Technical Documentation (see report 2 for more information)

CSCI441: Software Engineering

Group: Team E

October 31, 2025
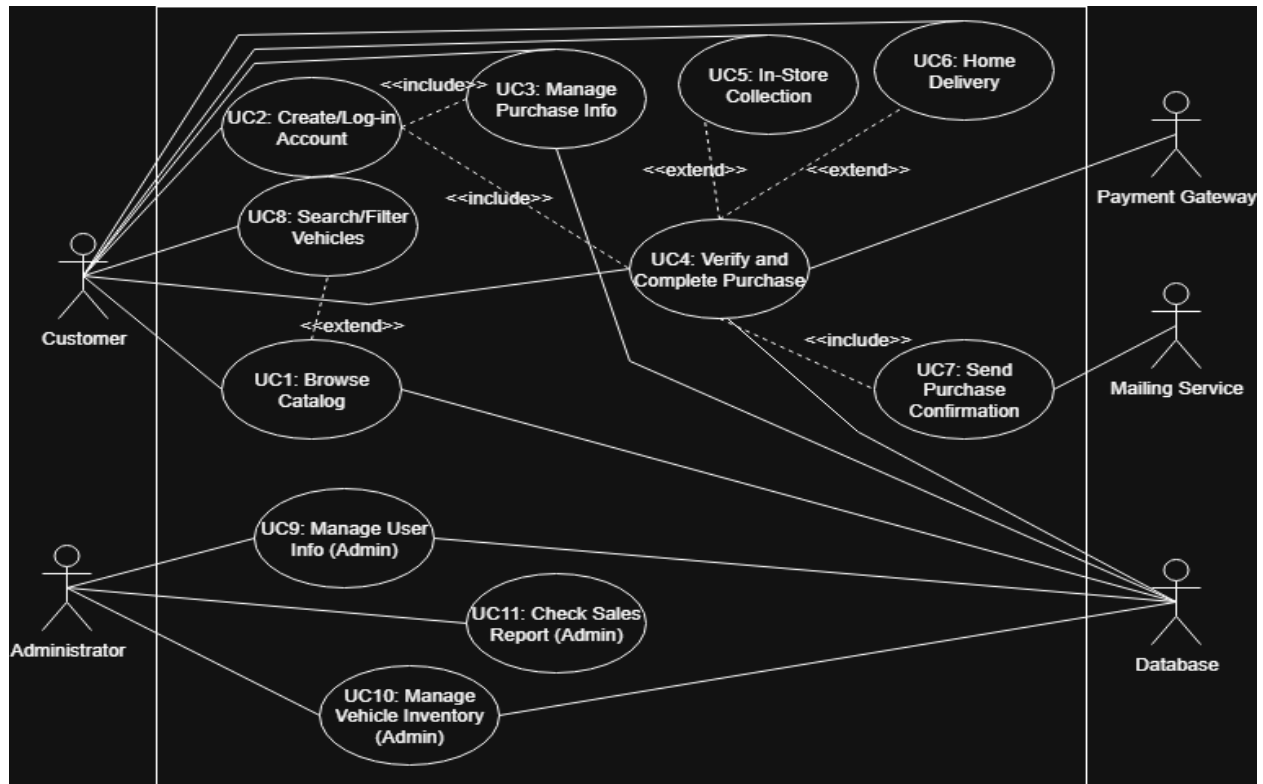
Team E Group Members

Moussa Mballo

Wyatt McDonnell
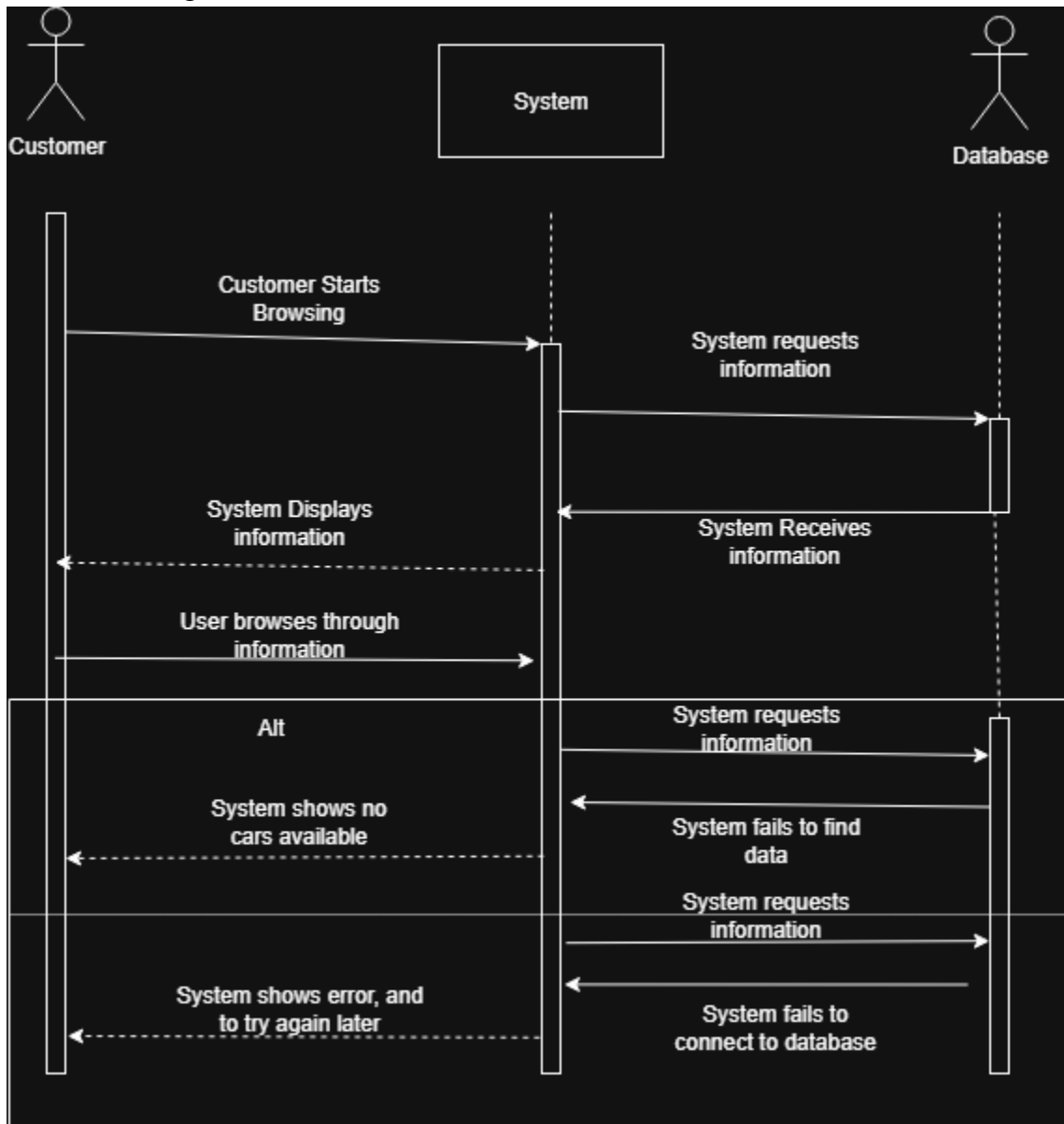
Mamadou Oumar Ndiaye

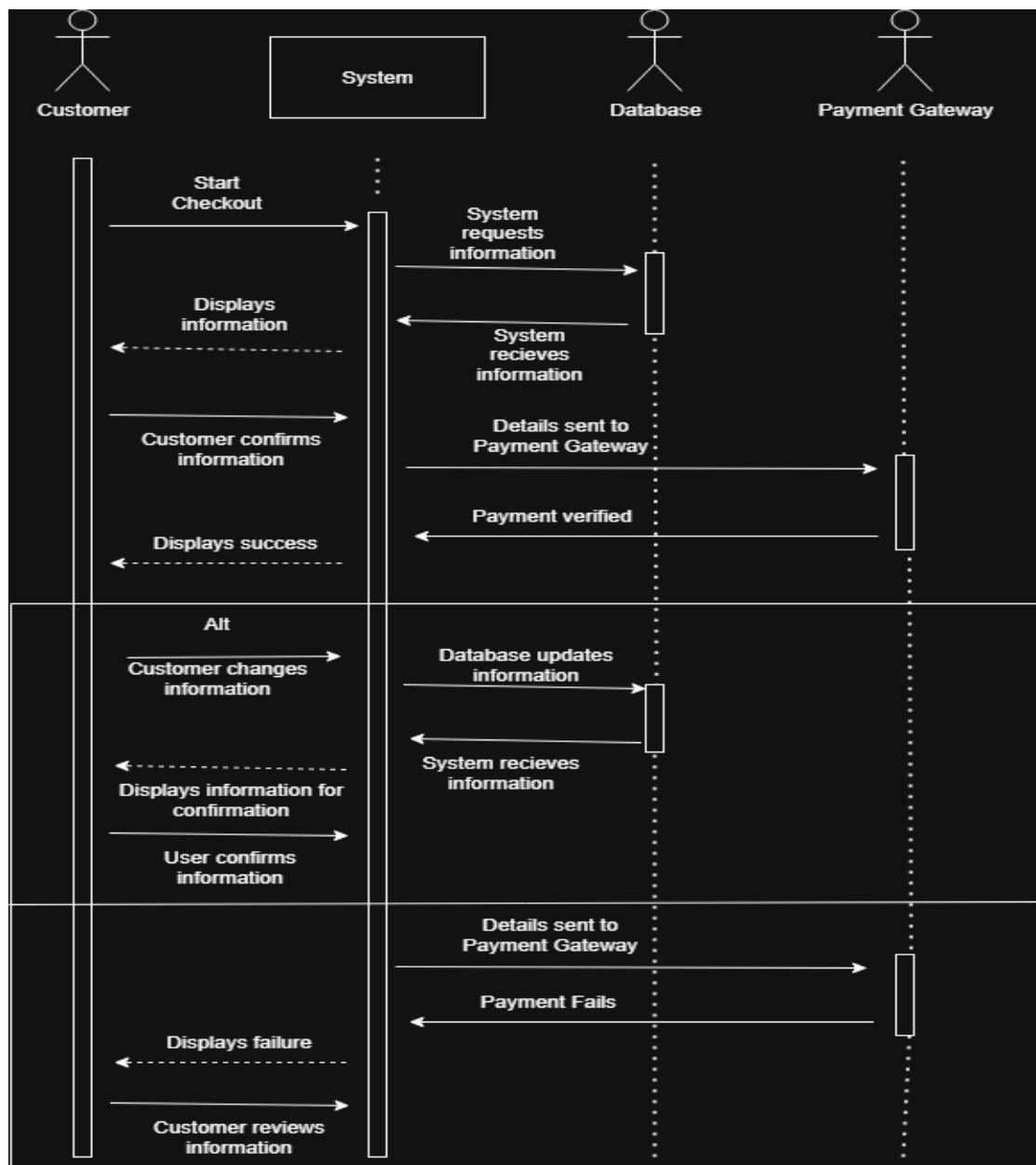William Steele

Colin Showalter

Use Case Diagram:

System Sequence Diagrams:

Browse Catalog

Verify and Complete Purchase

Class Diagram:

Vehicle

- vehicleID: int
- name: String
- price: double
- stock: int
- description: String

+ calculateDiscountedPrice(): double

Administrator

- adminID: int
- username: String
- password: String

+ manageInventory(): void
+ viewSalesReport(): Report

manages

1

*

1

contains a vehicle

1

views

1..*

view all sales

Customer

- customerID: int
- name: String
- email: String
- password: String
- address: String

+ updateInformation(): void
+ viewPurchaseHistory(): List<Purchase>

customer purchases

1

Purchase

- purchaseID: int
- customer: Customer
- vehicle: Vehicle
- date: Date
- totalAmount: double

+ verifyPayment(): boolean
+ generateReceipt(): String

composes

1

Payment

- paymentID: int
- purchase: Purchase
- paymentMethod: String
- amount: double

+ processPayment(): boolean

verify purchase

1

1..*

API

+ updateDatabase(): void
+ queryDatabase(): void

view purchases

1..*