CSE 412/598 Fall 2013
WinRDBI ASSIGNMENT #3
SQL

This is the third of three assignments that allow you to execute query languages of the relational model. This assignment focuses specifically on queries in SQL.

Using the Music Rental Agency Enterprise, you are to:

1. Load the music3.rdb file in WinRDBI. This data file is located in the folder for the assignment on myASU.
2. Develop SQL solutions for the five queries specified in this assignment. You may breakdown SQL queries into subqueries, if needed. However, your SQL solution must ***NOT*** be a translation of a relational algebra solution. *You are strongly encouraged to look at the example queries provided to you on the WinRDBI web pages.* **Comment the queries and use descriptive table and attribute names.**

On the due date, you will turn in the following:

1. A hard copy of your query file (.sql). Make sure that the listing includes your name, the last 5 digits of your Affiliate ID, and class (CSE 412 or CSE 598) as a comment line in your .sql file. ***When possible, print your solutions using a portrait orientation. WinRDBI uses the print capabilities of Java and there appears to be an issue with a landscape orientation that loses lines across page breaks with certain printers.***

2. A printout of result data for each query taken from WinRDBI for SQL. Do not include all intermediate tables – only include the last table that answers each query. An electronic copy of your query file ***must*** be turned in through the Assignment facility in the folder for the assignment on myASU. To avoid name clashes on files, name your .sql file as fname_lname.sql.
   To submit your file via myASU on the web, follow the directions given below:
   - Log into the course site on myASU. **Make sure you log in as yourself.**
   - Click on Submit Assignment under the folder for the homework assignment.
   - Follow the directions to submit your homework.
   - *You can only submit your assignment once.*

Points will be deducted from your grade for failing to follow the above directions.
Late Assignments Will Not Be Accepted!

The assignment submission on myASU will be disabled at the start of class on the due date.
Solutions will be published in the WinRDBI Assignment Folder on the due date.

REMINDER: THIS IS AN INDIVIDUAL ASSIGNMENT!

See Homework 1 for details on
QUALITY-BASED ASSESSMENT and TEST DATA DISCLAIMER

Music Rental Agency Relational Database Schema

client(clientID, firstName, lastName, phone, address)

cd(cdCode, cdTitle, numberSold, year, groupCode)

availableCopy(cdCode, seqNum)

rentedBy(cdCode, seqNum, clientID, fromDate, endDate, pricePerDay)

song(songCode, songTitle)

musicalGroup(groupCode, groupName)

artist(artistID, firstName, lastName, yearBorn)

topCDs(cdCode, year, rating)

composedOf (cdCode, songCode, trackNumber)

topSongs(songCode, year, rating)

member(groupCode, artistID, fromDate, toDate)

writtenBy(songCode, artistID)

Queries

The output schema for the query is given in parentheses following the query specification.

1. Which songs appeared on the CD rated number one in 2003?
   Order the results in ascending order on track number.
   (songCode, songTitle, trackNumber)
2. For each group in the database, find the number of CDs rated in the top 10.
   Order the results in descending order of the number of top 10 CDs.
   (groupCode, groupName, numberOfTop10CDs)
3. What is the maximum, the minimum, and average number of tracks on CDs published since the year 2000? Order the results in chronological order by year.
   (year, maxNumber, minNumber, avgNumber)
4. Find the list of musical groups such that every client in Detroit rented at least one of their CD's. (The same division query as appeared in HW1).
   (groupCode, groupName)
5. Which artists that have written a top 5 song are currently not a member of any group?
   Order the results alphabetically by last name and first name.
   (artistID, firstName, lastName, yearBorn)