CS335 Lab

Behavioural aspect modelling

This lab includes 2 parts. Part 1 relates to an exercise on behavioural aspect modelling. You should work on this part for 30 minutes, then you can access the solution to compare with your work.

Part 2 is about modelling the behavioural aspect of your MusicSpace application.

You should provide from 2 to 3 sequence diagrams of your choice related to use cases you identified and 1 swim lane activity diagram of your choice

Part 1- Behavioural modelling

1. **Sequence diagram**

 Loan application use case details:

Luna is applying to the bank manager, for a loan.

The Bank Manager checks to make sure Luna is a customer of the bank check her credit history.

If this is satisfactory he will check to see how much she wants to borrow and for how long, otherwise he will refuse the application.

He will calculate interest rates involved in this case.

Once this is all completed he will conclude the deal, create a loan and process a cheque to give to Luna.

1.1. Model the sequence diagram for the above scenario

1.2. Convert the diagram to collaboration diagram and see the differences/similarities between the two models

2. **Activity diagram**

Draw the activities diagram describing the flow of activities of *Auto Video rental at the shop* use case

Main flows:

A customer picks some videos from the shelves for renting. He/she scans the item(s) and the membership card. If any delinquent or overdue details found, then these are brought up for the employee to query the customer about and the rental cannot proceed. If the customer

does not have a delinquent rating, then he or she can hire up to a maximum of 8 items. However, if the rating of the customer is "unreliable", then a deposit is request apart from the normal payment over a period. Once the amount payable is received, the videos status is updated and the customer pick up the DVD with the receipt. A rental record is created as well.

 Alternative flows:

If the customer gets delinquent rating, the customer is refused to rent the videos.

Part 2 – Behavioural modelling of MusicSpace application

Provide from 2 to 3 sequence diagrams of your choice related to the use cases you identified, and 1 swim lane activity diagram of your choice, then include them in the Analysis specification documentation for submission.