Gerardo Herrera Gonzalez
2021SP CIDM 4390-01
Dr. Jeffry Babb
Assignment 1
Jan. 19, 2021

Description of Primary and Secondary Actors

Use Case Name: Customer orders groceries	ID: 1	Importance Level: High
Primary Actor: Customer	Use Case Type: Detail, Essential	

Stakeholders and Interests:
Customer—wants to have their groceries order shipped
Driver—wants to ensure customer's orders is delivered in a timely manner

Brief Description: This use case describes how a customer can get their groceries order shipped.

Trigger: Customer logins in the app

Type: External

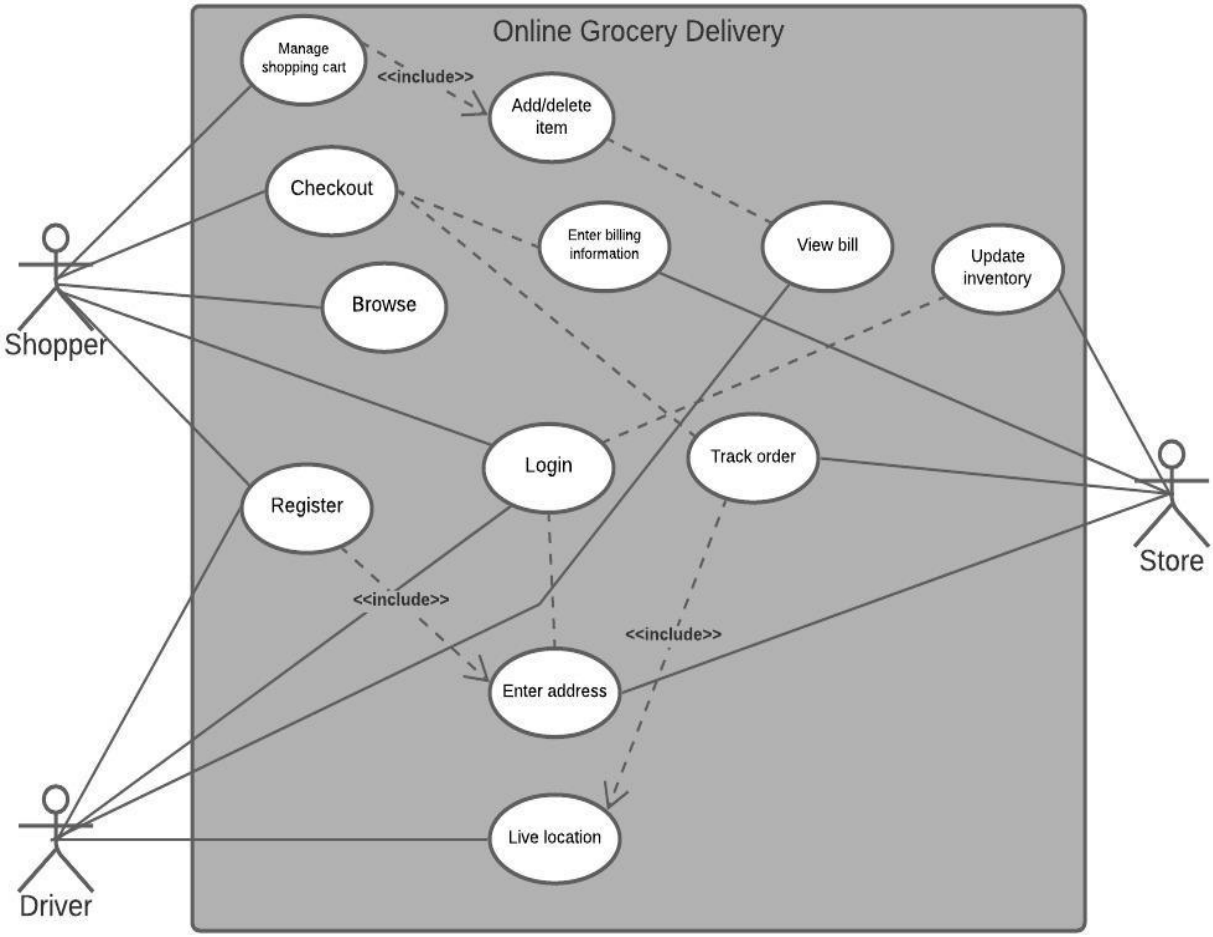
Relationships:
- Association: Driver
- Include: Add delete/item, Enter address, Live location
- Extend:
- Generalization:

Normal Flow of Events:
1. Customer logins in the app
2. Customer chooses not to enter new address
3. Customer browses grocery items
4. Customer views specific grocery item
5. Customer adds item to the shopping cart
6. Customer views shopping cart
7. Customer chooses to checkout
8. Customer ends billing information
9. Customer tracks order with live location

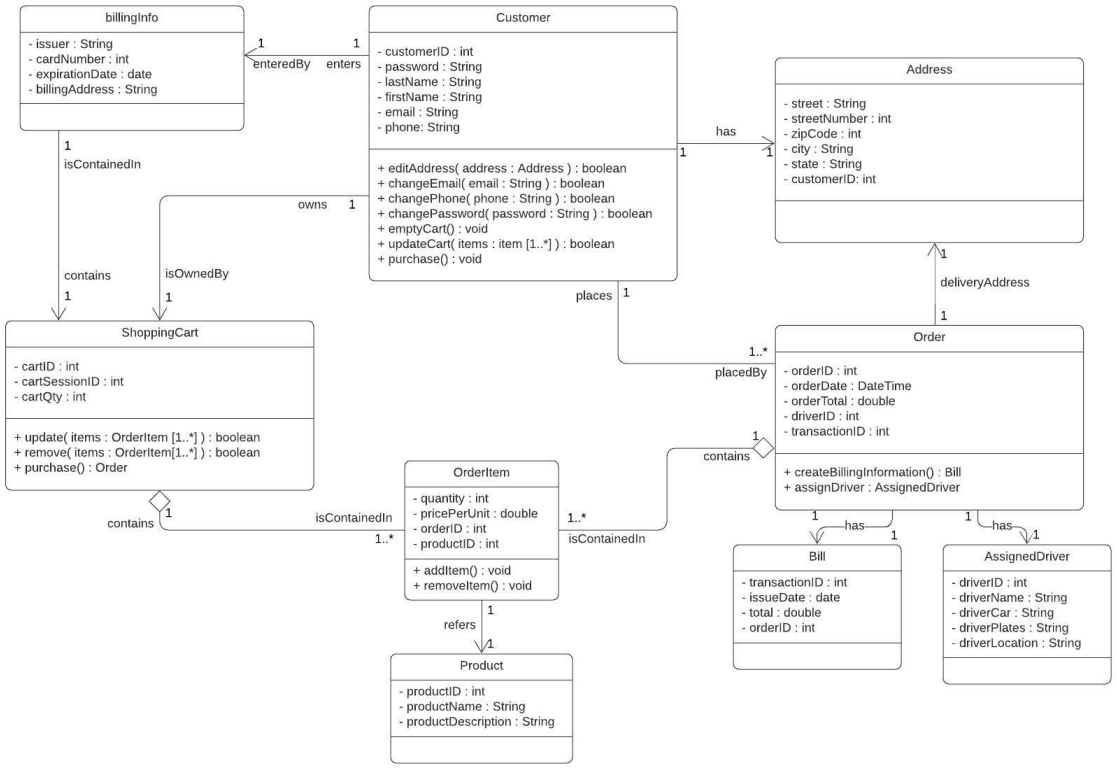
SubFlows:

Alternative/Exceptional Flows
- 1a. Customer registers in the app
- 2a. Customer chooses to enter new address

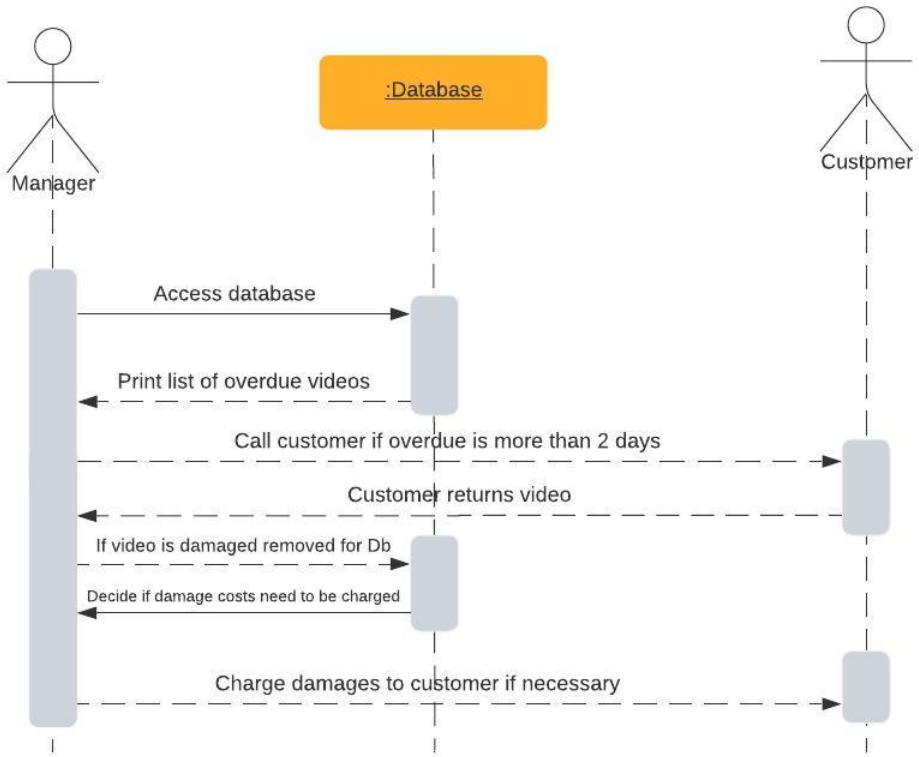
Use Case


Online Grocery Delivery
Manage shopping cart
<<include>>
Add/delete item
Checkout
Enter billing information
View bill
Update inventory
Browse
Shopper
Login
Track order
Register
Store
<<include>>
<<include>>
Enter address
Live location
Driver

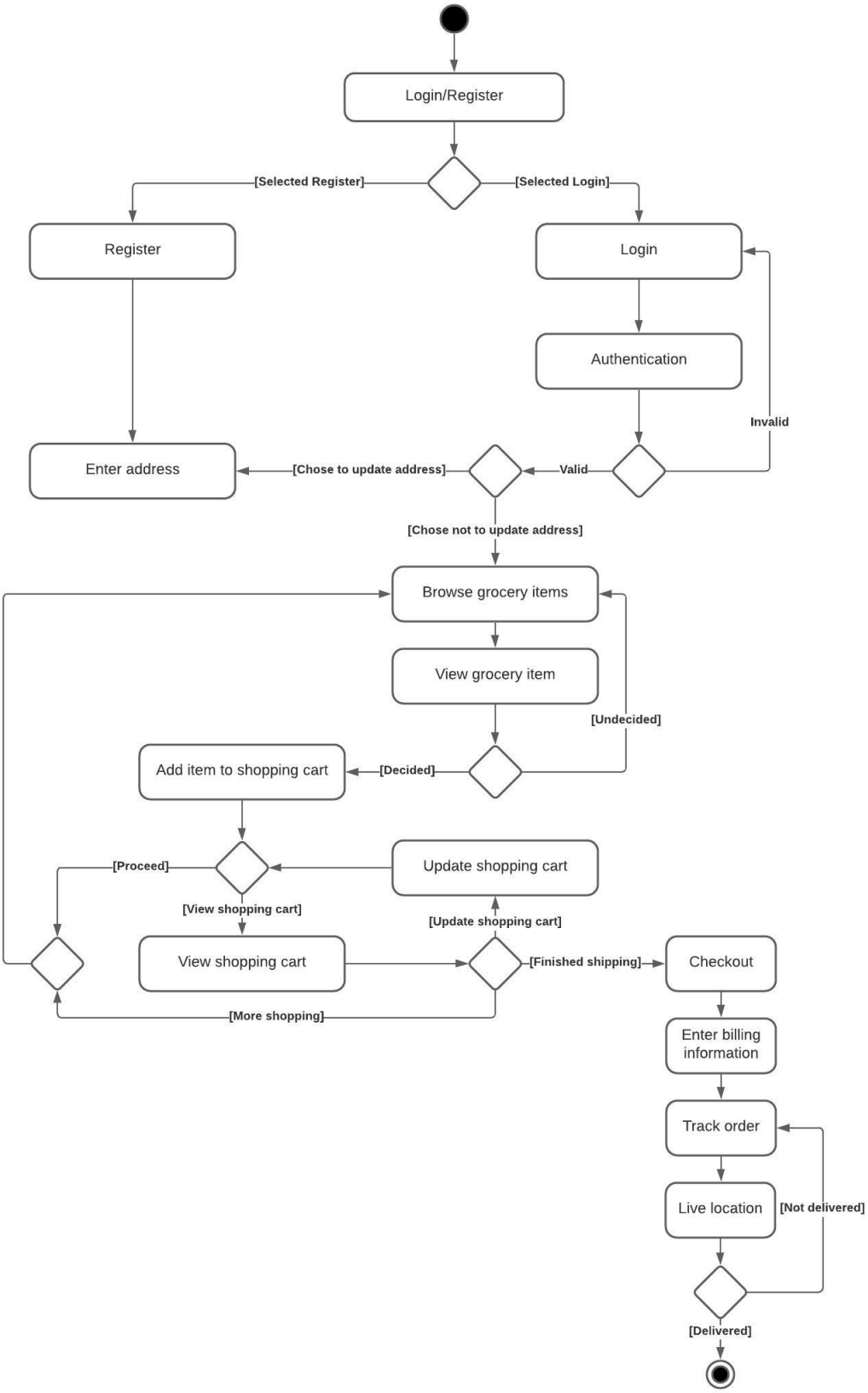
Class Diagram



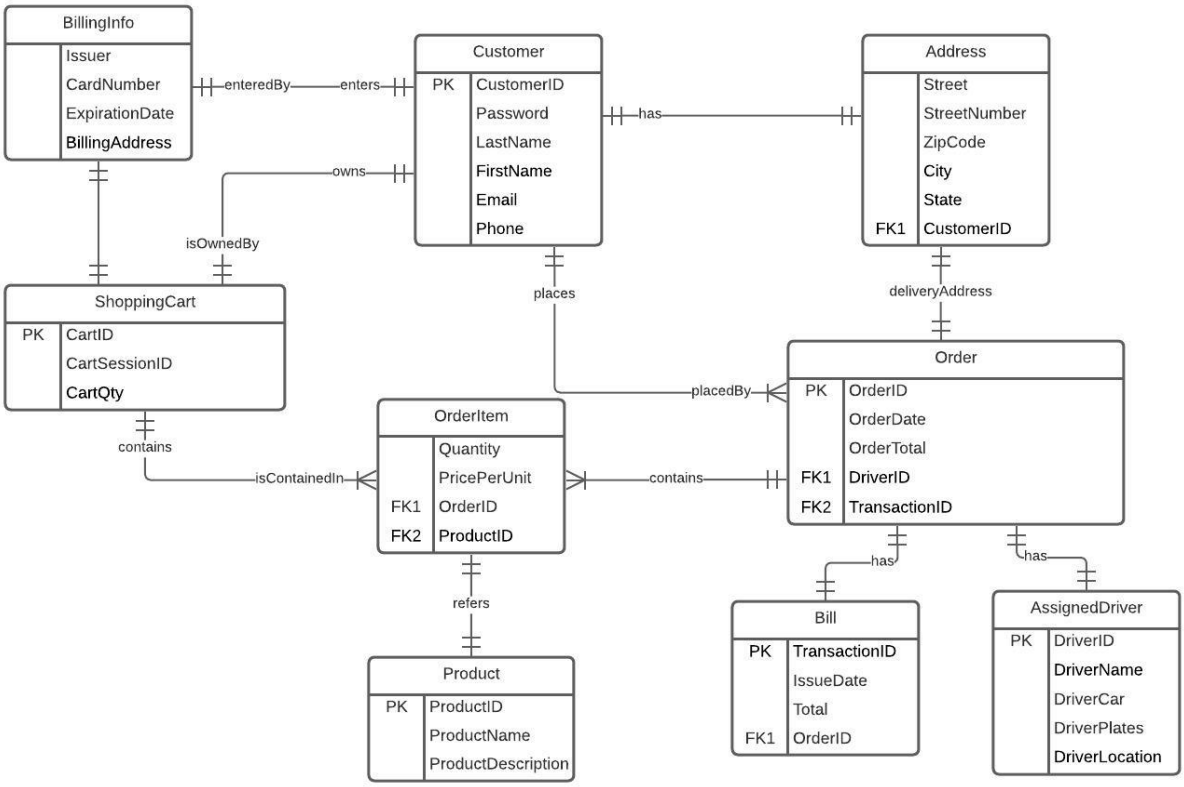
Sequence Diagram



Activity Diagram



ERD


BillingInfo
Issuer
CardNumber
ExpirationDate
BillingAddress
enteredBy
enters
Customer
PK
CustomerID
Password
LastName
FirstName
Email
Phone
has
Address
Street
StreetNumber
ZipCode
City
State
FK1
CustomerID
owns
isOwnedBy
ShoppingCart
PK
CartID
CartSessionID
CartQty
places
deliveryAddress
Order
PK
OrderID
OrderDate
OrderTotal
FK1
DriverID
FK2
TransactionID
placedBy
contains
isContainedIn
OrderItem
Quantity
PricePerUnit
FK1
OrderID
FK2
ProductID
contains
has
has
refers
Bill
PK
TransactionID
IssueDate
Total
FK1
OrderID
AssignedDriver
PK
DriverID
DriverName
DriverCar
DriverPlates
DriverLocation
Product
PK
ProductID
ProductName
ProductDescription

```
CREATE DATABASE GroceriesDB

USE GroceriesDB
CREATE TABLE Customer
(
CustomerID INT NOT NULL UNIQUE,
Password VARCHAR (16) NOT NULL,
LastName VARCHAR (255) NOT NULL,
FirstName VARCHAR (255) NOT NULL,
Email VARCHAR (255) NOT NULL,
Phone VARCHART (16) NOT NULL,
PRIMARY KEY (CustomerID)
);

USE GroceriesDB
CREATE TABLE Address
(
Street VARCHAR (255) NOT NULL,
StreetNumber INT NOT NULL,
ZipCode INT NOT NULL,
City VARCHAR (255) NOT NULL,
State VARCHAR (2) NOT NULL,
CustomerID VARCHAR (8) NOT NULL UNIQUE,
FOREIGN KEY (CustomerID) REFERENCES Customer(CustomerID)
);

USE GroceriesDB
CREATE TABLE Order
(
OrderID INT NOT NULL UNIQUE,
OrderDate DATETIME NOT NULL,
OrderTotal DOUBLE NOT NULL,
DriverID INT NOT NULL UNIQUE,
TransactionID INT NOT NULL UNIQUE,
PRIMARY KEY (OrderID),
FOREIGN KEY (DriverID) REFERENCES AssignedDriver(DriverID),
FOREIGN KEY (TransactionID) REFERENCES Bill(TransactionID)
);

USE GroceriesDB
CREATE TABLE Bill
(
TransactionID INT NOT NULL UNIQUE,
IssueDate DATETIME NOT NULL,
Total DOUBLE NOT NULL,
OrderID INT NOT NULL UNIQUE,
PRIMARY KEY (TransactionID),
```

```
FOREIGN KEY (OrderID) REFERENCES Order(OrderID)
);

USE GroceriesDB
CREATE TABLE Driver
(
DriverID INT NOT NULL UNIQUE,
DriverName VARCHAR (255) NOT NULL,
DriverCar VARCHAR (255) NOT NULL,
DriverPlates VARCHAR (255) NOT NULL,
DriverLocation VARCHAR (255) NOT NULL,
PRIMARY KEY (DriverID)
);

USE GroceriesDB
CREATE TABLE OrderItem
(
Quantity INT,
PricePerUnit DOUBLE NOT NULL,
OrderID INT NOT NULL UNIQUE,
ProductID INT NOT NULL UNIQUE,
FOREIGN KEY (OrderID) REFERENCES Order(OrderID),
FOREIGN KEY (ProductID) REFERENCES Product(ProductID)
);

USE GroceriesDB
CREATE TABLE Product
(
ProductID INT NOT NULL UNIQUE,
ProductName VARCHAR (255) NOT NULL,
ProductDescription VARCHAR (255),
PRIMARY KEY (ProductID)
);

USE GroceriesDB
CREATE TABLE ShoppingCart
(
CartID INT NOT NULL UNIQUE,
CartSessionID INT NOT NULL UNIQUE,
CartQty INT,
PRIMARY KEY (CartID)
);

USE GroceriesDB
CREATE TABLE BillingInfo
(
Issuer VARCHAR (255) NOT NULL,
```

```
CardNumber INT NOT NULL,
ExpirationDate DATE NOT NULL,
BillingAddress VARCHAR (255) NOT NULL
);
```