# CS 255 Model Application Short Paper

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[**Note:** Complete each section below. Each response should be a few paragraphs in length, and your paper should be between 3 to 5 pages. Use 12-point Times New Roman font, double spacing, and one-inch margins. Be sure to use proper grammar and APA format to cite any sources you use, including the textbook. Remove this note before you submit your paper.]

## Process Model Application

I would utilize the waterfall method or model for a process model with DrivePass. The reasoning I have behind this is because of the steps I have outlined here. One we will begin a Requirements analysis to identify the must haves for our application, acquiring detailed test information through surveys and one on one interviews with possible users. After that data is gathered, we ensure we have complete documentation written in order to help us in the next steps. Then we will focus on the system design, on this step we place the base components on paper for how each object is defined and how their relationships function. Once this scaffolding is laid we can move on to the next step. This step is the execution phase, we will be following through with the outlining code and underlying databases for the corresponding, creating each minimum viable function for the application. Following this steps completion we can move onto the testing phase. We can use user testers and quality assurance staff to find design flaws and or bugs within the tools. All parts of the application will need to be tested, every possible user flow needs to be identified and followed through with for many possible conclusions. Once the testing phase is completed we can move on to the deployment of the product, because testing is complete this means we have a stable product, and during this phase we need to focus on setting up a system for future growth, allowing the system to run on a cloud based platform such as Azure to ensure when we get more users and more data, we have a consistent uptime. Which leads us to maintenance, now that the product is deployed we can focus on keeping any user issues or bugs that were not found during the testing can be resolved now, additionally there will always be updates to technology and web based languages such as python or html, when these updates happen we need to ensure there are not compatibility issues.

## Object Model Application

I would create an object model through five phases, starting with identifying objects, in this phase we can sort through and define key objects in our system, next would be giving them definitions and establishing their importance as well as their state and any actions they can complete. Each of these objects will have attributes or methods for how these objects function. Next phase will be to defining the interactions and relationships, what each object could do. Then we can focus on inheritance, so we have a protected hierarchy of objects. Then the focus will be on implementation, we can use the created object model and establish and translate all defined objects and relationships into code. Ensuring they are all functional together.

## Process and Object Model Comparison

There are many disadvantages and advantages to process and object models. The primary benefits of a Process Model is that each step will have develop very detailed written word or documentation, this is something that will make it easier in development and for future updates. Additionally, the waterfall model will allow a structured and organized approach, then it the a to z setup of this model allows it to become easier for its predictability. However the advantages of an object model are as follows, the ability to reuse class definitions and objects throughout the system, it is more scalable and an almost lego like experience with building on top of. Disadvantages however of a process model are that it can only be tested after it is executed or implemented, which is rather late in the development cycle. Which many companies when developing often rush their testing for this reason, it is closer to the due date. It is also not very adaptable to every context and situation. The downsides for an object model are that is can be very time consuming to develop a larger system, and it can become very complex. There is a need for a team to adapt to this type of model. They may need additional insight or training.