

IT-314 Lab 6
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1. Use Case Textual Description

Process Sale:

Primary Actor: Cashier

Preconditions: The cashier is logged into the POS system.

Main Flow:

- The cashier starts a new sale transaction.
- The cashier scans the barcode of each item.
- The POS system retrieves the item details (name, price) from the catalog system.
- The POS system interacts with the inventory system to update the stock.
- The cashier selects the payment method (cash, credit card, check, or gift coupon).
- The POS system processes the payment.
- The POS system prints the receipt.

Postconditions: The sale is recorded, and the inventory is updated.

Handle Return:

Primary Actor: Cashier

Preconditions: The cashier is logged into the POS system, and the customer has a valid receipt.

Main Flow:

- The cashier starts a return transaction.
- The cashier scans the barcode of the item to be returned.
- The POS system verifies the return eligibility.
- The cashier processes the refund or exchange.
- The POS system updates the inventory.
- The POS system prints a return receipt.

Postconditions: The return is recorded, and the inventory is updated.

2. Entity/Boundary Control Objects

Entities:

- Item
- Sale
- Receipt
- InventoryRecord
- PaymentMethod (with subclasses CashPayment, CreditCardPayment, CheckPayment, GiftCoupon)

Boundary Objects:

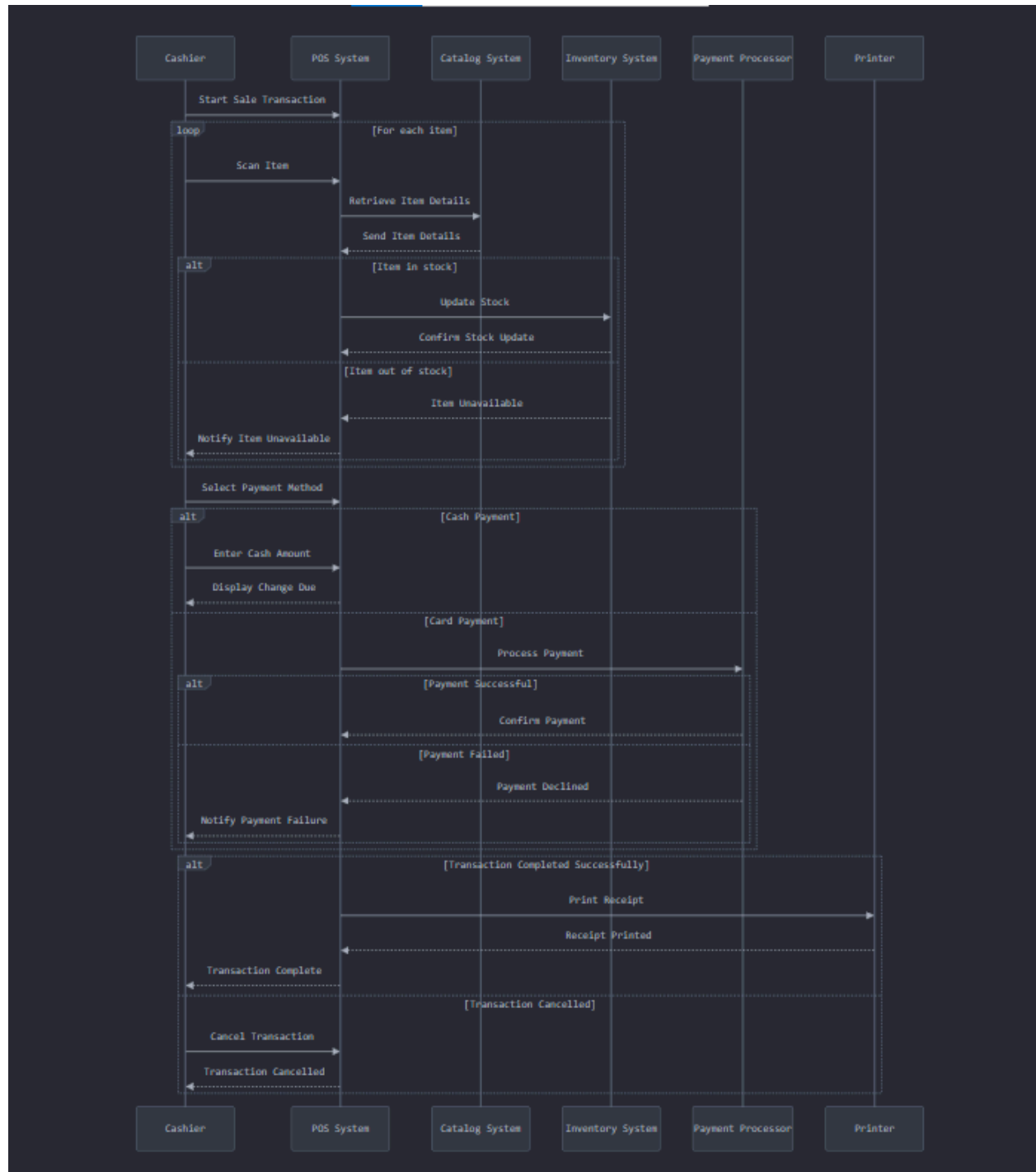
- POS System Interface, Barcode Scanner

Control Objects:

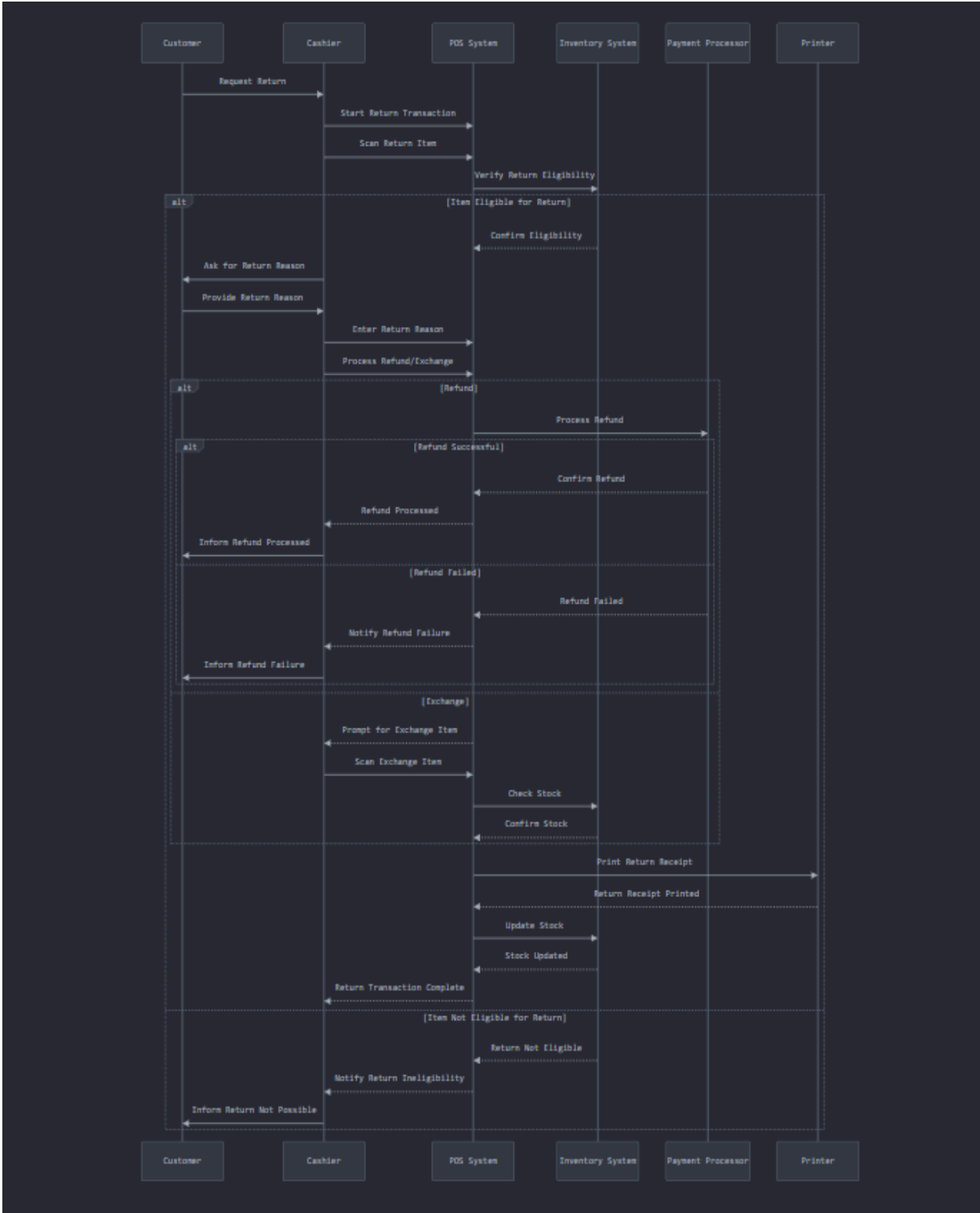
- Cashier

3. Sequence Diagrams

Process Sale Sequence Diagram



Handle Returns Sequence Diagram



4. Analysis Domain Models

The analysis domain model would include classes such as:

Item: Attributes like itemID, name, price, quantity.

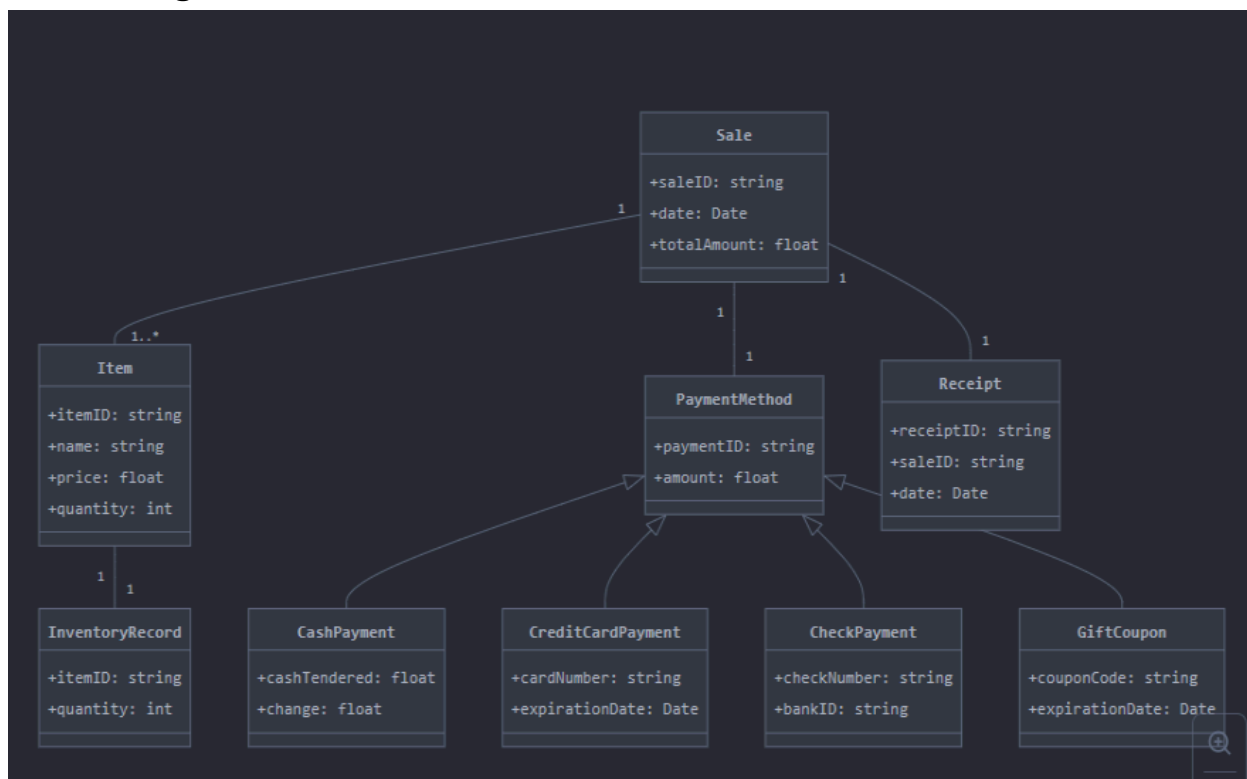
Sale: Attributes like saleID, date, totalAmount.

PaymentMethod: Subclasses for CashPayment, CreditCardPayment, CheckPayment, GiftCoupon.

Receipt: Attributes like receiptID, saleID, date.

InventoryRecord: Attributes like itemID, quantity.

Class Diagram



5. Activity Diagrams

Process Sale Activity Diagram:



Handle returns Activity Diagram

