

IT-314 : Software Engineering

Lab-6



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❖ Develop Use Case Textual Description for "Process Sale" and "Handle Return" use cases.

Process Sale

- **Primary Actor:** Cashier
- **Trigger:** Customer arrives at the POS to purchase goods.
- **Preconditions:** The cashier is logged into the system, and the POS system is operational.
- **Postconditions:** The sale is completed, payment is processed, and a receipt is printed.
- **Main Flow:**
 1. Cashier scans the barcode of the goods.
 2. The POS system retrieves item details (price, name) from the catalog system.
 3. The POS system interacts with the inventory system to deduct the stock.
 4. Cashiers offer customer payment options (cash, credit card, etc.).
 5. Customer selects a payment option.
 6. The POS system processes the payment and prints the receipt.
 7. Sales are recorded, and inventory is updated.

Handle Return

- **Primary Actor:** Cashier
- **Trigger:** A customer returns goods to the POS.
- **Preconditions:** The cashier is logged into the system, and the item being returned is eligible.
- **Postconditions:** The return is processed, the inventory is updated, and the customer receives compensation (cash or credit).
- **Main Flow:**
 1. Customer provides the receipt for the returned goods.
 2. Cashier scans the receipt and the barcode of the goods.
 3. The POS system retrieves item details and verifies eligibility for return.
 4. Cashier verifies the condition of the goods.
 5. POS system updates inventory.
 6. Customers are refunded through cash or store credit.

❖ Identify Entity/Boundary Control Objects.

- **Entity Objects:**

- Product
- Receipt
- Sale Transaction
- Payment Method (Cash, Credit, Check)
- Return Transaction

- **Boundary Objects:**

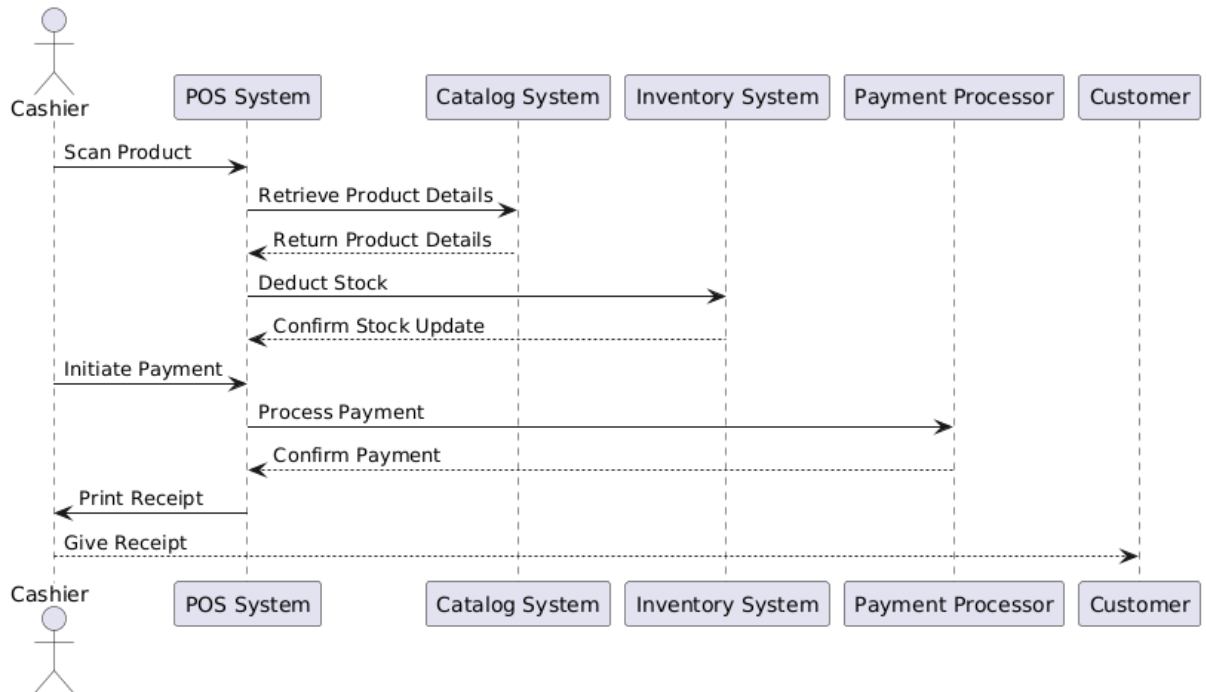
- Cashier Interface
- Payment Interface (Credit Card Machine, Cash Register)
- Inventory System
- Catalog System

- **Control Objects:**

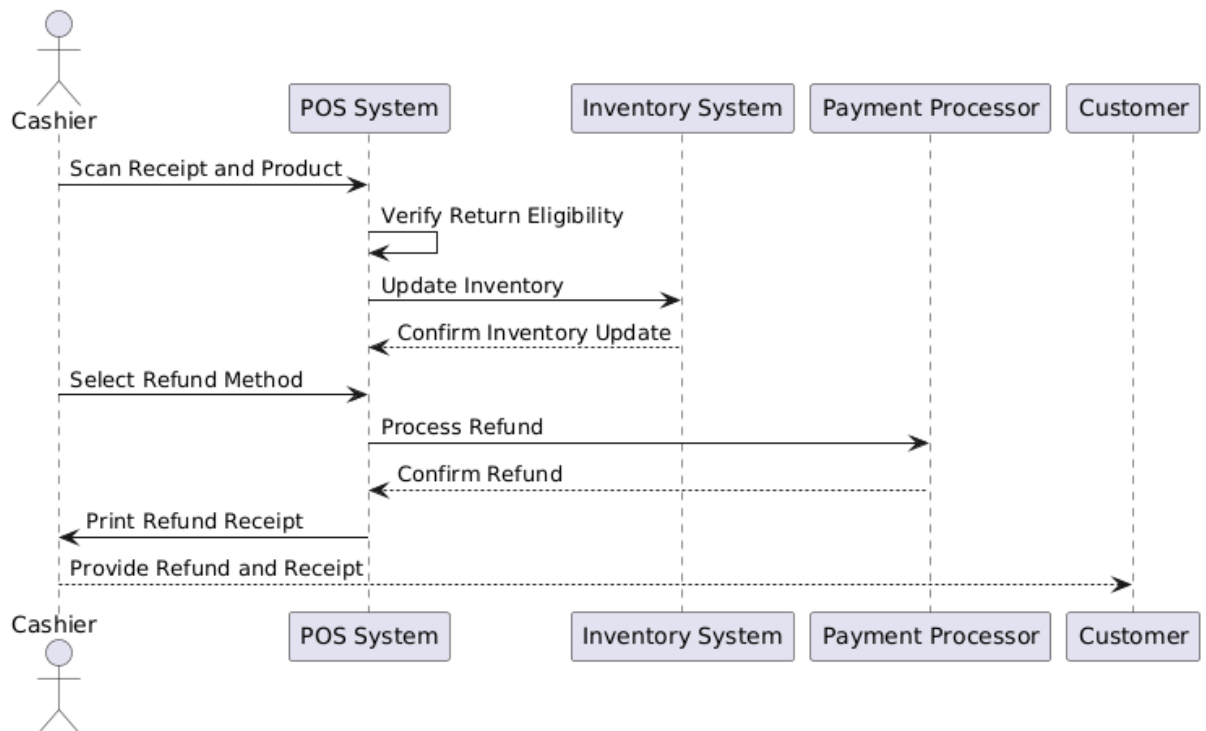
- Sale Processor (Handles sales logic)
- Payment Handler (Handles payment processing)
- Return Processor (Handles returns)

❖ Develop Sequence Diagrams.

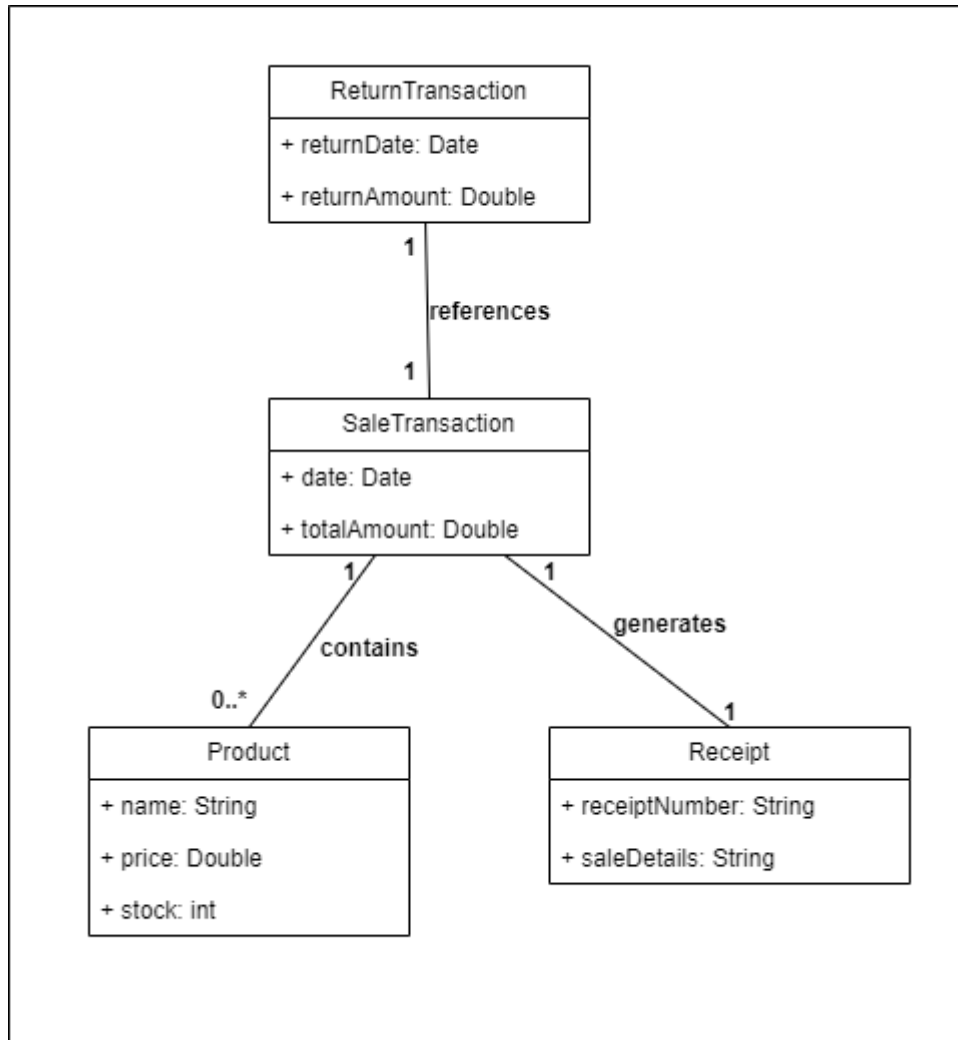
Process Sale



Handle Return

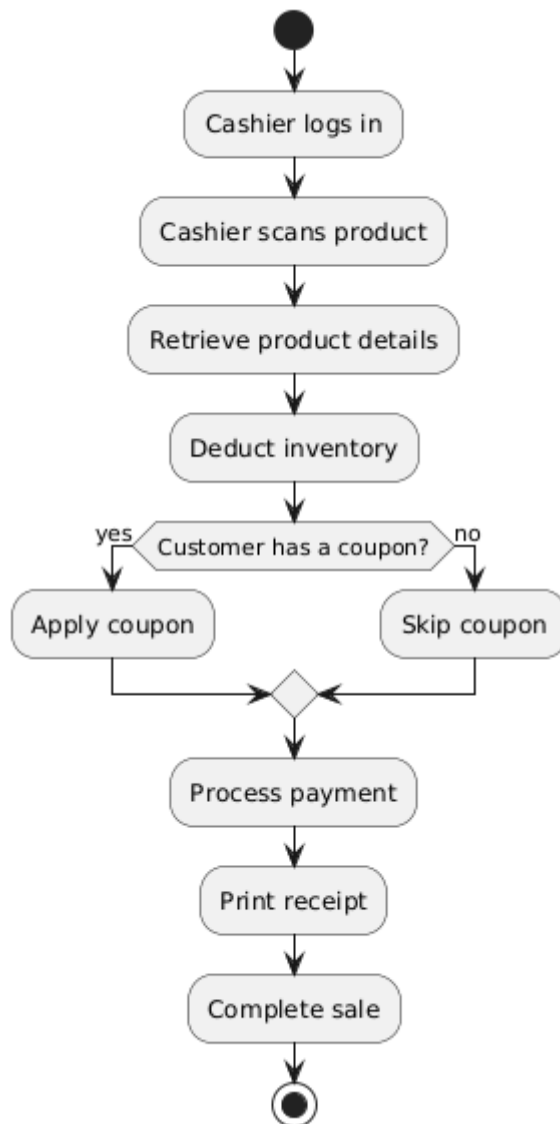


❖ Develop Analysis Domain Models.



❖ Develop activity diagram for "Process Sale" and "Handle Return" use cases.

- Process Sale



- **Handle Return**

