

Use case textual description for :

1.Process sale :

Preconditions:

- The cashier must be logged into the POS system.
- The customer must have goods to purchase.

Trigger:

- The cashier initiates a sale transaction when a customer brings goods to the POS counter.

Basic Flow:

1. The cashier selects "New Sale" to start a new sale transaction.
2. The cashier scans the barcode of each item, and the POS system retrieves the item's name and price from the catalog system.
3. The POS system deducts the stock amount of the items from the inventory system.
4. The cashier confirms the list of scanned items and their total price.
5. The customer chooses a payment method (cash, credit card, or check).
6. The POS system processes the payment. For card payments, it interacts with a payment gateway.
7. (Optional) If the customer uses a coupon, the POS system applies the coupon to reduce the total price.
8. After successful payment, the POS system prints the receipt for the customer.
9. The sale transaction is completed.

Postconditions:

- The sale is recorded in the system.
- The inventory is updated to reflect the items sold.
- The payment is completed, and the receipt is issued.

Alternate Flow:

- If the barcode cannot be scanned, the cashier can manually enter the item's code.
- If the payment fails (due to insufficient funds, card rejection, etc.), the cashier asks for an alternative payment method.
- If the customer cancels the transaction, the sale is voided, and no payment is processed.

2.Return sale :

Preconditions:

- The customer must have previously purchased the item and should provide a valid receipt.
- The cashier must be logged into the POS system.

Trigger:

- The customer requests to return an item previously purchased.

Basic Flow:

1. The cashier selects "Handle Return" from the POS system.
2. The customer provides the receipt, which the cashier scans or enters into the system to retrieve the original sale transaction details.
3. The POS system verifies the sale, including the item and price.
4. The cashier scans the item being returned.
5. The POS system checks the item's eligibility for return based on store policies (e.g., return window,

condition of the item).

6. If eligible, the POS system processes the return, and the item is added back to the inventory.
7. The cashier asks the customer for a preferred refund method (cash, card refund, or store credit).
8. The refund is processed, and a return receipt is printed for the customer.

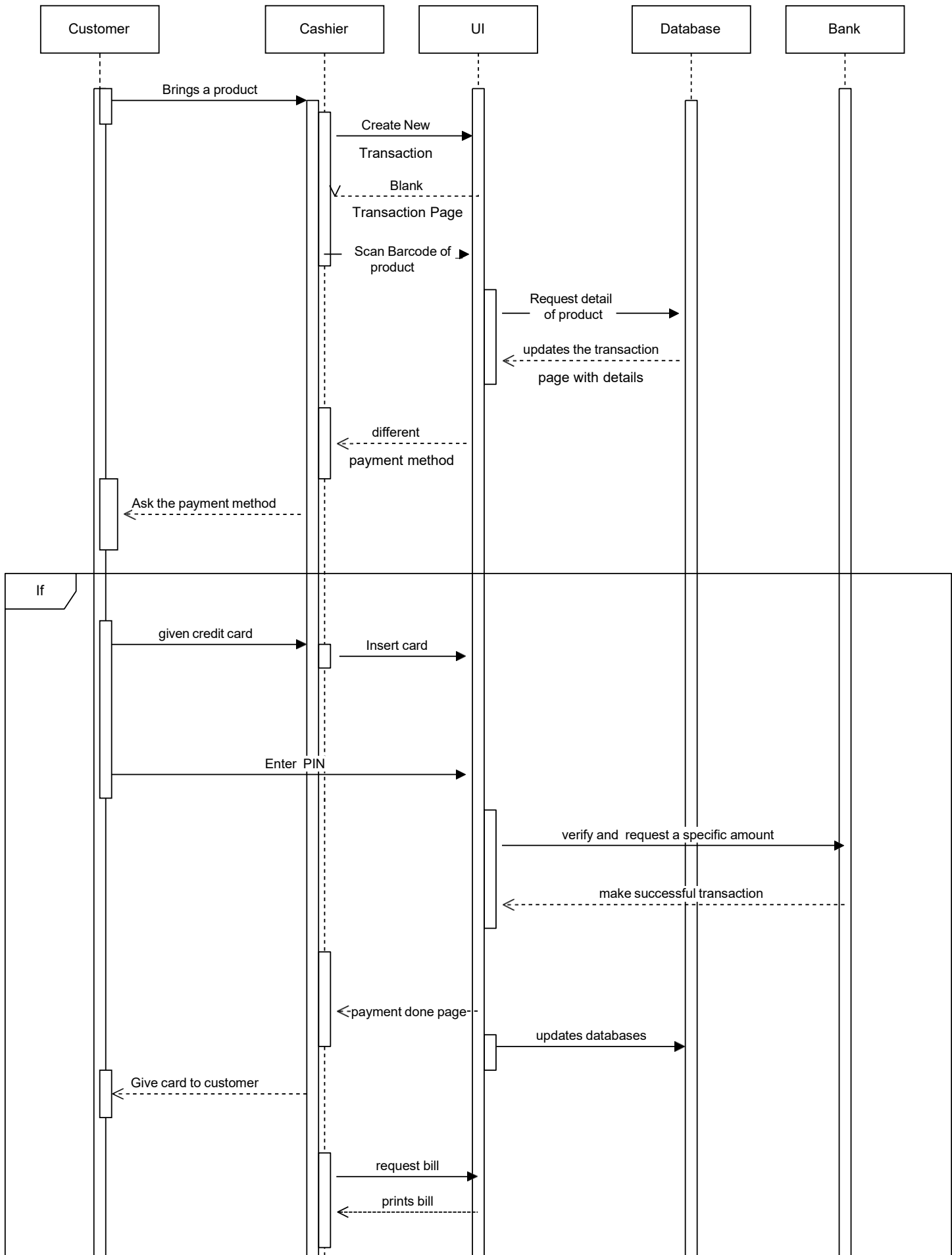
Postconditions:

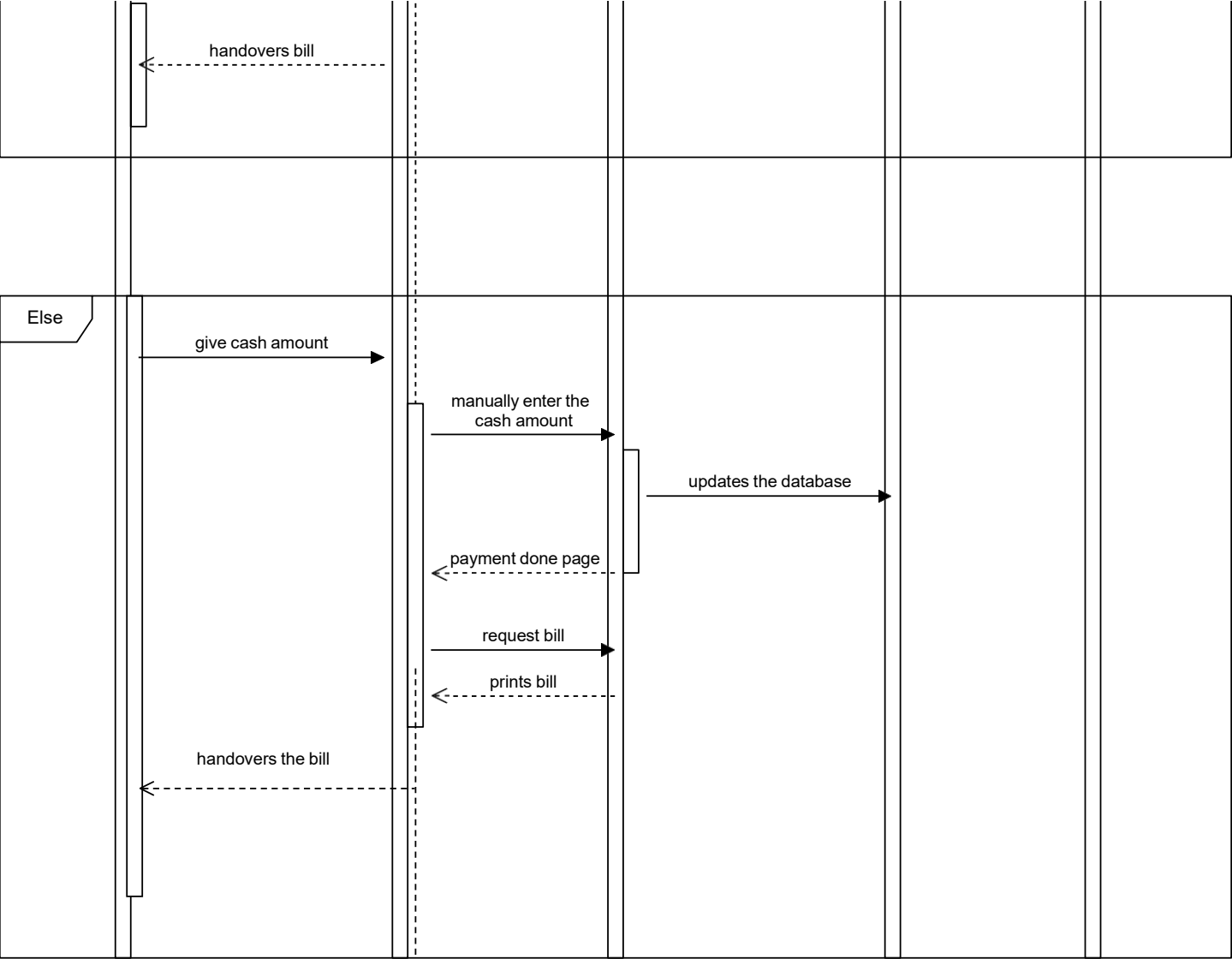
- The sale is updated to reflect the return.
- The inventory is adjusted to add the returned item back.
- The refund is processed successfully, and the return receipt is issued.

Alternate Flow:

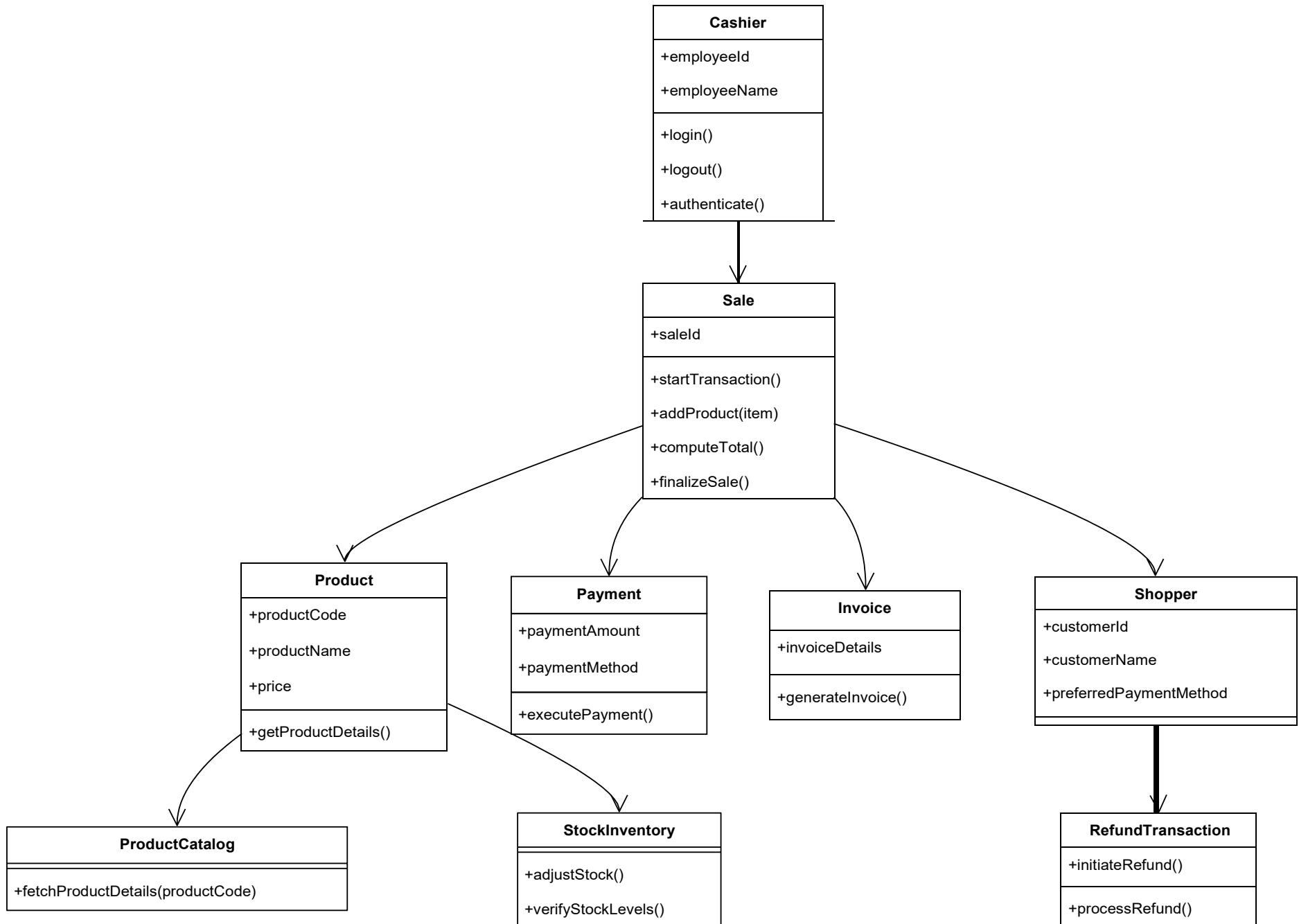
- If the receipt is lost or invalid, the cashier can search for the transaction manually if store policy allows.
- If the item is not eligible for return (due to time limits, condition, etc.), the return is denied, and the transaction is canceled.

QUESTION : 1

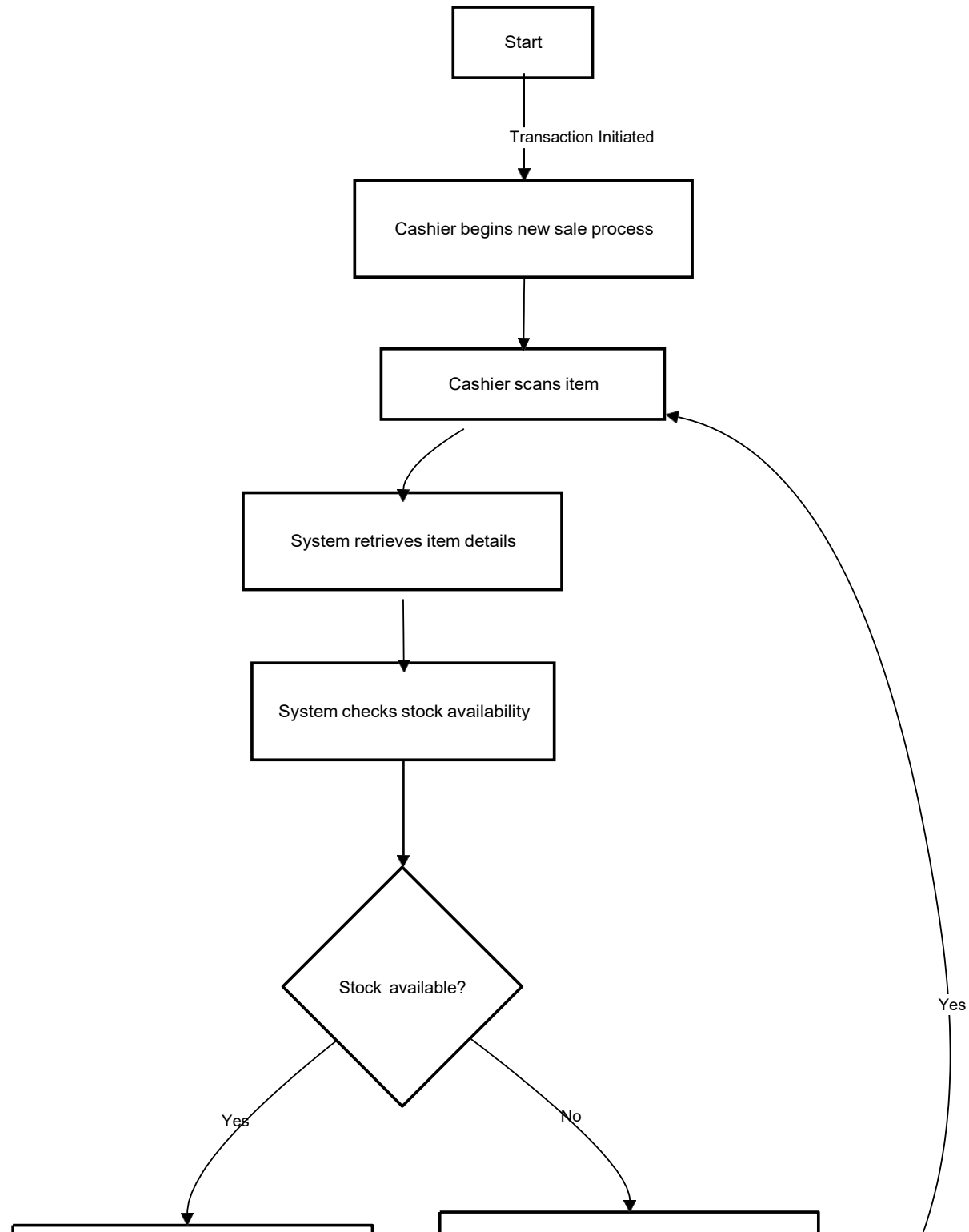


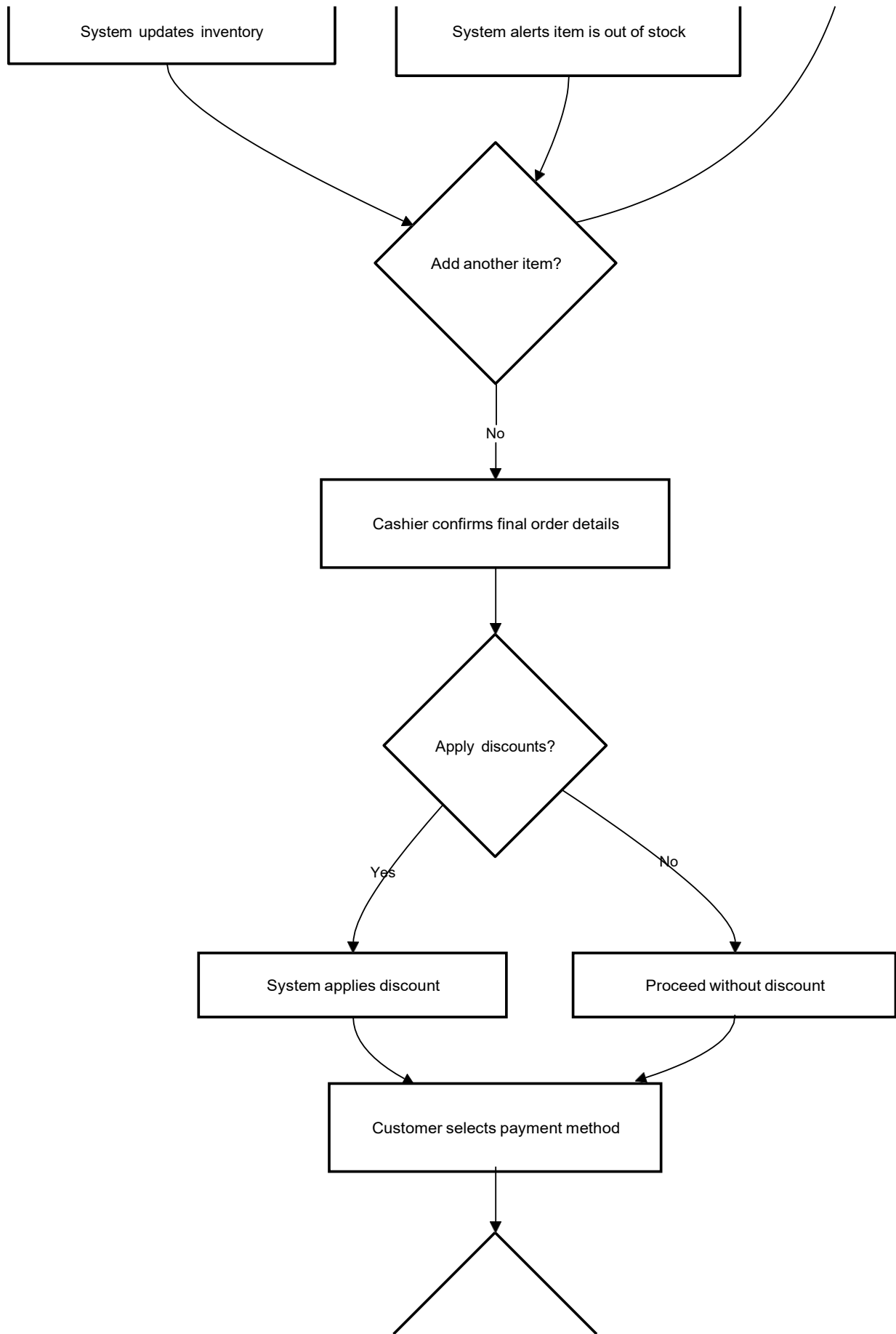


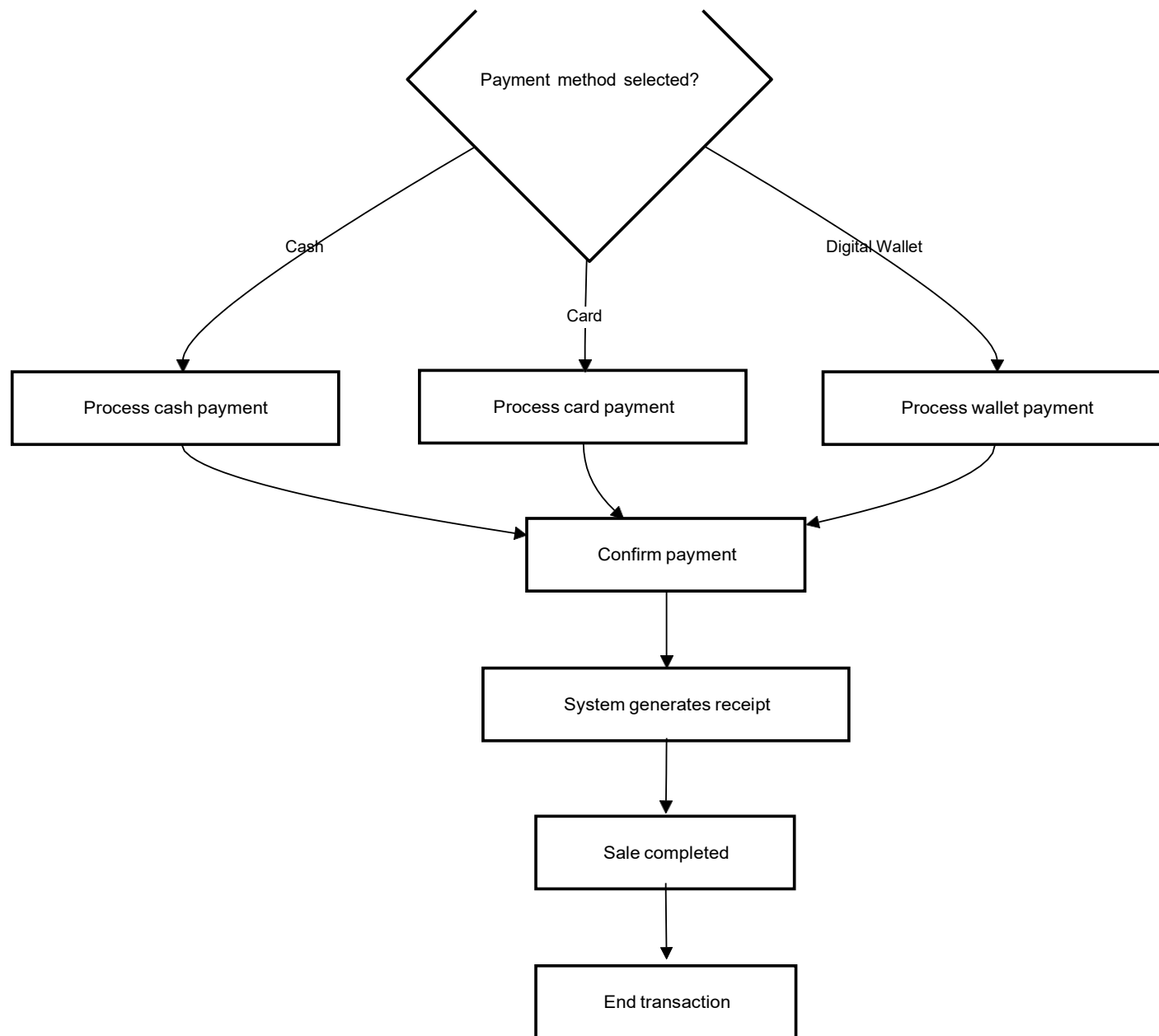
CLASS DIAGRAM



PROCESS SALE







PROCESS RETURN

