CS 4620/5620 HW 2 Kresman

Learning Outcomes

* Java/JDBC - Basic exposure to an embedded SQL program
* Simple database design

**Resource**: Unit 4 & Unit 5 NetBeans-3. The 32-bit JDK compiler on Canvas

Java program that queries an MS Access database with two entities (**2 tables**) of your own.

* The entities have a **one-to-many** relationship (example: Person and CarsOwned).
* You decide the entities, attribute names & tuple values. Don't use the ones we discussed!
* The ‘one’ entity has 2 attributes. The ‘many’ entity has 3 attributes plus an attribute to link the one entry (note: Access adds an extra AutoID field). Keep field length/values **short**, but readable!
* The program runs one query, invoked once - will be docked for use of SQL constructs not covered yet.
  + Then, prints the (next) instance of the "one" entity, all its attributes in one line. Below that multiple lines, one line for each instance of the "many" entity (all its attribute values in 1 line). Repeat until done.
  + Note: if a ‘one’ entity has no ‘many’ instances, do not print info for this ‘one’ entity.

Output MUST be this format: 'one' entity instance in a line by itself; each of its 'many' entity instances under it one/line, nicely indented. Hardcode attribute names. See an example below (two tables: Student: Name, ID; Cars: studentID, Model, Year, Miles) - note that only folks with cars are shown

Name Joe Blow ID 456

Model Town and country Year 2006 Miles 123456

Model Chevy Prizm Year 2000 Miles 234567

Name Cindy Smith ID 123

Model Ford Fusion Year 2017 Miles 4567

...

Canvas submission - two files:

* (txt) source program listing (following compile and run, copy and paste 'output window' as comments @ the top of the source program listing)
* The database: lastNameHomework2.mdb (for example, I would name my database as kresmanHomework2.mdb)

CS 5620

* Use metadata to get the 'one' and 'many' entities' attribute names – NO hardcoding!
* User's **command line** argument: either "normal" or "runTimeQuery"
  + normal: do what CS 4620 students did above, but use metadata to get attribute names
  + runTimeQuery: user types the (select) query at the terminal. Do it and display the output – you decide the format
* (Homework 2 folder has a sample NetBeans commandLineProgram)

Grading Rubric

\_\_\_/5 One SQL

\_\_\_/5 Two tables

\_\_\_/5 Output format

\_\_\_/5 Correct output