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Module 4: Evaluate Object Model

**Interpret the object model** for the new online storefront by responding to the following prompts:

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

Currently, the functions available for the storefront are – Register(), login(), updateProfile(), VerifyLogin(), UpdateShippingInfo(), AddCartitem(), UpdateQuantity(), viewCartDetails(), CheckOut(), UpdateCatalog(), CalcPrice(), and placeOrder().

These functions are represented at the bottom of each objects specific diagram in the format of; +FunctionName(): Return Type: + indicates that it’s a public function, then the FunctionName, () any parameters the function takes, and the return type of the function if applicable.

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

The different user represented classes are Customer, and Administrator. Customers buy things from the store; Users is an implementation class for Customers and Administrators that hold attributes to be inherited by both classes. Administrators manage the system and can update the catalog.

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

For the objects to access their respective function there would have to be a call from the server to request use of said process, ensuring the correct permissions are in place. Variables are hidden from direct manipulation so getters and setters would need to be accessed to change or read said variables along with function calls.

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

No, fundamentally an object model shows the relationships between objects but not how data flows. We have no understanding of what databases are being used, what data is moving, and the data structure(s) involved. More than an object model is needed to fully understand a system and its components. There could be a whole other component(s) section that provides other functionalities that are not displayed in the current class model diagram.

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 solid diamonds indicate a composition aggregation where the child classes cannot exist independently from the parent class. A customer can have 0 or many orders but the order needs a customer to exist. A customer can have 0 or many shopping carts but the shopping cart needs a customer to exist. An order can only have one shipping info object attached to it but it the shipping info objects needs an order to exist. Finally, an order can only have one order detail object attached to it, but it requires an order to exist.

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:

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?

Considering the assignment in Module 3 was to plan how to implement an online store into the current brick-and-mortar store workflow. I don’t believe that the process model describes the system well since its missing a key component, the online portion. The process model available for study very easily describes what is supposed to happen when a customer places an order and its easier to understand the flow of the processes and data.

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?

I think the object model does well with describing the order and user side of the system but clearly neglects everything else. I can see what the process is supposed to look like and the attributes that are generated whenever an order is finalized and created. This model does not investigate vendor, shipper, or carrier information, order fulfillment, or how the objects interact with the database. I don’t know how anything interacts with the website and what the logic and data flow is.

Both the process model and the object model together help bring the picture closer together, but they are still both lacking fundamental components of the system and how the data would flow, be stored, and processed once the new system is fully implemented.