E-COMMERCE
ONLINE SHOPPING

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FINAL PROJECT

INTRODUCTION

- The primary aim of ecommerce online shopping is to provide a convenient and efficient way for customers to purchase goods and services online. This allows customers to browse and shop from a wide range of products from the comfort of their own homes or anywhere with internet access.
- ecommerce platform manage sellers inventory, track sales, and analyze customer behavior, which can help them optimize their operations and increase profitability.

ONLINE SHOPPING SERVICES

- **Login :**
  - **User Authentication:secure way for users to authenticate themselves**
  - **Account Creation:create an account by providing user information**
  - **Password Reset:**
  - **Account Management: Users can manage their account information, such as updating their personal details, changing their password, ...**
  - **Personalized Experience: A login service allows users to access personalized features, such as viewing their order history, saving their payment details, and creating wish lists.**
  - **Security Features: A login service includes security features such as multi-factor authentication .**

ONLINE SHOPPING SERVICES

- **Business services:**
  - Product Listings: A list of all the products available for purchase on the website, often with detailed descriptions, prices, and images.
  - Search and Filtering: A search bar and filters that help customers find specific products or narrow down their search results based on criteria such as price, category, or brand.
  - Shopping Cart: A virtual shopping cart that allows customers to add products to their order as they browse the website.
  - Checkout Process: An easy-to-use checkout process that guides customers through the steps of purchasing the products they've selected.
  - Payment Gateway: A secure payment gateway that allows customers to make payments using various methods such as credit cards, debit cards, or digital wallets.
  - Order Tracking: A way for customers to track the status of their orders, such as when their products have been shipped and when they are expected to arrive.

ONLINE SHOPPING SERVICES

- **Business services:**
  - Customer Reviews: A system for customers to leave reviews and ratings of the products they've purchased, which can help other customers make informed purchasing decisions.
  - Personalized Recommendations: A system that recommends products to customers based on their past purchase history or browsing behavior.
  - Wish Lists: A feature that allows customers to save products they're interested in to a wish list for future reference.
  - Customer Support: A support system that helps customers with any issues or questions they may have about the products or the ordering process.
  - Returns and Refunds: A system for customers to return or exchange products they're not satisfied with, as well as receive refunds for cancelled orders or faulty products.
  - Gift Cards: A feature that allows customers to purchase gift cards for friends and family, which can be used to purchase products on the website.

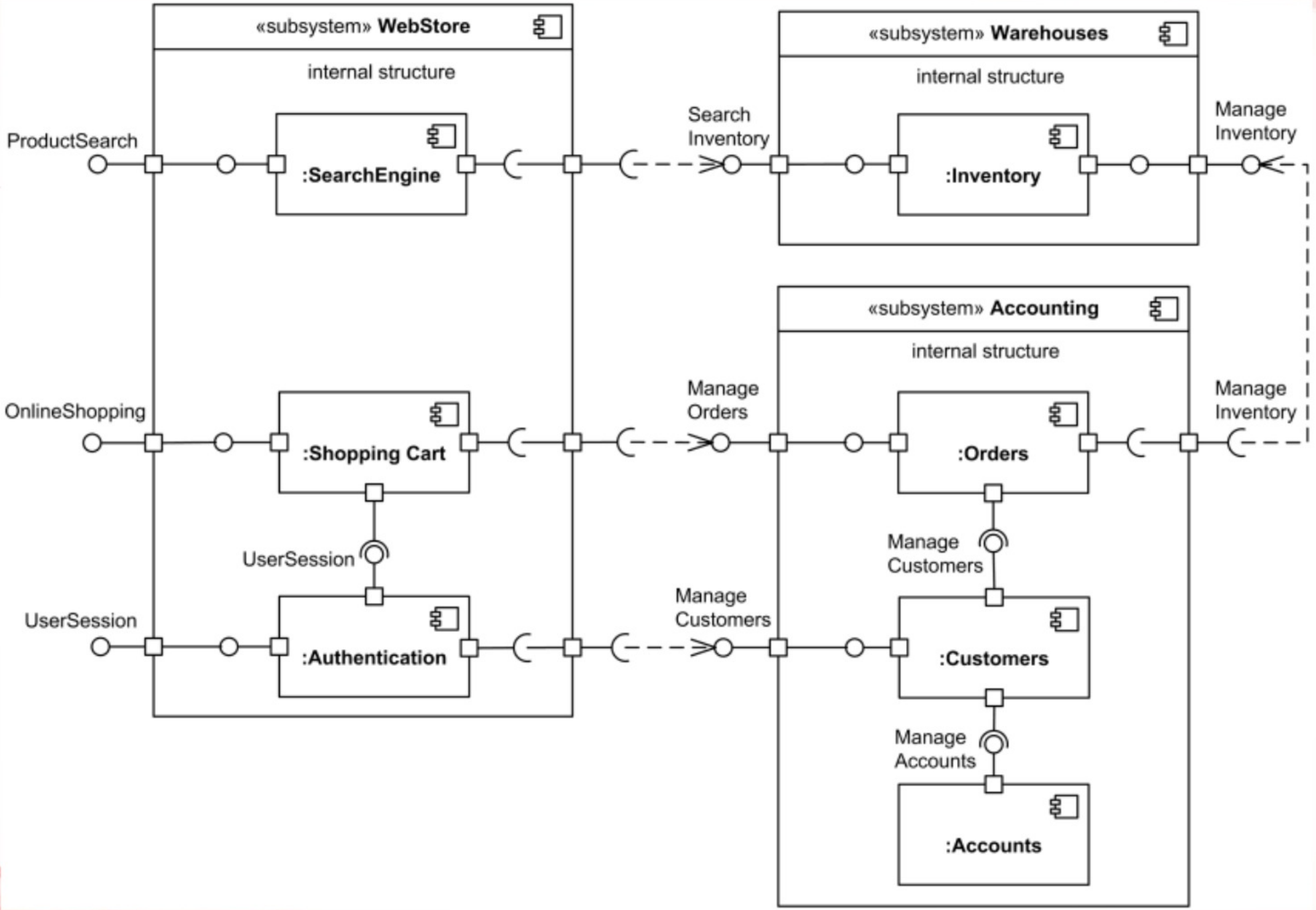
ONLINE SHOPPING SERVICES

- **Admin Management services:**
  - Dashboard: This page provides a high-level overview of the application's performance, including sales data, customer data, and other important metrics.
  - Product Management Page: This page allows the administrator to manage the products available on the application, including adding new products, updating existing products, and removing products that are no longer available.
  - Inventory Management Page: This page allows the administrator to track inventory levels and receive notifications when inventory levels are low, helping to ensure that products are always in stock.
  - Order Management Page: This page allows the administrator to manage orders, including processing payments, shipping products, and managing returns and refunds.
  - Customer Management Page: This page allows the administrator to manage customer accounts, including creating new accounts, updating account information, and resolving any issues related to customer orders or accounts.

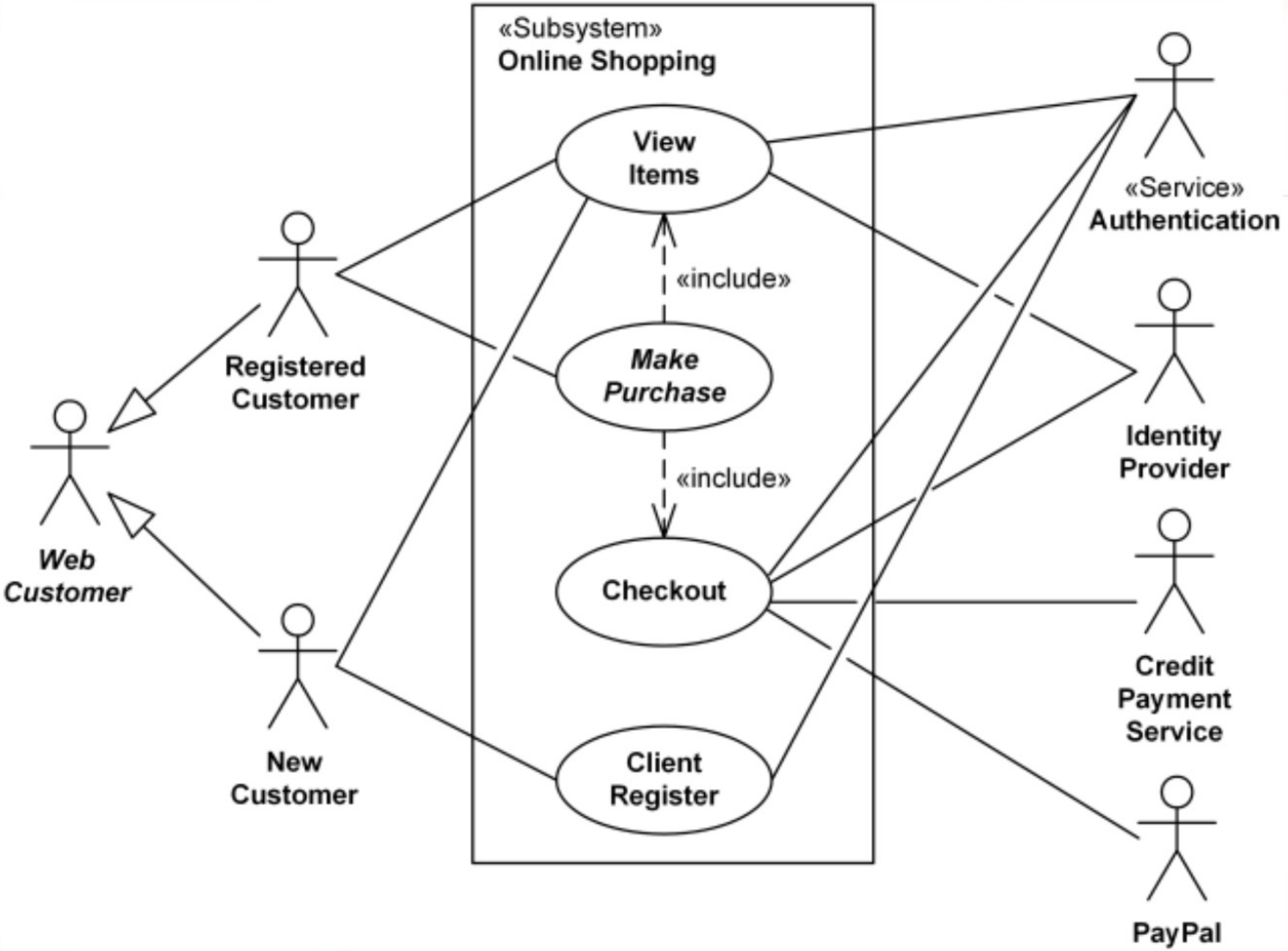
ONLINE SHOPPING SERVICES

- **content product services:**
  - **Chat GPT API can be used to generate high-quality content such as product descriptions, and more. This can save time and effort for content creators, and improve the overall quality of the content.**

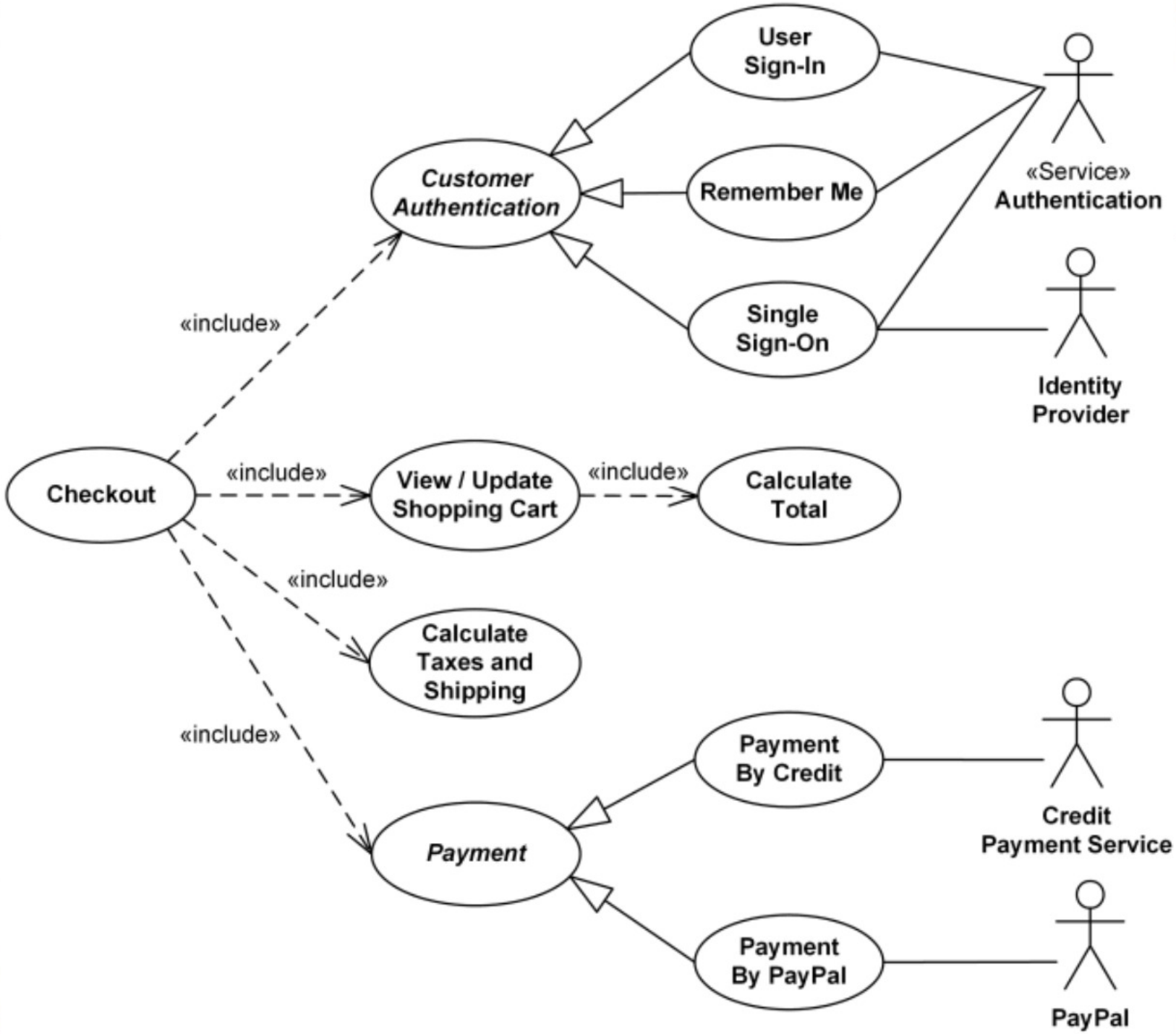
COMPONENT DIAGRAM


«subsystem» WebStore
internal structure
ProductSearch
:SearchEngine
OnlineShopping
:Shopping Cart
UserSession
UserSession
:Authentication
Search
Inventory
«subsystem» Warehouses
internal structure
:Inventory
Manage
Inventory
Manage
Orders
«subsystem» Accounting
internal structure
:Orders
Manage
Inventory
Manage
Customers
Manage
Customers
:Customers
Manage
Accounts
:Accounts

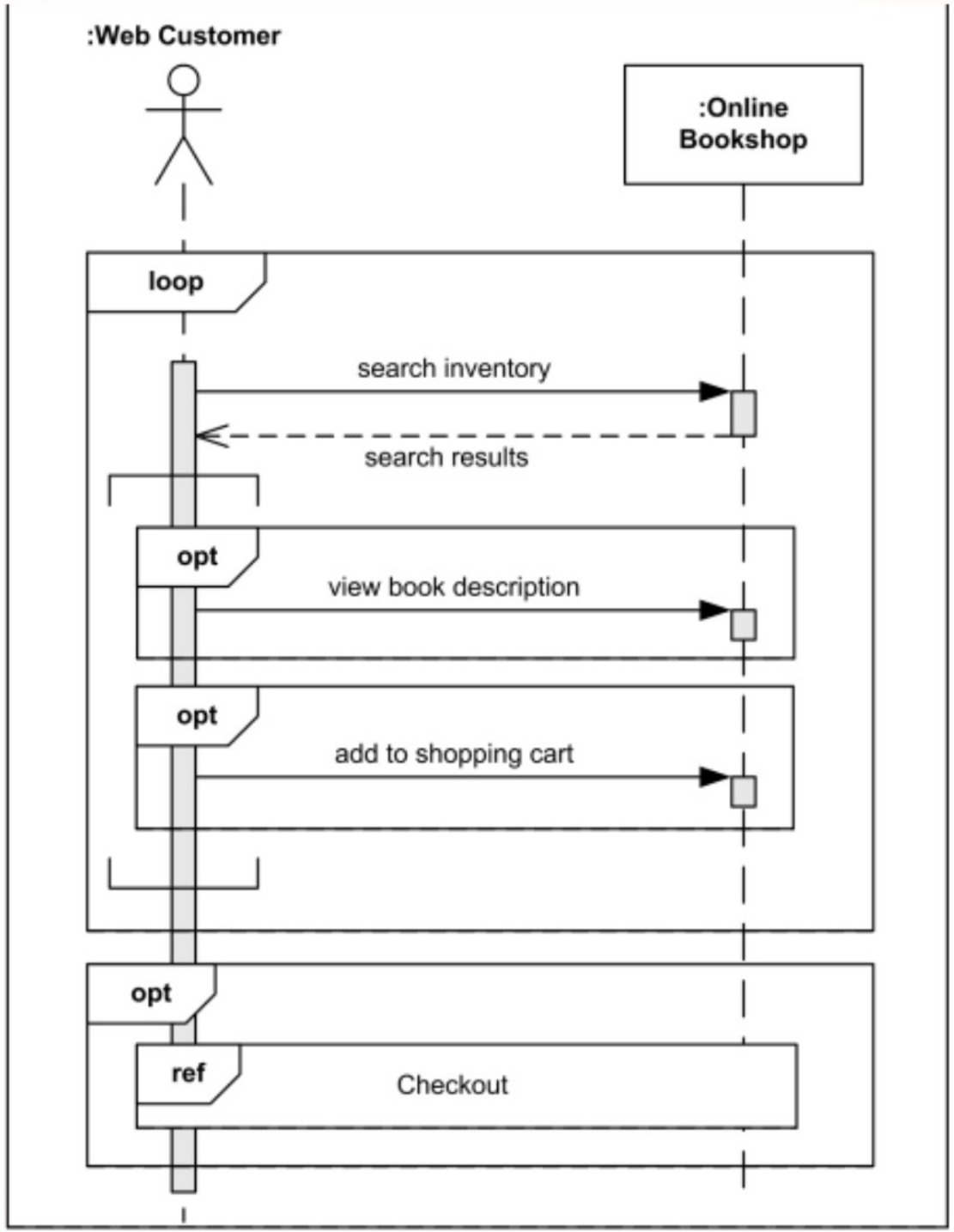
USE CASE DIAGRAM


«Subsystem»
Online Shopping
View Items
«include»
Make Purchase
«include»
Checkout
Client Register
Registered Customer
Web Customer
New Customer
«Service»
Authentication
Identity Provider
Credit Payment Service
PayPal

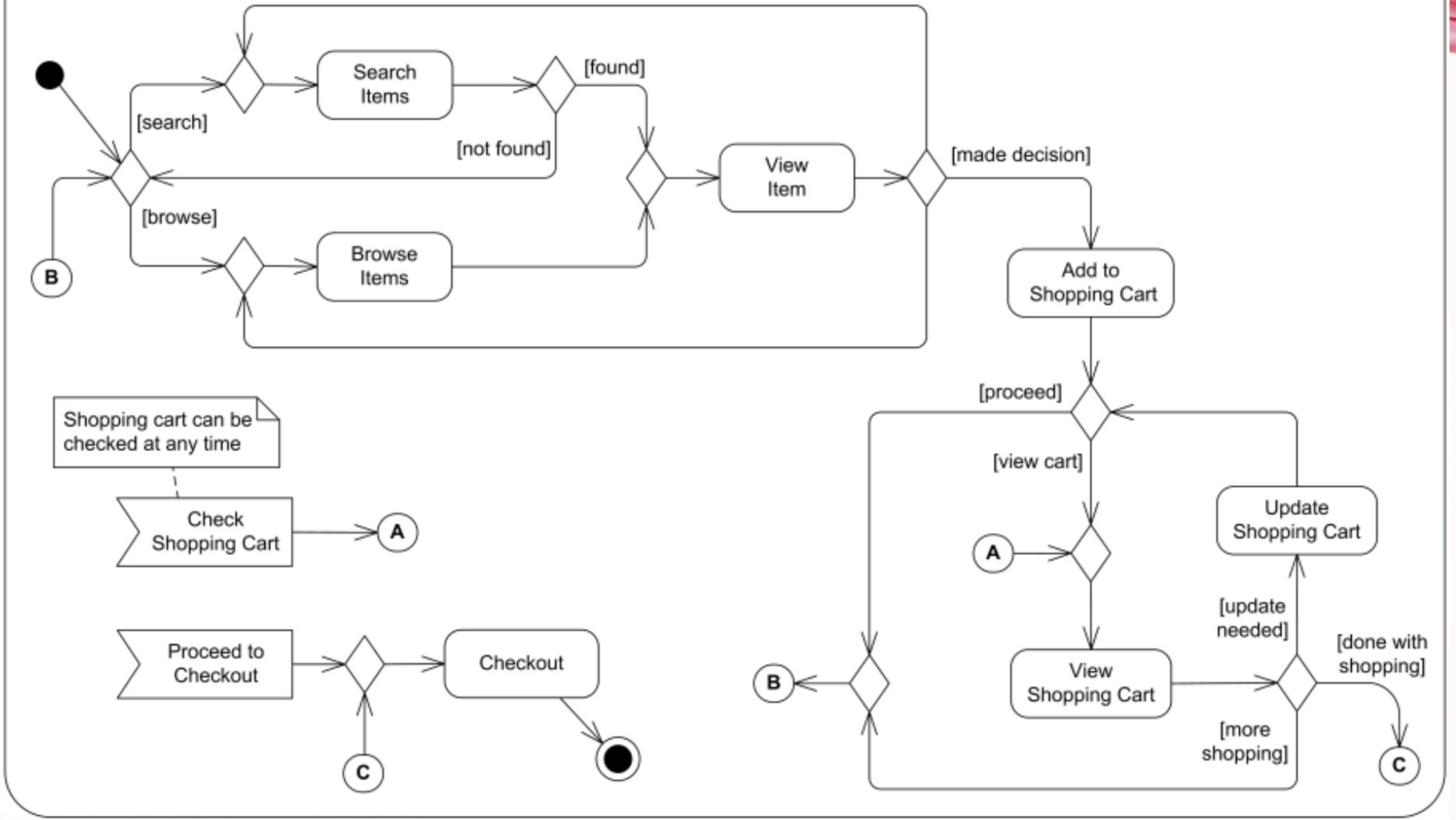
Search Items
«extend»
Browse Items
«extend»
View Items
«extend»
View Recommended Items
«include»
«extend»
Add to Shopping Cart
«extend»
Customer Authentication
«extend»
Add to Wish List
«include»


User Sign-In
Customer Authentication
Remember Me
Single Sign-On
«Service» Authentication
Identity Provider
«include»
Checkout
«include»
View / Update Shopping Cart
«include»
Calculate Total
«include»
Calculate Taxes and Shipping
«include»
Payment
Payment By Credit
Credit Payment Service
Payment By PayPal
PayPal

SEQUENCE DIAGRAM

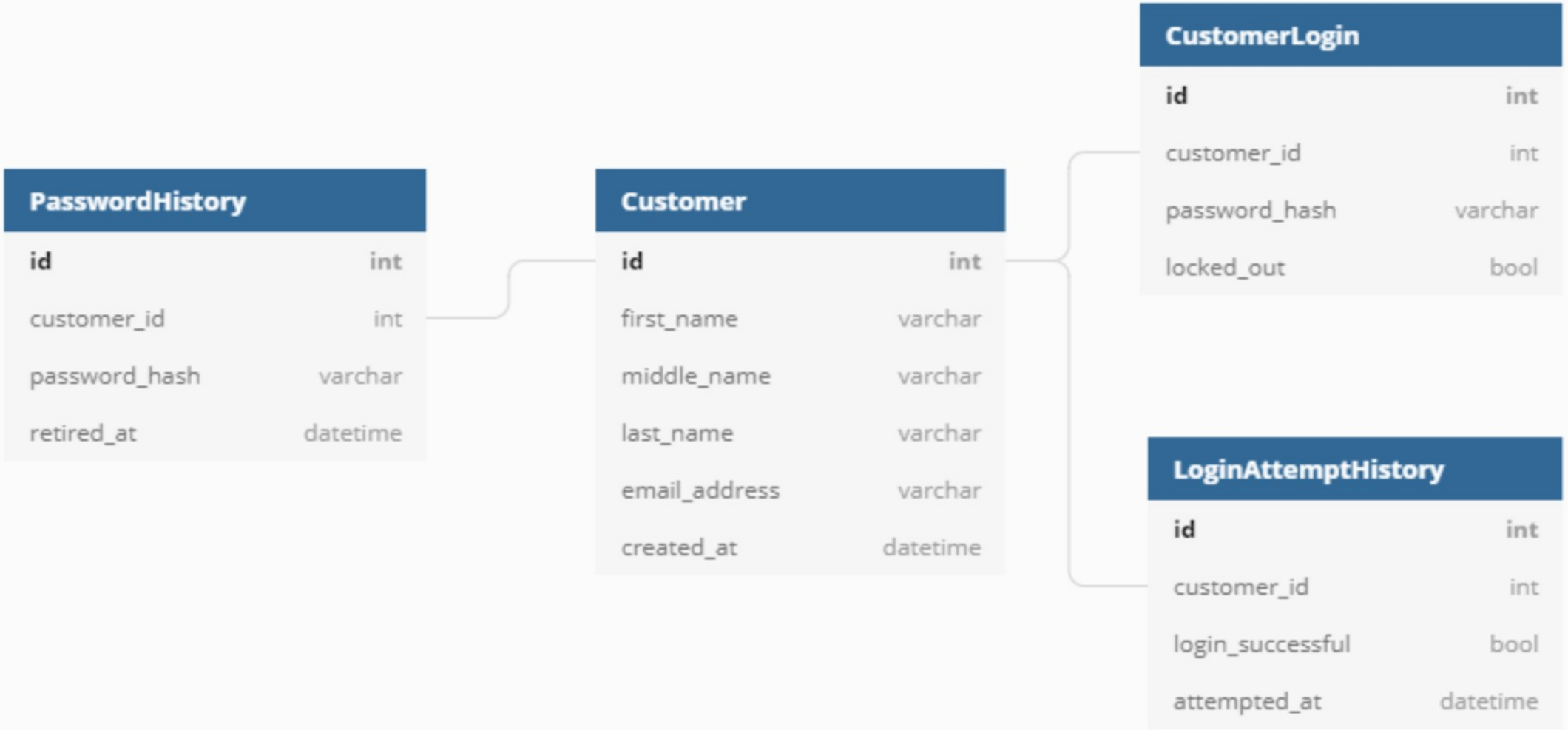

:Web Customer
:Online Bookshop
loop
search inventory
search results
opt
view book description
opt
add to shopping cart
opt
ref
Checkout

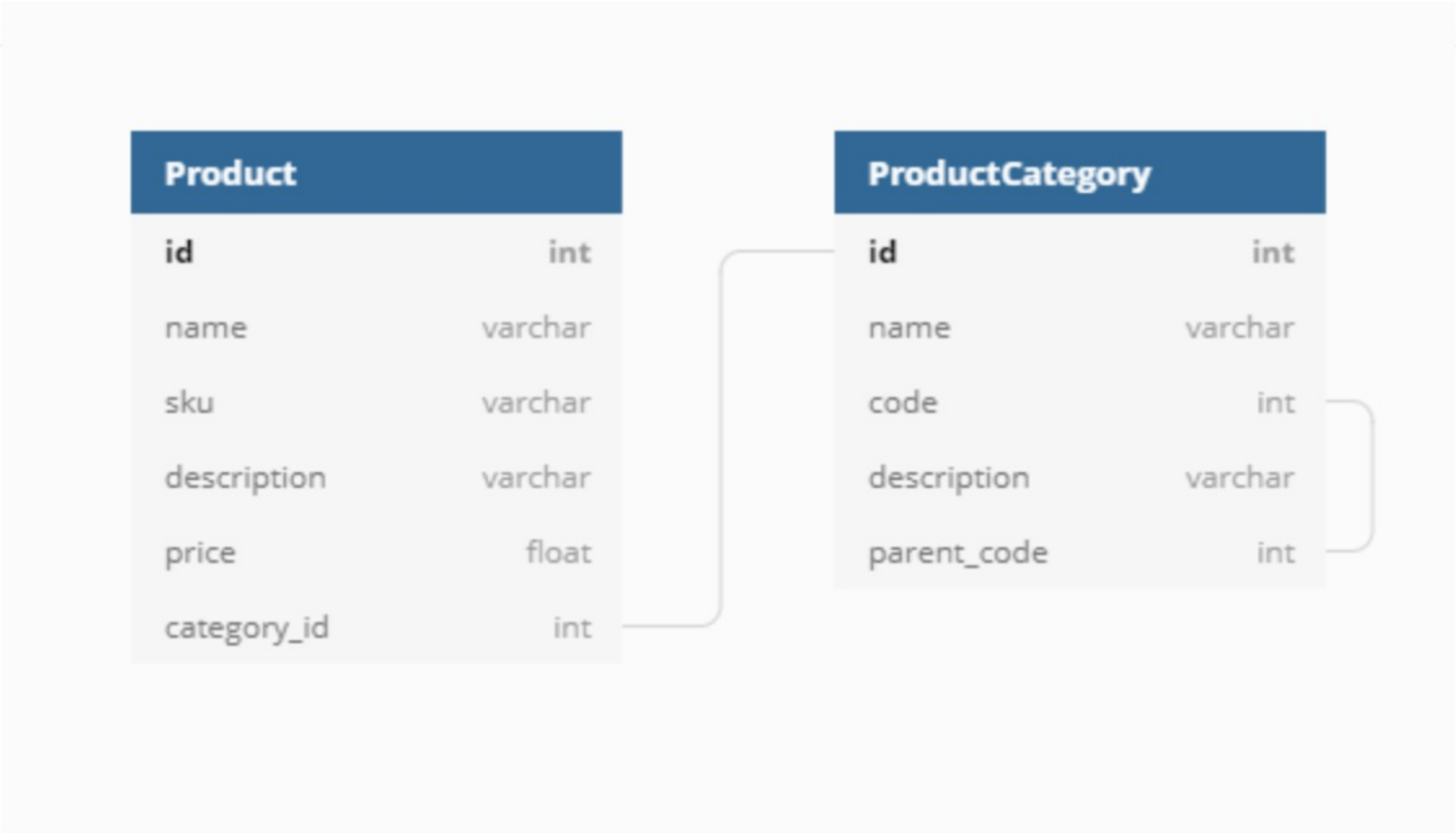
ACTIVITY DIAGRAM

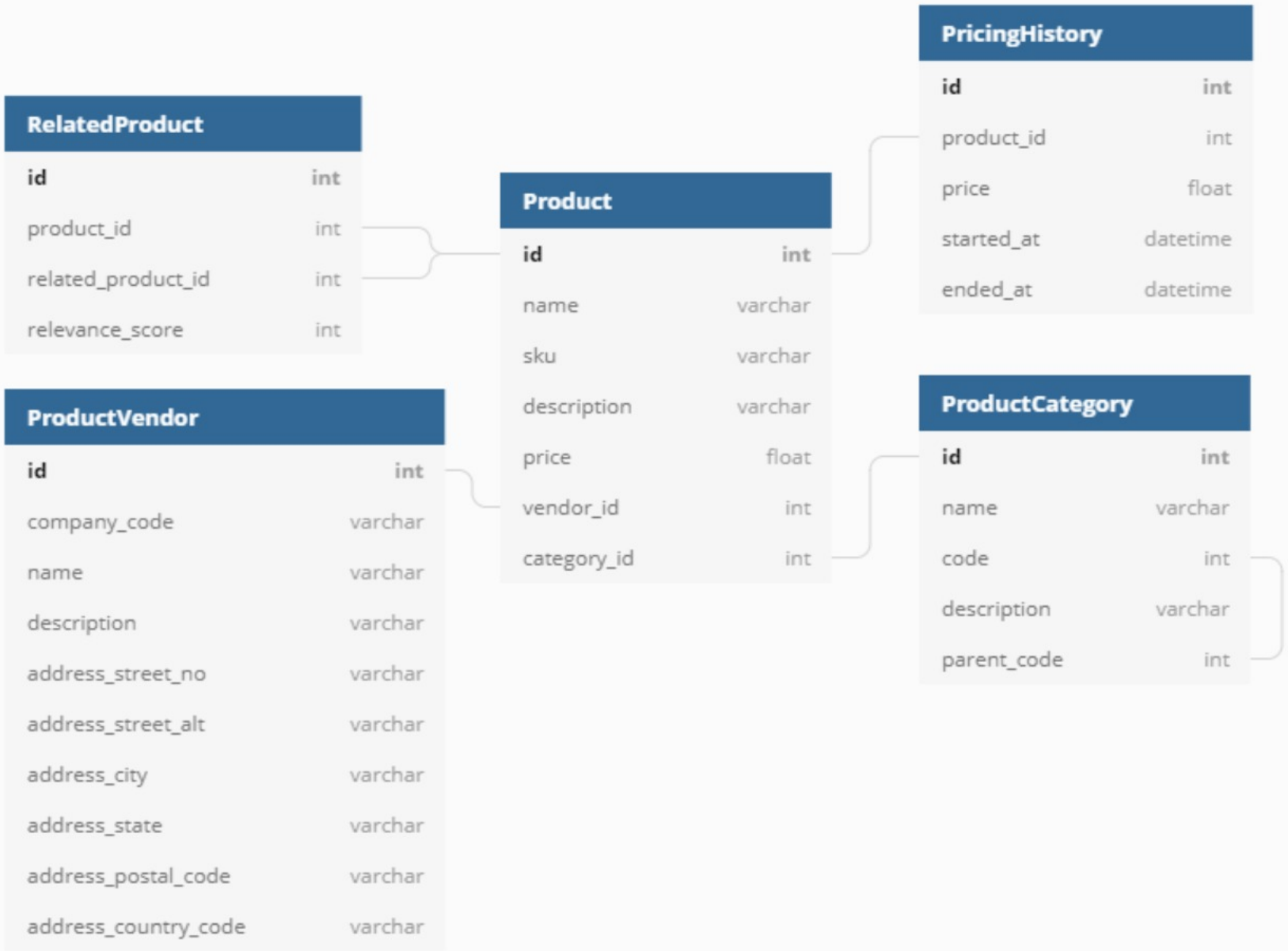

Search Items
[found]
[search]
[not found]
View Item
[made decision]
[browse]
Browse Items
B
Add to Shopping Cart
[proceed]
Shopping cart can be checked at any time
[view cart]
Check Shopping Cart
A
A
Update Shopping Cart
[update needed]
Proceed to Checkout
Checkout
B
View Shopping Cart
[done with shopping]
[more shopping]
C
C

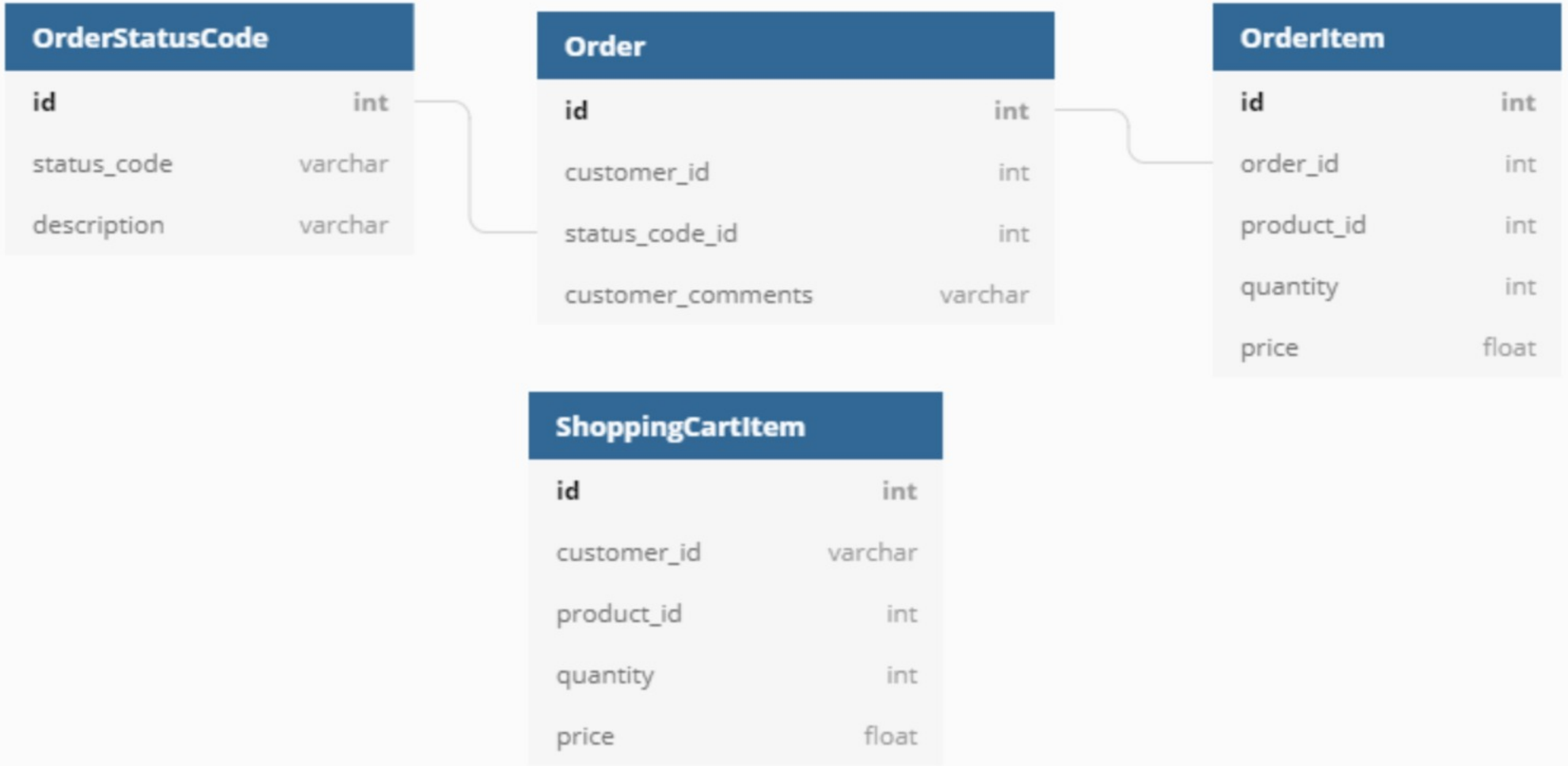
DATA MODEL

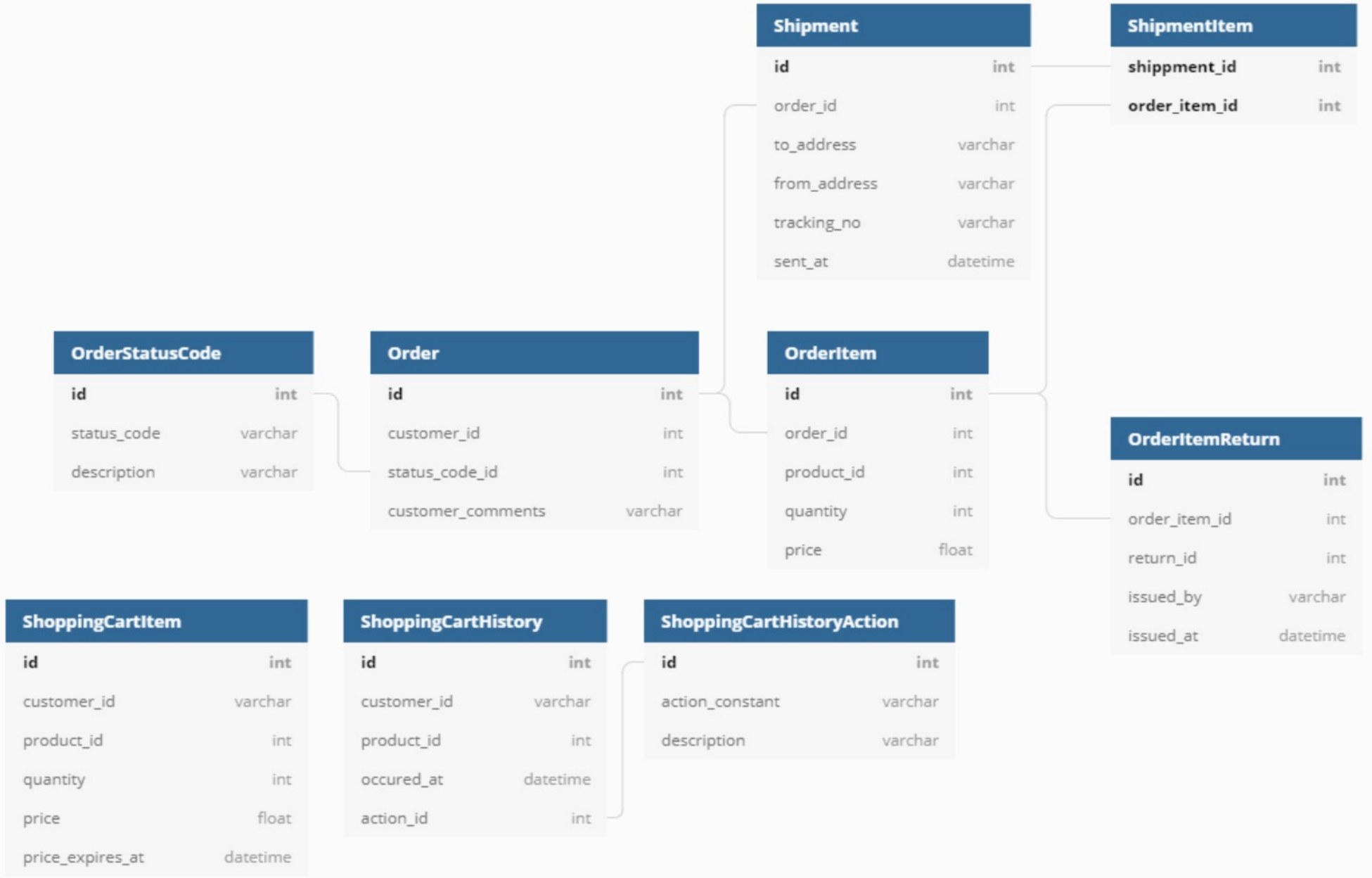
Customer
id int
first_name varchar
middle_name varchar
last_name varchar
email_address varchar
created_at datetime


PasswordHistory
id int
customer_id int
password_hash varchar
retired_at datetime
Customer
id int
first_name varchar
middle_name varchar
last_name varchar
email_address varchar
created_at datetime
CustomerLogin
id int
customer_id int
password_hash varchar
locked_out bool
LoginAttemptHistory
id int
customer_id int
login_successful bool
attempted_at datetime


Product
id int
name varchar
sku varchar
description varchar
price float
category_id int
ProductCategory
id int
name varchar
code int
description varchar
parent_code int


RelatedProduct
id int
product_id int
related_product_id int
relevance_score int
ProductVendor
id int
company_code varchar
name varchar
description varchar
address_street_no varchar
address_street_alt varchar
address_city varchar
address_state varchar
address_postal_code varchar
address_country_code varchar
Product
id int
name varchar
sku varchar
description varchar
price float
vendor_id int
category_id int
PricingHistory
id int
product_id int
price float
started_at datetime
ended_at datetime
ProductCategory
id int
name varchar
code int
description varchar
parent_code int


OrderStatusCode
id int
status_code varchar
description varchar
Order
id int
customer_id int
status_code_id int
customer_comments varchar
OrderItem
id int
order_id int
product_id int
quantity int
price float
ShoppingCartItem
id int
customer_id varchar
product_id int
quantity int
price float


Shipment
id int
order_id int
to_address varchar
from_address varchar
tracking_no varchar
sent_at datetime
ShipmentItem
shippment_id int
order_item_id int
OrderStatusCode
id int
status_code varchar
description varchar
Order
id int
customer_id int
status_code_id int
customer_comments varchar
OrderItem
id int
order_id int
product_id int
quantity int
price float
OrderItemReturn
id int
order_item_id int
return_id int
issued_by varchar
issued_at datetime
ShoppingCartItem
id int
customer_id varchar
product_id int
quantity int
price float
price_expires_at datetime
ShoppingCartHistory
id int
customer_id varchar
product_id int
occured_at datetime
action_id int
ShoppingCartHistoryAction
id int
action_constant varchar
description varchar

CustomerLogin
id int
customer_id int
password_hash varchar
locked_out bool
PasswordHistory
id int
customer_id int
password_hash varchar
retired_at datetime
LoginAttemptHistory
id int
customer_id int
login_successful bool
attempted_at datetime
Customer
id int
first_name varchar
middle_name varchar
last_name varchar
email_address varchar
created_at datetime
Shipment
id int
order_id int
to_address varchar
from_address varchar
tracking_no varchar
sent_at datetime
ShipmentItem
shippment_id int
order_item_id int
OrderItem
id int
order_id int
product_id int
quantity int
price float
OrderItemReturn
id int
order_item_id int
return_id int
issued_by varchar
issued_at datetime
Order
id int
customer_id int
status_code_id int
customer_comments varchar
OrderStatusCode
id int
status_code varchar
description varchar
ShoppingCartItem
id int
customer_id varchar
product_id int
quantity int
price float
price_expires_at datetime
ShoppingCartHistoryAction
id int
action_constant varchar
description varchar
ShoppingCartHistory
id int
customer_id varchar
product_id int
occured_at datetime
action_id int
Product
id int
name varchar
sku varchar
description varchar
price float
vendor_id int
category_id int
PricingHistory
id int
product_id int
price float
started_at datetime
ended_at datetime
RelatedProduct
id int
product_id int
related_product_id int
relevance_score int
ProductCategory
id int
name varchar
code int
description varchar
parent_code int
ProductVendor
id int
company_code varchar
name varchar
description varchar
address_street_no varchar
address_street_alt varchar
address_city varchar
address_state varchar
address_postal_code varchar
address_country_code varchar

THANK YOU

QUESTION ???