

CS 255 Model Application Short Paper

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Process Model Application

For constructive development and communication solutions in gathering application requirements, I will utilize use cases and process models to better understand the functions and creative process of the DriverPass application and how its design and behavior fits together. Creating a process model application will improve the developers, analysts, product managers and specialists understanding of the software. This model will break down the functions, actions, behaviors, and classes in order to reduce the complexity of the application, providing simple to comprehend development. Process model applications assist in solving a real-world issue of better preparing student drivers to understand driving concepts and pass their tests.

Starting with Customer, the application would require the customer to complete a questionnaire and application with all the necessary information about the customer. Then the customer will be required to “Order” any of the provided packages within the DriverPass program and then the customer checks out. The members of DriverPass will “Receive” the order and make the arrangements for a driver to be available to train the customer. From there, the staff/drivers of DriverPass will begin the process of training that customer based on what they order. That process would be labeled as “Train”. Following the training process, the staff involved in training will collaborate together to provide the student with their detailed progress; The process will be labeled as “Reporting Progress”.

As for security, the process model would include the following processes; The head of security would “Establish security requirements” for the program. This might entail establishing security for further expansion of the program as well as security for maintenance protocols. Another process would include to “Analyze risk and vulnerable aspects” of the DriverPass

system. The head of security would also need to include a process to secure protocols for resetting a customer's password when needed.

Finally, a process for administrators would entail many different aspects. Administrative users would manage the implementation of different modules to the program DriverPass. Each administrator would take part in deciding the best layout approach in order to captivate the appropriate audiences for the program. Ultimately, administrative users would be in charge of helping to implement changes to the system. As explained before, each of the concepts are broken down into basic or common concepts, then other processes show how each of the concepts work together; Finally, as the application runs, the process shows us what exactly happens during launch.

Object Model Application

From the object side of things, each of the three groups (customer, security, and administration) would be broken down into variables and functions needed to successfully launch the program. Focusing on the object's customer and administrator, both objects will need username, password, user id number, email address, and phone number; These variables help to differentiate users from other users and administrators. The methods or functions for the customer object might include login, verify user, update user profile, place package order, and check out. For an administrator, the functions would include update system, design layout, etc. Administrators would also need a function to add/delete user accounts.

Looking at the security user object, there would be similar variables and methods; Variables would include information like their username, password, email address, etc. Also, security officers involved in this program might have additional variables including security user number, security credentials, and authentication code. Methods for authorized security personnel

would entail reset user password, update security protocols, etc. For the security side of things, additional variables could include security

Process and Object Model Comparison

When it comes to modelling for a given program, different models offer varying advantages as well as disadvantages for a development team. The process model is helpful as each process for the different groups, i.e., customer, security team, and administrative users, describes the basic idea or behavior of the program. The process model lightly breaks down the different aspects of the program. More specifically, a process model describes the processes at a categoric level; For instance, a process model will include general concepts, the ways in which the system works, and finally, what exactly happens as the development of the system runs. While this is helpful for a team, the process model explains how the system will behave in its entirety, however, it does not explain or display how and why the differing parts work together.

Object models help with breaking down how the system works together by providing variables and different methods that, in many ways, help describe how the systems various parts and operations work together. In other words, they describe the system in terms of its object types. Object models include the processes along with the processes fluctuating definitions; In other words, the variables help break down part of a given process into respective variables. The function side of things help development teams to understand how each part of the system works on its own as well as with the rest of the system. These models provide an x-ray of the system so that the team can understand fully what is being asked from the owner for the system.

As using both models to develop different systems and programs for different needs could be a great practice, opting for one or the other can still be efficient in understanding various parts to a given system. Having mentioned this, teams may be more likely to better

comprehend the difference of each part of the system and do a more accurate job of actually creating the system as it is represented in the models. As development teams work together to produce the results required, these models represent how the system fits together with those different parts and how each part is needed to complete the system.

References

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