Zarooriyat Platform

"Unlocking E-Commerce for Everyone!"

Fall 2024

Department of Computer Science

FAST – National University of Computer & Emerging Sciences
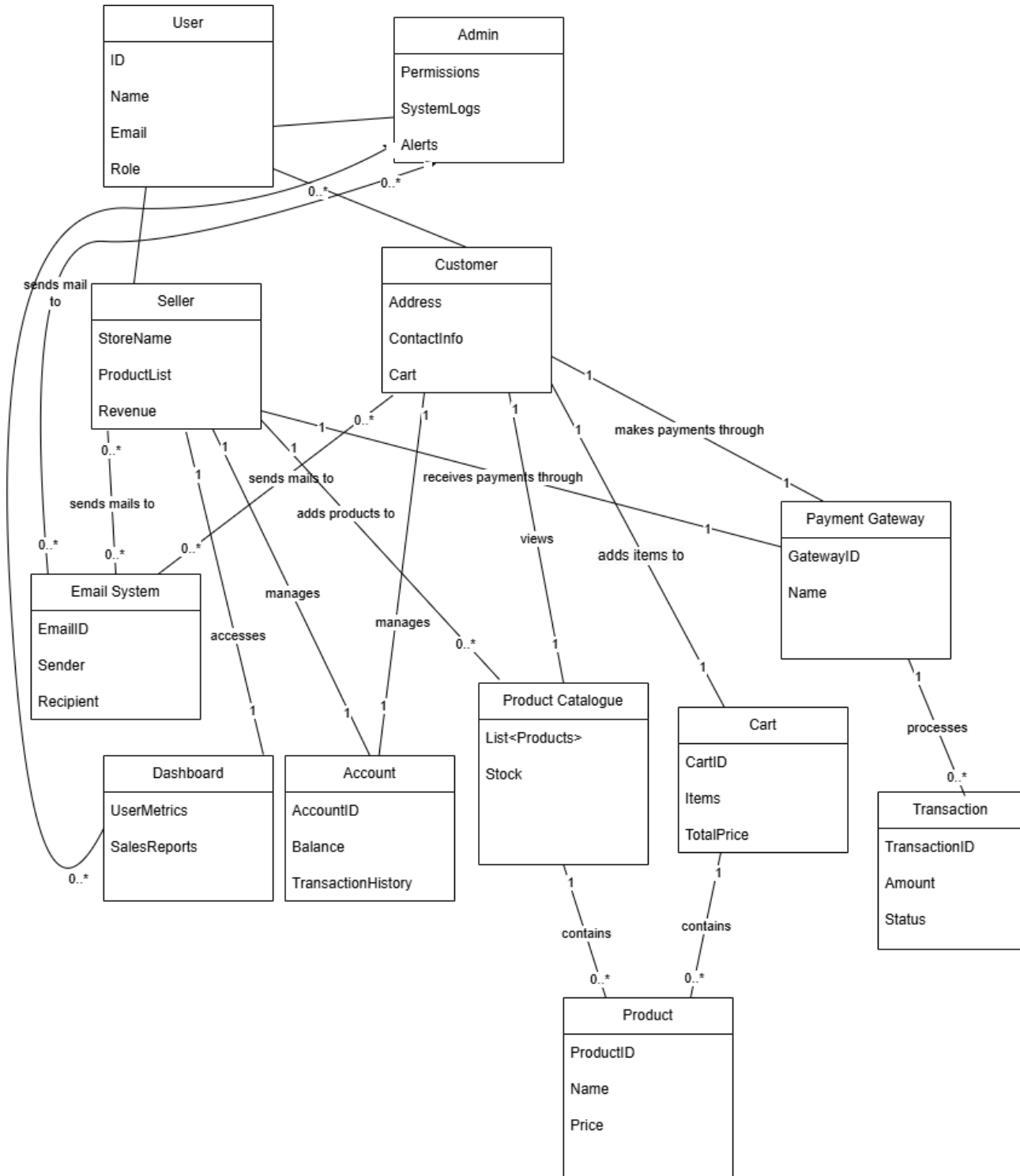
Group Members:

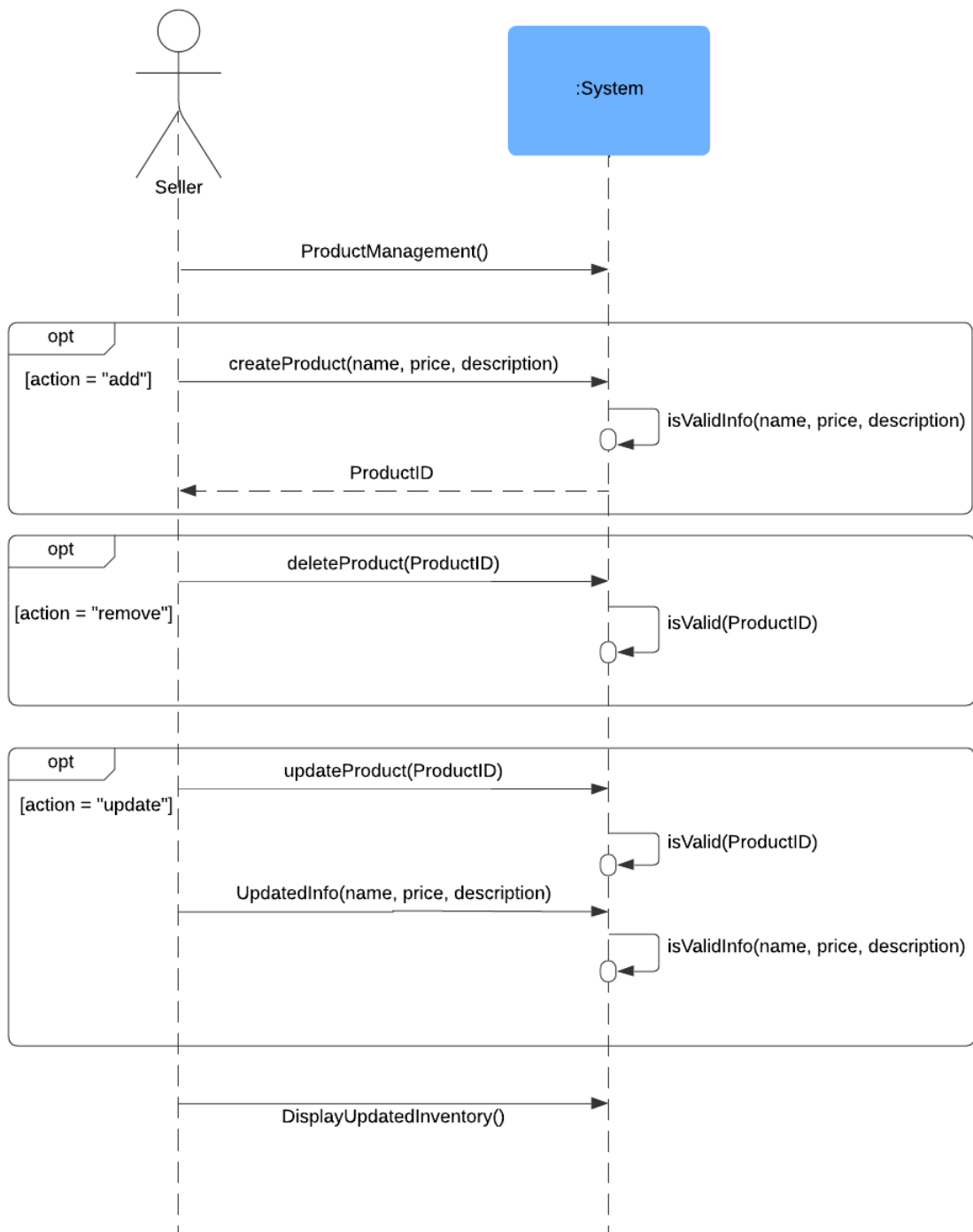Muhammad Masab Hammad | 22i-1004

Muhammad Hashim Awan | 22i-0976

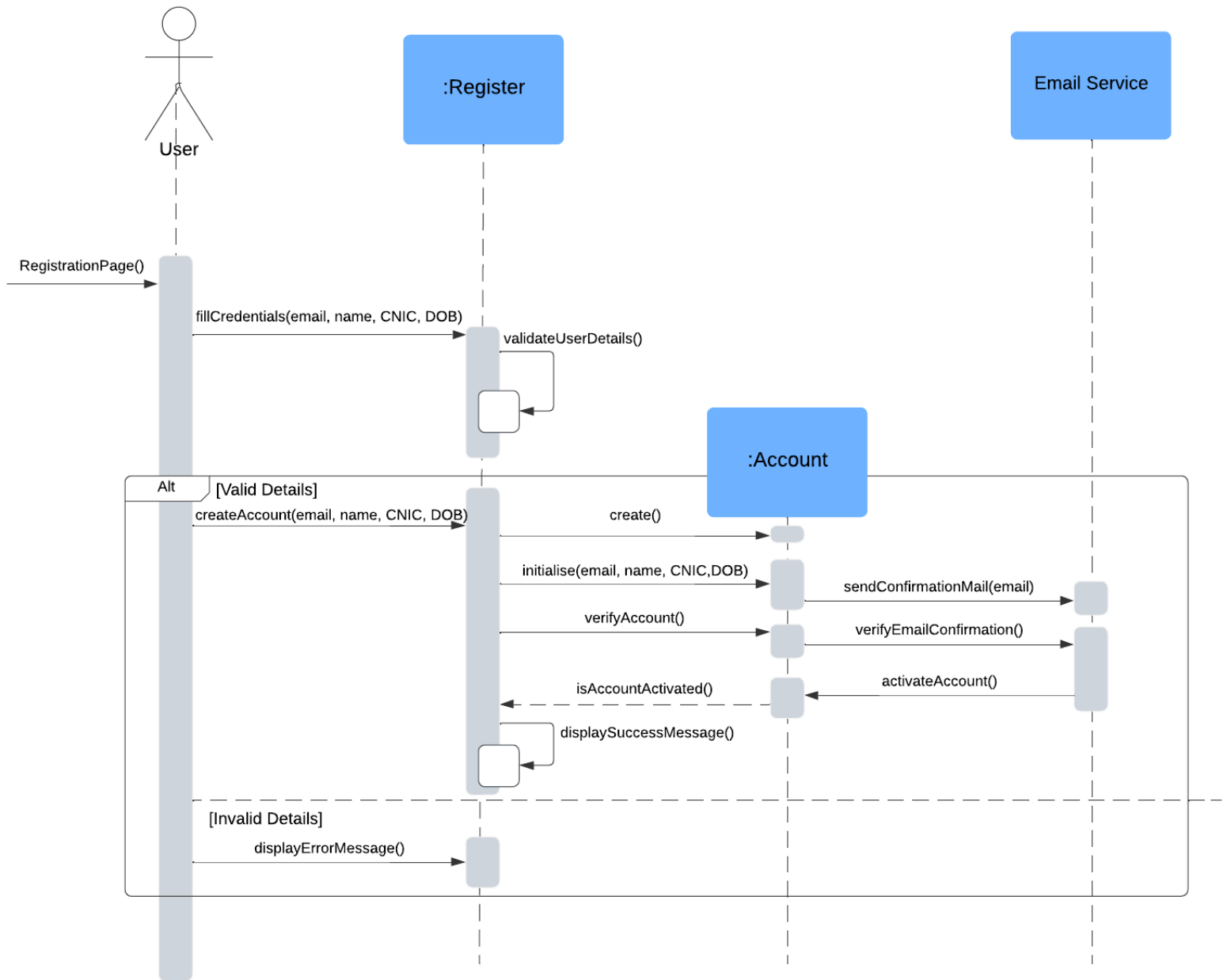Mahad Rehman | 22i-0792

Date: **12-10-2024**

Domain Model:

User
- ID
- Name
- Email
- Role

Admin
- Permissions
- SystemLogs
- Alerts

Customer
- Address
- ContactInfo
- Cart

Seller
- StoreName
- ProductList
- Revenue

Payment Gateway
- GatewayID
- Name

Email System
- EmailID
- Sender
- Recipient

Dashboard
- UserMetrics
- SalesReports

Account
- AccountID
- Balance
- TransactionHistory

Product Catalogue
- List<Products>
- Stock

Cart
- CartID
- Items
- TotalPrice

Transaction
- TransactionID
- Amount
- Status

Product
- ProductID
- Name
- Price

Relationships:
- sends mail to
- 0..*
- 0..*
- sends mails to
- adds products to
- receives payments through
- makes payments through
- views
- adds items to
- manages
- accesses
- manages
- processes
- contains
- contains

System Sequence Diagram (UC-003): Manage Product Listing

Action Sequence Diagram (UC-001): Register User

User

:Register

Email Service

RegistrationPage()

fillCredentials(email, name, CNIC, DOB)

validateUserDetails()

:Account

Alt   [Valid Details]

createAccount(email, name, CNIC, DOB)

create()

initialise(email, name, CNIC,DOB)

sendConfirmationMail(email)

verifyAccount()

verifyEmailConfirmation()

isAccountActivated()

activateAccount()

displaySuccessMessage()

[Invalid Details]

displayErrorMessage()

Action Sequence Diagram (UC-005): Add Products to Cart

"Add Producs to Cart"

Customer | Product Catalogue | Cart

BrowseProductCatalog()

DisplayAvailableProducts(products: List<Product>)

SelectProduct(productId: String)

GetProductDetails(productId: String)

DisplayProductDetails(product: Product)

AddToCart(productId: String, quantity: Integer)

VerifyProductAvailability(productId: String, quantity: Integer)

alt

[Product Available]

AddProductToCart(productId: String, quantity: Integer)

ShowUpdatedCart(cart: Cart)

[Product Out of Stock]

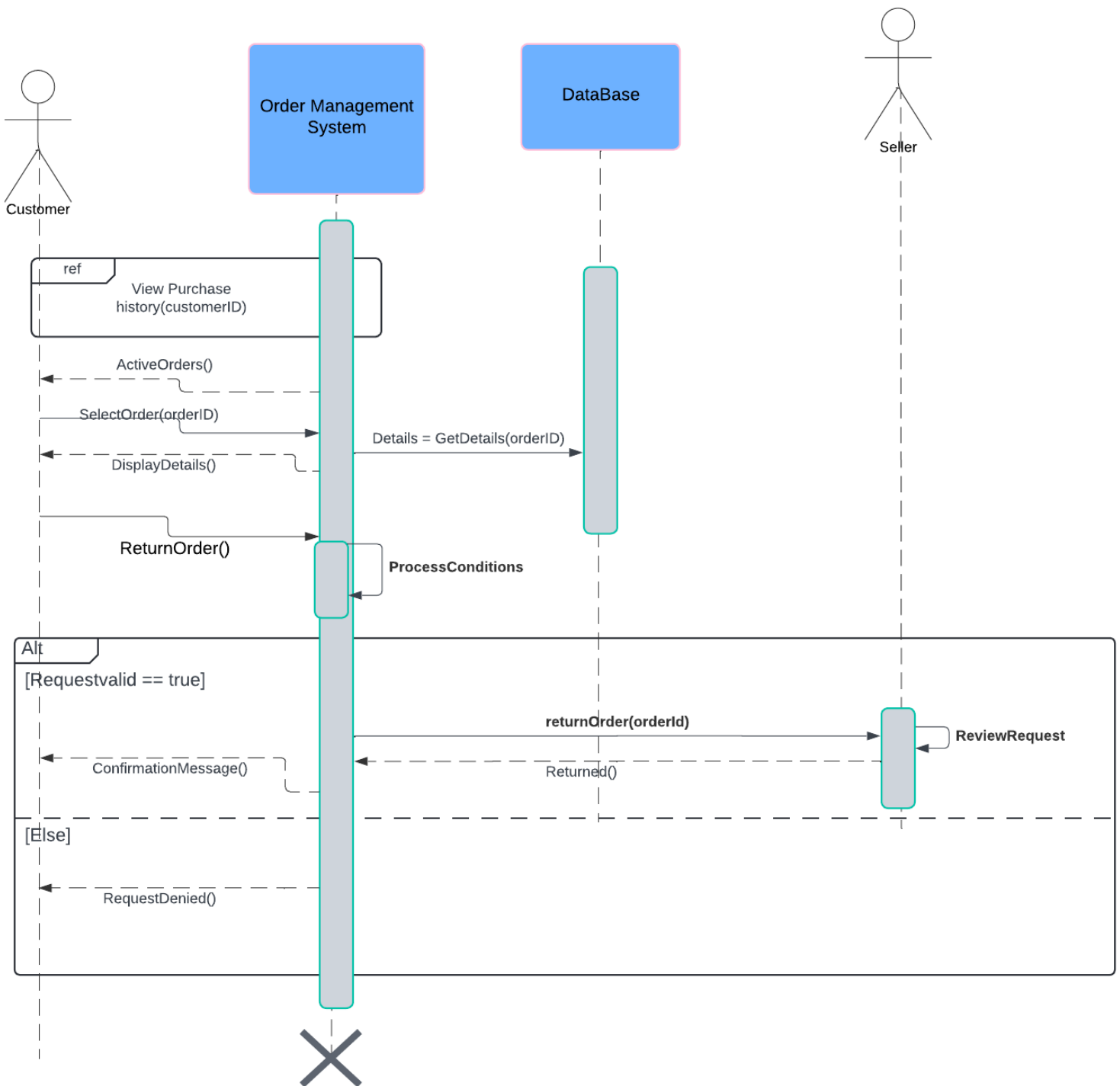ProductOutOfStock(productId: String)

Action Sequence Diagram (UC-006): Process Payment
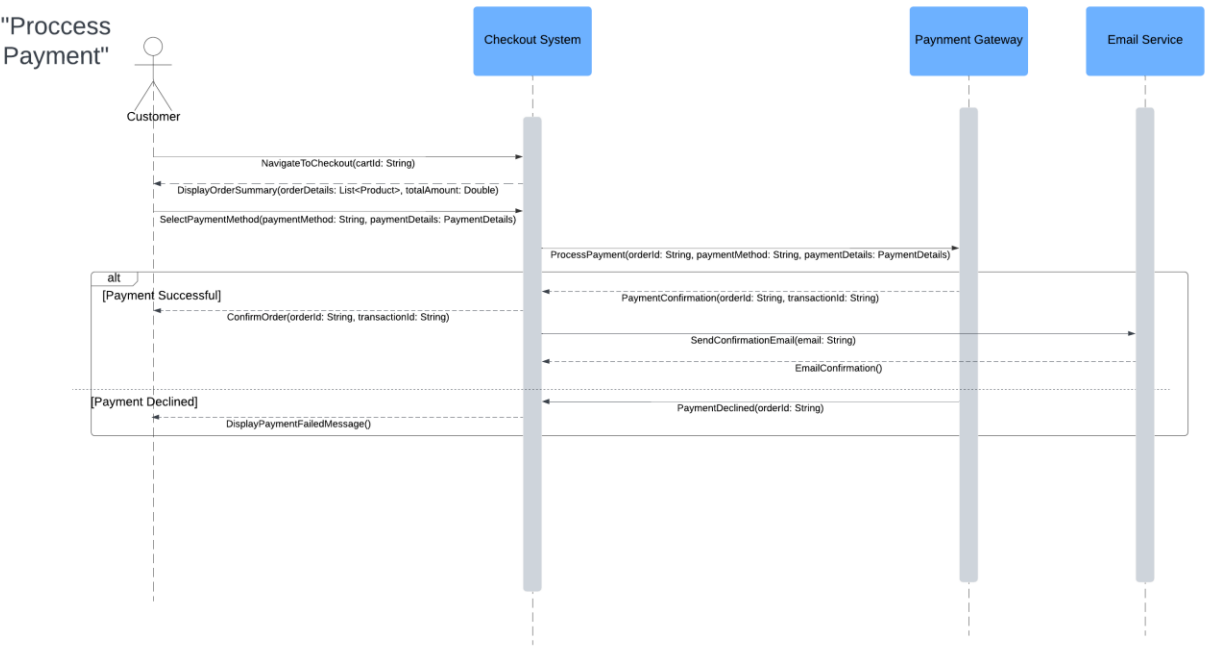
Action Sequence Diagram (UC-007): Track Order
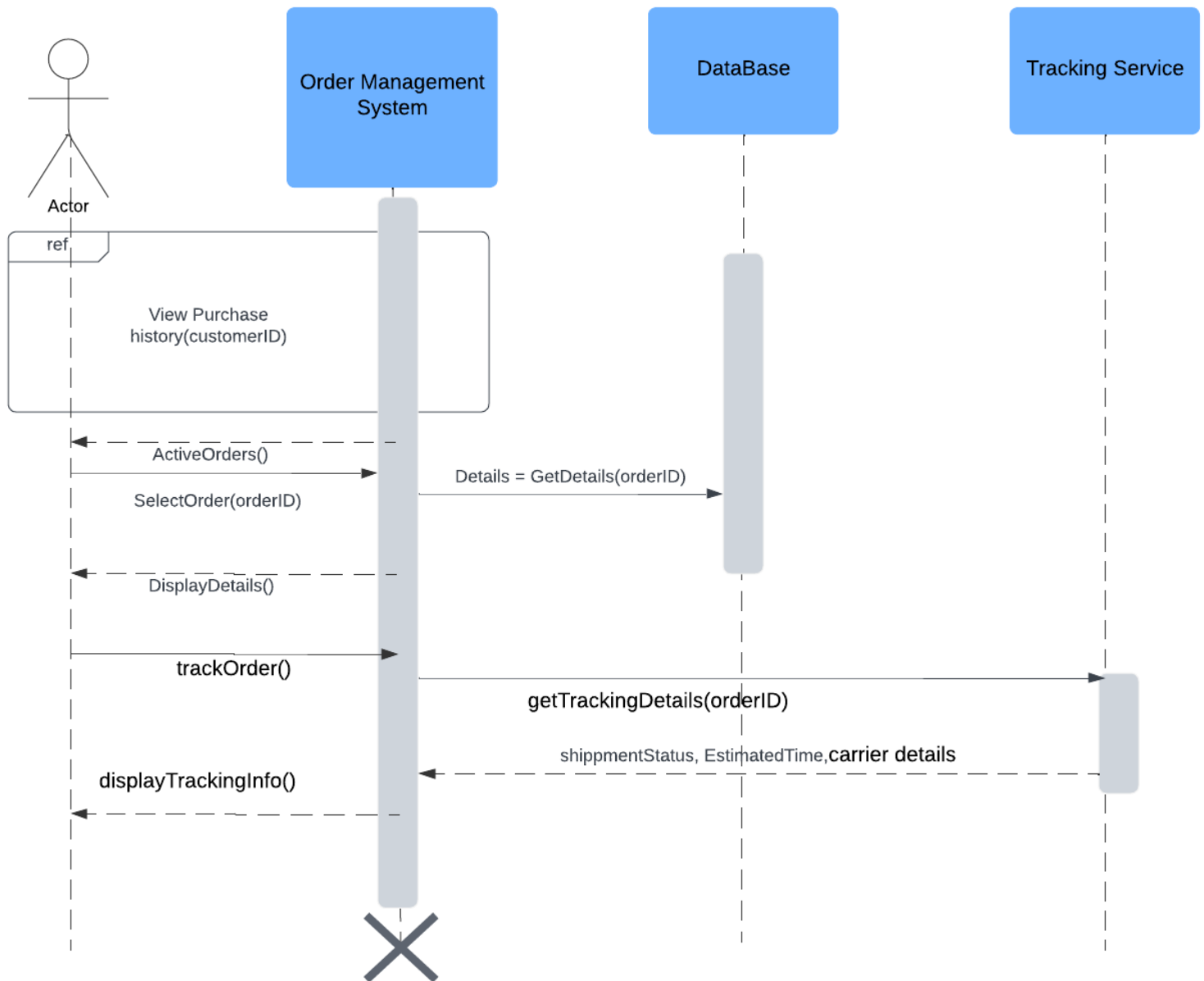
Action Sequence Diagram (UC-009): Return Product

Action Sequence Diagram (UC-010): Apply Seller Fee

Seller

:SalesThresholdChecker

:Account

Email Service

Dashboard

checkThreshold(account)

sales = getTotalSales()

Opt [sales > 40,000]

notifyUser()

sendThresholdMail(email)

Alt [error in Mail]

sendThresholdMail(email)

reviewAcountDetails()

applyThreshold(account)

applyFee()

view()