# CS 255 Model Application Short Paper

Nichole Griffith

nichole.griffith@snhu.edu

Southern New Hampshire University

## Process Model Application

Process models focus on information flow and are often represented with data flow diagrams. If I were to create a data flow diagram for this project, I would do it in the following way.

There would be four data sources: customer, trainer, secretary, and admin. Data. There would be one data sink, which would be the graduating of customers who have passed. There would be a data store which would be the database in the backend.

Data would flow from the customer by way of registering an account, booking an appointment, choosing a package, paying a bill, and attending a lesson. Data would flow from the trainers by way of registering an account, booking an appointment, and creating notes. Data would flow from the secretary by way of registering an account, booking appointments, and managing calendar. Data would flow from the admin by way of managing users and generating reports. Data would be stored in a database. Data would flow into the sink by way of these processes.

## Object Model Application

Object models focus on the relationship between objects and functions in a system. An object model would have a user object. Customers, admins, secretaries, and trainers would inherit from this user object. There would also be objects such as: appointments, notes, payments, packages, etc. A customer would have associations with appointments, payments, and packages. A trainer would have associates with appointments and notes. The administrator would have associations with reports and packages.

Another example of an object could be an address, which is where users’ address information is stored. Users would have a composition association with address because it would be part of the user’s profile information. Likewise, appointments would have a composition relationship with notes because the trainers would take notes during these appointments.

## Process and Object Model Comparison

Both process and object models play important parts about modelling the DriverPass system. Each are very different ways of looking at the system as a whole.

Process models show the flow of data from sources to sinks by way of processes. The main advantage of this model is to keep the focus on where information is going at each step. System design can become unwieldy if you try to focus on too many different details at any given time. Process models allow you to focus on functional requirements without the burden of details.

Object models show the relationship between different objects in the system. The main advantage of this model is to keep the focus on the important parts of the system. Object models do not take hardware requirements, practicality, or infrastructure into consideration. This allows the perspective of objects moving in the system to be uncluttered with unnecessary details.

The disadvantages of these models are that they are not particularly useful without each other. One model cannot describe the entire system. The combination of process and object models, along with other useful tools, help to understand and compartmentalize important parts of the system being designed.

## References

Valacich, J. S., & George, J. F. (2019). Modern Systems Analysis and Design (9th ed.). Pearson Education (US). https://mbsdirect.vitalsource.com/books/9780135172841