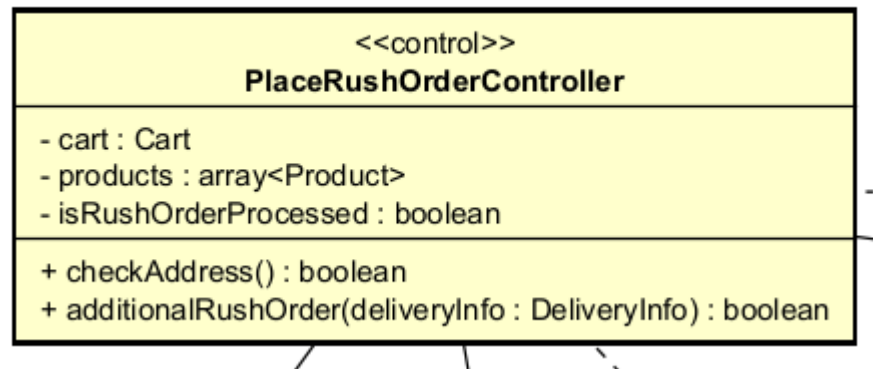


Fullname: Doan Thi Thu Quyen
Student ID: 20226063

1. Design for class “PlaceRushOrder”



• Attribute design

#	Name	Data type	Default value	Description
1	cart	Cart	Null	Reference to cart object
2	products	Array<Product>	Null	Reference to product object
3	isRushOrder Processed	boolean	false	State information to know whether the process is successful or not

• Operation design

#	Name	Return type	Description (purpose)
1	checkAddress	bool	Check whether the customer's address is eligible for rush order delivery
2	additionalRush Order	bool	<p>The function will retrieve information from the user interface (DeliveryFormScreen), verify and process the additional information. It can perform the following steps:</p> <ol style="list-style-type: none">1. Retrieve information from the form.2. Validate the information.3. Update the rush order information in

			<p>the system.</p> <p>4. Return the processing result: true if the process is successful, false if it fails.</p>
--	--	--	--

- Parameter

Null

- Exception

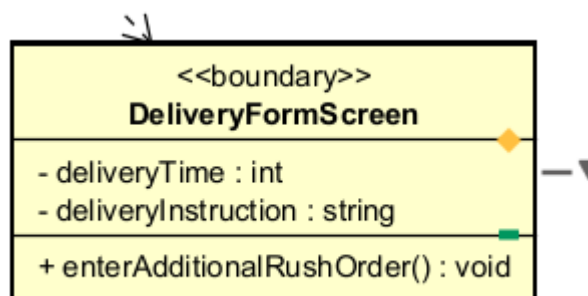
- Method

- checkAddress() : boolean
 - Purpose: Verifies the validity of the delivery address.
 - Algorithm: Checks address format and delivery area.
 - Related Objects: Uses `cart` and `products`.
 - Returns: `true` if valid, `false` otherwise.
- additionalRushOrder(deliveryInfo : DeliveryInfo) : boolean
 - Purpose: Handles additional processing for rush orders.
 - Algorithm: Updates order status and processes urgent delivery info.
 - Related Objects: Uses `deliveryInfo` and `isRushOrderProcessed`.
 - Returns: `true` if processed successfully, `false` otherwise.

- State

- “isRushOrderProcessed” changes from false to true if place rush order successfully

2. Design for class “DeliveryFormScreen”



- Attribute design

#	Name	Data type	Default value	Description
1	deliveryTime	int	2	Number of hours the customer wants to receive the order after successfully placing it.
2	deliveryInstruction	string	Null	Note from customer for the order

- Operation design

#	Name	Return type	Description (purpose)
1	enterAdditionalRushOrder	boolean	Allow customer to enter additional information for rush order, return true if all information is valid, else return false

- Parameter

Null

- Exception

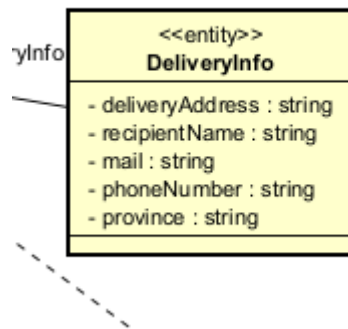
- InvalidInputException: When the user enters an incorrect format or leaves required information blank.
- SubmissionFailedException: When the order submission fails (e.g., network error, server error, etc.).

- Method

- Purpose: Captures and processes additional rush order details.
- Algorithm: Collects delivery time and special instructions from the user.
- Related Attributes: Uses deliveryTime and deliveryInstruction.

- State

3. Design for class “DeliveryInfo”

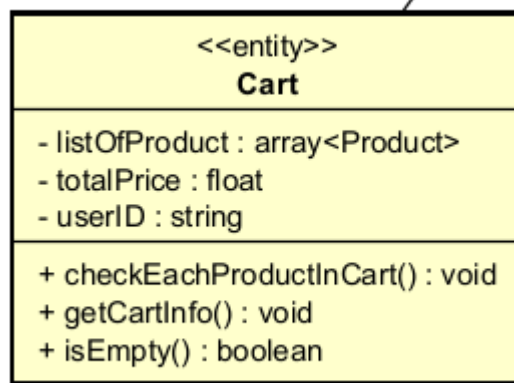


- Attribute design

#	Name	Data type	Default value	Description
1	deliveryAddress	string	Null	Detailed address of customer
2	recipientName	string	Null	
3	mail	string	Null	Email address of customer
4	phoneNumber	string	Null	Phone number of customer
5	province	string	Null	Province address

- Operation design
- Parameter
Null
- Exception
- State

4. Design for class “Cart”



- Attribute design

#	Name	Data type	Default value	Description
1	listOfProduct	array<Product>	Null	List of products in cart
2	totalPrice	float		Total price of products in cart
3	userID	string		User ID to know which user that cart is belonged to

- Operation design

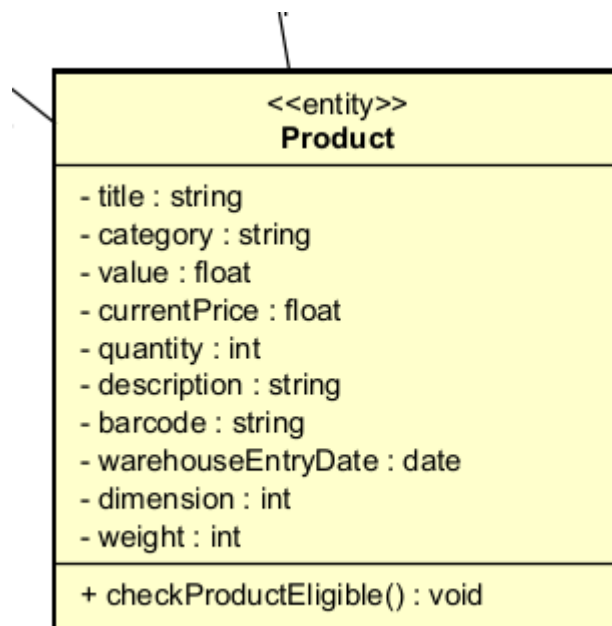
#	Name	Return type	Description (purpose)
1	checkEachProductInCart	void	Check whether product is suitable for rush order
2	getCartInfo	void	Get Information from cart
3	isEmpty	boolean	Check if this is an empty cart

- Parameter

Null

- Exception
- Method
 - checkEachProductInCart() : void
 - Purpose: Verifies the eligibility of each product in the cart
 - Algorithm: Iterates through listOfProduct to validate each item
 - Related Attributes: Uses listOfProduct
 - getCartInfo() : void
 - Purpose: Retrieves and displays information about the cart.
 - Algorithm: Aggregates details like totalPrice, product list, and user ID.
 - Related Attributes: Uses listOfProduct, totalPrice, userID.
 - isEmpty() : boolean
 - Purpose: Checks if the cart contains any products.
 - Algorithm: Returns true if listOfProduct is empty, otherwise false.
 - Related Attributes: Uses listOfProduct.
- State

5. Design for class “Product”



- Attribute design

#	Name	Data type	Default value	Description
1	title	string		

2	category	string		
3	value	float		
4	currentPrice	float		
5	quantity	int		
6	description	string		
7	barcode	string		
8	warehouseEntryDate	date		
9	dimension	int		
10	weight	int		

- Operation design

#	Name	Return type	Description (purpose)
1	checkProductEligible	void	Check whether product is suitable for rush order

- Parameter

Null

- Exception

- ProductEligibleException: when there is a product that is not suitable for rush delivery.

- State

- Method

- checkProductEligible() : void
 - Purpose: Verifies the eligibility of that product
 - Return: boolean