

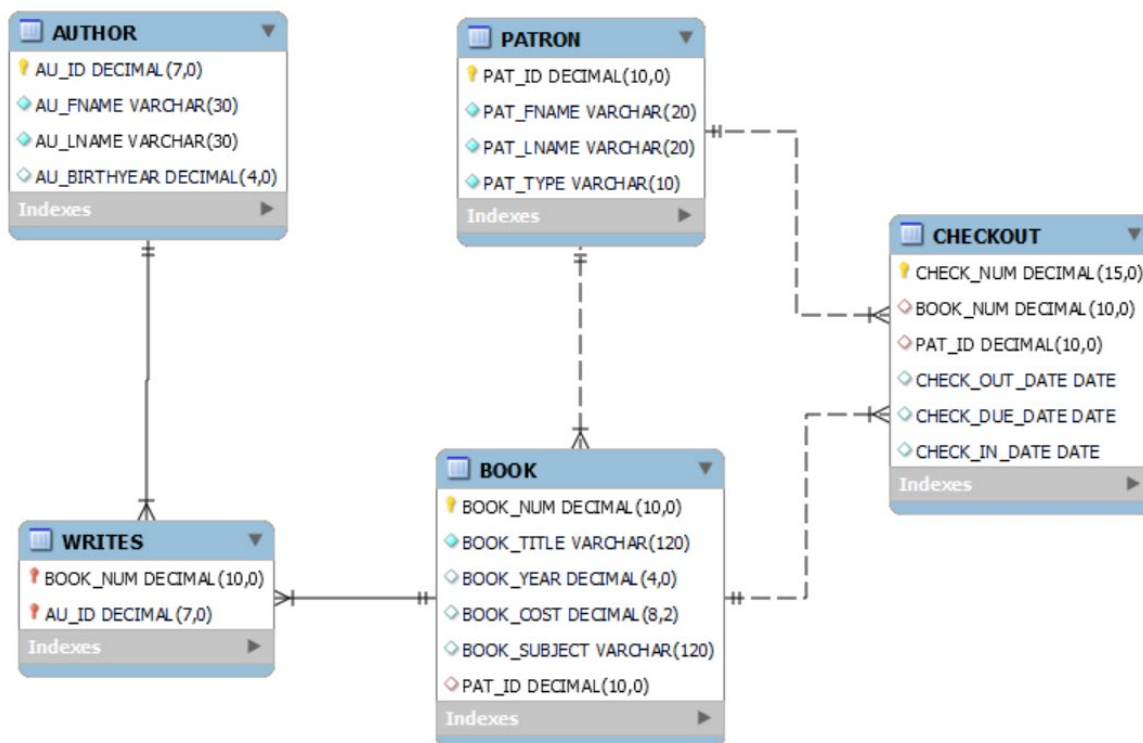
## SQL Lab – ProblemSet04

### Summary

The CIS Department at Tiny College maintains the Free Access to Current Technology (FACT) library of e-books. FACT is a collection of current technology e-books for use by faculty and students. Agreements with the publishers allow patrons to electronically check out a book, which gives them exclusive access to the book online through the FACT website, but only one patron at a time can have access to a book. A book must have at least one author but can have many. An author must have written at least one book to be included in the system but may have written many. A book may never have been checked out but can be checked out many times by the same patron or different patrons over time. Because all faculty and staff in the department are given accounts at the online library, a patron may have never checked out a book or they may have checked out many books over time. To simplify determining which patron currently has a given book checked out, a redundant relationship between BOOK and PATRON is maintained.

The structure of the *Fact* database is shown below.

### Database Schema



## Instructions

Use file *ProblemSet04-SetupDB.sql* to create the *Fact* database in your RDS and populate the tables with starter data. You should not change the setup file, but you may want to read it for a sense of the data in the database.

Using the structure of the *Fact* database shown above, create SQL commands to answer the problems in SQL Lab ProblemSet04. TEST your solutions before submitting them to the autograder!

Each problem comes in its own file with the problem description and a place for your solution. You will submit one file for each problem in the set to the autograder for evaluation. Zip all of your completed problems into a single file for submission to the autograder. Make sure you put your code in the location indicated and DO NOT change the names of the files!