SE 2001: Software Requirements Engineering (A)

Quiz 4

Time: 20 minutes   Max Marks: 20   Roll No. _____

Video-Rental Ltd. (VRL) is a small video rental store. The store lends videos to customers for a fee, and purchases videos from a local supplier. They need a computerized system that helps them run their daily business. Description of their daily business is as follows:

Only a registered customer can borrow videos from the store. New customers register by filling out a form with their personal details, credit card details, and paying subscription fee. On successful payment of subscription fee, the customer is issued a membership card by VRL. The membership card has a unique membership id which is later used when borrowing videos. Each new customer's data is also added to the customer file. A customer can request a video by providing video title, his/her membership id, and payment – payment is always through the credit card used to open the customer account. On the successful payment the customer is handed over the video by VRL and the record is saved in the loans register. The customer then returns the video to the store after watching it and the store updates the loans record. When a loaned video is overdue by a day the customer's credit card is charged, and a reminder letter is sent to the customer. Each day after that a further transaction on card is made, and each week a reminder letter is sent. This continues until either the customer returns the video, or the charges are equal to the cost of replacing the video - written in the stocks records.

To do: Develop a level 1 DFD for the VRL system mentioned above. Use the notation discussed in class. Mark each process as primitive or non-primitive.

Membership Form (ie Personal details, cc info)

CUSTOMER

Register new Customer 1

membership Card info

Customer details

Customers File

Reminder Letter

Payment Confirmation

Subscription fee amount and details

Process Fines and Overdue Videos 2

Fine details

(Returned) Video

Payment Confirmation

cc info

Loan Status

Charge Credit Cards 5

Process Return of Videos

amount to charge

details of returned video

(Alternative) Video Request

Loan Records

Bank/cc System

Requested Video

Process Borrow Requests 4

Loan details

Payment Confirmation

Borrowing fee amount details

Video Info

Video Price

Stocks File

Non-Primitive

Only Process 2 is doing multiple jobs including:
* Processing Fines
* Sending Reminders

Heuristic wise all processes look non-primitive, but they are not except process 2.