**CSE 3241 Project Checkpoint 03**

**SQL and More SQL**

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**Submitted to the Carmen Dropbox**

1. Provide a current version of your ER Diagram and Relational Model as per Project Checkpoint 02. **If you were instructed to change the model for Project Checkpoint 02, make sure you use the revised versions of your models**
2. Given your relational schema, create a text file containing the SQL code to create your database schema. Use this SQL to create a database in SQLite. Populate this database with the data provided for the project as well as 20 sample records for each table that does not contain data provided in the original project documents.
3. Given your relational schema, provide the SQL to perform the following queries. If your schema cannot provide answers to these queries, revise your ER Model and your relational schema to contain the appropriate information for these queries. These queries should be provided in a plain text file named “WorksheetTwoSimpleQueries.txt”:
   1. Find the titles of all tracks by ARTIST released before YEAR
   2. Give all the albums and their date of their checkout from a single patron (you choose how to designate the patron)
   3. List all the albums and their unique identifiers with less than 5 copies held by the library.
   4. Give all the patrons who checked out an album by ARTIST and the albums they checked out.
   5. Find the total number of albums checked out by a single patron (you choose how to designate the patron)
   6. Find the patron who has checked out the most albums and the total number of albums they have checked out.
4. For Project Checkpoint 02, you were asked to come up with three additional interesting queries that your database can provide. Give what those queries are supposed to retrieve in plain English, as relational algebra and then as SQL. Your queries should include joins and at least one should include an aggregate function, and they should be the same as the queries you outlined for Worksheet 02. If you were instructed to fix the queries in Checkpoint 02, make sure you use the fixed queries here. These queries should be provided in a plain text file named “WorksheetTwoExtraQueries.txt”.

Each patron has given how many feedbacks?

card\_numberFCOUNT feedback\_id(PERSON\*FEEDBACK)

What is the average star rating for each album?

albumFAVERAGE stars(REVIEW\*ALBUM)

How many copies does each album have (physical and digital)?

album\_idFCOUNT media\_id(ALBUM\*MEDIA)

Once you have completed all of the questions, create a ZIP archive containing the binary SQLite file and the three text files and submit this to the Carmen Dropbox. **Make sure your queries work against your database and provide your expected output before you submit them!**