

# 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 item to current transaction.
3. System calculates total amount to be paid.

4. If customer has a coupon Cashier applies coupon and then System recalculates total.
5. Cashier selects 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 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 refund amount.
5. Cashier confirms return with customer.
6. System updates the inventory.
7. Cashier processes 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:

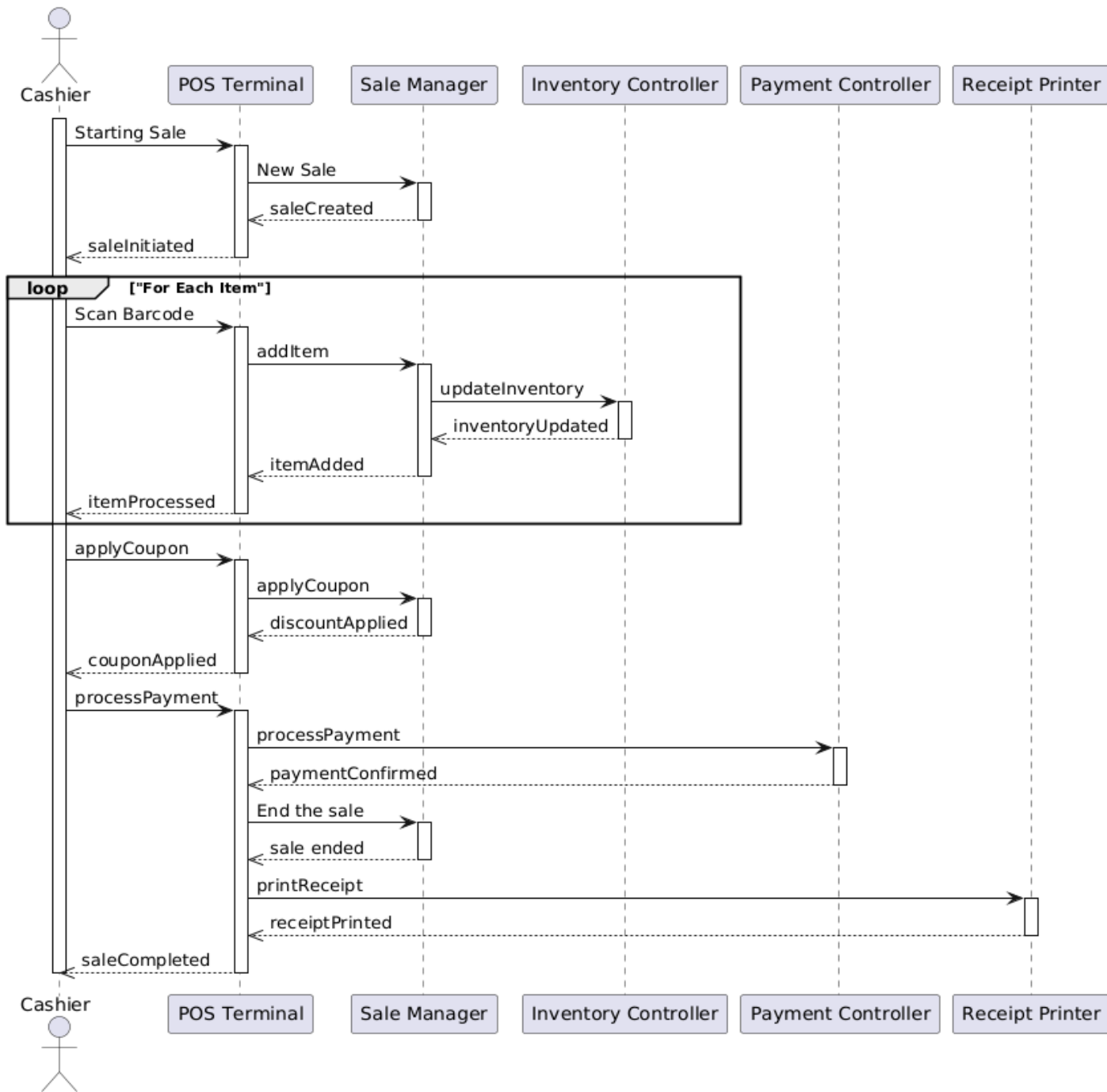
- POS Terminal Interface
- Barcode Scanner Interface

### Control Objects:

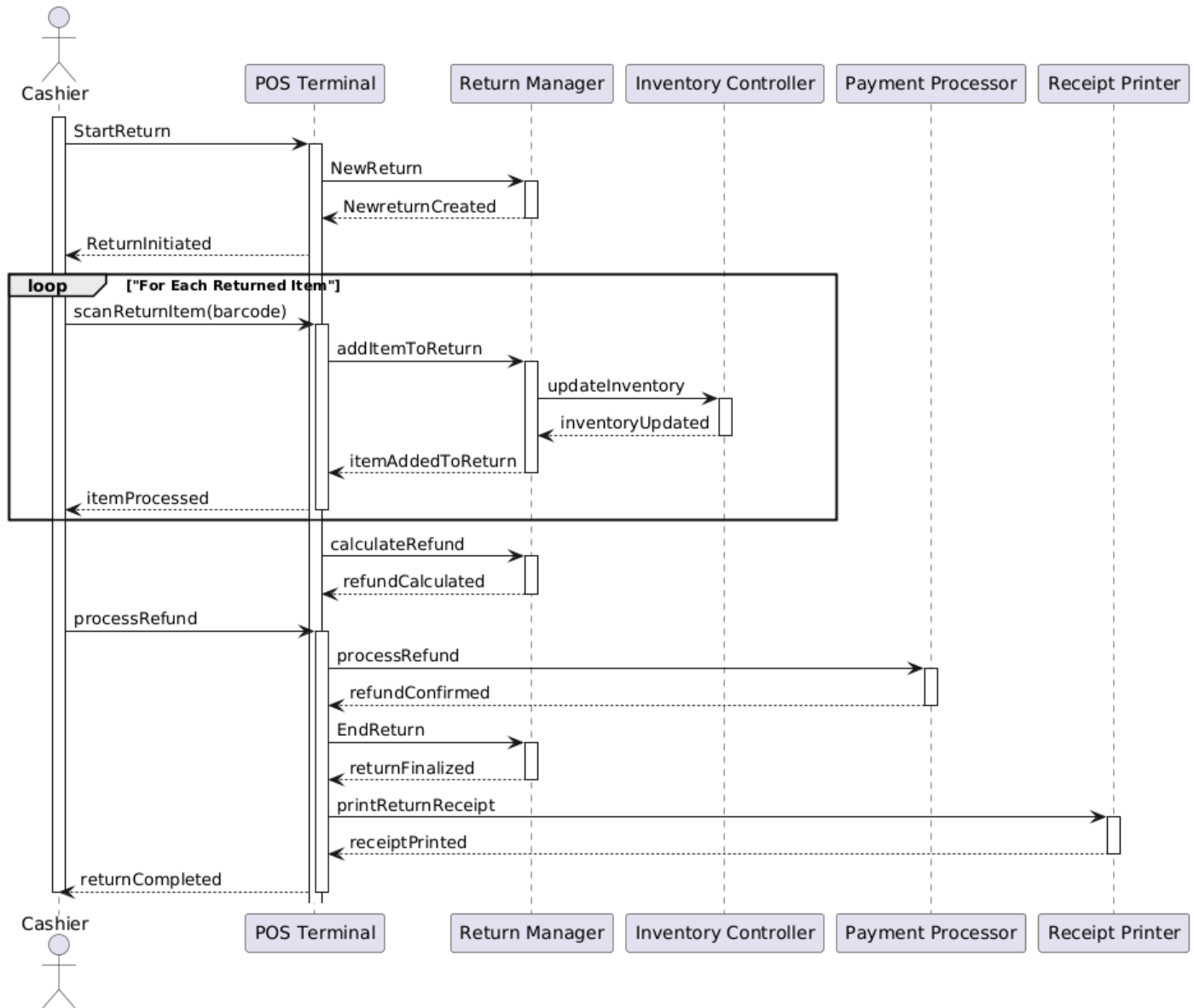
- Sale Manager
- Inventory Controller
- Payment Controller
- Receipt Printer

## (3) Sequence Diagrams:

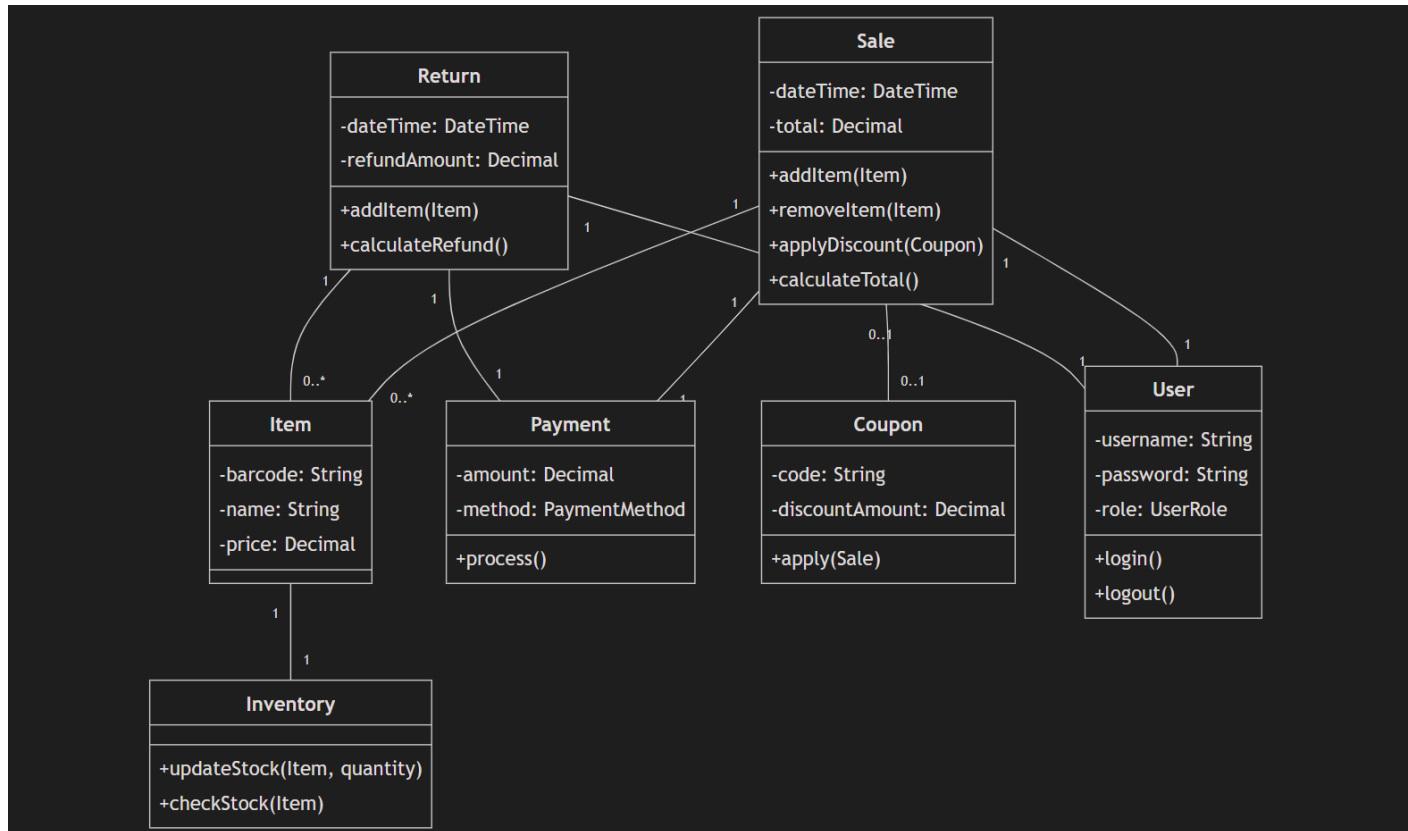
### 3.1) Process Sale:



## 3.2) Handle Return:

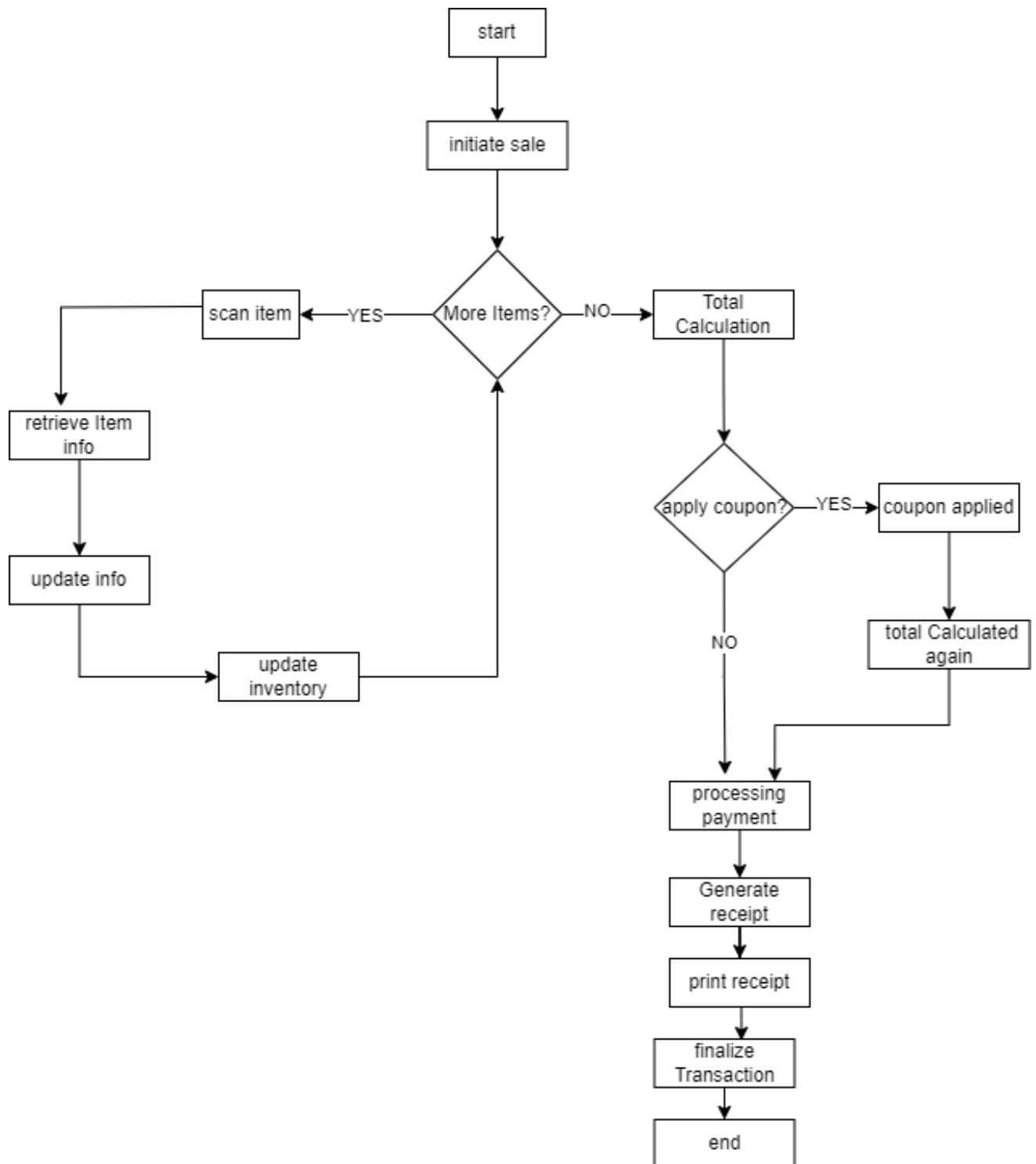


## (4) Analysis Domain Model:



## (5) Activity Diagrams:

### 5.1) Process Sale:





## 5.2) Handle Return:

