

**IT-314 Lab Assignment
(Point of sale System)**

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(1) Use Cases Textual Description:

(1.1)Process Sale:

Actor: Cashier

Preconditions:

- Cashier is logged into the POS system
- Customer has items to purchase

Main Flow:

1. Cashier starts a new sale transaction.
2. For each item Cashier scans the item's barcode System retrieves item details from catalog System updates inventory System adds items to current transaction.
3. System calculates the total amount to be paid.
4. If customer has a coupon Cashier applies coupon and then System recalculates the total.
5. Cashier selects the payment method.
6. Customer completes payment.
7. System validates payment.

Postconditions:

- Sale is recorded in the system
- Inventory is updated
- Receipt is printed

Alternate Flows:

- 2a) If item not found in catalog, cashier manually enters item details.
- 7a) If payment is invalid, system prompts for alternative payment method.

(1.2)Handle Return:

Actor: Cashier

Preconditions:

- Cashier is logged into the POS system
- Customer has item(s) to return

Main Flow:

1. Cashier initiates the return process.
2. If customer has receipt Cashier scans or enters receipt details System retrieves original transaction.
3. For each item to be returned Cashier scans item barcode System verifies item and System checks return policy compliance.
4. System calculates the refund amount.
5. Cashier confirms return with customer.
6. System updates the inventory.
7. Cashier processes the refund.
8. System records return transaction

Postconditions:

- Return is recorded in the system
- Inventory is updated
- Refund is processed
- Return receipt is printed

Alternate Flows:

- 2b) If no receipt, cashier manually enters item details
- 3c) If item doesn't comply with return policy, system alerts cashier and item is not added to return

(2) Identifying Objects:**Entity Objects:**

- Sale
- Item
- Inventory
- Payment
- Receipt
- Return Manager

Boundary Objects:

- POS Terminal Interface
- Barcode Scanner Interface

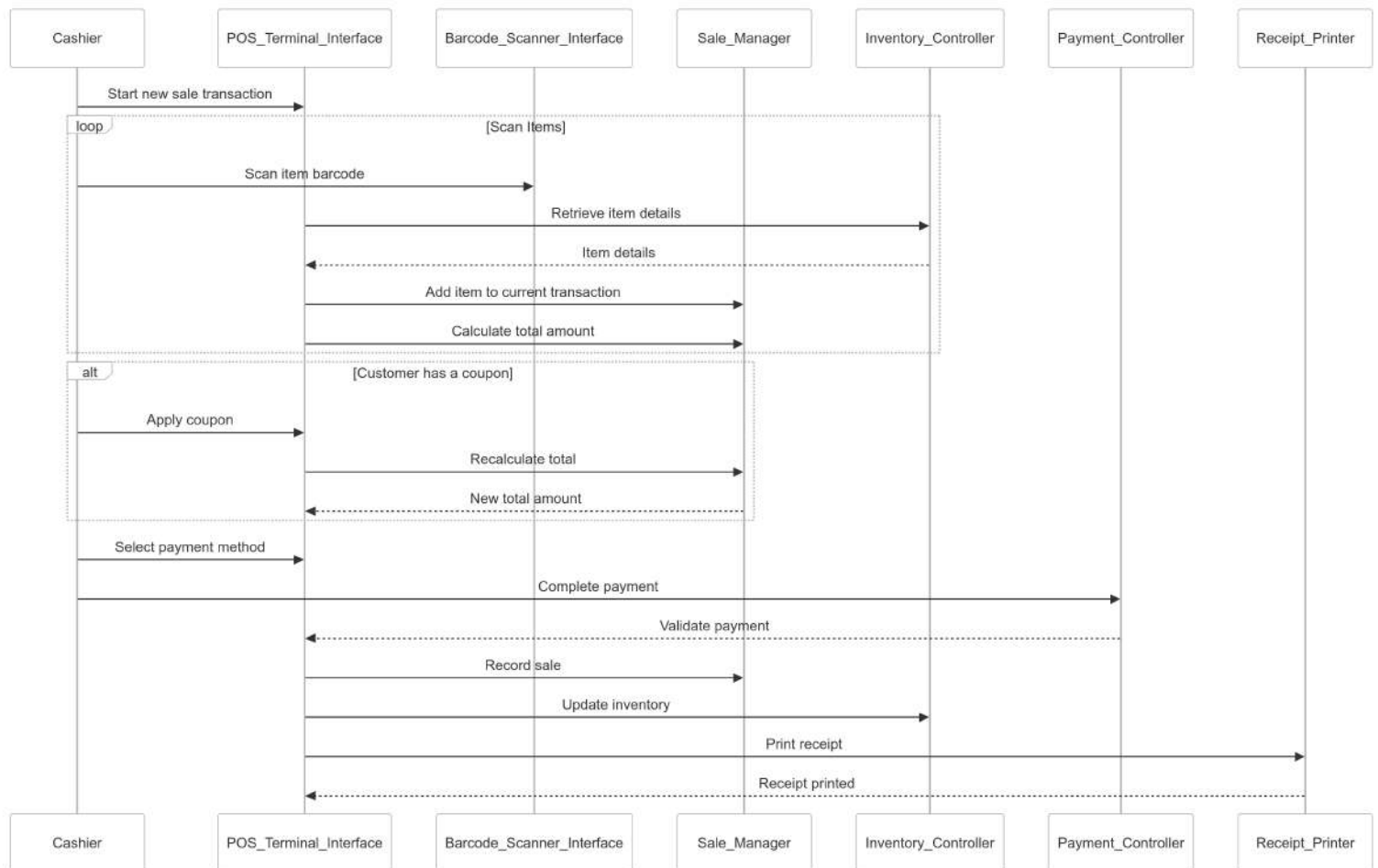
Control Objects:

- Sale Manager
- Inventory Controller

- Payment Controller
- Receipt Printer

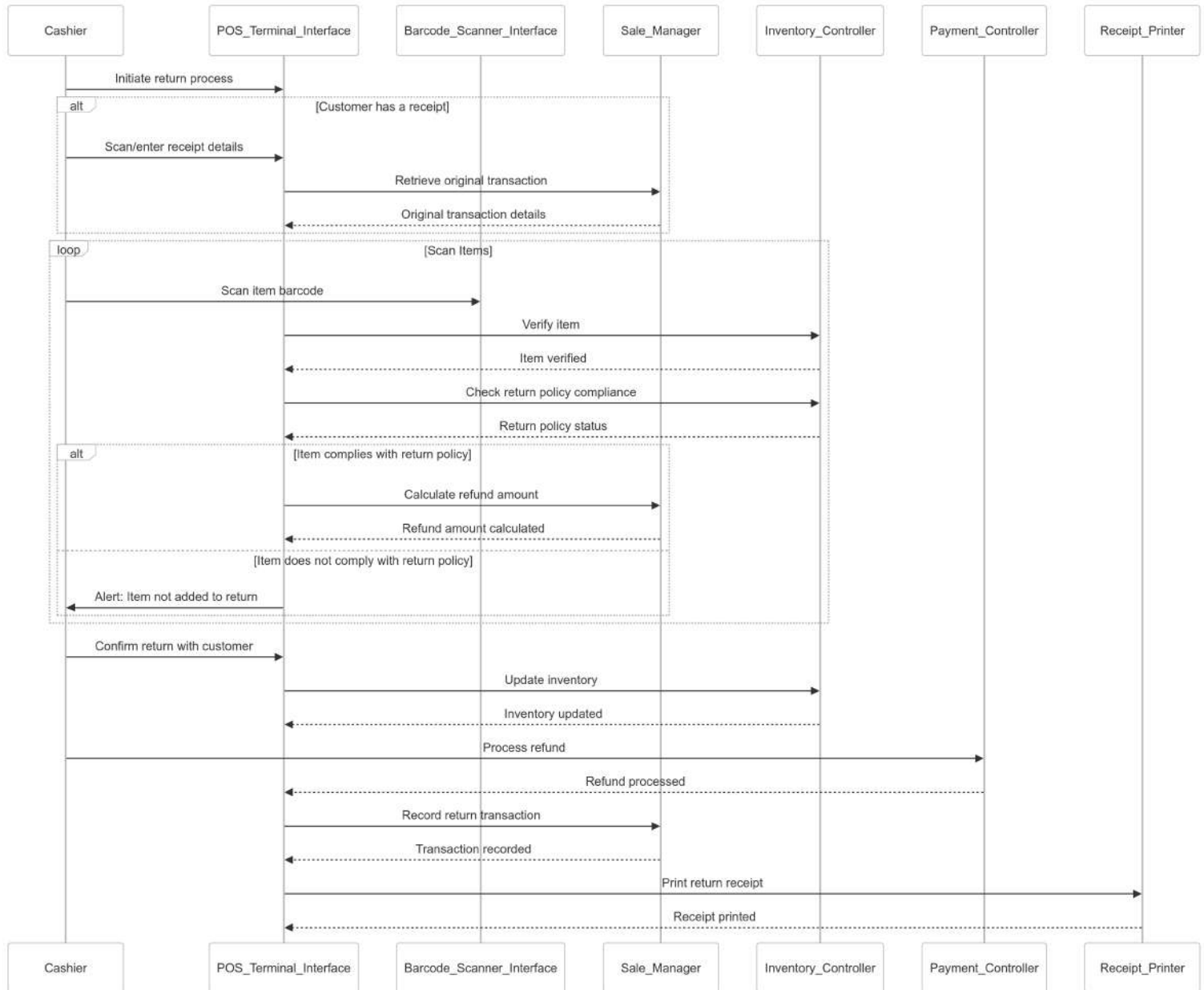
Sequence Diagram

- Process Sale

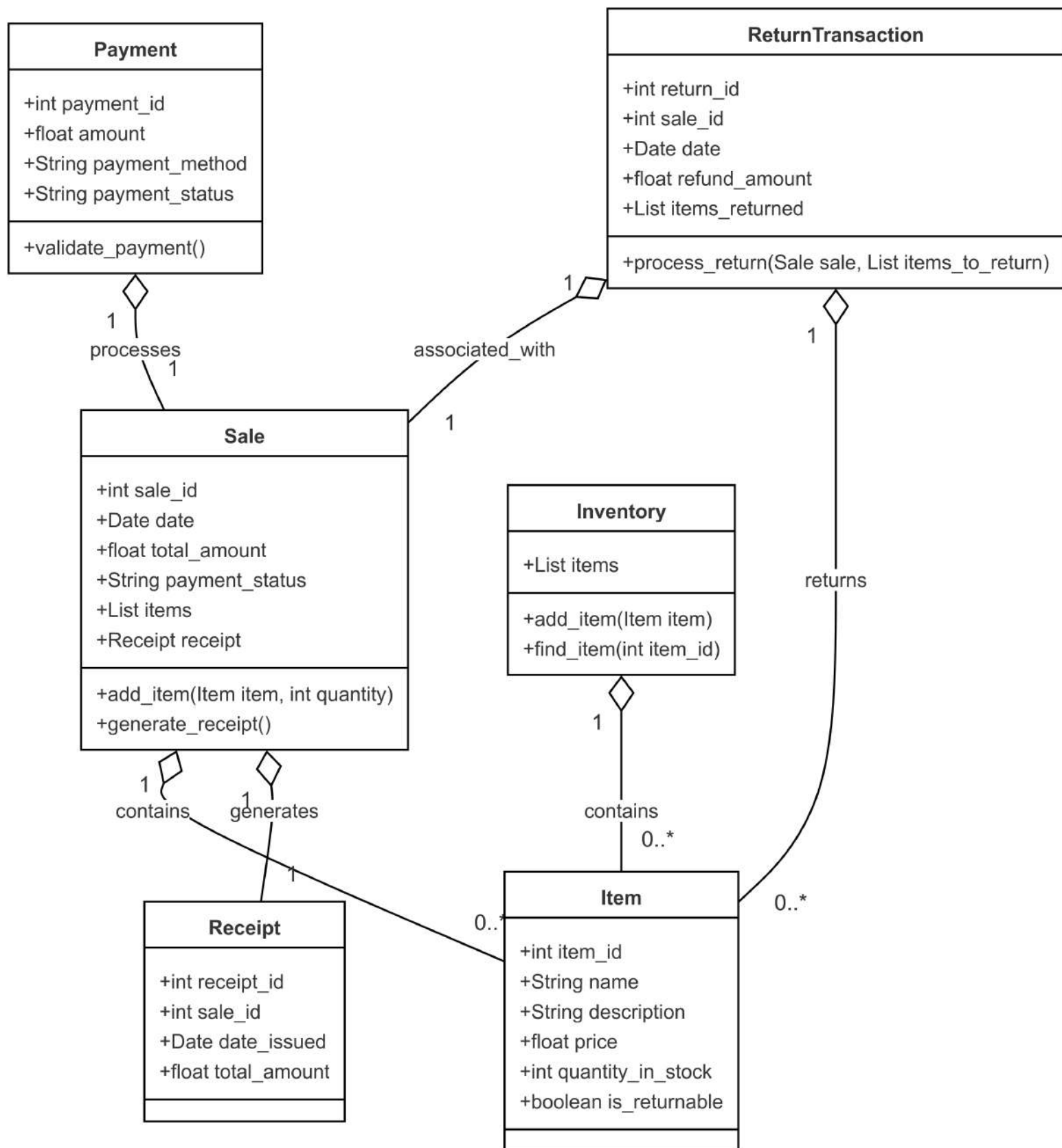


Sequence Diagram

- Handle Return

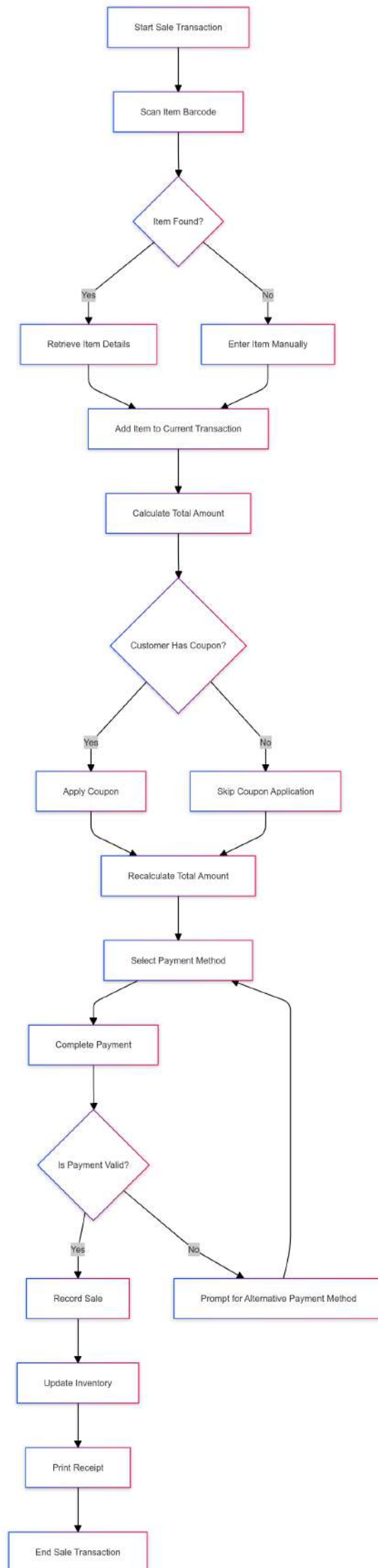


Analysis Domain Model :



Activity Diagram

- Process Sale



Activity Diagram

- Handle Return

