

SOFTWARE ENGINEERING (IT-314)

LAB-6

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->Use Case Description

Use Case 1 : Process Sale

- Actor(s) :
 - Cashier
 - Catalog System (external actor)
 - Inventory System(external actor)

- **Precondition :**
 - The cashier must be logged into the system.
 - The items must exist in the catalog and inventory system.
- **Main Flow :**
 - 1.)The cashier starts a new sale.
 - 2.)The cashier scans the item.
 - 3.)The system retrieves the item information from the inventory.

4.)The system deducts the stock of the item from the inventory.

5.)The cashier repeats the steps 1-4 for all items.

6.)The customer chooses a payment method.(cash,credit card or cheque)

7.)The system processes the payment.

8.)Once payment has been confirmed , the system generates a receipt.

- **Alternate Flow :**

3a)If an item is not found in the catalog, the cashier gets a notification.

4a)If there is insufficient stock , the cashier is notified to inform the customer.

8a)If the payment fails , the cashier retries the payment or cancels the sale.

- **Post condition :**

- The sale is completed and recorded in the system.
- The stock is updated in the inventory system.
- The receipt is printed for the customer.

-Use Case 2 : Handle Returns

- **Actor(s) :**
 - Cashier
 - Inventory System(external actor)

- **Precondition :**
 - The cashier must be logged into the system.
 - The item to be returned must be a part of a previous sale.
- **Main Flow :**
 - 1.)The cashier starts a new return transaction.
 - 2.)The cashier scans the returned item(s) and verifies the original sale.
 - 3.)The system retrieves the item information from the inventory.
 - 4.)The cashier confirms that the return is within the return policy.
 - 5.)The system updates the stock in the inventory by adding the item.

6.)The system issues a refund or a store credit to the customer.

- **Alternate Flow :**

5a)If the return period has expired, the system notifies the cashier to reject the return.

4a)If the item is damaged or missing, the return is rejected.

- **Post condition :**

- The return is processed and updated in the inventory system.
- The customer is compensated with appropriate refund or credit.

->Identification of Entity, Boundary and Control Objects

-Entity Objects

- Cashier
- Catalog System
- Inventory System
- Invoice
- Return Invoice

-Boundary Objects

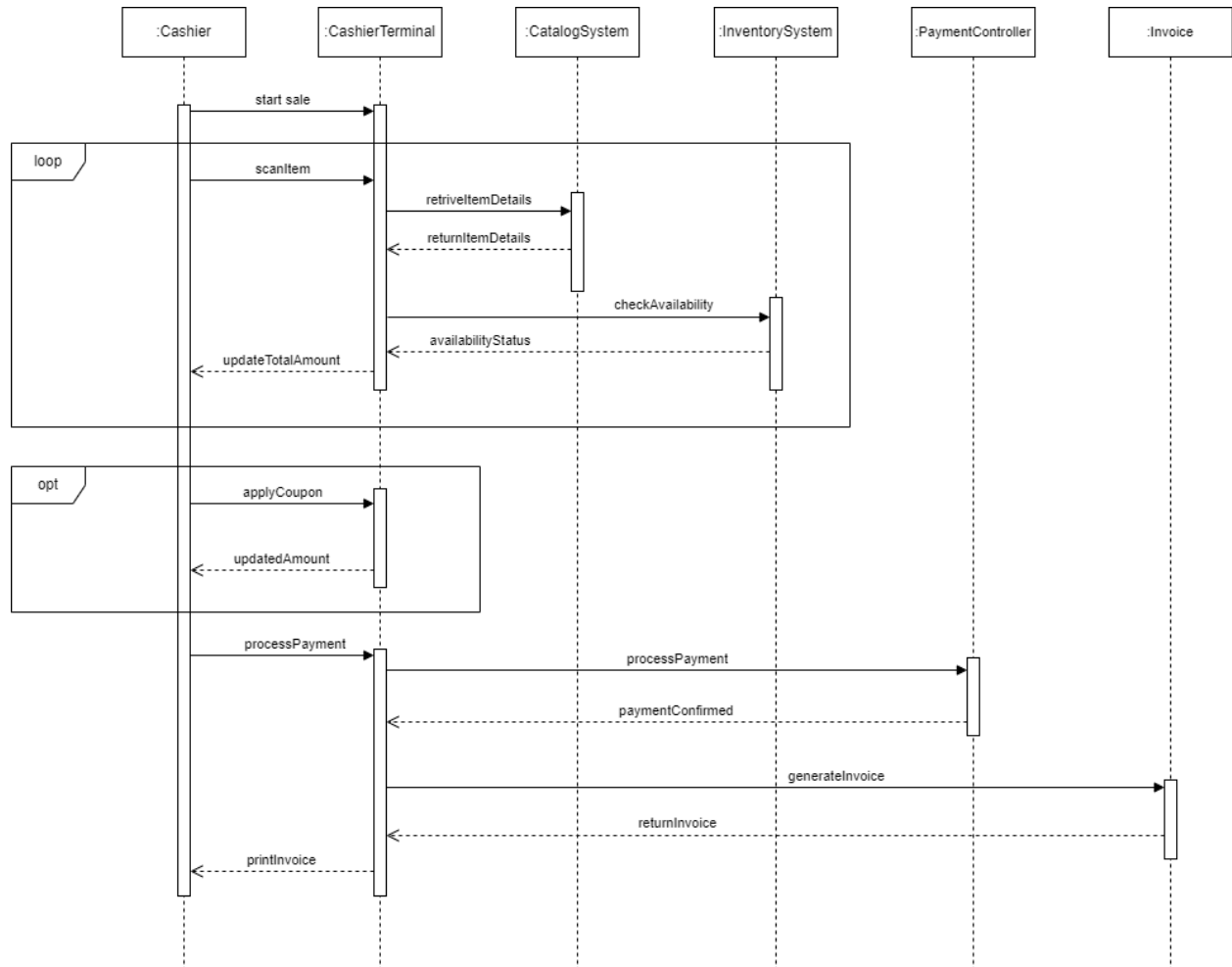
- Cashier Terminal
- Scanner

-Control Objects

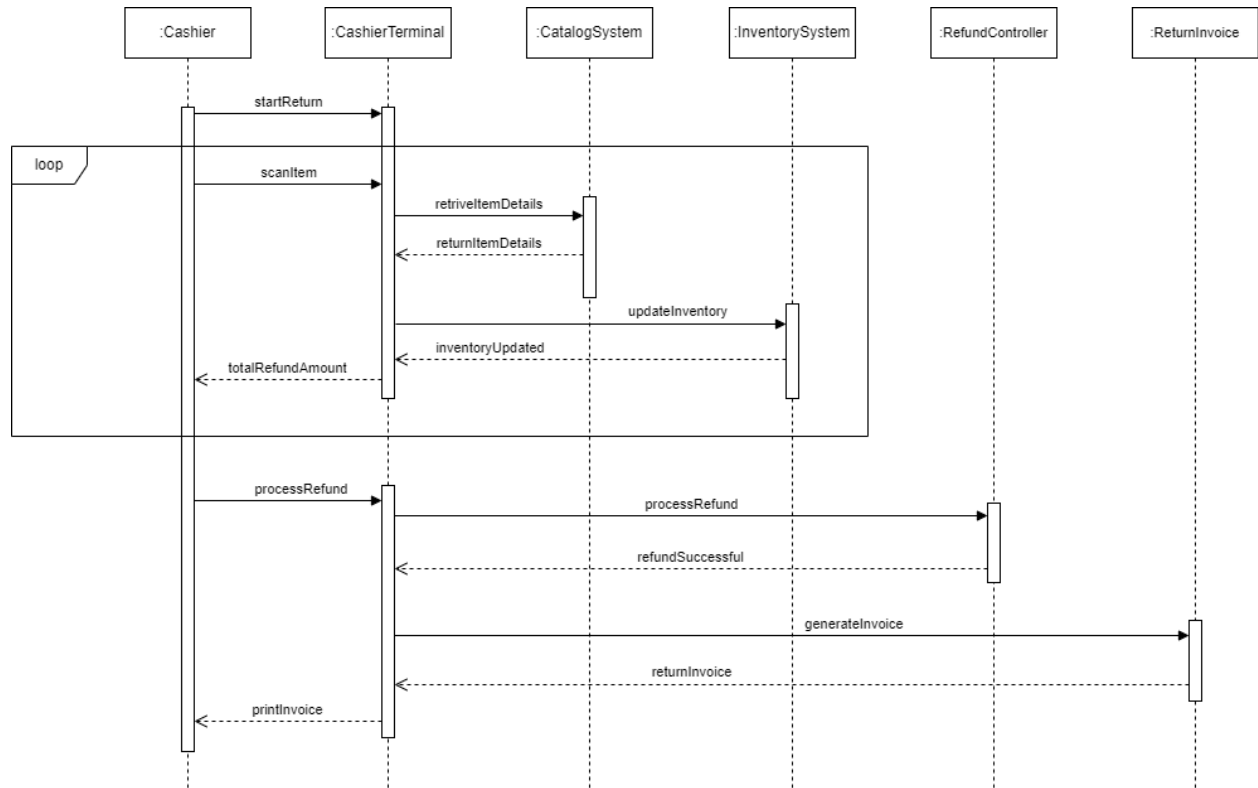
- Payment Controller
- Refund Controller

->Sequence Diagrams

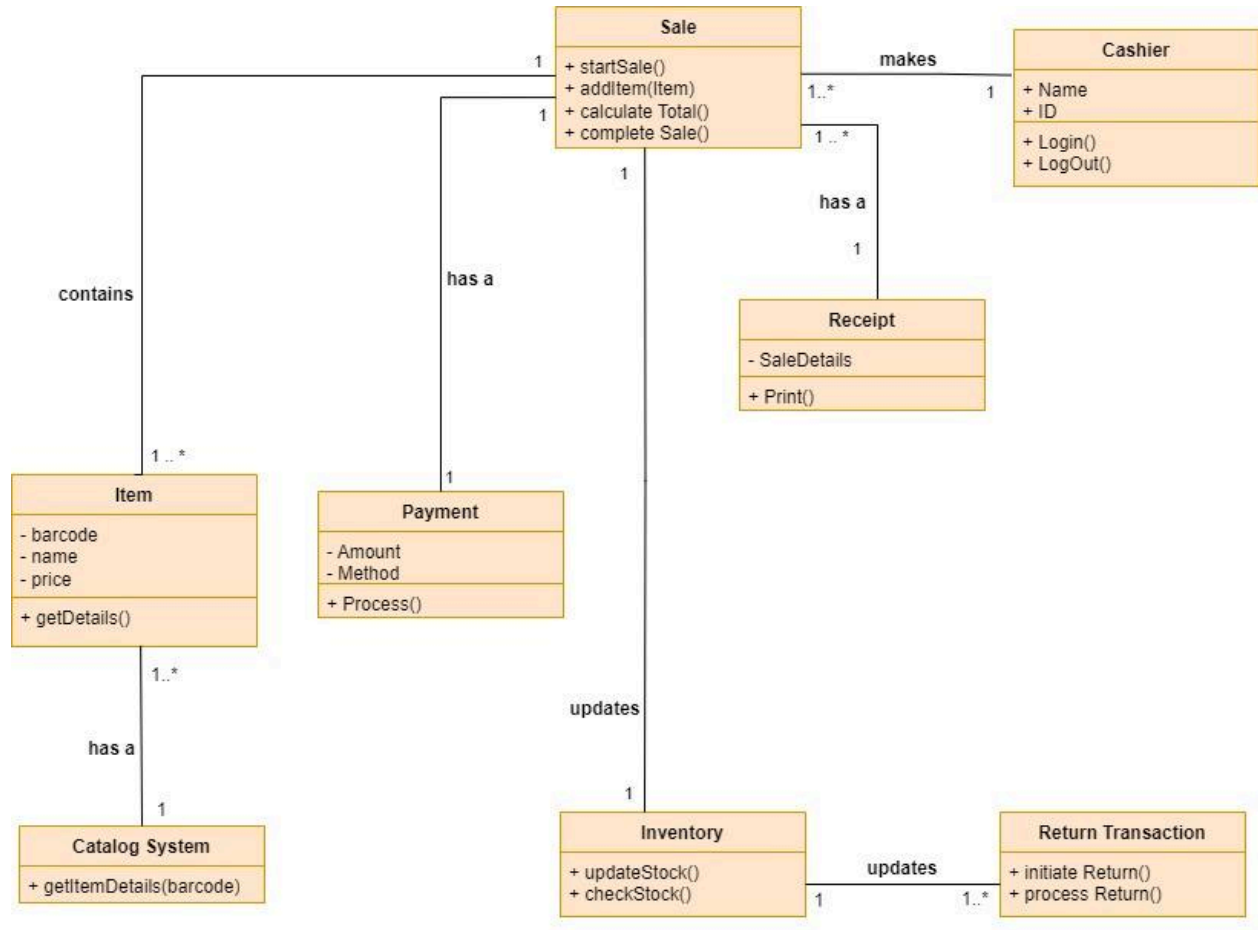
-Process Sale



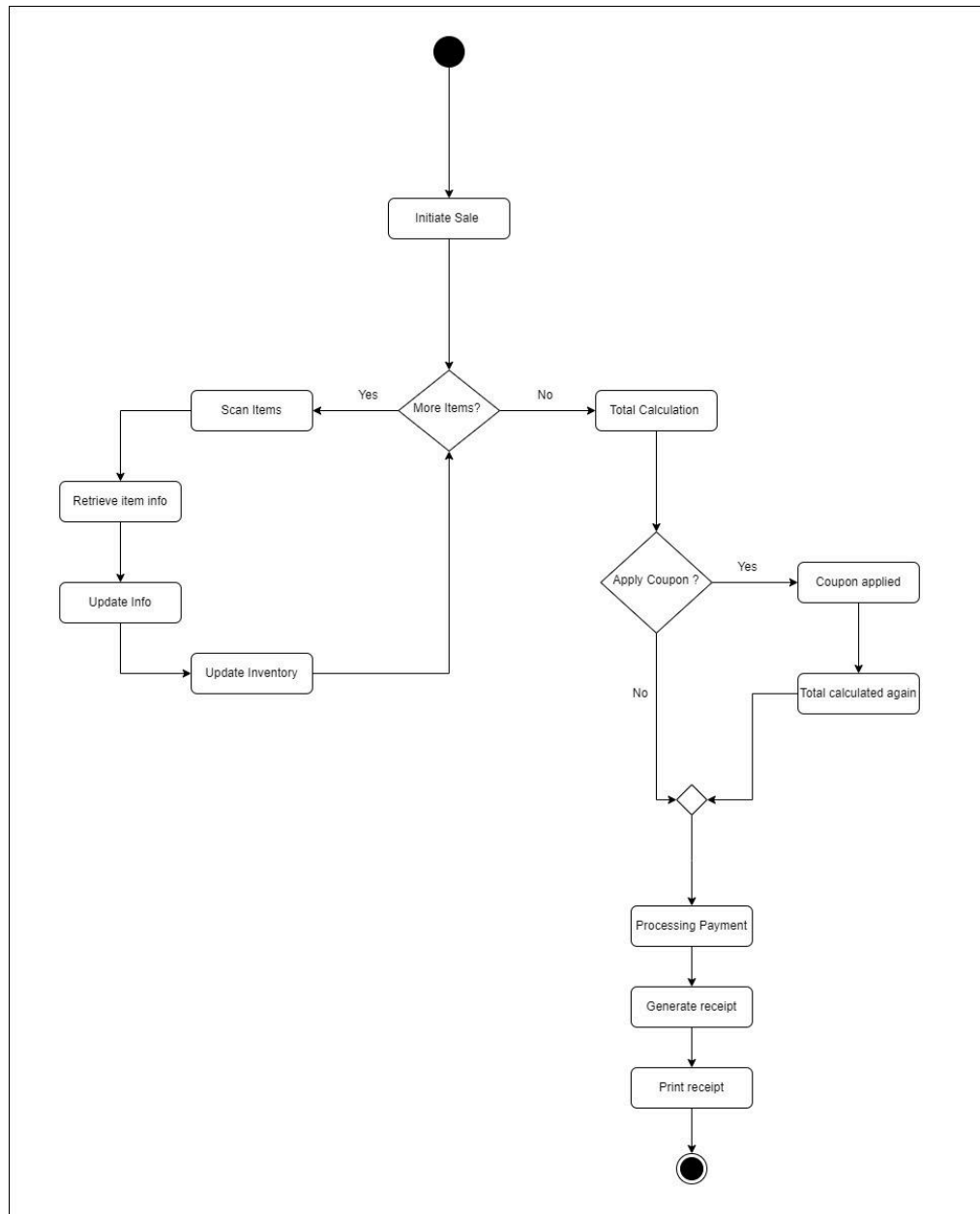
-Handle Return



->Analysis Domain Model (Class Diagram)



->Activity Diagram
-Process Sale



-Handle Return

