4-2 Assignment: Evaluate an Object Model

Michael Wood

SNHU

Course Number: CS-255

Instructor: Christopher Eppenger

02/01/2025

4-2 Assignment: Evaluate an Object Model

* **Interpret the object model for the new online storefront by responding to the following prompts:**
  + - **What are the different functions of the online storefront? How are they represented in this type of model?**

The functionalities of each class are shown at the bottom of each class block in this UML diagram. For instance, the three functions "register," "login," and "updateProfile" are found in the "Customer" class. These functions oversee client-class-specific processes, such online customer registration. Additionally, an instance of the characteristics of the customer class can be accessed by these functions. This holds true for every function in every class in which it appears. A "+" indicates a public function that is accessible through a class instance from outside the class. Here, only a "customer" object can use the "login" function; a "shopping cart" object is unable to access "customer" operations.

* + - **What are the different classes of “users” represented by this object model? What are the associations between these classes?**

1. Customer
2. Administrator

The address string, email string, and name string are the three things that the two classes have in common.

* + - **How would the objects “use” their respective variables and functions?**

Each object has unique variables, functions, and applications. For example, the administrator and client are associated with a certain email address and name. In addition, each has a user ID and password that must be verified, and they have extended the User class. Every client instance has a shopping cart where they can check out their orders, add items, and adjust quantities. It is also possible to update the order and shipment information.

* + - **Does this object model capture all of Hamp Crafts’ desired functionality? Why or why not?**

Because the object model is missing a crucial feature that enables you to place new orders based on past orders, I do not think it accurately captures Hamp Craft's intended capabilities. Another crucial feature that was missing was the option to cancel an existing order and place a new one.

* + - **The above diagram uses a solid diamond shape to represent a form of aggregation. What type of aggregation does this represent? What does it imply about the relationship between the classes? Why is a solid diamond the appropriate choice here?**

The classes indicate that the designated aspect is made up of another aspect, and the solid diamond form reflects the sort of aggregation. Every consumer will have access to a shopping cart, order form, and shipping information. Otherwise, there would be aggregation, which would result in no clients or orders, so I believe the solid diamond is the best alternative.

* **Finally, think through the two different models you’ve explored for Hamp Crafts’ systems: a process model and an object model. Then compare these models by responding to the following prompts:**
  + - **How well do you think a process model describes the system? What information does it make easier to understand? What aspects of the system are more difficult to understand or are not represented?**

To my understanding, the process model lays out the fundamentals of how data will move through the system, pinpoint its sources, and evaluate its response. In my perspective, the system has similarities to the framework in that it offers a minimal description of the functional components but limits a full understanding of the process models based only on their names and prospective purposes. The object model provides a clear description of the system since it depicts it in its entirety. The variables, functions, and procedures that control how the system's processes operate are examined.

# 