

Lab6

Name : Anjali Chandwani
ID: 202201032

Modeling Class Diagram and Activity Diagram (Point of Sale System):

Use case textual description:

- Process sale

Actor(s): Cashier, Customer

Preconditions:

- The cashier is logged into the POS system.
- The store inventory is updated and accessible.

Postconditions:

- The sale transaction is completed, and the inventory is updated.
- A receipt is printed for the customer.

Main Flow:

- The cashier greets the customer and asks for items to purchase.
- The customer places items on the counter.
- The cashier scans the barcode of each item using the barcode scanner.
 - The system retrieves the item name and price from the backend catalog.
 - The system checks the inventory to confirm availability.
- The system updates the inventory by deducting the quantity of each item sold.
- Once all items are scanned, the cashier informs the

customer of the total amount due.

- The customer chooses a payment method (cash, credit card, check).
 - The cashier processes the payment:
 - For cash: the cashier accepts cash and provides change if necessary.
 - For credit card: the cashier swipes the card and verifies the transaction.
 - For check: the cashier verifies the check before accepting it.
 - After successful payment, the system generates a receipt.
 - The cashier hands the receipt and purchased items to the customer.
 - The cashier thanks the customer and invites them to return.
- Handle return

Actor(s): Cashier, Customer

Preconditions:

- The cashier is logged into the POS system.
- The customer presents items for return with proof of purchase (receipt).

Postconditions:

- The return transaction is completed, and inventory is updated.
- A return receipt is printed for the customer.

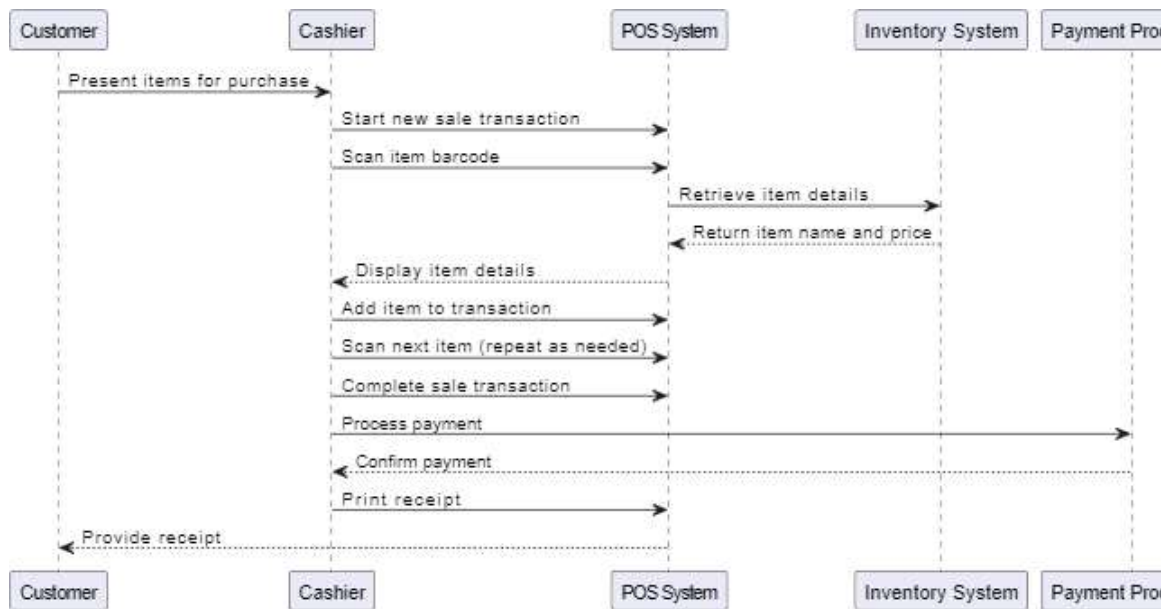
Main Flow:

- The cashier greets the customer and asks about the return.
- The customer presents items for return along with the original purchase receipt.
- The cashier verifies the receipt against the POS system to confirm the original sale.
- The system checks the return policy (e.g., within return period, condition of items).
- If the return is valid:

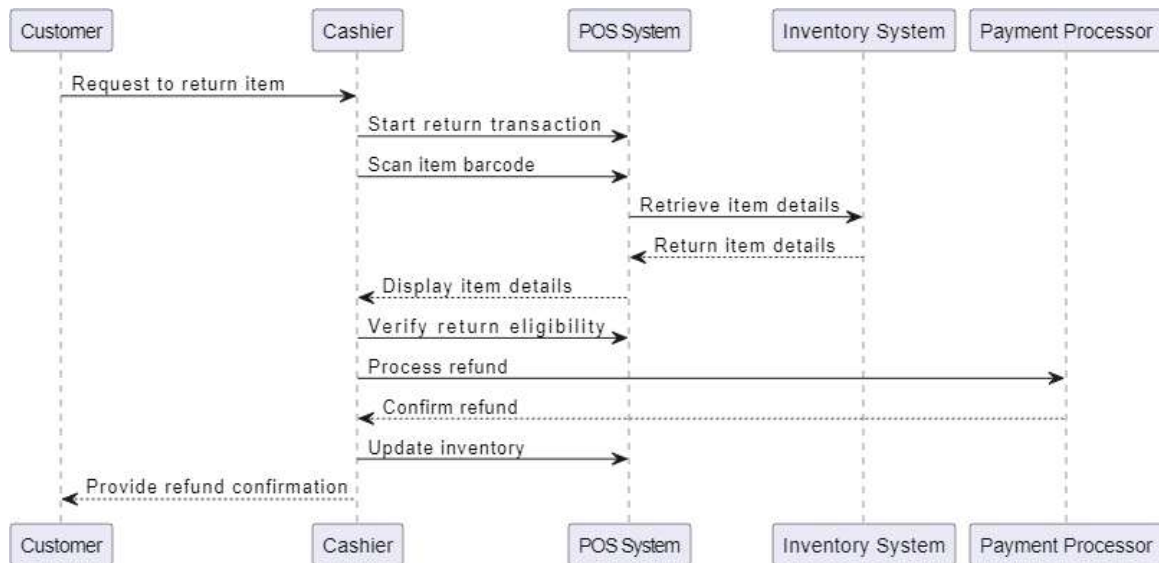
- The system processes the return transaction.
- The system updates the inventory by increasing the stock quantity of the returned items.
- The system calculates any refund amount if applicable.
- The cashier informs the customer of the return approval and refund amount.
- The customer receives the refund via the original payment method:
 - For cash: the cashier gives cash back.
 - For credit card: the cashier processes the refund to the card.
 - For check: the cashier issues a store credit or another method as per store policy.
- The system generates a return receipt.
- The cashier hands the return receipt and any refunded amount to the customer.
- The cashier thanks the customer for their visit.

Sequence diagram:

- Process sales:

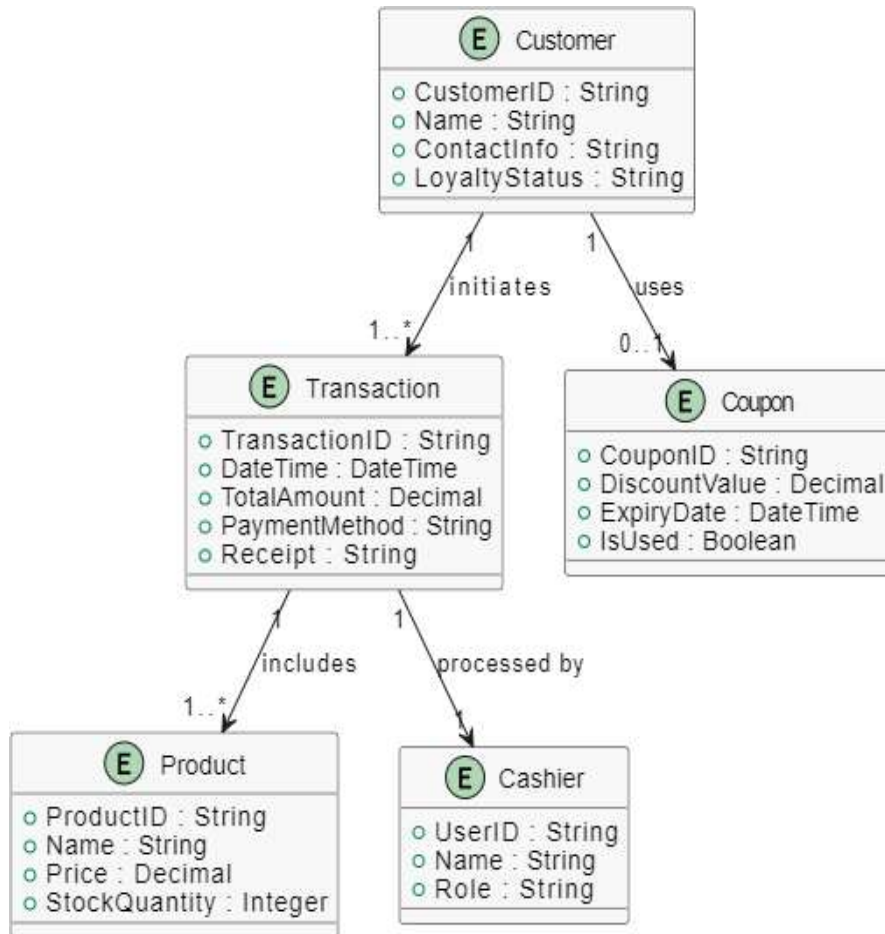


- Handel return

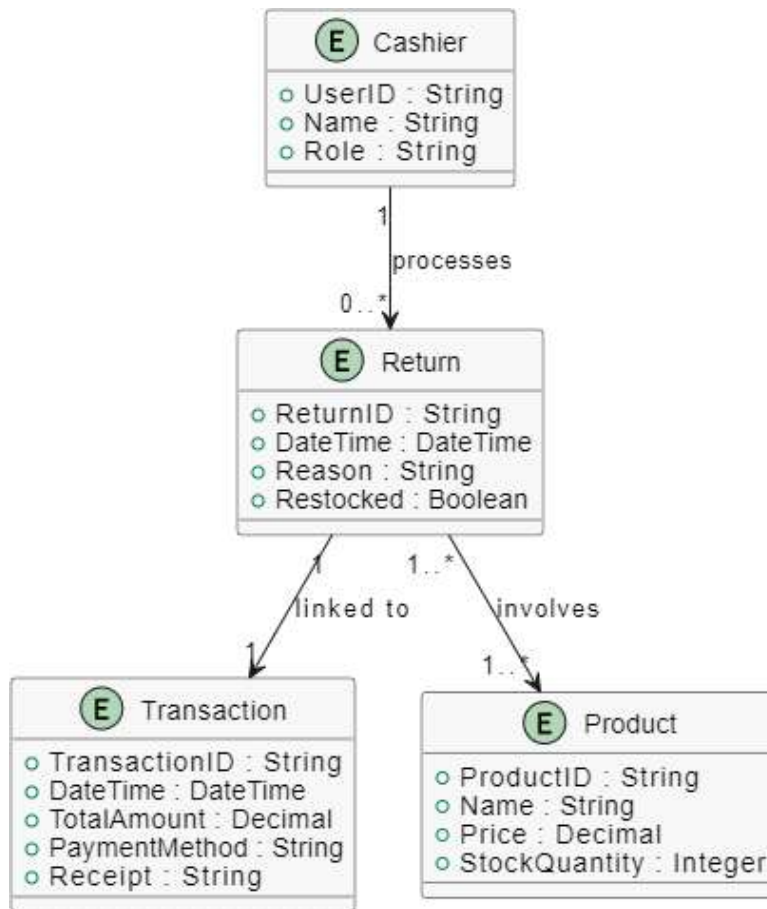


Analysis domain model:

- Process sale

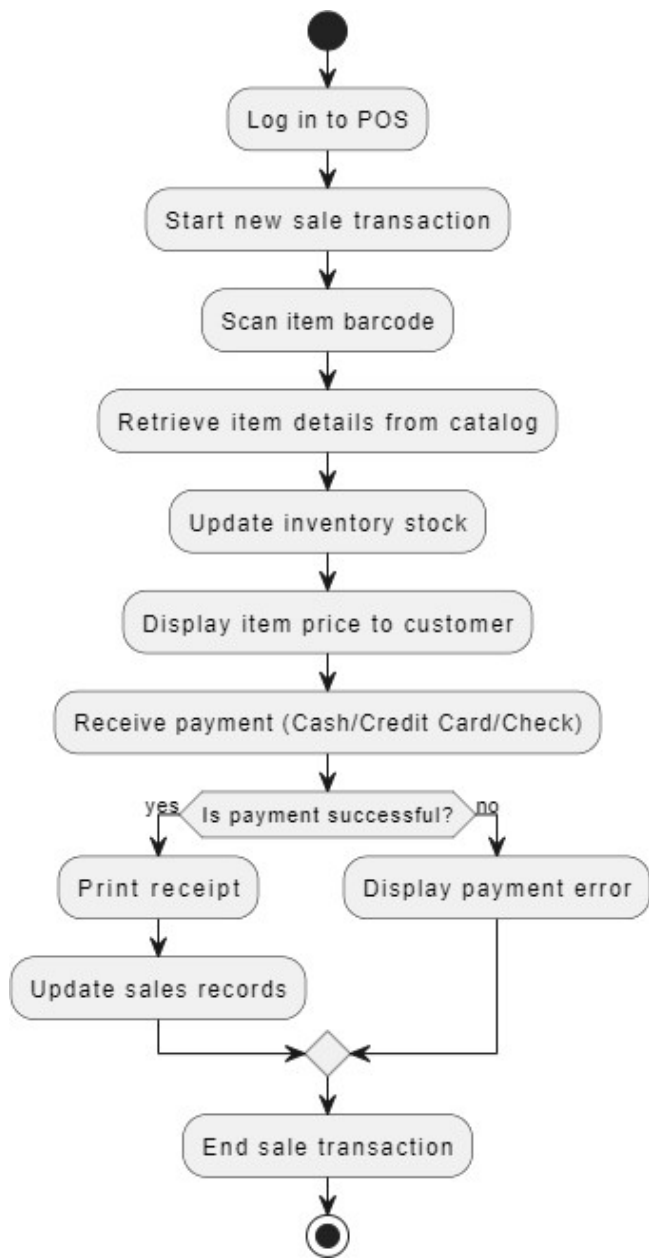


- Handle Return



Activity Diagram:

- Process sales



- Handle return

