# CS 255 Model Application Short Paper

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## Process Model Application

Appling a process model would first start by identifying the key processes that the system needs to do in order to be an effective and valuable system. These key processes include User registration and management of their user-profile, Practice exam hosting and management of test scores and progress, Reserving on the road Training Sessions based on package purchased, Hosting driver feedback from staff for each client, Processing of payments from clients, and Reporting and analytics of both the business and the system.

After identifying the key processes that are necessary for this system to function, we then must diagram how they work together to facilitate the overall function of the system. For example, the first time the client visits the webpage, they will have to register. The registration process will take care of that aspect of the system. Then, the process flows into the user profile management process where the user then builds out their profile within the system. From there, more processes are open depending on package purchased, the user may then be able to register for on-the-road training or take practice tests and look at sample questions. If the user is at this point, then they have an additional process in that they can look at their test scores and progress. (Valacich & George, 2025)

The final step of applying the process model to the DriverPass scenario is that we have to ensure that all processes are integrated and can communicate effectively. By that I mean, the “User Registration” process should seamlessly integrate with the “Practice Exam hosting and management” process by linking the user profile to their practice exam performance data.

## Object Model Application

To apply an object model to the DriverPass scenario, it would be similar to the process model, except with objects. First, I would identify the key objects in the system. In this scenario, the client, driver, practice exam module, registration module, administration panel, payment module, reservation module, and logging module are all key objects in the system.

Then, the object model must diagram the relationship between the objects in the system. For example, the client object is related to the registration, payment, practice exam, driver, and logging modules. The client can register for the service, pay for packages, (potentially) take practice exams and view progress, interact with the driver object in the form of lessons, and create logs which can then be viewed by the administration panel object. Going further, the administration panel object would be related to, among other things, the client object in that they are able to CRUD client accounts and manage passwords.

The advantage of the object model is that it provides a clear understanding of the objects involved, their attributes and how they interact with one another. This approach helps in organizing the system’s structure, ensuring that all desired functionalities are implemented.

## Process and Object Model Comparison

Process modeling provides a nice, comprehensive diagram of the workflow of the system. This form of modeling greatly helps when considering this like process optimization. For example, a process model that diagrams all the processes in the system can potentially be looked at when there is a problem with the system like a bottleneck or business policy change. Additionally, process modeling provides a diagram that can be understood by users that need to interact and troubleshoot the system but may not be technical enough or trained enough to understand the whole system and its inter-workings. (Valacich & George, 2025) In this case, the process model provides a map to guide users on potential hang-ups or bottlenecks.

Object modeling is different in that each object within the system represents a unique piece of the system that has its own attributes and expected behaviors. (Booch) Object models are nice in that they do a wonderful job of fully describing the individual objects of the system.

Process models and object models work together and, in my opinion, should be used in conjunction with one another in order to most fully describe the system. Both models offer advantages and disadvantages for this scenario. Process modeling is beneficial for understanding the system process workflows, ensuring compliance with the system design goals, and documenting system process interactions. Object modeling, on the other hand, excels in fully describing the individual objects within the system and how they will function.

Combining both process modeling and object modeling provides a more comprehensive diagram of the system objects and their desired processes. When they are both provided, it is much easier to gain a fuller understanding of the individual pieces of the system as well as how those pieces work together. Using both models together can work to address the many different required aspect of fully designing and documenting the system.

## References

Booch, G., Maksimchuk, R. A., Engle, M. W., Ph.D., B. J. Y., Conallen, J., & Houston, K. A. (n.d.). *Object-oriented analysis and design with applications, third edition*. O’Reilly Online Learning. https://learning.oreilly.com/library/view/object-oriented-analysis-and/9780201895513/ch02.html?sso\_link=yes&sso\_link\_from=SNHU

Valacich, J. S., & George, J. F. (2025a). *Modern Systems Analysis and Design*. Pearson Education, Inc.