

# USECASE SPECIFICATIONS FOR AIMS SYSTEM

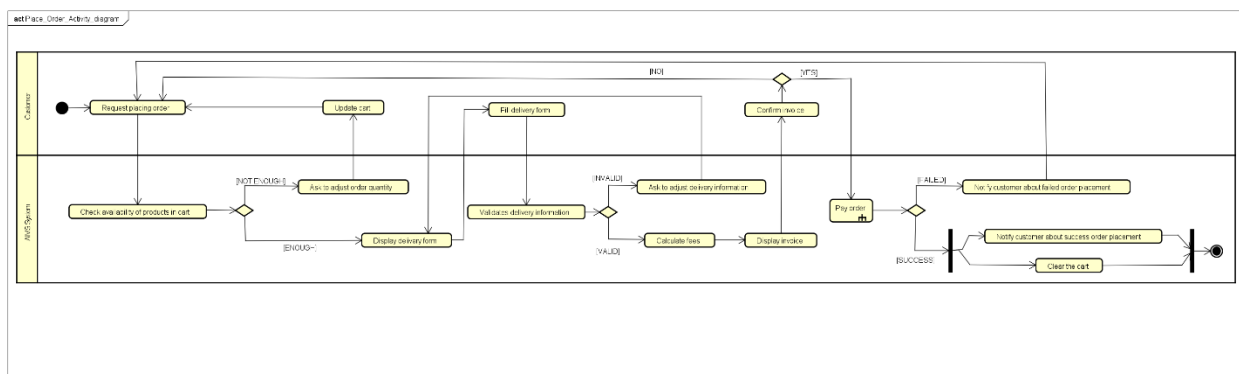
## I. USECASE “PLACE ORDER”

### 1. *Descriptions and flows*

<b>Usecase</b>	<b>PLACE ORDER</b>					
<b>Usecase code</b>	<b>UC-250</b>					
<b>Actors</b>	Customer					
<b>Brief description</b>	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.					
<b>Preconditions</b>	<ul style="list-style-type: none"> <li>- The cart of user has had some items</li> <li>- Customer is viewing the cart</li> </ul>					
<b>Main flow of event</b>	<b>Step</b>	<b>Actor</b>	<b>Action</b>			
	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			
<b>Alternative flow of event</b>	<b>No.</b>	<b>At step</b>	<b>Conditions</b>	<b>Actor</b>	<b>Action</b>	<b>Cont. at step</b>
	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 leaves 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
<b>Postconditions</b>		- 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	6

### Input data for delivery information

No.	Data field	Description	Mandatory	Valid conditions	Example
1	Receiver name		Yes		Nguyen Thi Thu Trang
2	Phone number		Yes	- All numbers - At least 10 digits	0123456789
3	Province	Select from list	Yes		Hanoi
4	District	Select from list	Yes		Dong Da
5	Ward	Select from list	Yes		Trung Phung
6	Address		Yes		123 X Street
7	Shipping notes/instruction		No		Turn left on the last crossroad. Please ship in work time

## 3. Output data

### Output data for displaying cart

No.	Data field	Description	Format	Example
1	Title	Title of media product	String	Gone with the wind
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

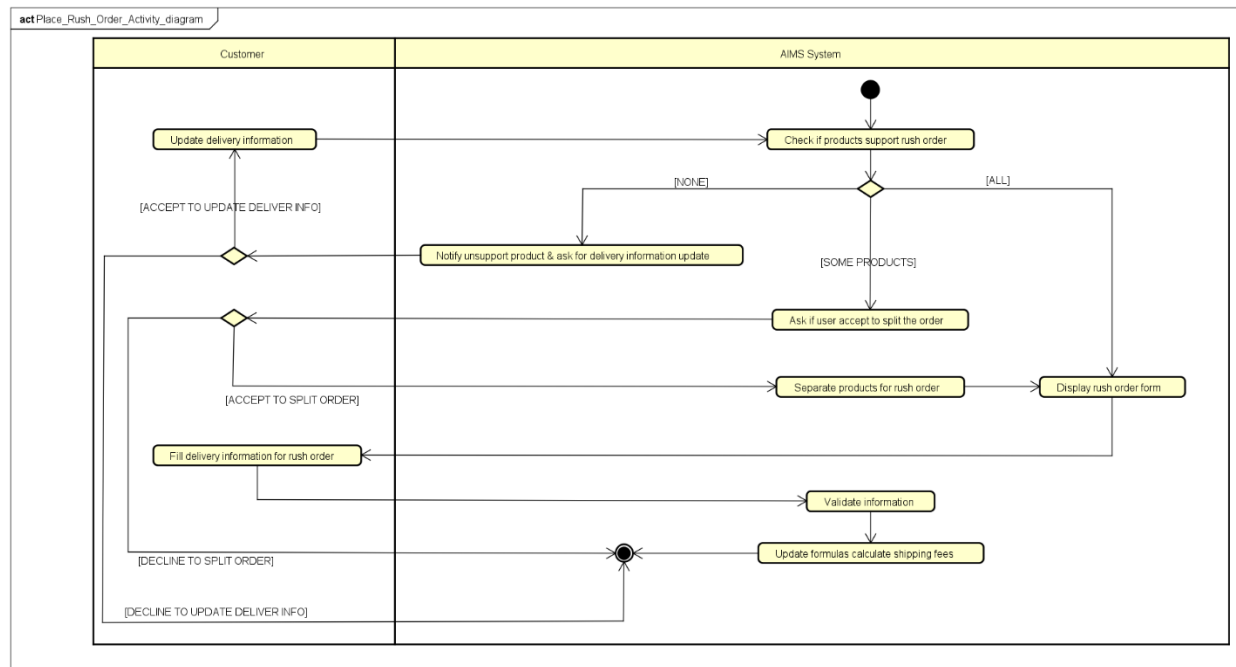
No.	Data field	Description	Format	Example
1	Title	Title of media product	String	Gone with the wind
2	Quantity	Order quantity of corresponding media product	- Space separating thousands - Positive integer	5
3	Price	Price of corresponding media product		120 000
4	Amount	Total money for corresponding media 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	Nguyen Thi Thu Trang
11	Address	Full address of receiver	- String - Combination order from user input: <address>, <ward> Ward, <district> District, province	123 X Street, Trung Phung Ward, Dong Da District, Hanoi
12	Shipping instruction		String	Turn left on the last crossroad. Please ship in work time

## II. USECASE “PLACE RUSH ORDER”

### 1. Descriptions and flows

<b>Usecase</b>	<b>PLACE RUSH ORDER</b>					
<b>Usecase code</b>	<b>UC-251</b>					
<b>Actors</b>	Customer					
<b>Brief description</b>	The customer chooses to place rush order when entering delivery information					
<b>Preconditions</b>	Customer chosen to place rush order in delivery form					
<b>Main flow of event</b>	<b>Step</b>	<b>Actor</b>	<b>Action</b>			
	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			
<b>Alternative flow of event</b>	<b>No.</b>	<b>At step</b>	<b>Conditions</b>	<b>Actor</b>	<b>Action</b>	<b>Cont. at step</b>
	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	
<b>Postconditions</b>	None					

## Activity diagram



## 2. Input data

### Input data for rush delivery information

No.	Data field	Description	Mandatory	Valid conditions	Example
1	Receiver name		Yes		Nguyen Thi Thu Trang
2	Phone number		Yes	- All numbers - At least 10 digits	0123456789
3	District	Select from list	Yes		Dong Da
4	Ward	Select from list	Yes		Trung Phung
5	Address		Yes		123 X Street
6	Shipping notes/instruction		No		Turn left on the last crossroad. Please ship in work time

## 3. Output data

None

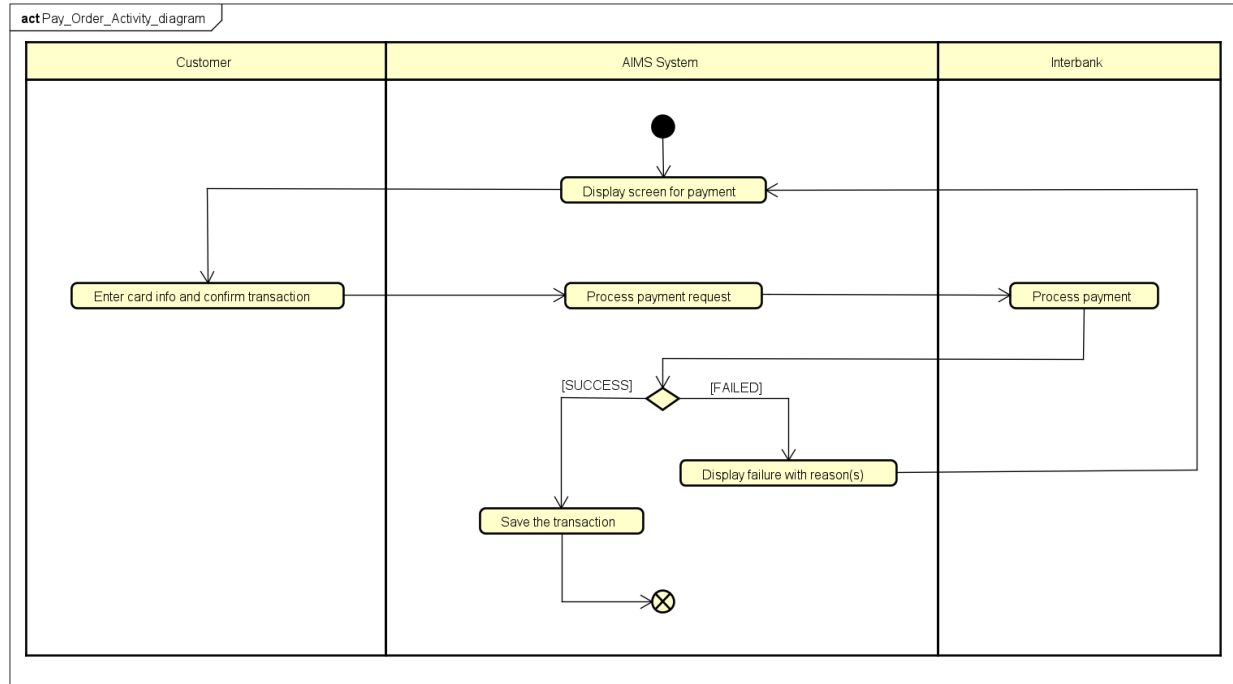
### III. USECASE “PAY ORDER”

#### 1. Descriptions and flows

<b>Usecase</b>	<b>PAY ORDER</b>					
<b>Usecase code</b>	<b>UC-260</b>					
<b>Actors</b>	1. Customer 2. Interbank					
<b>Brief description</b>	The customer enters transaction information. AIMS collects these information and contacts the interbank for performing payment.					
<b>Preconditions</b>	Customer has confirmed the invoice					
<b>Main flow of event</b>	<b>Step</b>	<b>Actor</b>	<b>Action</b>			
	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			
<b>Alternative flow of event</b>	<b>No.</b>	<b>At step</b>	<b>Conditions</b>	<b>Actor</b>	<b>Action</b>	<b>Cont. at step</b>
	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	
<b>Postconditions</b>		None				

## Activity diagram



## 2. Input data

### Input data for transaction information

No.	Data field	Description	Mandatory	Valid conditions	Example
1	Card holder name		Yes		NGUYEN THI THU TRANG
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		Vietcombank

## 3. Output data

### Output specs for transaction record

No.	Data field	Description	Format	Example
-----	------------	-------------	--------	---------



1	Cardholder name	Name of the cardholder	String, all caps	NGUYEN THI THU TRANG
2	Transaction ID	ID of the transaction	<ul style="list-style-type: none"> <li>- 24 characters, separated by dash every tuple of 4</li> <li>- The 3<sup>rd</sup> and 5<sup>th</sup> tuples are all digits, the remaining tuples are all letters</li> <li>- String, all caps</li> </ul>	QKSV-KJAR-1324-SAFB-3218-DSFB
3	Date issued	The date when the transaction is performed	DD Mon, YYYY	23 Apr, 2021
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, Vietcombank
5	Total	Amount to be paid	<ul style="list-style-type: none"> <li>- Space separating thousands</li> <li>- Positive integer</li> </ul>	636 000

#### IV. USECASE “REFUND ORDER”

##### 1. *Descriptions and flows*

<b>Usecase</b>	REFUND ORDER		
<b>Usecase code</b>	UC-270		
<b>Actors</b>	Interbank		
<b>Brief description</b>	The customer decides to cancel the order. AIMS requests the bank to return payment for customer and remove the order from pending state		
<b>Preconditions</b>	Customer has confirmed the invoice and perform transaction successfully		
<b>Main flow of event</b>	<b>Step</b>	<b>Actor</b>	<b>Action</b>
	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
<b>Alternative flow of event</b>	None		
<b>Postconditions</b>	None		

##### 2. *Input data*

None

##### 3. *Output data*

None