

Lab-6 IT314 Submission

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Q1. Use case Textual Description :

1. Process Sale

- Use Case Name: Process Sale
- Primary Actor: Cashier
- Goal: To complete a sales transaction successfully.
- Precondition: The cashier is logged in to the POS system, and the customer has selected the items to purchase.
- Triggers: The cashier starts a new sale transaction.

- **Main flow:**
 - The cashier scans the barcode of each item or enters the item manually.
 - The POS system retrieves the item's name and price from the catalog system and updates the inventory.
 - The cashier applies any applicable discounts or promotions.
 - The customer selects a payment method (cash, credit card, or check).
 - The cashier processes the payment.
 - The POS system prints a receipt.
- Postcondition: The sale transaction is complete, and the customer has received a receipt.

- **Alternative Flows:**
 - If an item scan fails, the cashier enters the item manually.
 - If payment fails, the system prompts the cashier to retry.

2. Handle Return

- Use Case Name: Handle Return
- Primary Actor: Cashier
- Goal: To process a return successfully.
- Precondition: The cashier is logged in to the POS system, and the customer has a valid receipt for the items to be returned.
- Triggers: The customer requests to return an item.
- **Main flow:**
 - The cashier scans the receipt or enters the transaction ID manually.
 - The POS system retrieves the transaction details.
 - The cashier verifies the items to be returned.
 - The cashier processes the return and updates the inventory.
 - The POS system prints a refund receipt , if applicable.
- Postcondition: The return is processed, and the customer has received a refund (if applicable).

Alternative Flows:

- If the item is not eligible for return, the system displays an error.
- If the receipt is lost, the cashier may use the sale record to verify.

Q2. Entity/Boundary Control Objects :

Entity Objects :

- Item
- Customer
- Sale Transaction
- Inventory
- Catalog System

Boundary Objects :

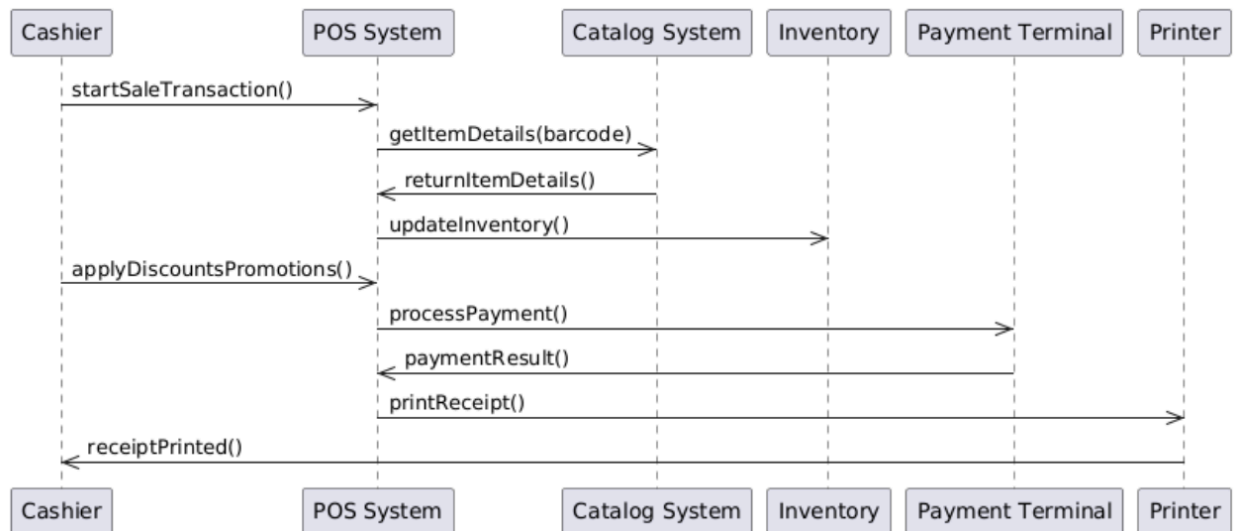
- POS System
- Barcode Scanner
- Printer
- Payment Terminal

Control Objects :

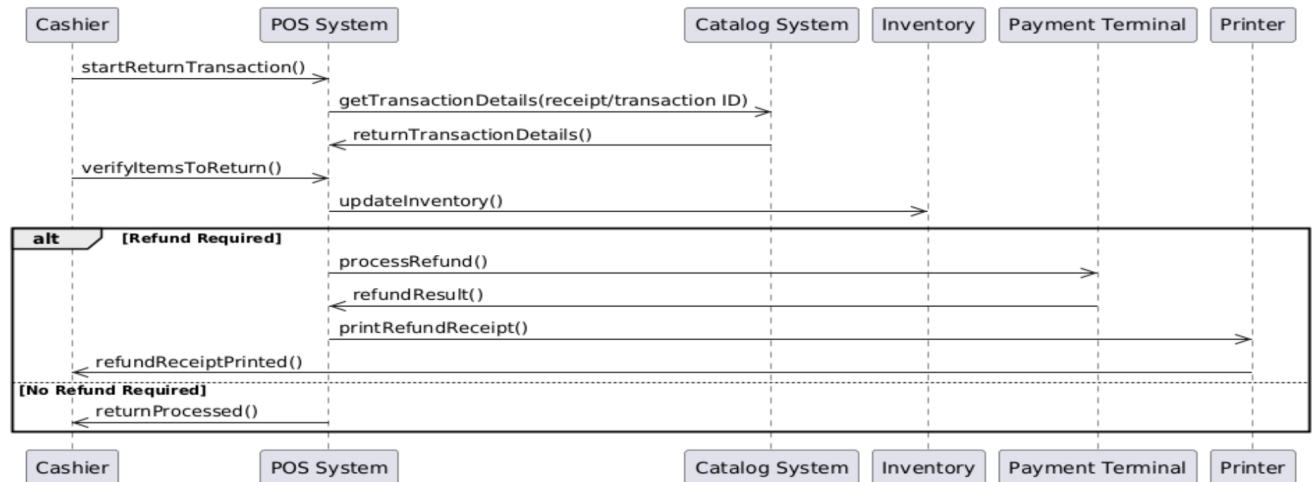
- Sale Controller
- Return Controller
- Inventory Controller

Q3. Sequence Diagrams :

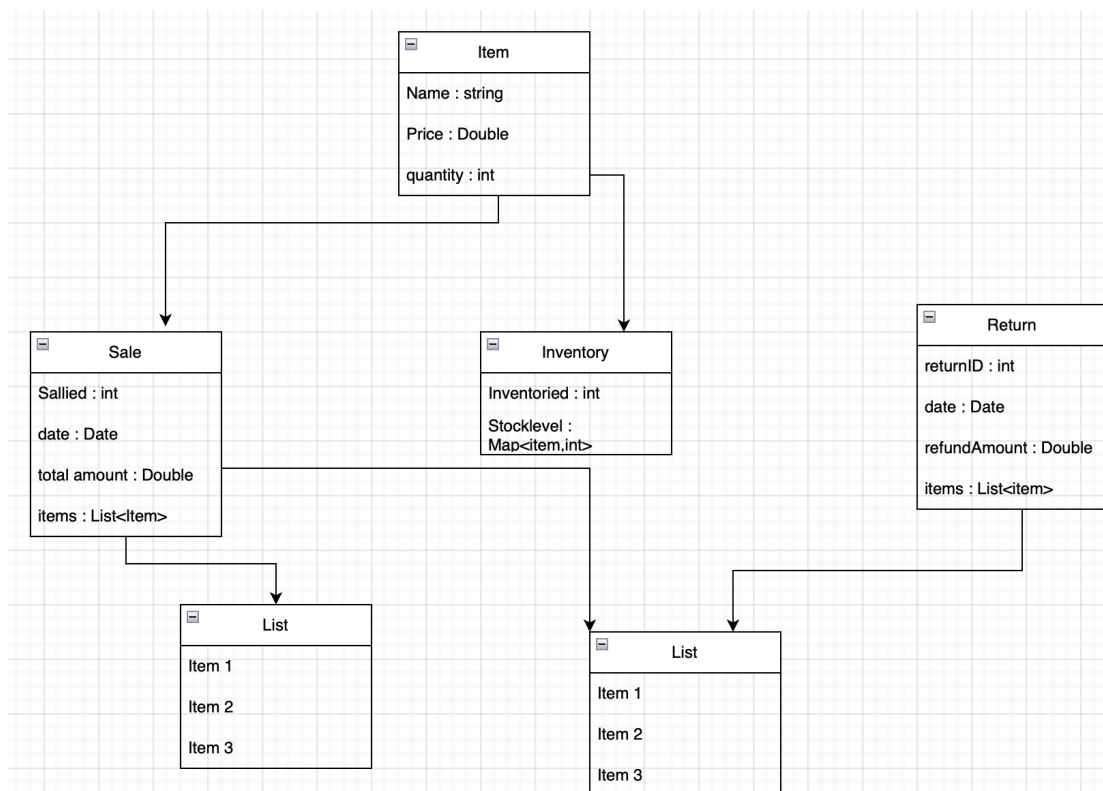
Process Sale



Return process

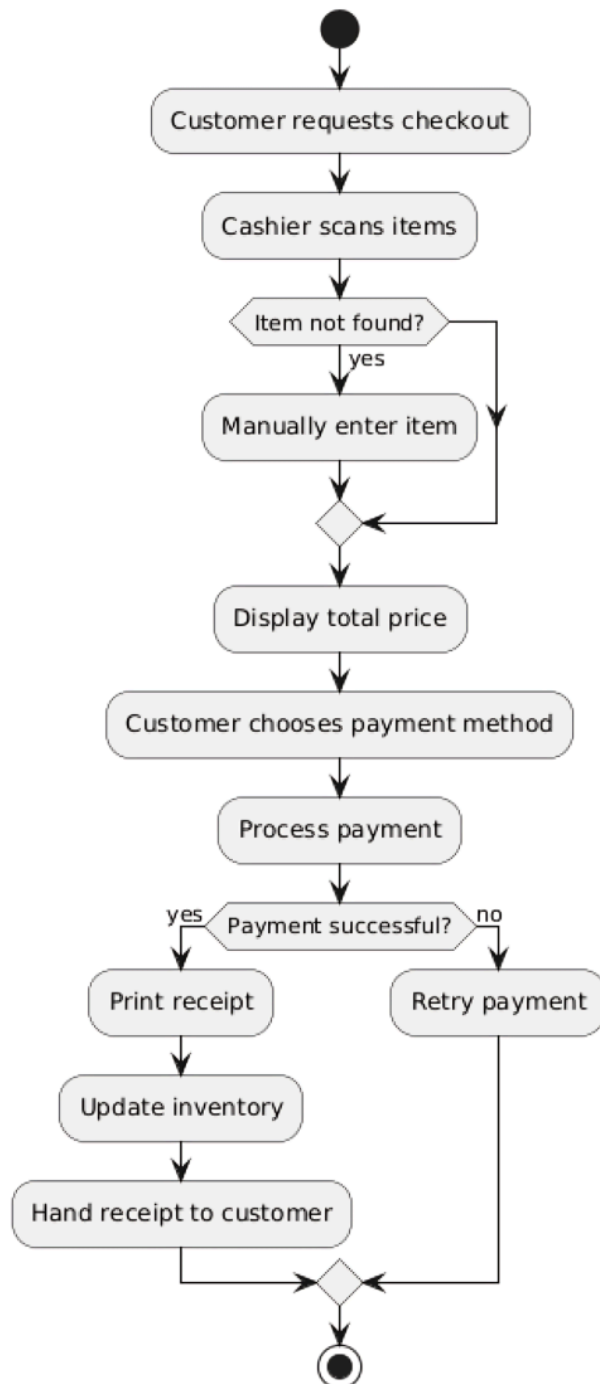


Q4. Develop Analysis Domain Model



Q5 Activity Diagrams

Process Sale



Handle Return

