CS 3009: Software Engineering (B)

Quiz 4

Time: 15 minutes   Max Marks: 20   Roll No. ___Solution___

Q1.   **20 Marks**

Zaman Books (ZB) is a book store that rents books, novels, digests, magazines, series etc. The store lends books to customers for a fee. They have digitalized their stock and can now offer e-versions of the books too. They need a computerized system that helps them run their daily business as well as automate the renting of e-versions of the books. Description of their business is as follows:

Only a registered customer can borrow books from the store and all registered customer already have a unique membership id. A customer can request an e-book by providing book title, his/her membership id, and payment – payment in this case is always through the credit card used to open the customer account. The cc info is available in the customers file. After receiving the borrow request the system charges the customer through cc. On the successful payment the customer is given access of the e-book by the process dealing with borrow requests and the record is saved in the loans register. This access is granted for 7 days. The customer is sent an expiry reminder on the 6th day and if the customer does not request the renewal, the access is revoked after 7 days. If a renewal is requested the request is processed and the cc is charged again and the access for the next 7 days is granted. The store updates the loans record at each renewal.

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

Customer

title, membershipid

e-book link

Grant e-book Access 1

Loan details including membershipid

membershipid

Customers File

Customer contact details

Bank

ccdetails, payment amount

Charge fees through cc 2

cc info

membershipid

membershipid, renewal request

Loans Register

Loandetails g.a. membershipid

ebook link, renewal confirmation

Process Renewal Requests 3

Renewal details

Send Expiry Reminder 4

Expiry Reminder