CSCI 3410 Databases – Spring 2018
Lab 1

eCommerce Site

You are a database developer for a custom software company based out of Atlanta, GA. You've been placed on a project with other developers to design an eCommerce website for an up-and-coming business that wants to add online sales to their business model. This system must be able to track customers, shipping addresses, product inventory, and purchases. Draw an Entity-Relationship Diagram using the system requirements below:

a. A customer entity with a unique primary key customerId, customer's first and last name, email address, and phone number.

b. Provide an entity that will keep track of customer addresses using a primary key addressId, a foreign key for customerId, a field to store either the PO Box or physical address line, city, state, country, zip code, and a flag indicating if this is the primary shipping address. The customer must be able to associate with multiple addresses. It's vital that any customer must have at least one address at all times.

c. An entity must also exist to store user accounts for the eCommerce site and must ensure that only one customer is assigned a user account to log into the site. It must contain a unique primary key of loginName, a secure password, a foreign key for customer, information about when the account was created, when the last login occurred, and the last time the user changed their password.

d. This system must be able to keep track of product inventory. Therefore, an entity must exist to list the company catalog of unique products that can be sold by the company. It must include a unique primary key productId, name of the product, URL path to the product image, a product description, shipping weight, how many items are available for purchase, current price of the item, a flag to show if the product is still available for purchase, and a date when the item was last purchased.

e. There needs to be an entity that keeps track of when a customer purchases something from the company catalog. It must relate to customer and product catalog using their primary keys, but must allow a customer to purchase the same product multiple times. A customer and product must be able to exist without requiring that a purchase also exists. This entity must have its own unique primary key, a way to relate a purchase to a customer and the product catalog, the quantity of the specific item purchased, how much it was purchased at, when it was purchased, and must list the specific address the purchased item will ship too.

Make sure to include data types after each attribute. Use only primitive data types {interger, string, fixed point, float point, date, time, boolean}