# CS 255 Model Application Short Paper

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## Process Model Application

In order for us to apply the process model we would need to first map out the sequence of activities that the system is going to need. This can range from identifying the main processes, as well as the flow of information and the interactions between different components and users. So in order for us to apply the process model we need to identify the core process. For core processes we have a user registration and authentication. What they do is account creation, login and role based access control.

Next for Core processes we will have course enrollment and content delivery. This entails managing online classes, practice test, and access to educational information. Next on the list would be Lesson Scheduling. This will give the users the ability to book driving lessons, manage appointments and track there sessions. Next on the list for identify core processes we will have progress track and reporting. So this will help by monitoring the user progress and generate reports as well as provide feedback. Lastly there would be a payment processing which will handle the financial transaction. Now that we established the core processor we can move on to define process flow.

So this creates a high level over view that leads to the next step. For example the process might be when a student decides to look over the educational content to pass his test or even booking or modifying the appointment.

Next in the steps would be Map interactions. It shows what each users can do in the system. For example if the admin needs to remove a user because they are done with the program they can modify that on there end. Another example would be if a student needs to schedule a lesson the trainer would be informed of that change.

Next would be data flow which means how data moves Data moves when someone registers for the course. Lastly would be the feedbacks loops this helps in case an error might occur and guides them to fix it.

## Object Model Application

For an object model its defining the system with objects and connecting them with there attributes and there relationships. In order for us to use this we would need to find key objects. So they would be users which would be something like userID. Next would be Course and the key would be courseID. Next would be lessons and the key object would be lessonID. Then right after that we have payments and the key object would be paymentID. Last it would be progress report and the key would be reportID. Now that we found all the key we would need to find a relationship.

Relationship will be user-course which allows them to be able to enroll in various and many courses. The next relationship would be user-lesson which gives the students many lesson and each lesson is paired up with a trainer. The next relationship would be lesson-car which means which car would be connected with the student. Lastly the last relationship we have to define would be User-progress report which gives each of the student a progress report that is link with there courses.

Now that we have all of the define we have to go into details based on there methods and behavior. So for Uses we have to include stuff like register, login, cancel lesson and view progress. For Courses the method that needs to be used is add content, update and assign practice test. Then we are moving to lessons and we need to add book lesson to the method. Lastly we need to add the progress report for the method and its to generate report.

To end it all we would have to create object interactions in order for us to get this working. So when we mesh them all together we should be able to do it. For example when a user decides to schedules a lesson the lesson object will update in the system and update the status. Which in turn will update the schedule.

## Process and Object Model Comparison

Now that we have a better understanding of the two models we need to find what there both good at and bad at. Lets focuses on Processing models first and we will look at the advantages of it. For advantages of the process model it gives you clarity in the workflow, good at error handling and has user interaction focus. Now the disadvantages of using a process model, its very complex to modify the system and its less focus on data. So if you want more data for your report this model probably wouldn’t be ideal for you. Next is object model.

Object model advantages is that its good at modularity which mean it can be reused over and over again without effecting other parts of the system. Data centric which means its really good at providing data between other relationships in the database. Lastly encapsulation, which promotes better organization and able to maintain the code better. Now the disadvantages are less focus on process flow and initial complexity.

In conclusion depending on what you need more of is better for you to use. If you need more process flow then the process flow model is the way to go. If you need more data then the Object model is the one you need to pick. They are both good model it all really comes down to what do you need them for. So never be afraid on using both and looking at which one you like better.