

Lab-06

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Use Case: Process Sale

Actor: Cashier

Use Case: Process Sale

Actor:

- Cashier

Preconditions:

- Cashier is logged into the system
- Items are available for purchase

Main Flow:

1. Customer brings items to the checkout counter
2. Cashier starts a new sale transaction
3. For each item:
 - a. Cashier scans or enters item code
 - b. System displays item details and price
 - c. System adds item to the current transaction
4. System calculates and displays total amount
5. Cashier informs customer of the total
6. Customer chooses payment method
7. Cashier processes payment
8. System records the sale and updates inventory
9. System generates receipt
10. Cashier gives receipt to customer

Alternate Flows:

- 3a. Item not found: Cashier manually enters item details
- 6a. Customer wants to remove an item: Cashier removes item from transaction
- 7a. Payment declined: Cashier asks for alternative payment method

Postconditions:

- Sale is recorded in the system

- Inventory is updated
 - Receipt is generated
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Use Case: Handle Return

Actor:

- Cashier

Preconditions:

- Cashier is logged into the system
- Customer has a valid receipt for the return

Main Flow:

1. Customer brings item(s) for return to the counter
2. Cashier initiates return process
3. Cashier scans or enters receipt number
4. System displays original transaction details
5. Cashier verifies returned item(s) against the receipt
6. For each returned item:
 - a. Cashier scans or enters item code
 - b. System validates return eligibility
 - c. System adds item to return transaction
7. System calculates total refund amount
8. Cashier confirms return with customer
9. System processes refund
10. System updates inventory
11. System generates return receipt
12. Cashier gives return receipt to customer

Alternate Flows:

- 3a. Receipt not found: Cashier enters transaction details manually
- 6b. Item not eligible for return: Cashier explains policy to customer
- 9a. Original payment was cash: Cashier provides cash refund
- 9b. Original payment was card: System initiates refund to the card

Postconditions:

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

Use Case: Process Sale

Entity Objects:

- **Sale: Represents the sale transaction.**
- **Item: Represents each product being purchased.**
- **Customer: Represents the person buying the items.**
- **Payment: Represents the details of the payment method and transaction.**
- **Receipt: Represents the generated sale receipt.**
- **Inventory: Represents the stock of items.**

Boundary Objects:

- **Checkout Interface: The user interface where the cashier scans items, views the total, and completes the sale.**
- **Payment Interface: The interface where the cashier processes payment (could be card, cash, etc.).**

Control Objects:

- **Sale Manager: Handles the overall sale transaction process (starting, adding items, etc.).**
- **Inventory Manager: Updates the inventory after the sale.**
- **Payment Processor: Manages the payment process and ensures payment is accepted or declined.**

Use Case: Handle Return

Entity Objects:

- **Return: Represents the return transaction.**
- **Item: Represents each product being returned.**
- **Customer: Represents the person returning the items.**

- **Payment:** Represents the refund process (e.g., cash refund or refund to card).
- **Receipt:** Represents the original and the return receipt.
- **Inventory:** Represents the stock, which needs updating after the return.

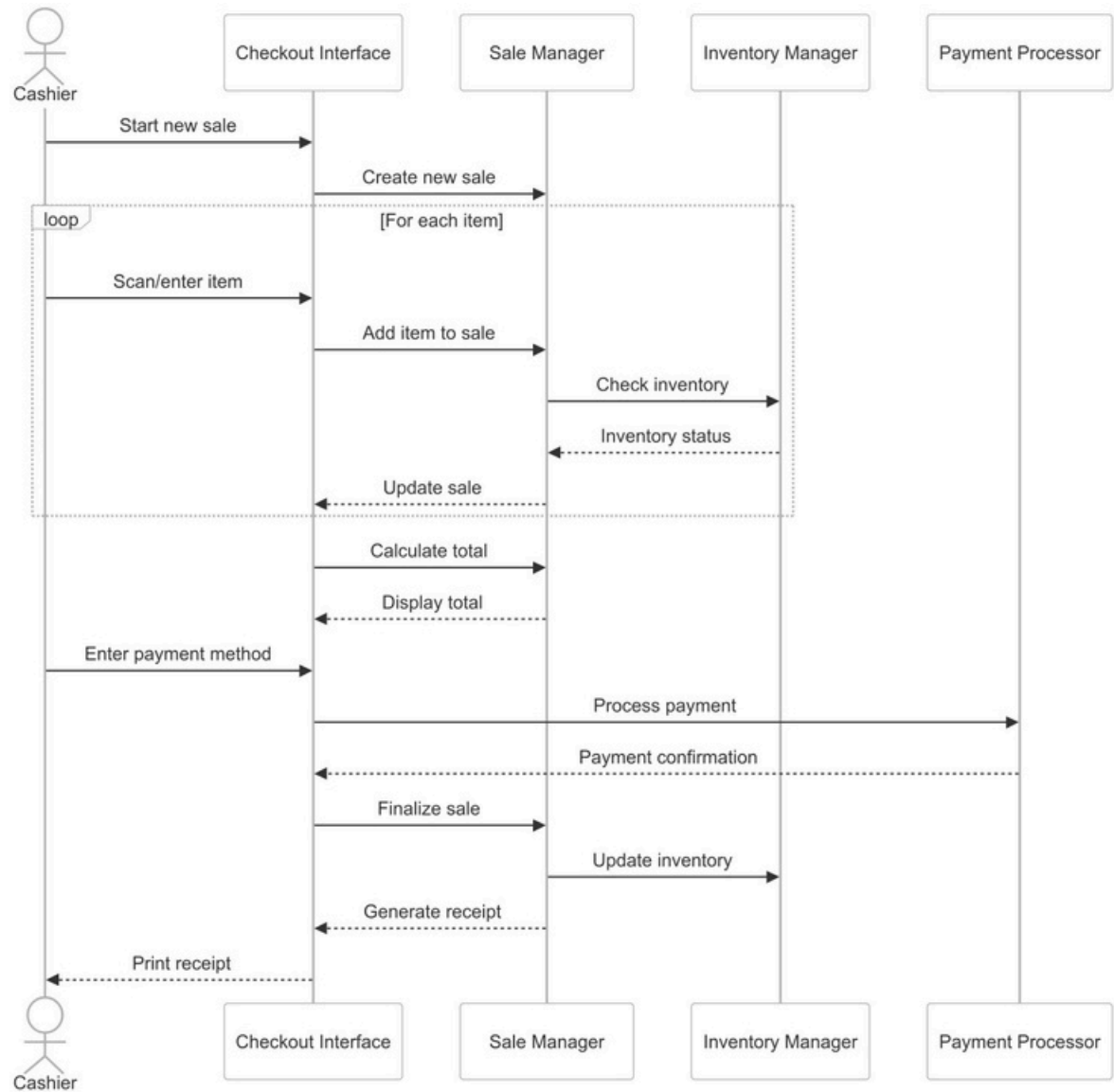
Boundary Objects:

- **Return Interface:** The user interface where the cashier processes the return.
- **Payment Interface:** The interface where refunds are processed (either cash or card).

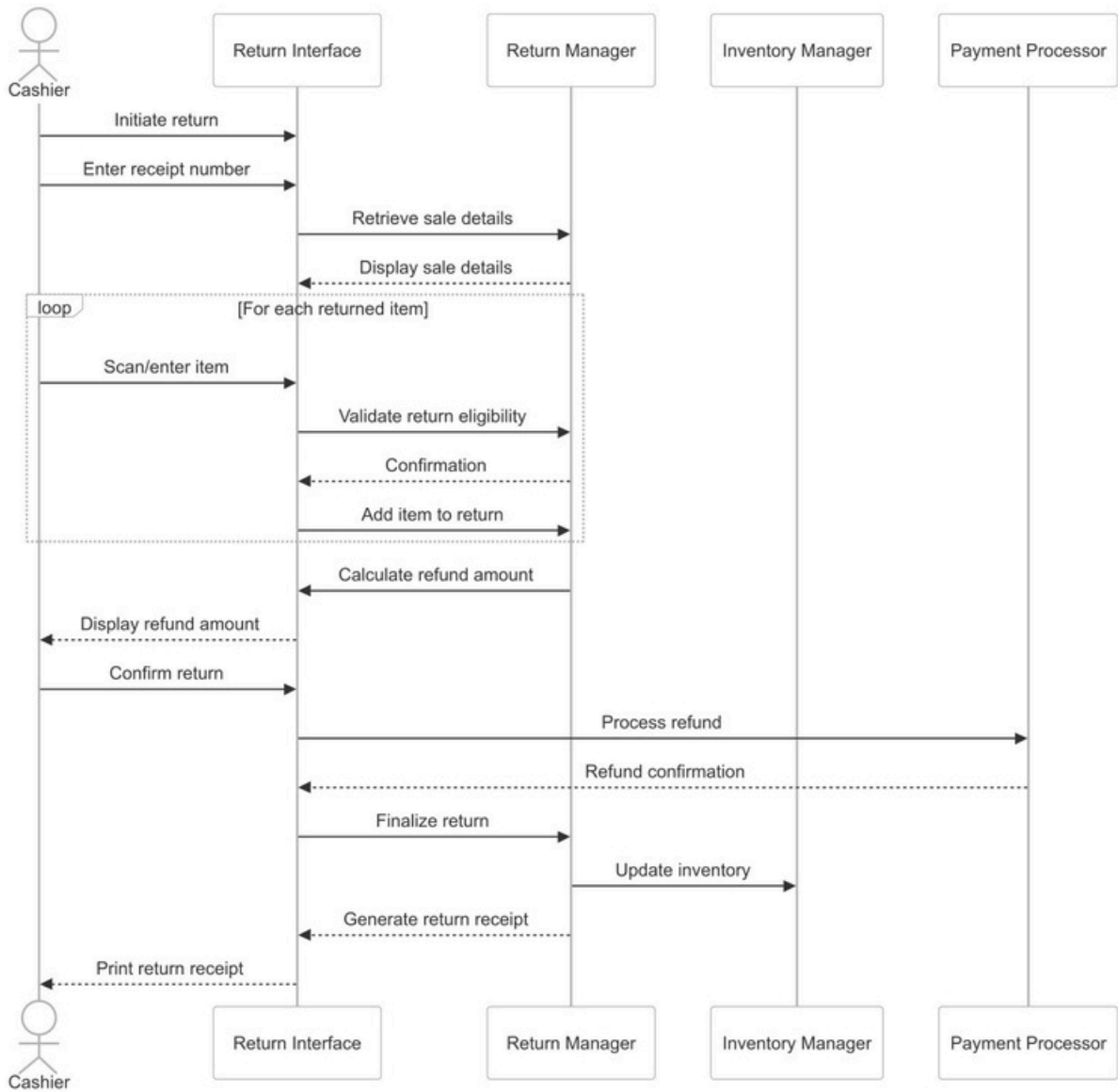
Control Objects:

- **Return Manager:** Handles the overall return process (initiating, verifying, etc.).
- **Inventory Manager:** Updates the inventory when items are returned.
- **Payment Processor:** Manages the refund process (cash or card refund).

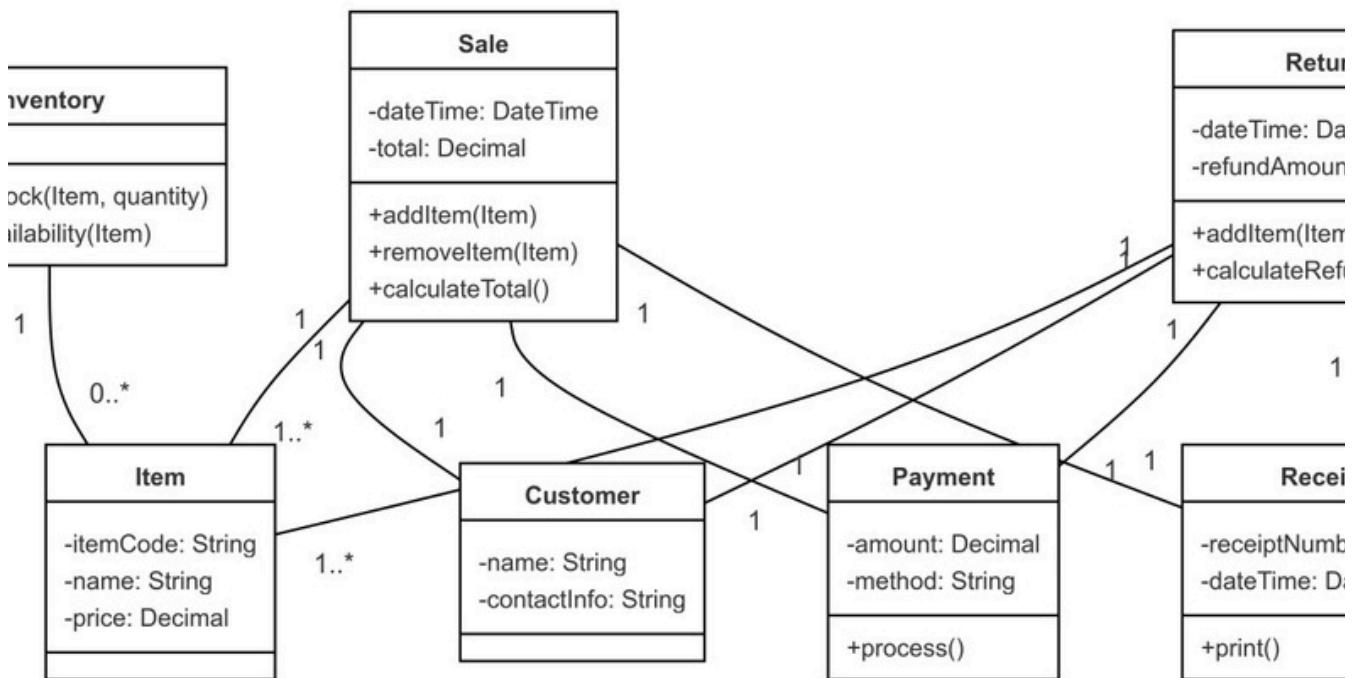
Sequence Diagram for Process Sale



Sequence Diagram for Handle Return



Analysis Domain Models



Activity diagram for "Process Sale" and "Handle Return" use cases.

