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CS 255

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**Object Model Evaluation**

1. **What are the different functions of the online storefront? How are they represented in this type of model?**

There are quite a few functions being used in the online storefront Object Model. Each function in the model is shown as a method within the bottom section of each object. The Shopping Cart object has functions for adding an item to the cart, updating the quantity in the cart, viewing the detail of the cart and checking out. The Customer object has functions for registration of profile, logging into the profile and updating profile information. The User object has a function for verifying the login, which uses a Boolean value. The Order object has a function for placing the order. The Shipping Info object has a function for updating the shipping info. The Administrator object has a function for updating the catalogue, and finally, the Order Details object has a function for calculating the price.

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

The two classes of "users" are the Customer and the Administrator. These two classes are children of the User object.

1. **How would the objects “use” their respective variables and functions?**

The online ordering program would use the variables to store and access data, which would then be accessed and used by the functions to perform tasks or manipulate the data.

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

When reviewing the Object Model, though there is quite a good amount of program logic being represented, it still lacks a few of the customers requested functionality. For one, the customer wanted to accept credit card and debit card transactions. Though there is a variable present for storing credit card information, there is no variable present for a debit card, and there is no explicit method named for transacting with the payment cards. The customer also requested connection to a credit card servicer, such a Square or Shopify. There is however, no method present that connects to any credit card servicer. The customer wants to receive alerts on the administrative end, which there is no method for any alert functionality. Finally, the customer wants to have backend support for updating customer info, which has no current method for functionality present in the model.

1. **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 black diamonds in the Object Model represent a Composition association with the other objects they are linked to. This means that the object with the attached black diamond has ownership of the object it is pointing to. In this model, the Shopping Cart and Order objects are compositions of the Customer object, while the Shipping Info and Order Details objects are compositions of Order object. A solid diamond shows a strong solid association between the two objects.

1. **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?**

While a process model does an excellent job of showing the flow of data and processes necessary to complete the functionality of the system, it does not give a clear picture of exactly what objects and methods are or will be present in the system to perform the necessary functionality.

1. **How well do you think an object 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?**

The Object model makes it very clear and easy to understand the data variables and methods that will be used in the functionality of the system. It does not, however, give a complete picture of the flow of data from beginning to end in the system. This data flow, I feel, is much easier to understand and gather when looking at an object model then it is to understand the variables and methods when looking at a process model.

Resources:

*Ezra, A. (n.d.). UML class diagram: Association, aggregation and composition. https://aviadezra.blogspot.com/2009/05/uml-association-aggregation-composition.html*