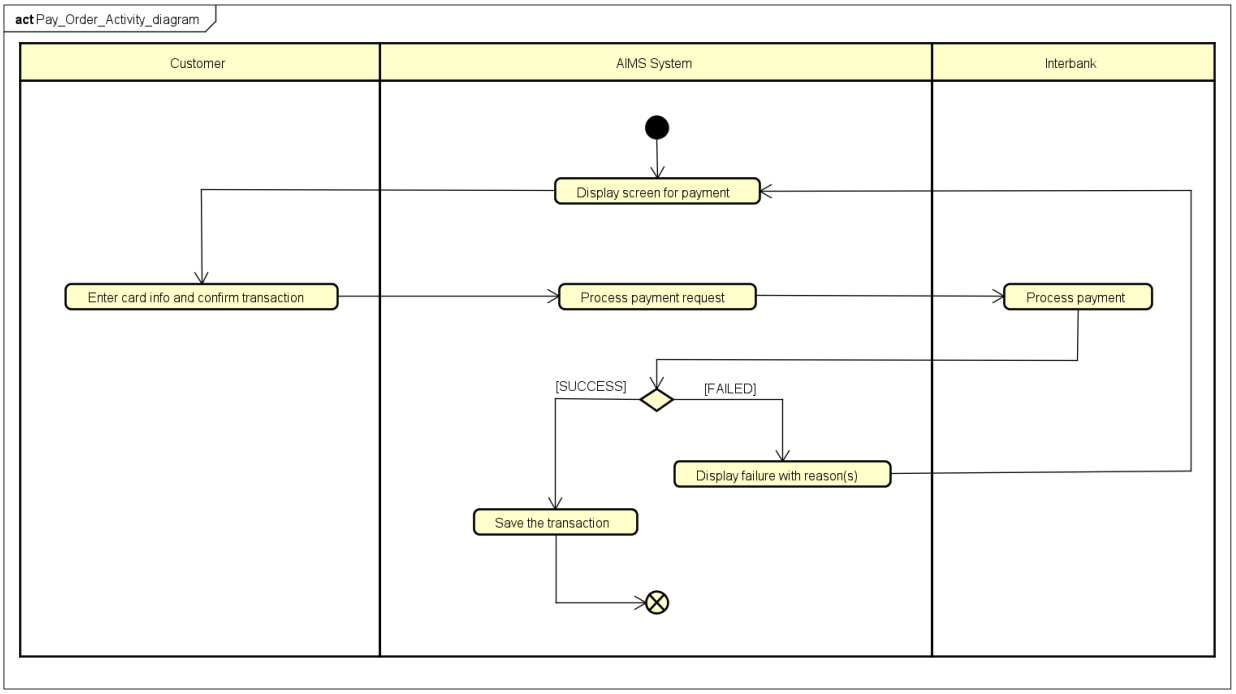
III. USECASE "PAY ORDER"

1. Descriptions and flows

Usecase	**PAY ORDER**					
Usecase code	**UC-260**					
Actors	1. Customer 2. Interbank					
Brief description	The customer enters transaction information. AIMS collects these information and contacts the interbank for performing payment.					
Preconditions	Customer has confirmed the invoice					
Main flow of event	**Step**	**Actor**	**Action**			
	1	System	AIMS displays form for entering transaction information			
	2	Customer	Customers fills in transaction information			
	3	System	AIMS validates information			
	4	System	AIMS send request to interbank for performing transaction			
	5	Interbank	Interbank checks for transaction validity			
	6	Interbank	Interbank performs transaction			
	7	Interbank	Interbank notifies AIMS about transaction success			
	8	System	AIMS records payment details and set the order to pending state			
	9	System	AIMS display payment details to customer			
	10	System	AIMS sends and email of invoice transaction information to customer			
Alternative flow of event	**No.**	**At step**	**Conditions**	**Actor**	**Action**	**Cont. at step**
	1	3	Customer enters invalid credit card number	System	AIMS asks the customer to input the credit card number again	1
	2	5	Customer's account does not have enough amount for transaction	Interbank	Interbank sends AIMS notifications about transaction failure	
				System	AIMS goes back to alternative flow 8 of "PLACE ORDER" usecase	
	3	5	Transaction failed due to errors of interbank	Interbank	Interbank sends AIMS notifications about transaction failure	

				System	AIMS goes back to alternative flow 8 of “PLACE ORDER” usecase	
Postconditions	None					

Activity diagram



2. Input data

Input data for transaction information

No.	Data field	Description	Mandatory	Valid conditions	Example
1	Card holder name		Yes		Ngo Nhu Dien
2	Card number		Yes	- 16 digits - Match interbank	6234 5678 9012 3456
3	Secure digits	On the back of the credit card	Yes	- 3 digits	505
4	Interbank	Select from list	Yes		BIDV

3. Output data

Output specs for transaction record

No.	Data field	Description	Format	Example
1	Cardholder name	Name of the cardholder	String, all caps	Ngo Nhu Dien

2	Transaction ID	ID of the transaction	- 24 characters, separated by dash every tuple of 4 - The 3rd and 5th tuples are all digits, the remaining tuples are all letters - String, all caps	QKSV-KJAR-1324-SAFB-3218-DSFB
3	Date issued	The date when the transaction is performed	DD Mon, YYYY	10 March, 2024
4	Payment method	Method for paying for the order	Type of credit card (identified by the first digit of card number), Name of interbank	Visa, BIDV
5	Total	Amount to be paid	- Space separating thousands - Positive integer	636 000

IV. USECASE “REFUND ORDER”

1. Descriptions and flows

Usecase	**REFUND ORDER**		
Usecase code	**UC-270**		
Actors	Interbank		
Brief description	The customer decides to cancel the order. AIMS requests the bank to return payment for customer and remove the order from pending state		
Preconditions	Customer has confirmed the invoice and perform transaction successfully		
Main flow of event	**Step**	**Actor**	**Action**
	1	System	AIMS sends notifications to interbank about refund
	2	Interbank	Interbank validates refund requests
	3	Interbank	Interbank returns money to customer and notify AIMS
	4	System	AIMS changes the state of order to “Discarded by customer”
	5	System	AIMS notifies customer about refund successfully
Alternative flow of event	None		
Postconditions	None		

2. Input data

None

3. Output data

None