

eCommerce System Design

Objective

Using PowerPoint, describe the class-level design of a back-end system that will support the provided features described in the eCommerce stories/epics below. This eCommerce system is intended to work very much like Amazon.com in those scenarios where other merchants are using Amazon to sell their own products through the Amazon.com platform. There are three personas:

- Merchant/Seller: This is the owner of the “webstore” that is hosted on the eCommerce platform. This is akin to merchants like Apple who have a dedicated store on the Amazon platform. (see <https://www.amazon.com/stores/Apple/page/77D9E1F7-0337-4282-9DB6-B6B8FB2DC98D>)
- Buyer/Customer: This is the individuals who are shopping for products from the Merchant/Seller
- Provider: This persona represents the eCommerce platform itself and would be equivalent to Amazon.

Key things to keep in mind for this activity:

- Do not include any UI requirements (i.e. assume you are design the API and back-end services/data for the UI
- See Example PowerPoint for more guidance

Assumptions

- This document would be what you would use to describe to your team what you were going to be building together
- This design should show any necessary relationships between classes, etc
 - Use arrows only. No need to define specific details of the relationship
- You do not need to worry about specific methods, etc
- You should briefly describe the role of each class, along with any rationale, in a separate word document or in the powerpoint
- Your instructor will act as the Product Owner for any questions or clarifications you might have regarding the stories

Describing your process

The way we approach designing systems and solving problems tends to be unique. You will be provided with a Word document that contains several questions meant to uncover the critical thinking you are doing as you go through this activity. Type your answers to these questions in the document as part of this assignment.

Stories/Epics

The following stories/epics describe the scope of the features of the initial version of this platform.

Merchant/Seller

- As a seller, I need to be able to define products and their attributes such as pricing, name, and descriptions so that customers have the information they need
- As a seller, I need to be able to create an online catalog that contains my products so that customers can find and purchase my products
- As a seller, I need to be notified when a purchase occurs so that I can track orders that are happening
- As a seller, I need to be able to process a return for a product when a customer changes their mind about their purchase
- As a seller, I need to be able to look up an order so that I can answer questions from customers about their purchase
- As a seller, I need to be able to run reports showing sales for my webstore

Buyer/Customer

- As a customer, I want to be able to browse a catalog to view all of the products
- As a customer, I want to be able to see details of a specific product such as price, description, etc.
- As a customer, I want to be able to select one, or more products to purchase.
- As a customer, I want my shopping cart of selected products to persist after I close my browser so that when I come back to the store at a later time they are still in my cart
- As a customer, I want to be able to view and edit the shopping cart so that I can see how much my order will be and remove products I no longer wish to purchase.
- As a customer, I want to be able to purchase the items in my shopping cart using a credit card.
- As a customer, I want to be notified when my purchase is successful and when my order status changes.
- As a customer, I want to be able to go online and view the status and details of my order.

Provider

- As a provider, I need to be able to run reports that shows sales across all Merchants
- As a provider, I need to be able to access order details to provide customer support
- As a provider, I need to be able to create Merchant/Seller accounts