

# Software Engineering (IT-314)

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## Lab – 6

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Q -1) Develop Use Case Textual Description for "Process Sale" and "Handle Return" use cases.

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**Use case:** Process sale

**Actor:** cashier

**Stack holder:** customer, cashier

**Precondition:**

- cashier should be login in to POS system.

**Postcondition:**

- Payment and sale transaction is completed.
- Update the Quantity of items is system.
- Customer received receipt for purchase item.

**Main Flow:**

1. Customer arrives at POS system with goods purchase, then cashier create new transaction of the system.
2. Cashier scan barcodes of all the goods.
3. Cashier validates with customer for all item are scanned.
4. Customer present any gift coupon then customer use for it to the transaction process.
5. Cashier asks to the customer for payment.
6. Customer can use online or offline mode use for payment.
7. After payment Successful, system generate a receipt.

8. Cashier returns the hard copy to the customer.

**Alternate Flow:**

2.a If barcode is not present any of the items, then cashier enter manually number in the system.

6.a If customer choose online mode and payment is failed then cashier ask to customer for retry payment process.

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**Use case:** Handle Return

**Actor:** cashier

**Stack holder:** customer, cashier

**Precondition:**

- Cashier should be login in to POS system.
- Customer should carry their receipt or bill.

**Postcondition:**

- Item should be return by customer.
- Customer received returns and update the receipt.
- Customer received update receipt.

**Main Flow:**

1. Customer first approach the counter to return their items.
2. Cashier scans the barcode for the customer want to return.
3. Cashier Verify timing for return duration.
4. If Customer return items between duration, then Cashier return refund amount and update the POS system database.
5. After return cash, Cashier changes the receipt and give to the Customer.

**Alternate Flow:**

3.a If return time is out then cashier deny for return item to the customer.

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Q -2) Identify Entity/Boundary/Control Objects

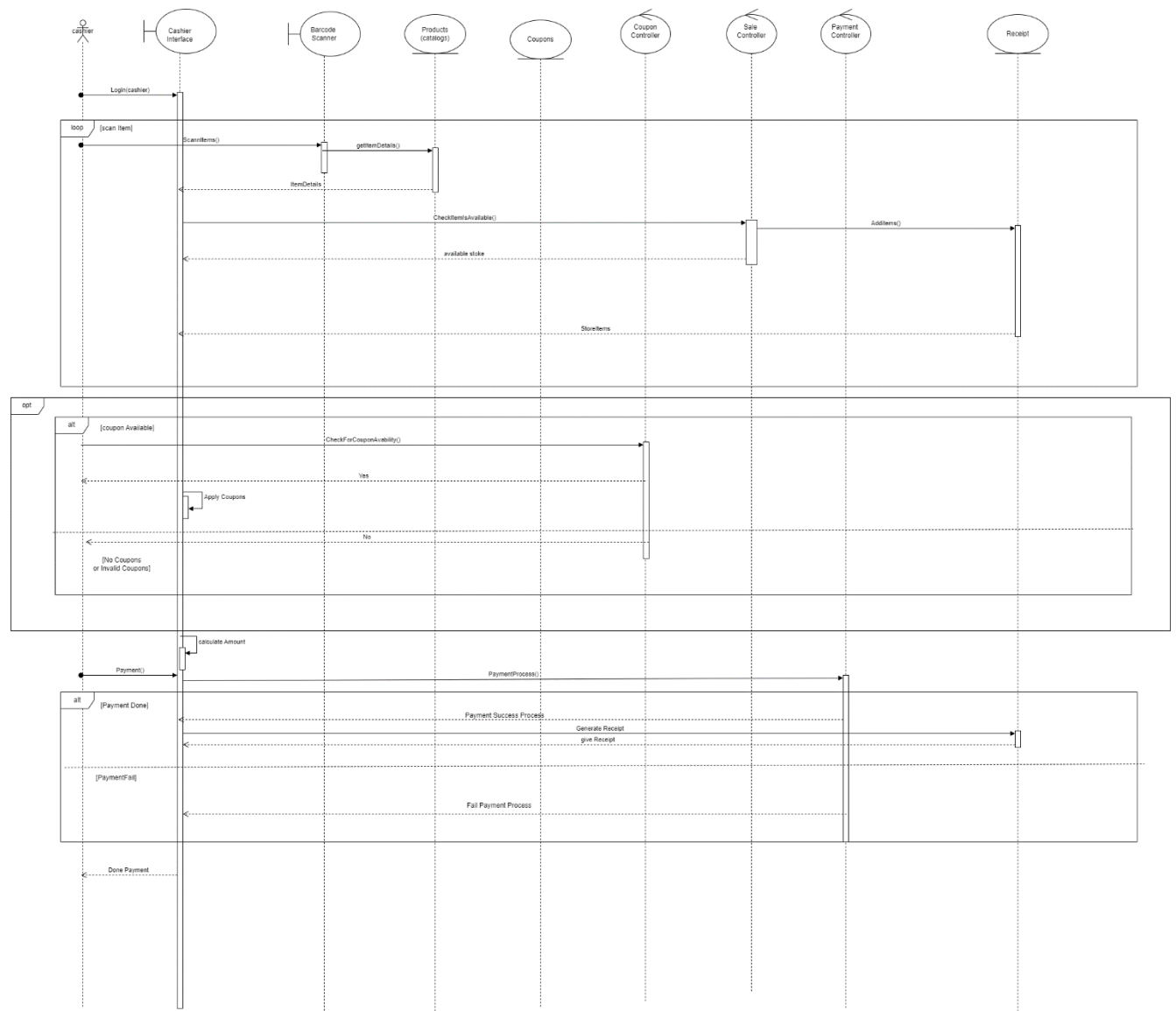
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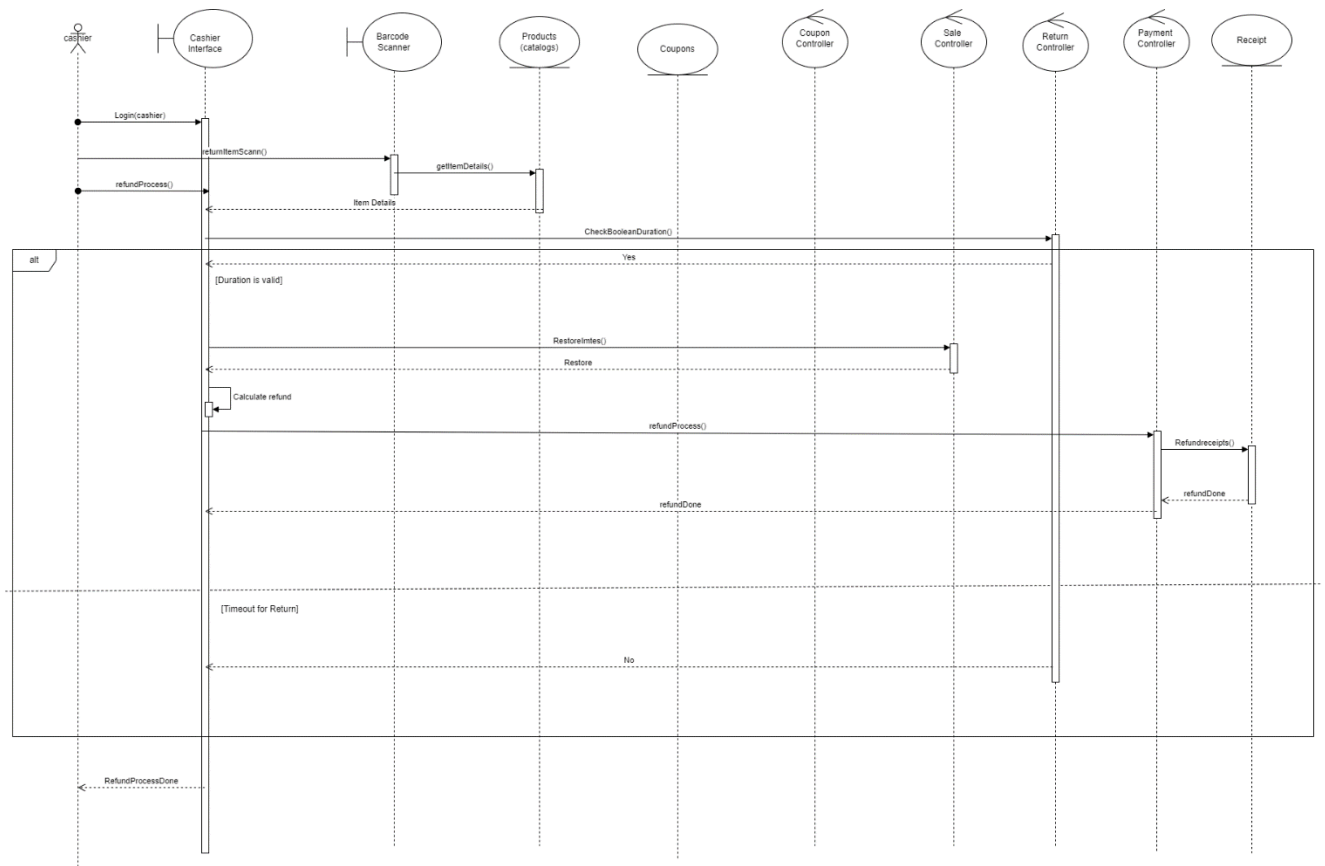
Entity Objects: Products, Coupons, Receipt, Cashier, Customer, Coupons

Boundary Object: After Login Cashier Interface, Barcode Scanner

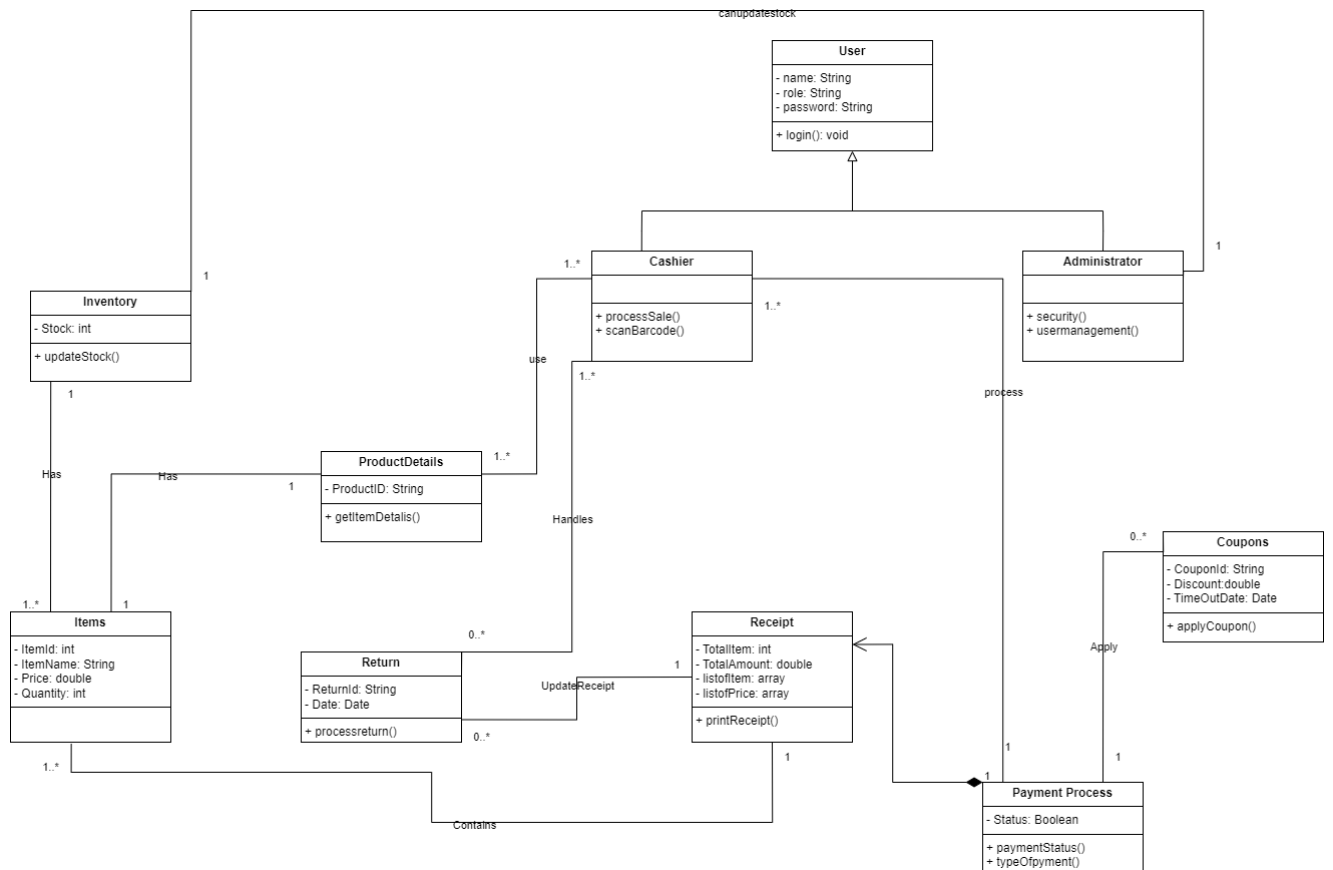
Control Object: Sale controller, coupon controller, payment controller, refund controller

### Q -3) Develop Sequence Diagrams





Q -4) Develop Analysis Domain Models



Q -5) Develop activity diagram for "Process Sale" and "Handle Return" use cases

