**Kode Mermaid**

Nama : Tita Nazalah Aisyah

NIM : 12030123120053

1. **Class Diagram**

classDiagram

class Customer {

int customerID

String name

String email

String phone

String address

viewOrderHistory(): void

updateProfile(): void

}

class Order {

int orderID

Date orderDate

String status

float totalAmount

calculateTotal(): float

placeOrder(): void

cancelOrder(): void

}

class OrderItem {

int orderItemID

int quantity

float price

calculateSubtotal(): float

}

class Product {

int productID

String productName

String description

float price

int stock

updateStock(): void

applyDiscount(): void

}

class Payment {

int paymentID

Date paymentDate

float amount

String paymentMethod

processPayment(): void

refundPayment(): void

}

class ShoppingCart {

int cartID

Date createdDate

addItem(): void

removeItem(): void

calculateTotal(): float

}

class Shipping {

int shippingID

Date shippingDate

String deliveryAddress

float shippingCost

calculateShippingCost(): float

trackShipment(): void

}

Customer "1" --o "0..\*" Order : places

Order "1" --o "0..\*" OrderItem : contains

OrderItem "1" --o "1" Product : refers to

Order "1" --o "1" Payment : includes

Customer "1" --o "1" ShoppingCart : has

Order "1" --o "1" Shipping : shipped to

1. **Sequence Diagram**

sequenceDiagram

participant Customer

participant ShoppingCart

participant Order

participant Payment

participant Shipping

Customer->>ShoppingCart: addItem(product)

ShoppingCart-->>Customer: item added

Customer->>ShoppingCart: viewCart()

ShoppingCart-->>Customer: cart details

Customer->>Order: placeOrder()

Order->>ShoppingCart: getItems()

ShoppingCart-->>Order: items list

Order->>Order: calculateTotal()

Order-->>Customer: showTotal()

Customer->>Payment: makePayment(orderID, paymentDetails)

Payment->>Order: confirmPayment()

Order-->>Payment: paymentConfirmed

Order->>Shipping: initiateShipping(orderID)

Shipping-->>Order: shippingDetails

Shipping-->>Customer: notifyShipping()sequenceDiagram

participant Customer

participant ShoppingCart

participant Order

participant Payment

participant Shipping

Customer->>ShoppingCart: addItem(product)

ShoppingCart-->>Customer: item added

Customer->>ShoppingCart: viewCart()

ShoppingCart-->>Customer: cart details

Customer->>Order: placeOrder()

Order->>ShoppingCart: getItems()

ShoppingCart-->>Order: items list

Order->>Order: calculateTotal()

Order-->>Customer: showTotal()

Customer->>Payment: makePayment(orderID, paymentDetails)

Payment->>Order: confirmPayment()

Order-->>Payment: paymentConfirmed

Order->>Shipping: initiateShipping(orderID)

Shipping-->>Order: shippingDetails

Shipping-->>Customer: notifyShipping()

1. **Use Case Diagram**

flowchart LR

subgraph Pelanggan

A((Pilih Produk)) --> B{Masukkan Keranjang}

B --> C((Checkout))

C --> D[Pembayaran]

D --> E((Konfirmasi Pesanan))

end

subgraph Admin

F((Kelola Produk)) --> G{Tambah Produk}

F --> H{Edit Produk}

F --> I{Hapus Produk}

J((Kelola Pesanan)) --> K{Proses Pesanan}

J --> L{Kirim Pesanan}

end

subgraph Kasir

M((Proses Transaksi)) --> N[Terima Pembayaran]

N --> O((Cetak Struk))

end

subgraph Sistem

Z((Cek Stok))

end

B --> Z

K --> Z

1. **Activity Diagram**

---

title: Activity Diagram Sistem Penjualan

---

stateDiagram

[\*] --> PilihProduk

PilihProduk --> TambahKeKeranjang : Produk dipilih

TambahKeKeranjang --> LihatKeranjang : Produk ditambahkan

LihatKeranjang --> Checkout : Lanjut ke checkout

Checkout --> HitungTotal : Sistem menghitung total

HitungTotal --> Pembayaran : Customer melakukan pembayaran

Pembayaran --> ValidasiPembayaran : Sistem memvalidasi pembayaran

ValidasiPembayaran --> [\*] : Pembayaran gagal

ValidasiPembayaran --> ProsesPesanan : Pembayaran berhasil

ProsesPesanan --> PengaturanPengiriman : Sistem mengatur pengiriman

PengaturanPengiriman --> Pengiriman : Barang dikirim

Pengiriman --> PesananDiterima : Customer menerima barang

PesananDiterima --> [\*] : Selesai

1. **State Diagram**

stateDiagram

[\*] --> OrderPlaced : Customer places order

OrderPlaced --> PaymentPending : Waiting for payment

PaymentPending --> PaymentConfirmed : Payment successful

PaymentPending --> OrderCanceled : Payment failed or order canceled

PaymentConfirmed --> OrderProcessed : Order is being processed

OrderProcessed --> Shipped : Order has been shipped

Shipped --> Delivered : Order delivered to customer

Delivered --> [\*] : Order completed

OrderCanceled --> [\*] : Order terminated