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**Section: 08**

**Describing the Use Case Diagram as per Template given in Week.6.1.Modeling.with.UML**

The name of the use case I am describing is the Log In use case.
The participating actors for this use case are both the Customer and Manager.
The entry conditions that need to be satisfied before the use case is initiated are the customer/manager provides correct username entry, correct password entry, and presses Log In button.
The flow of events occur as follows:

1) Customer/Manager enters username
2) Customer/Manager enters password
3) Customer/Manager hits log in button

The exit condition for customer is his/her log in is authenticated and their file is read and they can continue banking.
The exit condition for manager is his/her log in is authenticated and they can continue to manage bank accounts.

**Describing the UML Class Diagram**

My UML Class Diagram is made up of 7 classes: Driver, Customer, Manager, CustomerState, SilverState, GoldState, PlatinumState.
The Driver class is responsible for the GUI and has an association relationship with the Manager class and Customer class. The CustomerState class is an interface and the SilverState, GoldState, PlatinumState classes implement the CustomerState interface, so they have a implements interface relationship. Furthermore, the Customer class has an association relationship with the CustomerState interface.
The Manager class is responsible for implementing manager behaviour (adding and deleting customers done through file reading and file writing).
The Customer class is responsible for creating customer objects and implementing customer behaviour (withdrawing, purchasing, depositing, and checking balance).
The SilverState, GoldState, PlatinumState classes are responsible for changing states and performing specific fee on purchases.

**The class that I chose to address point number 2 in the project Document is the 'Customer' class.**

**Part of the UML Class Diagram that form State Design Pattern**

Together Customer, CustomerState, SilverState, GoldState, PlatinumState classes form the State Design Pattern. The Customer class is the context. The CustomerState class is the state interface. The CustomerState, SilverState, GoldState classes are the concrete state classes.

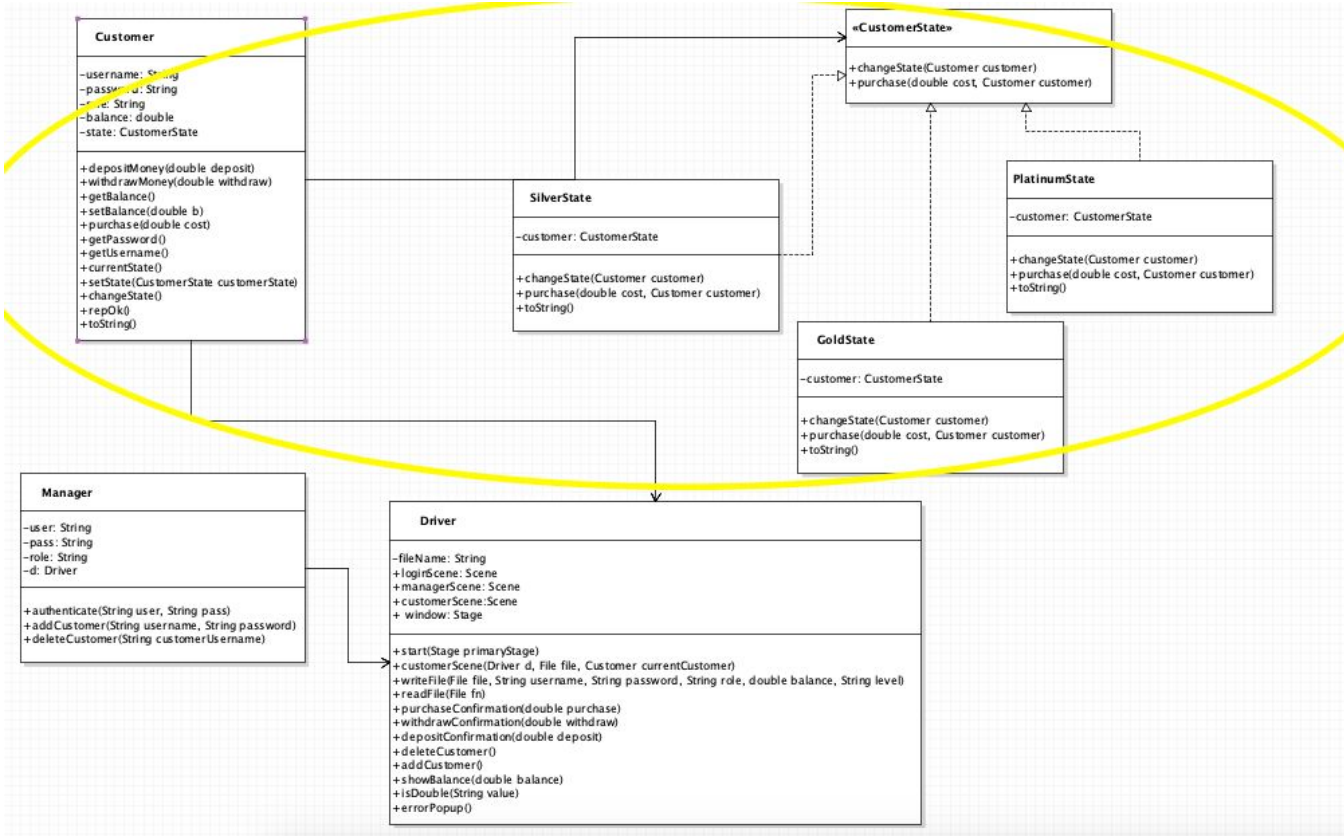


**Figure 1: Yellow Part forms the State Design Pattern**

**References**


Week.6.1.Modeling.with.UML from
https://courses.ryerson.ca/d2l/le/content/212972/viewContent/2151719/View

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