COMP 2920: Software Architecture & Design

Class Activity #4

Objective:

To walk through the process of defining software architecture of a system using UML diagrams

Description:

Let us define a CD sales system that displays the record of sales of a music band. The overall sales are recorded in the external Billboard Reporting Service. Our system co-ordinates with the external system and can show the details of sales of specific band to the band manager. The records manager of our company can view the overall billboard report as well as the details of specific band or other music.

Please note that our system delivers Billboard reports from an external Billboard Reporting Service.

Optional: If you wish, you may add additional services to the system.

To do:

1. Recommend the software architecture pattern used for this system.
2. Design the use case diagram for the system. Since its all about viewing sales reports, login into the system is must.
3. Identify the classes and sketch the class diagram using multiplicities. Also define the common attributes and the functions required to define the system
4. Design a sequence diagram that allows the records manager to generate the report for a particular CD for the specific week.
5. Convert this sequence diagram to the communication diagram.
6. Is there any state chart diagram associated with this system? Draw if any.
7. Design the activity diagram for generating the report of sales for specific CD by the records manager
8. List a few functional and non-functional requirements for this case study
9. List the specific domain requirements for this case study, if any.
10. What software development model would you like to use to develop this system and why?

Instructions:

Make a group of two students and start documenting everything you feel important for this case study keeping in mind the 10 questions given above. You are free to change the sequence of questions to answer.

Make sure you make a complete documentation of this case study as I will be needing that to mark this activity.