CSCI 3700 (Fall 19)

Homework 4
(50 pts)

due Thursday, Oct. 24

Use the same library database schema used in previous homework:

Book(bookID, ISBN, title, author, publish-year, category)
Member(memberID, lastname, firstname, address, phone-number, limit)
CurrentLoan(memberID, bookID, loan-date, due-date)
History(memberID, bookID, loan-date, return-date)

Members can borrow books from the library. The number of books they can borrow is limited by the "limit" field of the Member relation (it may differ for different members). The category of a book includes fiction, non-fiction, children's and reference. The CurrentLoan table represents the information about books that are currently checked out. When the book is returned to the library, the record will be removed from CurrentLoad relation, and will be inserted into History relation with the return-date. A library may have more than one copy of the same book, in which case each copy has its own bookID, but all copies share the same ISBN.

Write SQL statements for each of the following questions.

(1) (6 pts) Find the lastname and firstname of the member(s) who have the highest limit allowed.
(2) (10 pts) Find the lastname and firstname of members who have borrowed both books titled "XML and XQuery" and "XQuery: The XML Query Language" either currently or in the past.
(3) (10 pts) Find the name of the author(s) that has the largest number of different books owned by the library (multiple copies of the same book only count as one book).
(4) (12 pts) For each member (using both member ID, last name, and first name), list the number of books he/she has currently checked out, and the number of books he/she checked out in the past. If a person checked out the same book multiple times, it will be counted multiple times. Zero count should also be listed as 0.
(5) (12 pts) List the member ID, first name and last name of members who have borrowed (either currently or in the past) all the books in the library with "Harry Potter" in the title. If any of such books have multiple copies, he or she must have borrowed at least one copy of each of such books.

Note:

- You may need to add more tuples to the database you created for previous homework in order to test the queries for this homework.
- **Please name your file as hw4_*yourPirateID*.sql.** For this assignment, you need to test your solutions in Oracle and submit your .sql file(s) electronically to Blackboard and also hand in a hard copy of your solutions. **Please also submit the SQL file you used to create your database (name it as hw4_*yourPirateID*_table.sql) so that the grader can test your query on your database. You can either include those commands (as well as drop table statements) at the beginning of this homework file, or submit it as a separate .sql file. Failure to do this will result in losing points.**
- No views should be created for any query.
- **Please remember to always attach the homework description page as the cover page for your hard copy submission. You will be deducted points if you don't have the cover page.**