# CS 255 Model Application Short Paper

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## Process Model Application

The process model application is the act of building a framework that focuses on the actions and the activities of the project. For the DriversPass project, the most efficient utilization of a process model would be creating a data flow diagram (DFD). The DFD shows the actions that the project will need to accomplish as well as the different relationships and dependencies.

The first action that needs to be taken is account creation. Each account should have a unique username, password, personal info, and preset privileges based on the account role. Editing and deletion of an account are also actions that need to be built. Passwords resets need to be integrated as well as a lockout action if an incorrect password is entered three times. The primary action the DriverPass project needs to accomplish is the creation of driver training reservations. These reservations also need to have the ability to be modified or deleted. Reservations, the customer, the assigned driver, and the vehicle all need be able to be tracked.

There are some additional secondary processes that need to occur within the DriverPass application. Updated information from the DMV needs to be added to the application in real time to provide all users the most update information. Reservation packages need to be added, edited, or removed. This includes the reservation time frames, module focus, and cost.

## Object Model Application

The object model application focuses around outside entities that will interact with the project. In creating the object model application, the most efficient tool to implement would be a Unified Modeling Language diagram (UML). There are several different types of UML diagrams. If the focus is entirely on objects, the component structured diagram would provide all of the necessary information without excess information that would detract from the diagram’s primary purpose.

The primary physical object that will interact with the application is the user. Users can be broken down into various roles which will have access to specified actions. The two primary types of users will be the customers and the admins. The customers will have rights to edit and modify their own profile information, reservations and be able to review pertinent information from DriverPass and the DMV.

Admins can be further broken down into sub objects such as instructors, operators, managers, and support. These roles will have different modifying permissions based on the needs of the job. Instructors will have the ability to view and edit all reservations assigned to them but will not have the ability to changer other accounts or modify appoints that are not assigned to them. Operators will have the ability to view, add, edit, and delete all reservations and all customer accounts. Support will have the same rights as operators with the added ability to make changes to operator accounts, unlock locked out accounts, and update information provided in the DriverPass application. Managers will have all the abilities of support with the added ability to delete support accounts, delete manager accounts, and change account roles.

## Process and Object Model Comparison

The differences between process modeling and object modeling directly reflect their advantages and disadvantages. Their differences are primarily with their focus and the information the provide to the project development team. They are both helpful and both should be implemented to ensure the DriverPass project is completed in the most efficient and comprehensive manner possible.

Process modeling focuses on the actions of the project. An advantage to this that is helps keep focus on accomplishing the task the client requested. One of the biggest disadvantages to process modeling is that it relies on a clear focused goal from the client that needs to be communicated efficiently. It does not necessarily anticipate the unspoken needs of the client.

Conversely, object modeling focuses on the object interacting with the project. This helps keep the project modular which allows the objects to adapt to different types of actions that may have not been identified during the initial design of the project. The disadvantage to object modeling is that it can lose focus and the end result has the possibility of not fulfilling the client’s original goals.

## References

Valacich, J., & George, J. (2020). Modern Systems Analysis and Design (9th ed.). Pearson.