CSE 4508 RDBMS PROGRAMMING LAB

LIBRARY MANAGEMENT SYSTEM

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**Introduction:**

In Library management system there are three kinds of users (admin, customer and employee). There is a login interface for admin. The admin can add, update, remove customers and employees. The admin can also view their information. The admin can check if any user’s fine is due. The admin can add books and videos. He can update and remove them. He can access all the information of the books and videos. The customer and employee both can login to the system. They can rent the books and videos. They can return them. If they are late in return, then they have to pay some fine for that.

**Implementation:**

The library management system is built in ORACLE database using PL/SQL. The system can be accessed through command line. There are implementations of sequence, procedure, function, curser, trigger.

There are 9 tables in the database:

1. Admin (userID, password)
2. Card (cardID(using sequence), status, fines)
3. Location (address)
4. Branch (name, address, phone)
5. Customer (customerID, name, cAdress, phone, password, userName, dateSignUp, cardID)
6. Employee (employeeID, name, eAdress, phone, password, userName, paycheck, branch, cardID)
7. Book (ISBN, bookID, state, availability, debyCost, lostCost, address)
8. Video (title, year, videoID, state, availability, debyCost, lostCost, address)
9. Rent (cardID, itemID, rentDate, returnDate).

There are 22 procedures in the database:

1. Admin login procedure
2. Adding customer trigger
3. Adding customer procedure
4. Updating customer information procedure
5. Viewing customer information procedure
6. Viewing customer fines procedure
7. Adding employee trigger
8. Adding employee procedure
9. Updating employee information procedure
10. Viewing employee information procedure
11. Viewing employee fines procedure
12. Adding book procedure
13. Adding video procedure
14. Viewing item procedure
15. Viewing all books and videos procedure
16. Removing book or video procedure
17. Customer login procedure
18. Employee login procedure
19. Rent a book or video from library procedure
20. Paying fine procedure
21. Paying fines trigger
22. Returning books and videos procedure