# CS 255 Model Application Short Paper

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## Process Model Application

Applying a process model, which provides a visual representation and outlines the system's process flow and activities of the DriverPass system, can be done in an organized manner.

The first step would be identifying the basic core concepts or bulk processes of the system. For this system, the core intention is to have customers register, schedule appointments, and take both written and physical tests(driving). Next is to document each process in detail, starting with registration, we would capture the process of collecting the customer’s personal information, like personal details, payment information, and then the package option that they choose, this would also include mapping how customers go on to create their accounts which can be done manually online or by contacting a secretary. Next, is capturing the reservation, focusing on showing how the system will match specific people to certain drivers, and keeping track of each two-hour block of time. From here, we can capture the testing process, document how customers will access the online classes and practice tests while keeping track of their progress and whether or not the tests were failed or passed. It will also be important to document the system process of implementing any law or policy updates from the DMV.

After documenting all the important processes of the system, one can perform an in-depth analysis of the current design, which will allow for the identification of any inefficiencies, bottlenecks, or potential security risks. From here, a revision plan could potentially be created where the system can be improved over time.

## Object Model Application

An object model, which aims to capture the system component details and relationships of objects within the system. To implement this model, we would start as follows:

First, we will identify the key objects, specifically the users, as they will be the ones providing input into the system's actions. We will need to know the customers, IT officer, CEO, drivers, and secretaries. Each of these objects will also have its respective attributes and behaviors, which we will also need to capture; for example, customers would have underlying components for payment options, package options, and personal information with their accounts, while drivers will have things like car details, student details, and schedules. Next is identifying the relationships that exist between these objects. Test objects and training objects will be interconnected in several ways. The package options, which have different levels, provide access to online classes and tests that are managed and tracked by the test objects themselves, working together. The other is the relationship between the customer objects, driver objects, and scheduling objects. for example, a driver can be assigned many different customers through many different appointments and thus can teach multiple drivers.

After documenting all the interconnected relationships of the system, one can use this model to efficiently grow and scale the system as needed without having to drastically rehaul the entire system preserving the existing relationships, it will also help with implementing any updates for the DMV and how to effectively add, remove, or modify any training packages in the future as the company wanted.

## Process and Object Model Comparison

Process Model:

* Provides a clear visualization of the system's flow(customer registering or how the process of implementing updates from the DMV)
* Does not provide a clear visualization of the relationships between system components.
* Gives a clear view of how all the different users will interact within the system.
* Not effective at showing the flow and processing of raw data, like how customer data(name, age, etc.) is passed throughout the system.

Object Model:

* Clearly shows the relationships between different system objects and components like users, drivers, or vehicles.
* Does not effectively show a systems process flow
* It can be more complex than a process model and harder to visualize
* Makes it easier to understand complex structures of data and where it goes.

## References

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